



## ***Service Manual***

**Lexmark™ X850e, X852e, and X854e Options**

---

**7500-XXX**

- ***Table of contents***
- ***Start diagnostics***
- ***Safety and notices***
- ***Trademarks***
- ***Index***



Lexmark and Lexmark with diamond design are trademarks of Lexmark International, Inc., registered in the United States and/or other countries.

**Edition: March 24, 2006**

**The following paragraph does not apply to any country where such provisions are inconsistent with local law:**  
LEXMARK INTERNATIONAL, INC. PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions; therefore, this statement may not apply to you.

This publication could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in later editions. Improvements or changes in the products or the programs described may be made at any time.

Comments may be addressed to Lexmark International, Inc., Department D22A/032-2, 740 West New Circle Road, Lexington, Kentucky 40550, U.S.A or e-mail at [ServiceInfoAndTraining@Lexmark.com](mailto:ServiceInfoAndTraining@Lexmark.com). Lexmark may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

References in this publication to products, programs, or services do not imply that the manufacturer intends to make these available in all countries in which it operates. Any reference to a product, program, or service is not intended to state or imply that only that product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any existing intellectual property right may be used instead. Evaluation and verification of operation in conjunction with other products, programs, or services, except those expressly designated by the manufacturer, are the user's responsibility.

Lexmark and Lexmark with diamond design are trademarks of Lexmark International, Inc., registered in the United States and/or other countries.

All other trademarks are the property of their respective owners.

**© 2006 Lexmark International, Inc.**  
**All rights reserved.**

#### **UNITED STATES GOVERNMENT RIGHTS**

This software and any accompanying documentation provided under this agreement are commercial computer software and documentation developed exclusively at private expense.

# Table of contents

<b>Safety information</b> .....	<b>xiii</b>
<b>Preface</b> .....	<b>xvi</b>
<b>Definitions</b> .....	<b>xvi</b>
<b>General information</b> .....	<b>1-1</b>
<b>Options and features</b> .....	<b>1-1</b>
<b>2X 500-Sheet drawer (2TM)</b> .....	<b>1-1</b>
<b>2X 500-Sheet drawer (2TM) theory</b> .....	<b>1-2</b>
<b>Driving force transmission path</b> .....	<b>1-2</b>
<b>Media transport</b> .....	<b>1-3</b>
Media transport path .....	1-3
Layout of media transport path .....	1-4
Main components associated with the media transport .....	1-4
Functions of main components .....	1-4
<b>Media tray assembly</b> .....	<b>1-5</b>
Front media tray guide and rear media tray guide .....	1-5
Media tray end guide .....	1-5
Bottom plate .....	1-5
Media feed unit assembly .....	1-5
Media feed lift motor .....	1-5
Switch (media size) .....	1-5
Sensor (media out) .....	1-5
Sensor (media level) .....	1-5
Sensor (pre-feed) .....	1-6
<b>Main components</b> .....	<b>1-7</b>
Switch (2TM/TTM left door interlock) .....	1-7
Sensor (tray 3 feed-out) .....	1-7
Sensor (tray 4 feed-out) .....	1-7
2TM/TTM Transport roll assembly .....	1-7
2TM/TTM controller card assembly .....	1-7
Switch (media size) .....	1-8
<b>High capacity feeder</b> .....	<b>1-9</b>
<b>Media feeding</b> .....	<b>1-10</b>
Outline .....	1-10
HCF media feed unit assembly .....	1-10
HCF media transport roll assembly .....	1-10
<b>HCF media feed unit assembly operation</b> .....	<b>1-12</b>
<b>HCF media transport roll assembly operation</b> .....	<b>1-13</b>
<b>HCF media feed unit assembly sensor/motor functions</b> .....	<b>1-14</b>
<b>Status monitoring</b> .....	<b>1-15</b>
Static media jam detection .....	1-15
Interlock detection .....	1-15
Tray insertion detection .....	1-16
Functions of sensors used for status monitoring .....	1-16
Media size detection .....	1-17
Sensor for media size detection .....	1-17
Size sensors .....	1-17
Tray lifting .....	1-18
Media out detection .....	1-18
Sensor (media out) .....	1-19
Remaining media volume detection .....	1-19
Sensor (media level) .....	1-20

<b>Finisher</b>	<b>1-21</b>
<b>Finisher weight</b>	<b>1-21</b>
<b>Components</b>	<b>1-21</b>
<b>Stacker media bin block to stack media</b>	<b>1-22</b>
<b>Media size and weight</b>	<b>1-22</b>
Media size/orientation and applicable functions	1-23
Media weight	1-23
<b>Features</b>	<b>1-24</b>
<b>Finisher theory</b>	<b>1-24</b>
<b>Media transport</b>	<b>1-24</b>
Bridge unit assembly paper path	1-24
Finisher media path	1-24
Finisher roll assemblies	1-25
Finisher media path sensors	1-25
Finisher motors	1-26
Bridge unit assembly	1-26
From bridge unit assembly to punch	1-27
From punch to compiler unit assembly	1-28
From compiler unit assembly to stacker media bin	1-30
From punch to upper media bin	1-30
<b>Functions of sensors along the media path</b>	<b>1-30</b>
Bridge unit assembly	1-30
Finisher	1-31
<b>Punch unit</b>	<b>1-32</b>
Adjusting punching positions	1-32
Punching	1-33
Detecting punch waste full	1-34
Detecting punch waste box	1-34
Functions of punch sensors/motors	1-34
<b>Compiler unit assembly</b>	<b>1-35</b>
Outline of operation	1-35
Capacity of compiler unit assembly	1-36
Compiler unit assembly operation with multiple media sizes	1-36
Tamping	1-36
Front tamping	1-37
Rear tamping	1-38
Center tamping	1-39
Determining tamper home position	1-39
Tamping	1-39
Offsetting	1-40
Functions of compiler unit assembly sensors/motors	1-40
<b>Stapler</b>	<b>1-41</b>
Stapling operation	1-41
Staple positions	1-41
Media sizes that allow stapling	1-42
Stapling one sheet	1-42
Stapling multiple size media	1-43
Media limits for stapling	1-43
Stapler operation	1-43
Stapler unit assembly	1-44
Functions of stapler sensors/motors	1-44
<b>Upper media bin</b>	<b>1-45</b>
Operation	1-45
Functions of upper media bin sensors	1-45
<b>Stacker media bin</b>	<b>1-46</b>
Operation	1-46
Full stack detection	1-48
Functions of stacker media bin sensors/motors	1-48
<b>Power supply and interlock</b>	<b>1-50</b>



Tools required for service .....	1-51
Acronyms .....	1-51
<b>Diagnostic information .....</b>	<b>2-1</b>
Start .....	2-1
Using service checks .....	2-1
Confirm the installation status .....	2-2
Power-on Reset sequence .....	2-2
Error code messages - 2X 500-sheet drawer (2TM) .....	2-3
Service checks - 2X 500-sheet drawer (2TM) .....	2-5
243.00 Sensor (pre-feed) on jam (tray 3 media feed) .....	2-5
243.01 Sensor (tray 3 feed-out) on jam (tray 3 media feed) .....	2-6
243.02 Sensor (tray 2 feed-out) on jam (tray 3 media feed) .....	2-8
243.03 Sensor (registration) on jam (tray 3 media feed) .....	2-10
243.04 Sensor (tray 3 feed-out) static jam .....	2-12
244.00 Sensor (tray 4 feed-out) on jam (tray 4 media feed) .....	2-13
244.01 Sensor (tray 3 feed-out) on jam (tray 4 media feed) .....	2-14
244.02 Sensor (tray 2 feed-out) on jam (tray 4 media feed) .....	2-16
244.03 Sensor (registration) on jam (tray 4 media feed) .....	2-18
244.04 Sensor (pre-feed) on jam (tray 4 media feed) .....	2-20
244.05 Sensor (tray 4 feed-out) static jam .....	2-22
943.00 Tray 3 lift up / no tray failure .....	2-23
944.00 Tray 4 lift up / no tray failure .....	2-24
980.00 2TM/TTM controller card assembly communication failure .....	2-26
Tray 3 media size failure .....	2-26
Tray 4 media size failure .....	2-27
2TM/TTM left door assembly open .....	2-28
No media in the select media tray .....	2-29
Media size mismatch in width .....	2-30
Tray 3 media size mismatch in length .....	2-31
Tray 4 media size mismatch in length .....	2-33
Error code messages - HCF .....	2-36
Service checks - HCF .....	2-37
245.00 Sensor (tray 5 feed-out) on jam .....	2-37
245.01 Sensor (tray 2 feed-out) on jam .....	2-39
245.02 Sensor (registration) on jam .....	2-40
245.03 Sensor (tray 5 feed-out) static jam .....	2-42
945.00 HCF unit media tray lift failure .....	2-44
945.01 HCF unit NVM R/W failure .....	2-45
980.01 Tray 5 HCF communication failure .....	2-45
HCF top door assembly open .....	2-46
HCF unit docking failure or tray 5 set failure .....	2-47
No media in the selected media tray .....	2-48
Error code messages - finisher .....	2-50
Service checks - finisher .....	2-58
280.00 Sensor (bridge unit media entrance) on Jam .....	2-58
280.01 Sensor (bridge unit media entrance) static jam A .....	2-59
280.02 Sensor (bridge unit media entrance) static jam B .....	2-60
281.00 Sensor (bridge unit media exit) On Jam A .....	2-62
281.01 Sensor (bridge unit media exit) On Jam B .....	2-63
281.02 Sensor (bridge unit media exit) On Jam C .....	2-65
281.03 Sensor (bridge unit media exit) static jam A .....	2-66
282.00 Sensor (finisher media entrance) on jam .....	2-67
282.01 Sensor (finisher media entrance) static jam A .....	2-69
283.00 Sensor (buffer path) on jam A .....	2-70
283.01 Sensor (buffer path) on jam B .....	2-74
283.02 Sensor (buffer path) static jam A .....	2-77
283.03 Sensor (buffer path) static jam B .....	2-78
283.04 Sensor (buffer path) static jam C .....	2-79

284.00 Sensor (lower media exit) off jam A	2-80
284.01 Sensor (lower media exit) on jam A	2-81
284.02 Sensor (lower media exit) on jam B	2-83
284.03 Sensor (lower media exit) on jam C	2-86
284.04 Sensor (lower media exit) off jam B	2-88
284.05 Sensor (lower media exit) static jam	2-90
285.00 Finisher eject set jam	2-92
286.00 Sensor (compiler media in) static jam	2-93
287.00 Sensor (upper media exit) on jam A	2-94
287.01 Sensor (upper media exit) off jam A	2-96
287.02 Sensor (upper media exit) on jam B	2-98
287.03 Sensor (upper media exit) on jam C	2-100
287.04 Sensor (upper media exit) off jam B	2-101
287.05 Sensor (upper media exit) static jam A	2-103
287.06 Sensor (upper media exit) static jam B	2-105
287.07 Sensor (upper media exit) static jam C	2-106
288.00 Sensor (diverter gate) on jam	2-107
288.01 Sensor (diverter gate) static jam (to top bin) A	2-110
288.02 Sensor (diverter gate) static jam (to top bin) B	2-111
288.03 Sensor (diverter gate) static jam (to top bin) C	2-112
288.04 Sensor (diverter gate) static jam (to stacker bin) A	2-113
288.05 Sensor (diverter gate) static jam (to stacker bin) B	2-115
288.06 Sensor (diverter gate) static jam (to stacker bin) C	2-116
980.02 Finisher communication failure	2-117
981.00 Stacker bin failure	2-118
981.01 Stacker bin upper limit failure	2-119
981.02 Stacker bin lower limit failure	2-121
982.00 Sensor (front tamper HP) on failure	2-124
982.01 Sensor (front tamper HP) off failure	2-125
983.00 Sensor (rear tamper HP) on failure	2-126
983.01 Sensor (rear tamper HP) off failure	2-128
984.00 Sensor (punch unit HP) on failure	2-129
984.01 Sensor (punch unit HP) off failure	2-130
985.00 Sensor (punch carriage shift HP) on failure	2-131
985.01 Sensor (punch carriage shift HP) off failure	2-133
986.00 Sensor (media eject clamp HP) on failure	2-134
986.01 Sensor (media eject clamp HP) off failure	2-135
987.00 Sensor (media eject shaft HP) on failure	2-136
987.01 Sensor (media eject shaft HP) off failure	2-138
988.00 Sensor (punch unit side reg) on failure	2-139
988.01 Sensor (punch unit side reg) off failure	2-141
989.00 Stapler unit failure	2-143
990.00 Sensor (stapler carriage HP) on failure	2-144
990.01 Sensor (stapler carriage HP) off failure	2-145
995.00 Finisher NVRAM R/W failure	2-146
996.00 Finisher type failure	2-146
999.00 Finisher engine/RIP functional failure	2-146
Bridge unit top cover open	2-147
Finisher front door open	2-149
Finisher eject cover open	2-150
Finisher upper media bin full	2-150
No punch waste box	2-151
Punch waste box full	2-152
Stacker media bin full (mix size)	2-153
Stacker media bin full (no mix)	2-155
Stacker lower safety failure	2-157
Stacker set over count failure	2-158
Staple cartridge empty	2-159

<b>Diagnostic aids</b>	<b>3-1</b>
<b>Accessing service menus</b>	<b>3-1</b>
<b>Diagnostics Menus</b>	<b>3-2</b>
<b>Entering Diagnostics Menus</b>	<b>3-2</b>
<b>Available tests</b>	<b>3-2</b>
<b>MOTOR TESTS</b>	<b>3-5</b>
<b>PRINT TESTS</b>	<b>3-6</b>
Input Source Print Test	3-6
Print Quality Test Pages	3-6
Print Quality Pages Content by Report Page Number	3-7
<b>HARDWARE TESTS</b>	<b>3-7</b>
Panel Test	3-7
Button Test	3-7
DRAM Test	3-8
CACHE Test	3-9
Parallel Wrap	3-9
<b>DUPLEX TESTS</b>	<b>3-10</b>
Quick Test	3-10
Sensor Test (duplex)	3-10
<b>INPUT TRAY TESTS</b>	<b>3-10</b>
Feed Tests	3-10
Sensor Test (input tray)	3-11
<b>OUTPUT BIN TESTS</b>	<b>3-12</b>
Feed Tests (output bins)	3-12
Feed To All Bins	3-12
Sensor Test (output bin)	3-13
<b>FINISHER TESTS</b>	<b>3-13</b>
Staple Test	3-13
Hole Punch Test	3-14
Feed Tests (Finisher)	3-14
Sensor Test (Finisher)	3-14
<b>BASE SENSOR TEST</b>	<b>3-16</b>
<b>DEVICE TESTS</b>	<b>3-17</b>
Quick Disk Test	3-17
Disk Test/Clean	3-17
<b>PRINTER SETUP</b>	<b>3-19</b>
Defaults	3-19
Printed Page Count	3-20
Permanent Page Count	3-20
Serial Number	3-20
Engine Setting 1 to 4	3-20
Model Name	3-20
Configuration ID	3-20
Edge to Edge	3-21
Parallel Strobe Adjustment (Par S Strobe Adj)	3-22
<b>EVENT LOG</b>	<b>3-22</b>
Display the Event Log	3-22
Print the Event Log	3-24
Clear the Event Log	3-24

<b>SCANNER TESTS</b>	<b>3-25</b>
ASIC Test	3-25
Feed Test	3-25
<b>Scanner Manual Registration</b>	<b>3-26</b>
Printing the registration test original page	3-26
Testing the manual scanner registration	3-27
Analyzing the manual scanner registration copies	3-28
Manually adjusting the scanner's registration	3-28
Scanner manual registration factory defaults	3-30
Sensor Test (Scanner Tests)	3-31
<b>Exiting Diagnostics Menu</b>	<b>3-32</b>
<b>Configuration Menu</b>	<b>3-33</b>
Entering Configuration Menu	3-33
Available menus	3-33
Maintenance Counter Value	3-35
Reset Maintenance Counter	3-35
<b>REGISTRATION</b>	<b>3-36</b>
Quick Test	3-37
Print Quality Pages (Configuration Menu)	3-38
<b>SIZE SENSING</b>	<b>3-39</b>
A5/Statement	3-40
B5/Executive	3-40
<b>Panel Menus</b>	<b>3-40</b>
PPDS Emulation	3-40
Factory Defaults	3-41
Energy Conserve	3-41
Min Copy Memory	3-41
Format Fax Storage	3-42
EVENT LOG (Configuration Menu)	3-42
ADF Edge Erase	3-42
FB Edge Erase	3-42
Paper Prompts	3-43
Envelope Prompts	3-43
Jobs On Disk	3-43
Disk Encryption	3-43
Wipe Disk	3-46
Font Sharpening	3-48
Require Standby	3-49
Short Edge Printing	3-49
Tray Low Message	3-49
LES Applications	3-49
Key Repeat Initial Delay	3-50
Key Repeat Rate	3-50
Exiting Configuration Menu	3-50
<b>Repair information</b>	<b>4-1</b>
Handling ESD-sensitive parts	4-1
Removal procedures	4-2
Before starting service work	4-2
<b>2X 500-sheet drawer (2TM) removals</b>	<b>4-3</b>
2X 500-sheet drawer (2TM)– top cover removal	4-3
2X 500-sheet drawer (2TM)– foot cover removal	4-4
2X 500-sheet drawer (2TM)– right cover removal	4-4
2X 500-sheet drawer (2TM)– left cover removal	4-5
2X 500-sheet drawer (2TM)– rear cover removal	4-5
2X 500-sheet drawer (2TM)– 2TM/TTM left door assembly removal	4-6
2X 500-sheet drawer (2TM)– caster removal	4-7
2X 500-sheet drawer (2TM)– switch (media size) assembly removal	4-8
2X 500-sheet drawer (2TM)– media feed unit assembly removal (tray 3)	4-9

2X 500-sheet drawer (2TM)– media feed unit assembly removal (tray 4)	4-11
2X 500-sheet drawer (2TM)– media tray guides removal	4-12
2X 500-sheet drawer (2TM)– media tray end guide removal	4-14
2X 500-sheet drawer (2TM)– tray lift gear group removal	4-16
2X 500-sheet drawer (2TM)– media feed lift motor removal	4-17
2X 500-sheet drawer (2TM)– lift coupling assembly removal	4-18
2X 500-sheet drawer (2TM)– tray lift one-way gear clutch assembly removal	4-19
2X 500-sheet drawer (2TM)– media feed unit drive gear - 13 tooth removal	4-21
2X 500-sheet drawer (2TM)– media out actuator removal	4-22
2X 500-sheet drawer (2TM)– sensor (media level) removal	4-23
2X 500-sheet drawer (2TM)– sensor (media out) removal	4-24
2X 500-sheet drawer (2TM)– sensor (pre-feed) removal	4-25
2X 500-sheet drawer (2TM)– media feed unit drive gear - 28 / 21 tooth removal	4-26
2X 500-sheet drawer (2TM)– media feed unit drive gear - 29 tooth removal	4-27
2X 500-sheet drawer (2TM)– feed roll removal	4-28
2X 500-sheet drawer (2TM)– feed roll one-way clutch removal	4-29
2X 500-sheet drawer (2TM)– feed roll one-way gear 22 tooth removal	4-30
2X 500-sheet drawer (2TM)– separation roll one-way friction clutch removal	4-31
2X 500-sheet drawer (2TM)– separation roll removal	4-32
2X 500-sheet drawer (2TM)– pick roll idler gear - 33 tooth removal	4-33
2X 500-sheet drawer (2TM)– pick roll removal	4-34
2X 500-sheet drawer (2TM)– pick roll drive gear 25 tooth removal	4-35
2X 500-sheet drawer (2TM)– feed unit drive gear - 27 tooth removal	4-36
2X 500-sheet drawer (2TM)– sensor (tray 3 feed-out) removal	4-37
2X 500-sheet drawer (2TM)– sensor (tray 4 feed-out) removal	4-38
2X 500-sheet drawer (2TM)– upper media transport roll removal	4-39
2X 500-sheet drawer (2TM)– lower media transport roll assembly removal	4-40
2X 500-sheet drawer (2TM)– left door pinch roll assembly removal	4-41
2X 500-sheet drawer (2TM)– switch (2TM/TTM left door interlock) removal	4-42
2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal	4-43
2X 500-sheet drawer (2TM)– transport clutch removal	4-44
2X 500-sheet drawer (2TM)– drive motor assembly removal	4-45
High capacity feeder (HCF) removals	4-46
HCF top cover removal	4-46
HCF right cover removal	4-47
HCF sensor (HCF media tray set) removal	4-48
HCF sensor (HCF media size) removal	4-49
HCF caster removal	4-50
HCF left cover removal	4-51
HCF rear cover removal	4-51
HCF media tray front cover removal	4-52
HCF media long edge guide assembly removal	4-53
HCF media tray assembly removal	4-54
HCF lift cables removal	4-55
HCF tray lift gear bracket removal	4-57
HCF media feed unit assembly removal	4-58
HCF feed lift motor removal	4-58
HCF feed lift gear bracket removal	4-59
HCF separation gear group removal	4-60
HCF media tray lift coupling assembly removal	4-61
HCF pick solenoid assembly removal	4-62
HCF sensor (pre-feed) removal	4-63
HCF media out actuator removal	4-64
HCF sensor (media level) removal	4-65
HCF sensor (media out) removal	4-66
HCF pick roll shaft assembly removal	4-67
HCF pick roll assembly removal	4-68
HCF feed roll assembly removal	4-69
HCF separation roll shaft assembly removal	4-70

HCF separation roll assembly removal	4-71
HCF top door assembly removal	4-72
HCF switch (top door interlock) removal	4-73
HCF sensor (tray 5 feed-out) removal	4-74
HCF media transport roll assembly removal	4-75
HCF media transport motor assembly removal	4-76
HCF switch (unit docking interlock) removal	4-77
HCF controller card assembly removal	4-78
Finisher removals	4-79
Finisher removal	4-79
Bridge unit assembly removal	4-81
Bridge unit rear cover removal	4-83
Bridge unit top cover assembly removal	4-84
Bridge unit drive belt and bridge unit drive pulley removal	4-85
Bridge unit right shaft assembly removal	4-86
Bridge unit left shaft assembly removal	4-87
Bridge unit idler rolls removal	4-88
Bridge unit transport belt removals	4-89
Bridge unit drive motor assembly removal	4-90
Bridge unit entrance guide removal	4-91
Sensor (bridge unit top cover interlock) removal	4-92
Sensor (bridge unit media entrance) removal	4-93
Sensor (bridge unit media exit) removal	4-94
Bridge unit pinch roller removal	4-95
Top cover removal	4-96
Upper media bin assembly removal	4-97
Right eject cover removal	4-98
Stacker media bin assembly removal	4-99
Right lower low voltage power supply (LVPS) cover removal	4-99
Rear lower cover removal	4-100
Rear upper cover removal	4-101
Upper media bin front cover removal	4-102
Switch (finisher front door interlock) removal	4-103
Finisher front door assembly removal	4-104
Left lower cover removal	4-105
Left upper cover removal	4-106
Carriage lift belt left removal	4-107
Carriage lift belt right removal	4-109
Sensor (stacker bin level 1) removal	4-111
Sensor (stacker bin level 2) removal	4-111
Sensor (stacker bin level encoder) removal	4-112
Sensor (stacker bin upper limit) or sensor (stacker bin no media) removal	4-113
Stacker bin lift motor assembly removal	4-115
Punch carriage assembly removal	4-118
Punch carriage shift motor assembly removal	4-120
Sensor (punch unit side registration pair) with bracket removal	4-121
Punch unit assembly removal	4-122
Punch media stop assembly removal	4-123
Punch unit motor assembly removal	4-124
Sensor (punch unit motor encoder) removal	4-125
Sensor (punch hole select), sensor (punch cam front), and sensor (punch unit HP) removal	4-126
Sensor (punch carriage shift HP) removal	4-128
Sensor (punch waste box set) removal	4-129
Sensor (punch waste box full) removal	4-130
Stapler unit frame removal	4-131
Stapler unit assembly removal	4-133
Sensor (stapler carriage HP) removal	4-135
Media eject unit assembly removal	4-136
Sub paddle removal	4-140


Sub paddle drive shaft assembly removal .....	4-141
Media eject clamp motor assembly removal .....	4-143
Sensor (media eject clamp HP) removal .....	4-144
Switch (eject cover interlock) removal .....	4-145
Media compiler unit assembly removal .....	4-146
Sensor (front tamper HP) and sensor (rear tamper HP) removals .....	4-149
Sensor (compiler media in) removal .....	4-150
Media eject shaft assembly removal .....	4-151
Clamp paddle removal .....	4-153
Media eject clutch assembly removal .....	4-154
Media eject motor assembly removal .....	4-155
Sensor (media eject shaft HP) removal .....	4-156
Sensor (lower media exit) removal .....	4-157
Lower media exit roll assembly removal .....	4-159
Paddle and roll exit assembly removal .....	4-163
Lower pinch guide assembly removal .....	4-167
Finisher diverter gate removal .....	4-168
Buffer diverter gate removal .....	4-169
Sensor (buffer path) removal .....	4-170
Buffer roll assembly removal .....	4-171
Buffer pinch guide assembly removal .....	4-173
Media entrance pinch guide assembly removal .....	4-174
Sensor (finisher media entrance) removal .....	4-175
Media entrance roll assembly removal .....	4-176
Drive motor (entrance/paddle) and belt (entrance/paddle) removal .....	4-177
Finisher diverter gate solenoid removal .....	4-179
Buffer diverter gate solenoid removal .....	4-180
Sensor (upper media exit) removal .....	4-181
Upper media exit pinch roll assembly removal .....	4-181
Upper media exit roll assembly removal .....	4-182
Sensor (upper media bin full) removal .....	4-185
Upper pinch guide assembly removal .....	4-186
Sensor (diverter gate) removal .....	4-187
Upper media transport roll assembly removal .....	4-188
Drive motor (exit) assembly and belt (exit) removal .....	4-190
Drive motor (buffer/transport) and belt (buffer/transport) removal .....	4-192
Bridge unit interface card assembly removal .....	4-194
Finisher controller card assembly removal .....	4-195
Finisher low voltage power supply (LVPS) removal .....	4-196
<b>Component locations .....</b>	<b>5-1</b>
2TM components .....	5-1
HCF components .....	5-3
Finisher components .....	5-5
Bridge unit assembly .....	5-5
Stacker lift and stapler .....	5-6
Punch unit .....	5-7
Diverter and media eject .....	5-8
Media eject and media compiler .....	5-8
Buffer, upper exit, lower exit, and drive motors .....	5-9
Cabling .....	5-10
Electronic component diagrams .....	5-13
<b>Preventive maintenance .....</b>	<b>6-1</b>
Safety inspection guide .....	6-1
Lubrication specifications .....	6-1
Maintenance recommendations .....	6-1

<b>Parts catalog</b> .....	<b>7-1</b>
How to use this parts catalog .....	7-1
Assembly 1: 2X 500-sheet drawer (2TM)– covers .....	7-2
Assembly 2: 2X 500-sheet drawer (2TM)– media tray and media feed units .....	7-4
Assembly 3: 2X 500-sheet drawer (2TM)– media tray .....	7-6
Assembly 4: 2X 500-sheet drawer (2TM)– media feed unit .....	7-8
Assembly 5: 2X 500-sheet drawer (2TM)– left door .....	7-10
Assembly 6: 2X 500-sheet drawer (2TM)– drive and electrical .....	7-12
Assembly 7: High capacity feed (HCF)– covers and media tray .....	7-14
Assembly 8: High capacity feed (HCF)– media tray .....	7-16
Assembly 9: High capacity feed (HCF)– media tray lift .....	7-18
Assembly 10: High capacity feed (HCF)– media feed unit .....	7-20
Assembly 11: High capacity feed (HCF)– media feed unit .....	7-22
Assembly 12: High capacity feed (HCF)– top door and transport .....	7-24
Assembly 13: High capacity feed (HCF)– electrical .....	7-26
Assembly 14: Finisher– bridge unit .....	7-28
Assembly 15: Finisher– bridge unit top cover assembly .....	7-29
Assembly 16: Finisher– bridge unit lower assembly .....	7-30
Assembly 17: Finisher– covers .....	7-32
Assembly 18: Finisher– covers and front door .....	7-34
Assembly 19: Finisher– stacker bin lift .....	7-36
Assembly 20: Finisher– punch .....	7-38
Assembly 21: Finisher– stapler .....	7-40
Assembly 22: Finisher– media eject .....	7-42
Assembly 23: Finisher– eject and compiler unit .....	7-44
Assembly 24: Finisher– lower exit drive .....	7-46
Assembly 25: Finisher– buffer and entrance drive .....	7-48
Assembly 26: Finisher– buffer, transport, and upper drive .....	7-50
Assembly 27: Finisher– electronics .....	7-52
Assembly 28: Finisher– cables 1 .....	7-54
Assembly 29: Finisher– cables 2 .....	7-56
Assembly 30: Finisher– cables 3 .....	7-57
<b>Index</b> .....	<b>I-1</b>
<b>Part number index</b> .....	<b>I-7</b>




---

## Safety information

- The safety of this product is based on testing and approvals of the original design and specific components. The manufacturer is not responsible for safety in the event of use of unauthorized replacement parts.
- The maintenance information for this product has been prepared for use by a professional service person and is not intended to be used by others.
- There may be an increased risk of electric shock and personal injury during disassembly and servicing of this product. Professional service personnel should understand this and take necessary precautions.
-  **CAUTION:** When you see this symbol, there is a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you begin, or use caution if the product must receive power in order to perform the task.


---

## Consignes de sécurité

- La sécurité de ce produit repose sur des tests et des agrégations portant sur sa conception d'origine et sur des composants particuliers. Le fabricant n'assume aucune responsabilité concernant la sécurité en cas d'utilisation de pièces de rechange non agréées.
- Les consignes d'entretien et de réparation de ce produit s'adressent uniquement à un personnel de maintenance qualifié.
- Le démontage et l'entretien de ce produit pouvant présenter certains risques électriques, le personnel d'entretien qualifié devra prendre toutes les précautions nécessaires.
-  **ATTENTION :** Ce symbole indique la présence d'une tension dangereuse dans la partie du produit sur laquelle vous travaillez. Débranchez le produit avant de commencer ou faites preuve de vigilance si l'exécution de la tâche exige que le produit reste sous tension.


---

## Norme di sicurezza

- La sicurezza del prodotto si basa sui test e sull'approvazione del progetto originale e dei componenti specifici. Il produttore non è responsabile per la sicurezza in caso di sostituzione non autorizzata delle parti.
- Le informazioni riguardanti la manutenzione di questo prodotto sono indirizzate soltanto al personale di assistenza autorizzato.
- Durante lo smontaggio e la manutenzione di questo prodotto, il rischio di subire scosse elettriche e danni alla persona è più elevato. Il personale di assistenza autorizzato deve, quindi, adottare le precauzioni necessarie.
-  **ATTENZIONE:** Questo simbolo indica la presenza di tensione pericolosa nell'area del prodotto. Scollegare il prodotto prima di iniziare o usare cautela se il prodotto deve essere alimentato per eseguire l'intervento.


---

## Sicherheitshinweise

- Die Sicherheit dieses Produkts basiert auf Tests und Zulassungen des ursprünglichen Modells und bestimmter Bauteile. Bei Verwendung nicht genehmigter Ersatzteile wird vom Hersteller keine Verantwortung oder Haftung für die Sicherheit übernommen.
- Die Wartungsinformationen für dieses Produkt sind ausschließlich für die Verwendung durch einen Wartungsfachmann bestimmt.
- Während des Auseinandernehmens und der Wartung des Geräts besteht ein zusätzliches Risiko eines elektrischen Schlags und körperlicher Verletzung. Das zuständige Fachpersonal sollte entsprechende Vorsichtsmaßnahmen treffen.
-  **ACHTUNG:** Dieses Symbol weist auf eine gefährliche elektrische Spannung hin, die in diesem Bereich des Produkts auftreten kann. Ziehen Sie vor den Arbeiten am Gerät den Netzstecker des Geräts, bzw. arbeiten Sie mit großer Vorsicht, wenn das Produkt für die Ausführung der Arbeiten an den Strom angeschlossen sein muß.


---

## Pautas de Seguridad


- La seguridad de este producto se basa en pruebas y aprobaciones del diseño original y componentes específicos. El fabricante no es responsable de la seguridad en caso de uso de piezas de repuesto no autorizadas.
- La información sobre el mantenimiento de este producto está dirigida exclusivamente al personal cualificado de mantenimiento.
- Existe mayor riesgo de descarga eléctrica y de daños personales durante el desmontaje y la reparación de la máquina. El personal cualificado debe ser consciente de este peligro y tomar las precauciones necesarias.
-  **PRECAUCIÓN:** este símbolo indica que el voltaje de la parte del equipo con la que está trabajando es peligroso. Antes de empezar, desenchufe el equipo o tenga cuidado si, para trabajar con él, debe conectarlo.

---


## Informações de Segurança

- A segurança deste produto baseia-se em testes e aprovações do modelo original e de componentes específicos. O fabricante não é responsável pela segurança, no caso de uso de peças de substituição não autorizadas.
- As informações de segurança relativas a este produto destinam-se a profissionais destes serviços e não devem ser utilizadas por outras pessoas.
- Risco de choques eléctricos e ferimentos graves durante a desmontagem e manutenção deste produto. Os profissionais destes serviços devem estar avisados deste facto e tomar os cuidados necessários.
-  **CUIDADO:** Quando vir este símbolo, existe a possível presença de uma potencial tensão perigosa na zona do produto em que está a trabalhar. Antes de começar, desligue o produto da tomada eléctrica ou seja cuidadoso caso o produto tenha de estar ligado à corrente eléctrica para realizar a tarefa necessária.


## Informació de Seguretat

- La seguretat d'aquest producte es basa en l'avaluació i aprovació del disseny original i els components específics.  
El fabricant no es fa responsable de les qüestions de seguretat si s'utilitzen peces de recanvi no autoritzades.
- La informació pel manteniment d'aquest producte està orientada exclusivament a professionals i no està destinada a ningú que no ho sigui.
- El risc de xoc elèctric i de danys personals pot augmentar durant el procés de desmuntatge i de servei d'aquest producte. El personal professional ha d'estar-ne assabentat i prendre les mesures convenients.
-  **PRECAUCIÓ:** aquest símbol indica que el voltatge de la part de l'equip amb la qual esteu treballant és perillós. Abans de començar, desendolieu l'equip o extremeu les precaucions si, per treballar amb l'equip, l'heu de connectar.

## 안전 사항

- 본 제품은 원래 설계 및 특정 구성품에 대한 테스트 결과로 안정성이 입증된 것입니다. 따라서 무허가 교체부품을 사용하는 경우에는 제조업체에서 안전에 대한 책임을 지지 않습니다.
- 본 제품에 관한 유지 보수 설명서는 전문 서비스 기술자용으로 작성된 것이므로, 비전문가는 사용할 수 없습니다.
- 본 제품을 해체하거나 정비할 경우, 전기적인 충격을 받거나 상처를 입을 위험이 커집니다. 전문 서비스 기술자는 이 사실을 숙지하고, 필요한 예방 조치를 취하도록 하십시오.
-  **주의:** 이 표시는 해당영역에서 고압전류가 흐른다는 위험 표시입니다. 시작전에 플러그를 뽑으시거나, 주의를 기울여 주시기 바랍니다.

## 安全信息

- 本产品的安全性以原来设计和特定产品的测试结果和认证为基础。万一使用未经许可的替换部件，制造商不对安全性负责。
- 本产品的维护信息仅供专业服务人员使用，并不打算让其他人使用。
- 本产品在拆卸、维修时，遭受电击或人员受伤的危险性会增高，专业服务人员对这点必须有所了解，并采取必要的预防措施。
-  **切记:** 当您看到此符号时，说明在您工作的产品区域有危险电压的存在。请在开始操作前拔掉产品的电源线，或者在产品必须使用电源来执行任务时，小心从事。

---

## Preface

Service information for the Lexmark X850e, X852Ee, and X854e is contained within two service manuals:

- *MFP Service Manual*– Contains specific service information for the MFP and includes the options error codes.
- *Options Service Manual*– Contains specific service information for the 2X 500-Sheet Drawer (2TM), High Capacity Feeder, and Finisher.

This manual contains maintenance procedures for service personnel. It is divided into the following chapters:

1. **General information** contains a general description of the printer and the maintenance approach used to repair it. Special tools and test equipment are listed, as well as general environmental and safety instructions.
2. **Diagnostic information** contains an error indicator table, symptom tables, and service checks used to isolate failing field replaceable units (FRUs).
3. **Diagnostic aids** contains tests and checks used to locate or repeat symptoms of printer problems.
4. **Repair information** provides instructions for making printer adjustments and removing and installing FRUs.
5. **Component locations** uses illustrations to identify the component locations and test points on the printer.
6. **Preventive maintenance** contains the lubrication specifications and recommendations to prevent problems.
7. **Parts catalog** contains illustrations and part numbers for individual FRUs.

---

## Definitions

**Note:** A note provides additional information.

**Warning:** A warning identifies something that might damage the product hardware or software.

**CAUTION:** A caution identifies something that might cause a servicer harm.



**CAUTION:** When you see this symbol, there is a danger from hazardous voltage in the area of the product where you are working. Unplug the product before you begin, or use caution if the product must receive power in order to perform the task.

---

## 1. General information

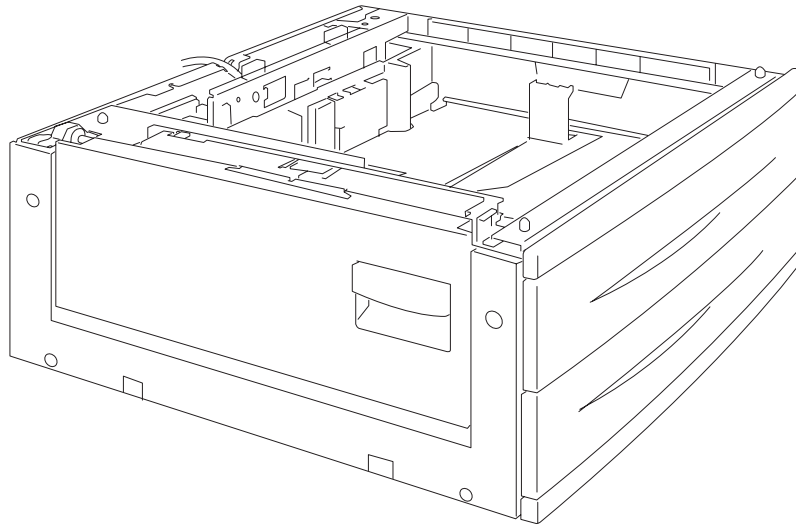
---

### Options and features

This chapter describes features for the 2X 500-Sheet drawer, high capacity feeder, and finisher for the Lexmark™ X850e, X852e, and X854e MFP.

---

#### 2X 500-Sheet drawer (2TM)

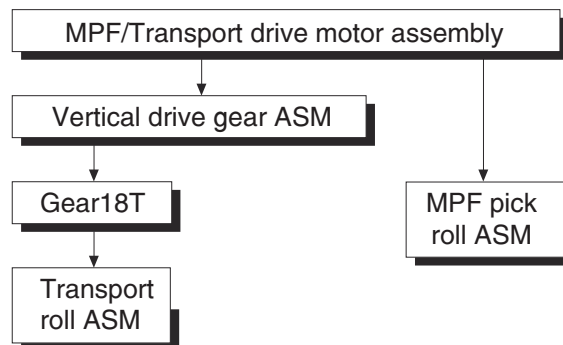


---

## 2X 500-Sheet drawer (2TM) theory

### *Driving force transmission path*

The rotating force of the 2 tray/tandem tray drive motor is transmitted through the gears to components that need mechanical driving force as shown below.

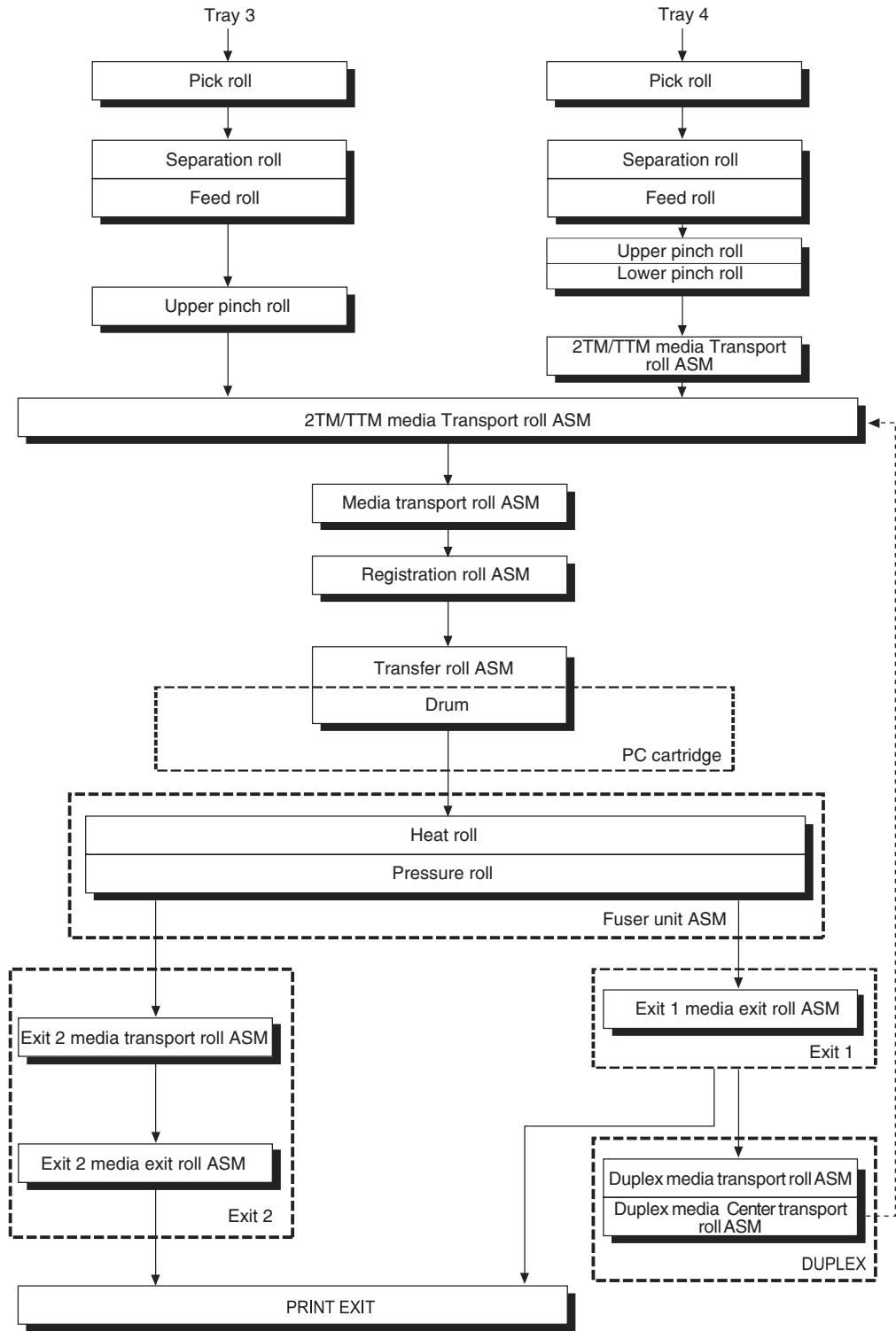


The driving force transmitted to the drive gear 22/40T drives the transport roll assembly through the clutch and gears.

Media transport

Media transport path

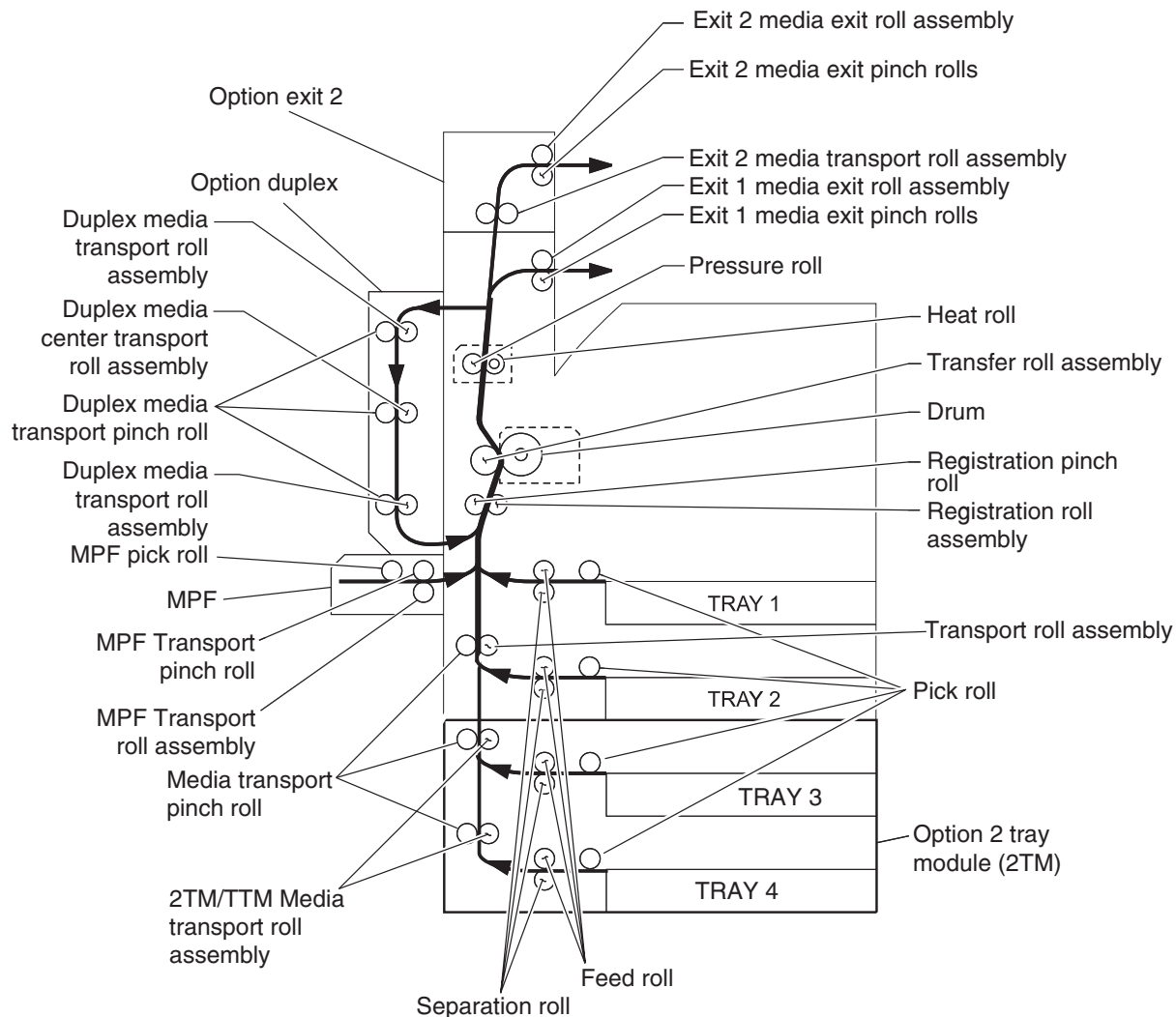
Media is supplied from tray 3 or tray 4, and is transported to the printer along the media transport path shown below.



## Layout of media transport path

The following is a cross section of the laser printer and the optional 2 tray module, showing main components directly associated with the media path and transport.

### Main components associated with the media transport



### Functions of main components

When the option 2 tray module is installed under the printer, additional trays are available.

The following chapters outline the functions of the main components of the 2 tray module.



## **Media tray assembly**

It is necessary to adjust the front side guide, rear side guide, and end guide on the media tray assembly to match the media size.

### **Front media tray guide and rear media tray guide**

To adjust the front media tray guide to different media sizes, move it to the front or rear. The front and rear media tray guides come into contact with the front and rear edges of the media and hold it in position.

The rear side guide moves together with the front side guide.

### **Media tray end guide**

To adjust the media tray end guide assembly to the media length, move the end guide to the left or right.

### **Bottom plate**

The force pushing up the bottom plate is transmitted by the driving force of the media feed lift motor on the media feed unit assembly to the lift up shaft through the drive gear 13/60T and sector gear 12T. The bottom plate is pushed up when the lift up shaft is turned, which causes the supplied media to get in contact with the pick roll assembly.

### **Media feed unit assembly**

Since tray 3 and tray 4 are functionally equivalent in terms of the switch (media size), sensor (media out), sensor (media level) and sensor (pre-feed), only the components of one tray are described here.

The media feed unit assembly is a mechanical unit for supplying media from the media tray assembly to the printer. The driving force from the media feed lift motor on the media feed unit assembly is transmitted to the three roll assemblies to feed media.

When the pick roll picks up media and the remaining media decreases, the actuator of the sensor (media level) lowers accordingly. When the sensor (media level) detects the lowering, the media feed lift motor is activated to turn the lift up shaft and the bottom plate is lifted accordingly. The remaining media is ready to be fed out.

### **Media feed lift motor**

This motor is activated to feed media and to lift the bottom plate. When feeding media, it rotates forward to drive the pick roll. When lifting the bottom plate, it rotates in reverse to drive the tray module gears to turn the lift up shaft.

### **Switch (media size)**

This switch (media size) changes the setting of the size of media supplied from each media tray assembly. A signal indicating the set size is transmitted as voltage to the printer engine card assembly.

### **Sensor (media out)**

If media runs out in the media tray assembly, the media out actuator lowers and the flag of the media out actuator that has stayed in the sensor (media out) sensing area leaves there. Thus, the sensor light is transmitted. When the sensing area is blocked (media is present), the signal is off.

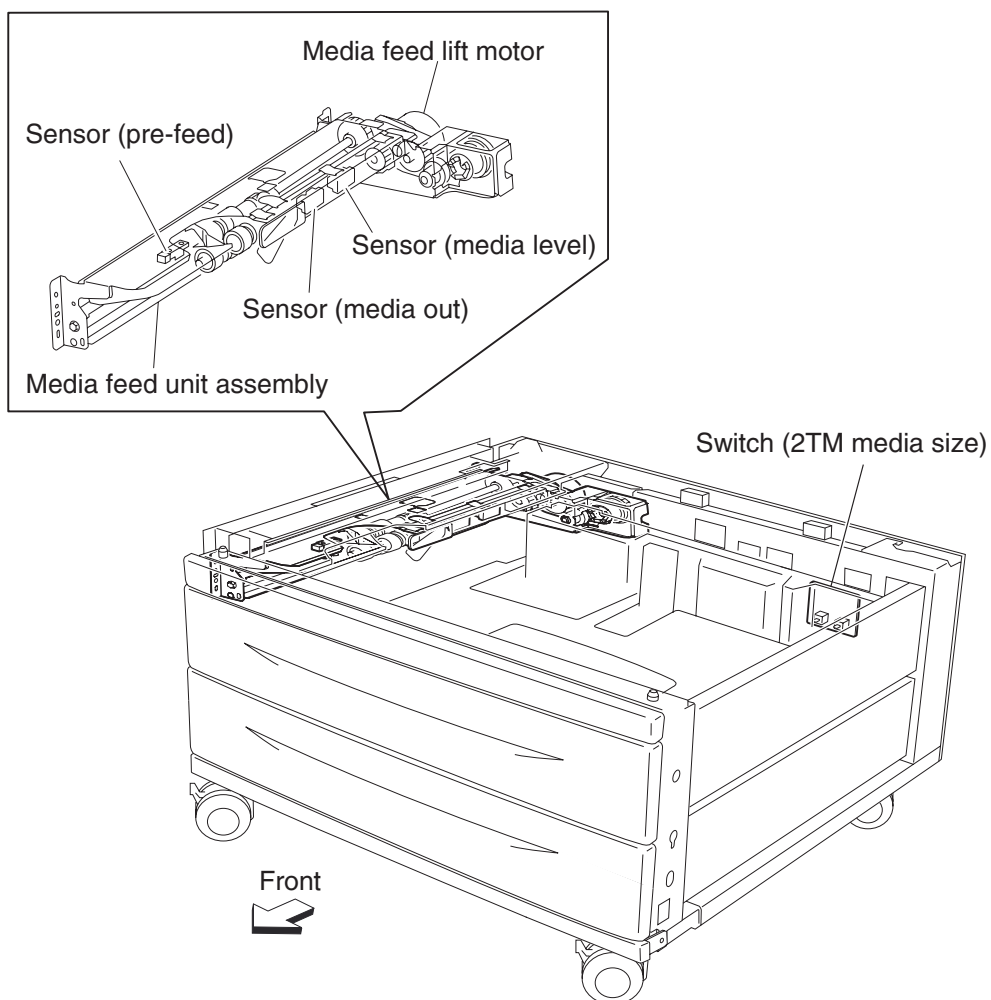
### **Sensor (media level)**

This sensor detects, by the actuator position, whether media in the media tray assembly is lifted. When the flag of the actuator leaves the sensor (media level) sensing area, the sensor detects that the media has been lifted.

## Sensor (pre-feed)

This sensor detects a media jam in the media tray assembly by the media position and sensor on/off time.

The sensor on/off state is monitored by media passing through the sensor (pre-feed) sensing area.



## Main components

### Switch (2TM/TTM left door interlock)

The left door interlock switch detects open/close of the left door assembly.

### Sensor (tray 3 feed-out)

The sensor (tray 3 feed-out) detects media fed from tray 3 or tray 4.

### Sensor (tray 4 feed-out)

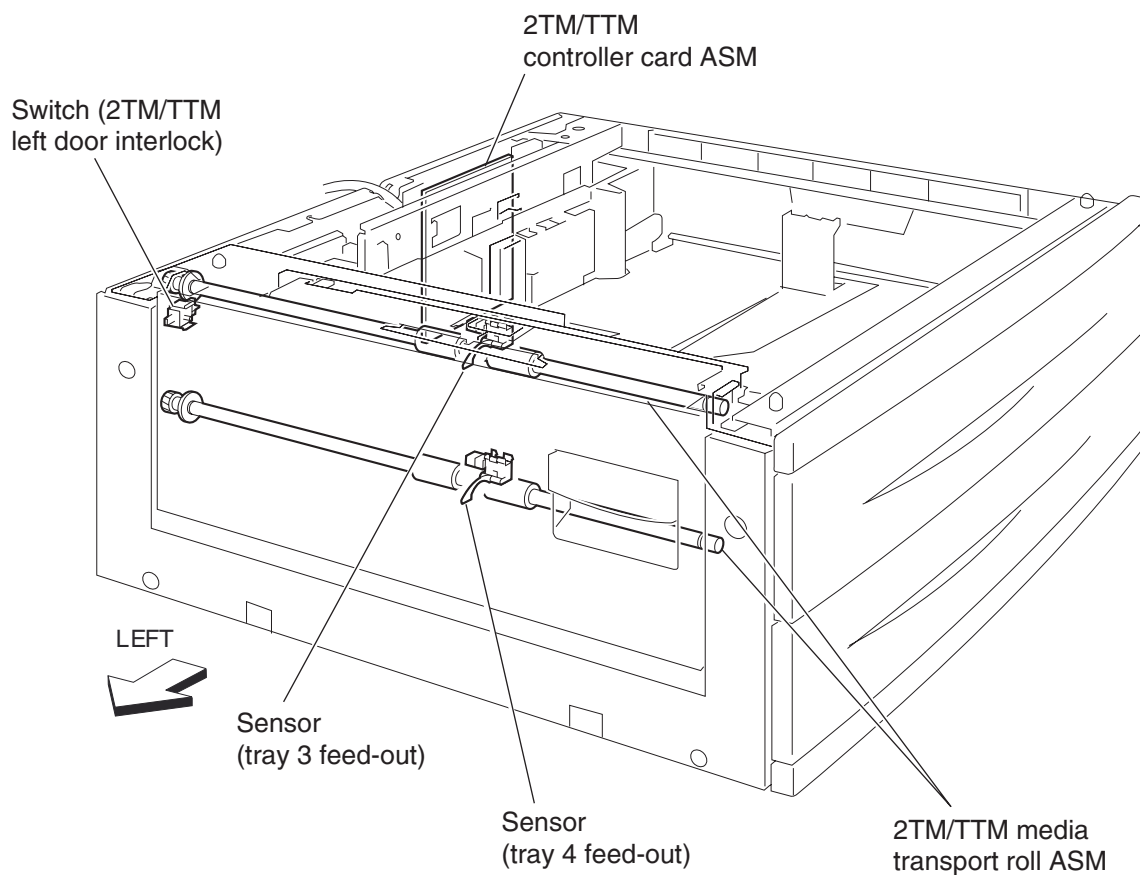
The sensor (tray 4 feed-out) detects media fed from tray 4.

### 2TM/TTM Transport roll assembly

The 2TM/TTM transport roll assembly feeds media from tray 3 or tray 4 to the printer.

### 2TM/TTM controller card assembly

The 2TM/TTM controller card assembly contains a CPU that controls media feed in the 2 tray module upon receiving a command from the printer engine card assembly and sensor/switch information.



## Switch (media size)

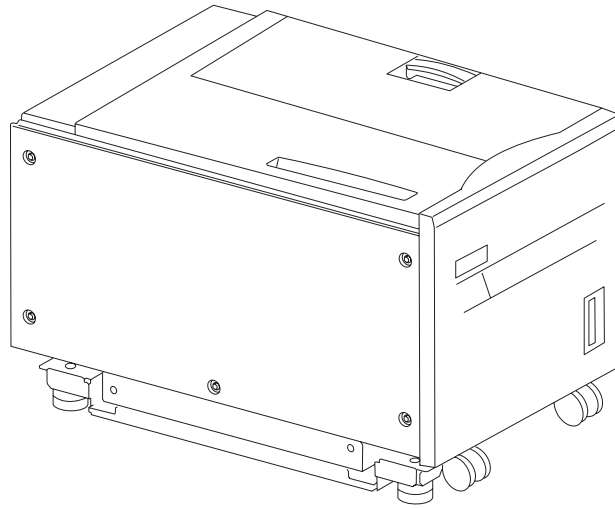
The following table gives on/off states for the switch (media size), corresponding to the media sizes on the media tray assembly.

**Note:** The switches (media size) are denoted by “S/W2”, “S/W4”, “S/W3”, “S/W5”, and “S/W1”, respectively, from the left side.

Media Size	Analog switch				Digital switch
	S/W1	S/W2	S/W3	S/W4	S/W5
No Tray	Off	Off	Off	Off	Off
5.5" x 8.5" SEF/A5 SEF	Off	Off	On	Off	Off
B5 SEF	Off	Off	On	On	On
8.5" x 13" SEF	Off	On	Off	On	Off
8.5" x 14" SEF	Off	On	Off	On	On
A4 SEF	Off	On	On	Off	Off
8.5" x 11" SEF	Off	On	On	Off	On
A4 LEF	On	Off	On	Off	Off
A3 SEF	On	Off	On	On	Off
B5 LEF/Executive LEF	On	On	Off	Off	On
8K SEF (TFX/GCO)	On	On	Off	On	Off
B4 SEF	On	On	Off	On	On
8.5" x 11" LEF	On	On	On	Off	Off
16K LEF (TFX/GCO)	On	On	On	Off	On
11" x 17" LEF	On	On	On	On	On

---

## High capacity feeder



## ***Media feeding***

### **Outline**

The HCF feeds media from the tray to the printer through the HCF media feed unit assembly and the HCF media transport roll assembly.

### **HCF media feed unit assembly**

The pick roll feeds media from the tray. The feed roll and the separation roll feed media from the pick roll to the HCF media transport roll assembly.

Rollers are driven by the media feed lift motor on the media feed unit assembly at prescribed timings.

The media fed by the feed roll and separation roll passes through the sensor (pre-feed).

The sensor (pre-feed) detects the presence of media fed from the tray.

The sensor (pre-feed) controls the HCF media feed lift motor speed and on/off operation of the HCF pick solenoid assembly.

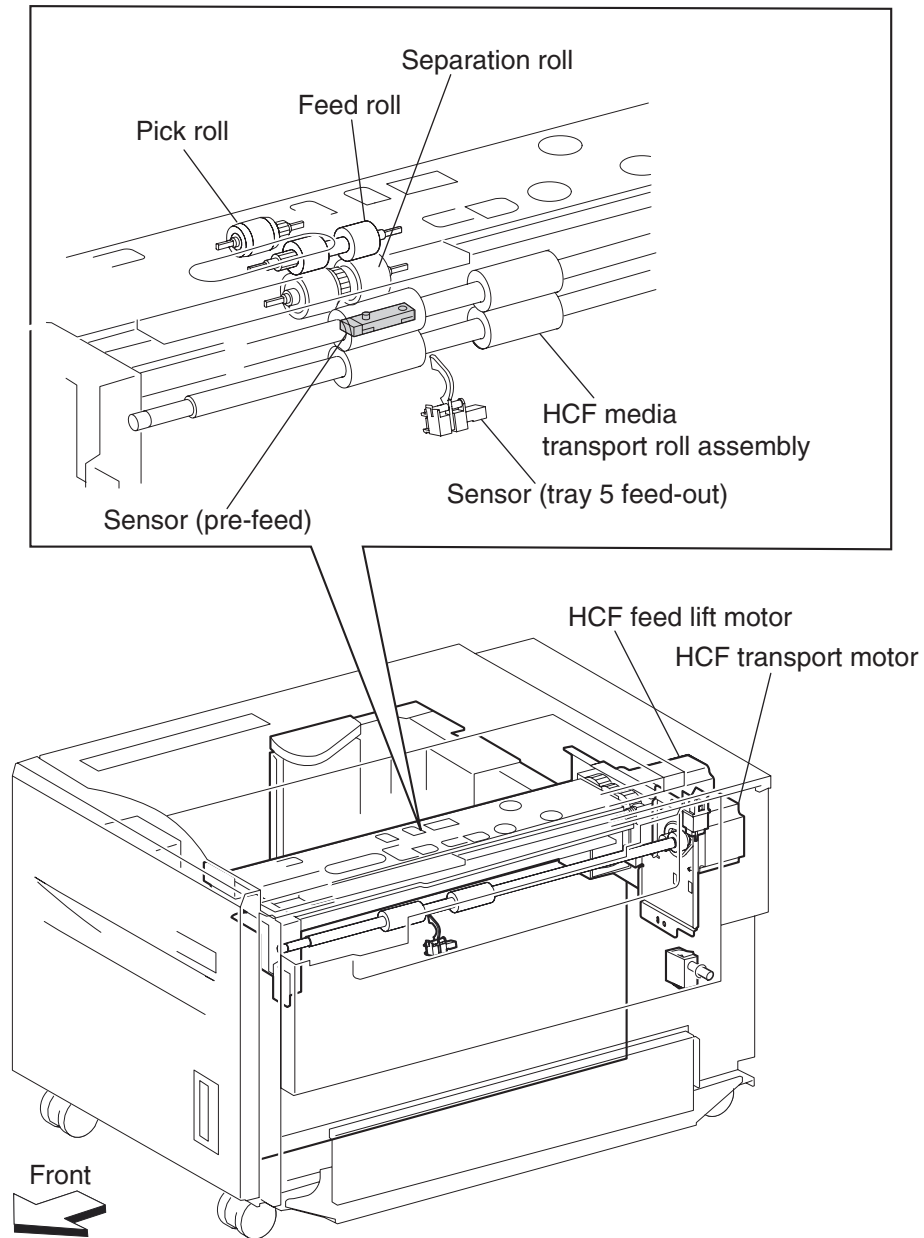
### **HCF media transport roll assembly**

This HCF media transport assembly roll transfers media fed from the HCF media feed unit assembly to the printer.

The HCF media transport roll assembly is driven by the transport motor installed on the rear side.

The media fed with the HCF media transport roll assembly passes through the sensor (tray 5 feed-out).

The sensor (tray 5 feed-out) detects the presence of media fed from the tray and controls the media feed lift motor stop and the transport motor speed. It also detects media jams to identify the media jam zone.



## ***HCF media feed unit assembly operation***

Upon receiving the feed start signal from the controller, the HCF activates the pick solenoid after a preset time has passed to press the pick roll against the media in the tray.

After a preset time has passed, after receiving the feed start signal, the HCF feed lift motor rotates forward to feed media from the tray to the feed roll side with the pick roll.

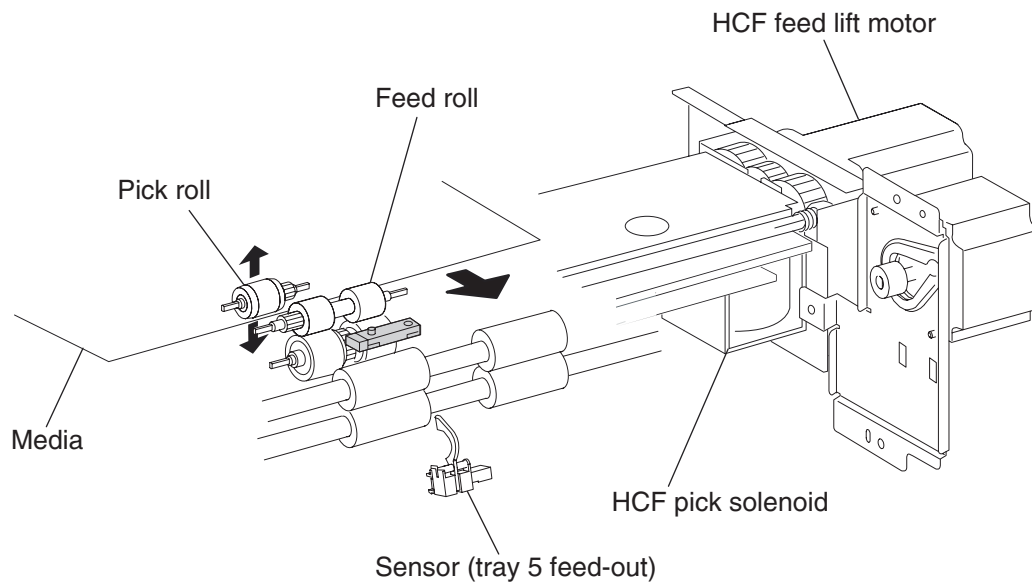
When the end of the media reaches the sensor (pre-feed) and the sensor turns on, the pick solenoid is deactivated so that the pick roll separates from the media in the tray.

The pick solenoid remains activated at a high voltage for a specified time from its actuation. After that, it is activated at a low voltage until it is deactivated. If the HCF receives the feed start signal for the next media while the solenoid is activated at low-voltage, it maintains the actuation state at the low voltage, while pressing the pick roll against the media in the tray.

When the media is transferred to the printer and the sensor (tray 5 feed-out) turns on, the pick solenoid is reactivated for a preset time.

Media feed lift motor start/stop timing and revolutions are controlled based on the timing of the HCF feed lift motor start signal and the sensor (pre-feed).

Thus, media is fed from the tray to the HCF media transport roll assembly.





## ***HCF media transport roll assembly operation***

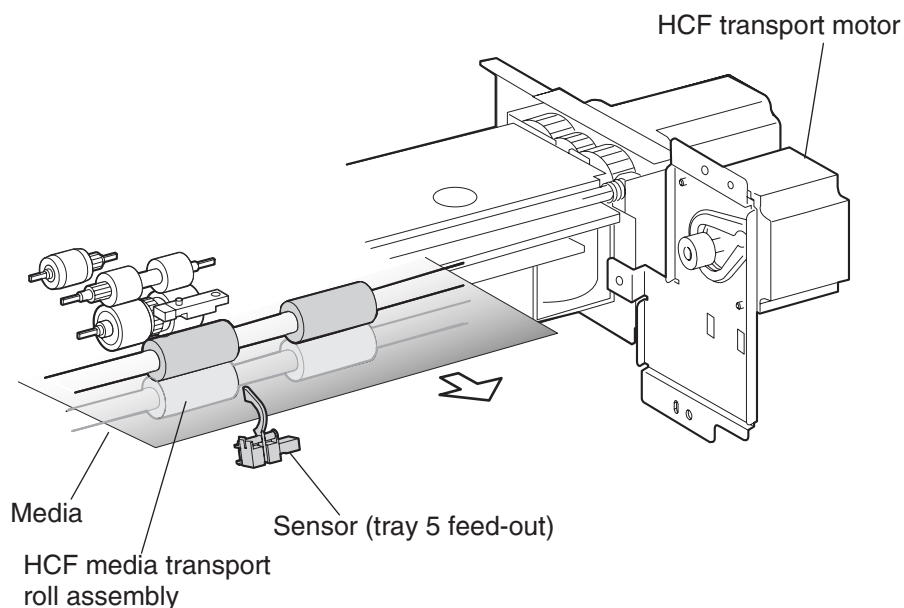
Upon receiving the feed start signal from the controller the HCF activates the HCF transport motor at a high speed after a preset time has passed. This rotating power of the HCF transport motor is transmitted to the HCF media transport roll assembly, and the media from the HCF media feed unit assembly is transferred to the printer.

When the sensor (tray 5 feed-out) is turned on by the media fed with the HCF media transport roll assembly, the HCF transport motor speed decreases after a preset time has passed.

When the sensor (registration) in the printer is turned on by the media fed from the HCF, the HCF transport motor turns off.

When the next feed start signal is received, before the HCF transport motor is turned off, the transport motor continues to rotate.

Thus, media is transferred from the HCF media transport roll assembly to the laser printer.

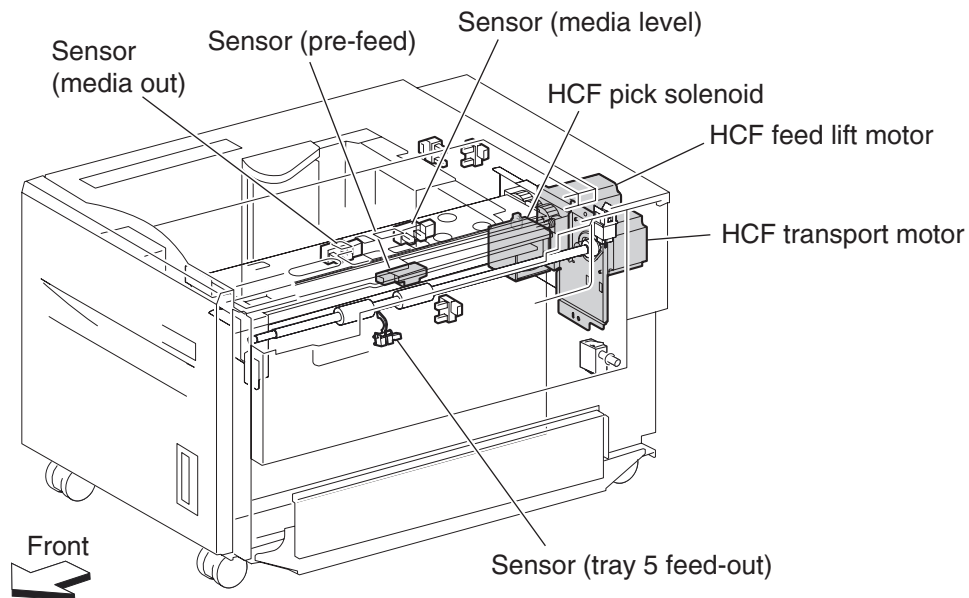


## ***HCF media feed unit assembly sensor/motor functions***

Functions of the sensors and motors of the media feed unit assembly are outlined below.

- **HCF media feed lift motor**– is a stepping motor that rotates (forward) the pick roll and feed roll to send media from the tray to the HCF media transport roll assembly. The motor also lifts the tray by reverse rotation.
- **HCF pick solenoid**– Raises or lowers the pick roll. The HCF pick solenoid stays activated from the beginning of media feed until the sensor (pre-feed) turns on. The HCF pick solenoid is activated when the tray is inserted and when the power is turned on to check the presence of media in the tray.
- **Sensor (pre-feed)**– Detects whether media has been fed from the tray, and controls the HCF feed lift motor speed. The sensor also becomes a trigger to deactivate the HCF pick solenoid. The sensor turns on upon detecting media, and determines that media is present.
- **HCF transport motor**– is a stepping motor that rotates the HCF media transport roll assembly to feed media to the printer.
- **Sensor (tray 5 feed-out)**– Detects whether media has been fed from the tray, becomes a trigger to stop the HCF feed lift motor, and controls the HCF transport motor speed.

The sensor turns on (light receiving) upon detecting media, and determines that media is present.



## Status monitoring

This function includes detection of static media jams, interlocking, and insertion of the HCF media tray assembly.

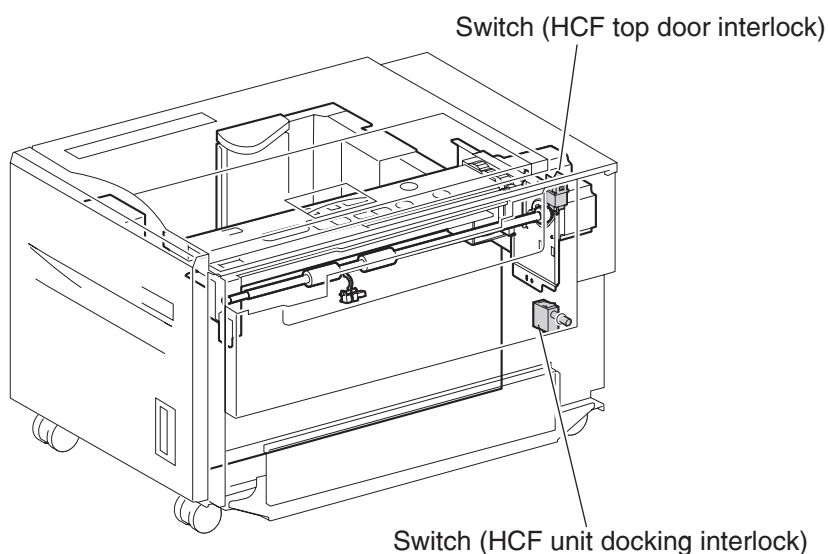
### Static media jam detection

This function checks the status of all relevant sensors on the media path to detect media jams. When media is present on the sensor, it is treated as a static jam. This detection of media jam is carried out during the start-up procedure and at every jam/fail detection. The status of all relevant sensors are checked during the start-up procedure. In addition, the sensor states are checked constantly for the jam/fail detection in order to monitor the variation in sensor levels.

### Interlock detection

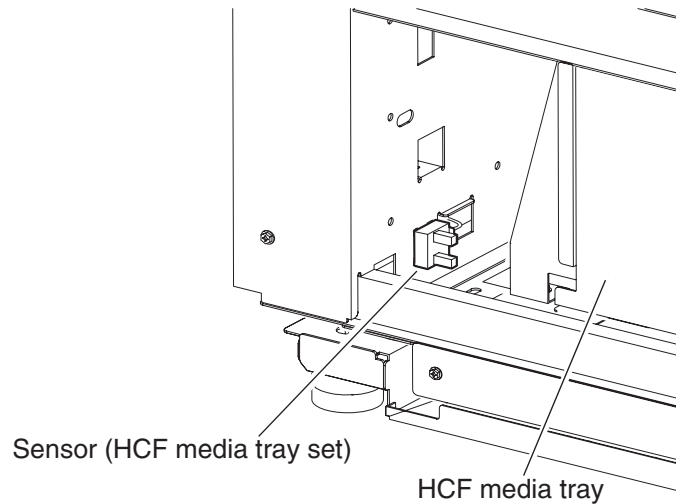
This function checks the open state of the switch (top door interlock) and the switch (HCF unit docking interlock). This detection is constant while the power is on.

When open, the switch (top door interlock) is detected, printing operation is inhibited, and the 24 V supply to the media feed lift motor and the transport motor is shut off. When open, the switch (HCF unit docking interlock) is detected, and transfer of media from the HCF is inhibited.



## Tray insertion detection

The sensor (HCF media tray set) checks whether the tray is properly set. This check is constant while the power is on. Printing operation is inhibited if the sensor (HCF media tray set) off (tray is not present) is detected before printing starts.



## Functions of sensors used for status monitoring

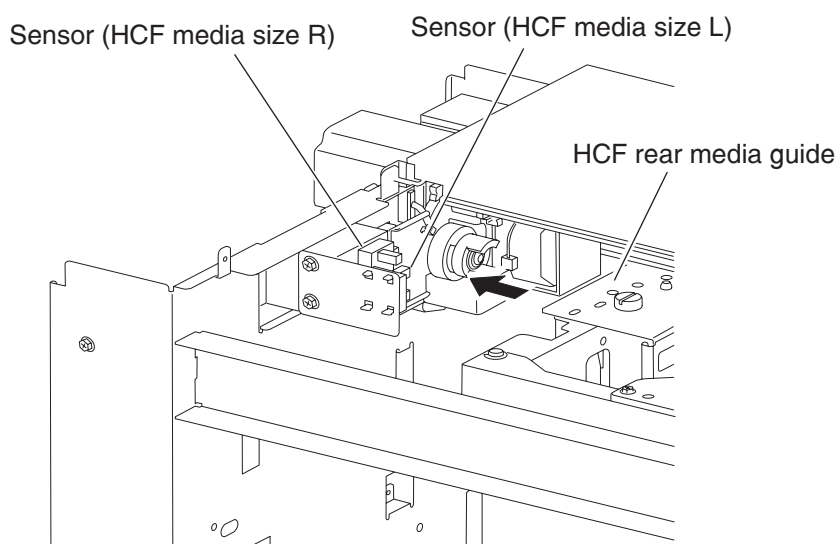
- **Switch (HCF top door interlock)**– Detects open/close of the HCF top door. The on state of this switch indicates the top door is closed.
- **Switch (HCF unit docking interlock)**– Detects the docking of the HCF with the printer. The off state of this switch indicates that the HCF is separated from the printer. In this case, transfer of media is inhibited.
- **Sensor (HCF media tray set)**– Detects insertion of the HCF media tray into the HCF. The sensor turns on when the HCF media tray is properly inserted. While it is off, media fed from the HCF medial tray is inhibited.

## Media size detection

When media is loaded in the tray, the media size is automatically detected by the rear media edge guide that is attached to the media tray assembly and aligned with the side of the media. The position of the rear media edge guide is detected by the sensor (HCF media size L) and the sensor (HCF media size R).

Media size	Sensor (HCF media size R)	Sensor (HCF media size L)
B5L	off	off
7.25" x 10.5" L		
8.5" x 11" L	on	off
A4L	off	on

**Note:** B5L and 7.25" x 10.5" L can be switched by the NVM.



The media size is detected during the start-up procedure and – with the tray inserted– once a specified amount of time has passed since the sensor (HCF tray set) level was change from off to on. The media size loaded in the tray is determined when the same media size has been detected a certain number of consecutive times.

If a sensor level pattern does not match the above table, media size cannot be determined. In this case, though the tray is lifted, starting a print job by feeding media from the tray is inhibited.

## Sensor for media size detection

### Size sensors

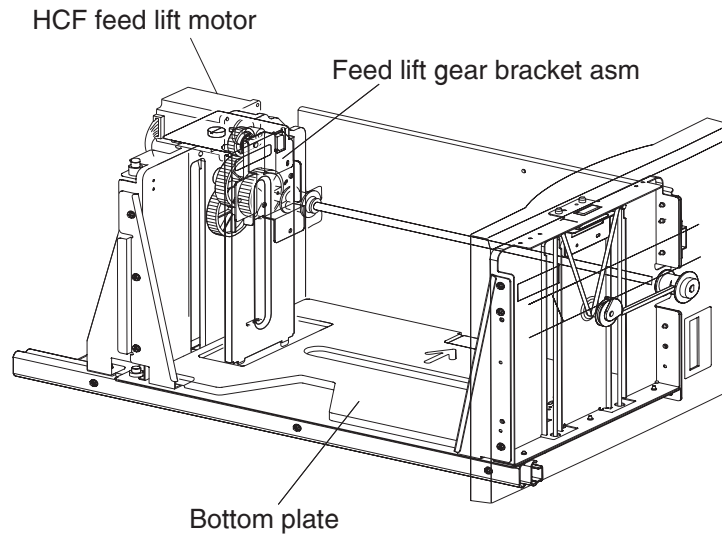
There are two size sensors: sensor (HCF media size R) and sensor (HCF media size L).

Media size can be determined by moving the HCF rear media edge guide to turn on/off these sensors and by using the sensor level patterns.

## Tray lifting

Tray lift operation starts automatically when the HCF media tray is inserted with media loaded.

Media is lifted and stops at the feeding position. At the same time, detection of no media and remaining media volume becomes available.



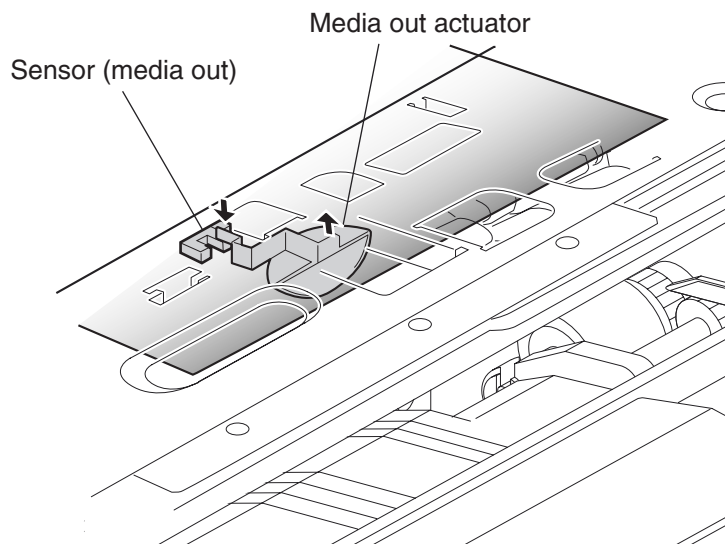
## Media out detection

This function checks whether media is loaded in the HCF media tray.

When media is present, the media out actuator in the middle of the HCF is raised as media is lifted, and leaves the sensing area of the sensor (media out), which makes the sensor light-receivable. The presence of media is detected.

On the other hand, if media out occurs when the HCF media tray is at the feeding position, the media out actuator comes inside the sensing area of the sensor (media out), which blocks the light transmission of the sensor (media out). Media out is detected.

If the HCF media tray is not lifted, the media out actuator remains in the sensing area of the sensor (media out), while blocking the light transmission of the sensor (media out). Media out is detected regardless of the presence of media in the tray.



Detection of media out is carried out constantly after the lifting operation is completed.

When media out is detected, media transfer from the HCF is inhibited.

If media out is detected during printing, print operation of the next media is stopped. However, when the printer is operating in the Auto Tray Select mode and there is media of the same size in another tray, media is automatically fed out of the tray.

### Sensor (media out)

Detects whether media is present in the HCF media tray.

When this sensor (media out) is off while the tray is at the feeding position, the presence of media is detected.

### Remaining media volume detection

This function determines the media volume remaining in the HCF media tray by using the HCF feed lift motor rotation time and the sensor (media level) during the tray lifting time. The printer notifies operators of remaining media volume as 25%, 50%, 75%, full, or 0 (zero).

If the remaining media volume becomes zero before no media is detected, the indication remains at (25%).

When the sensor (media level) detects no media, the indication becomes (0) (zero).

When a fault occurs, determination of remaining media volume is carried out as shown below.

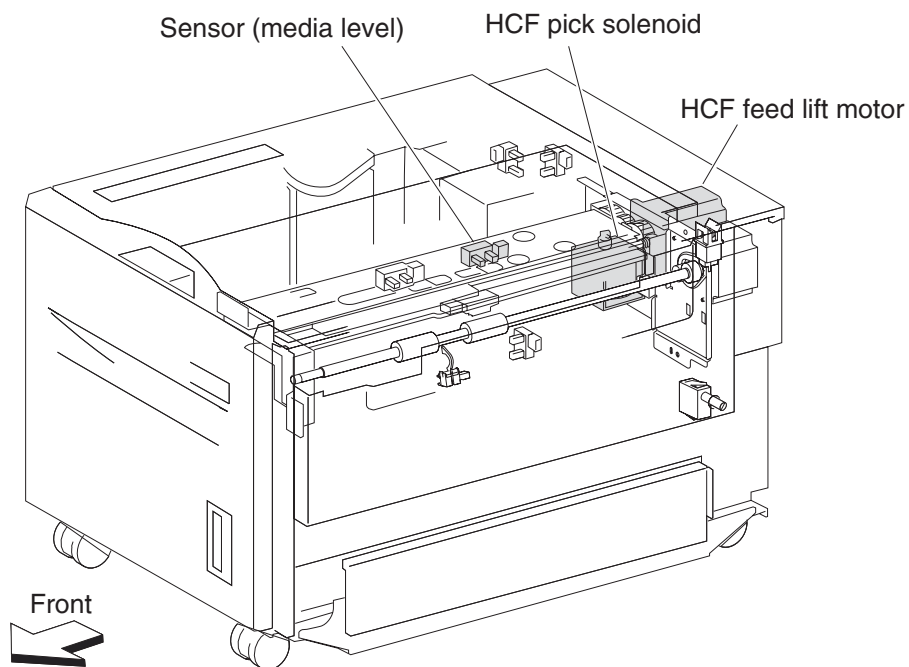
- When the interlock is opening during the lifting operation, the remaining media volume is determined based on the total of the time it takes for the interlock to open, plus the amount of time that transpires from the media feed lift motor forward/reverse rotation until the sensor comes on.
- When the power is turned off and on during the lifting operation, the remaining media volume is determined by the lifting time after the power comes on. (The actual volume of media in the tray may differ from the indication.)
- When the power is turned off and on while the tray is at the feeding position, the sensor (media level) is on when the power is turned on, and the remaining media volume before the previous power off is regarded as the remaining media volume.

- If the sensor (media level) is off when the power is turned on, the HCF regards the HCF media tray as having been removed, and determines the remaining media volume based on the time from the media feed lift motor forward/reverse rotation until the sensor (media level) comes on.

### Sensor (media level)

Detects the media feeding position in the tray in order to control the media position.

While this sensor (media level) is off, lifting the tray is continued until the sensor (media level) turns on.

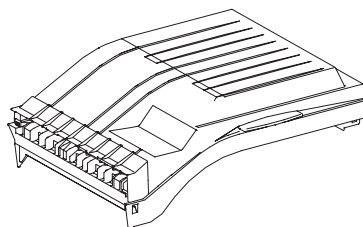




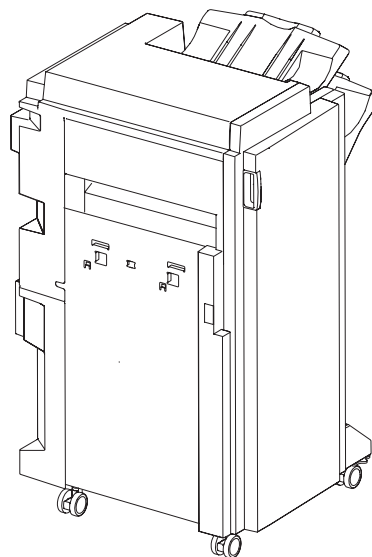
---

## Finisher

The optional finisher performs staples and punches, and stacks media transferred from the Lexmark X850e, X852e, or X854e MFP. Output is stacked in the upper media bin or separately collated in the stacker media bin.



Bridge unit assembly



Finisher

### ***Finisher weight***

Packaged: 42 kg

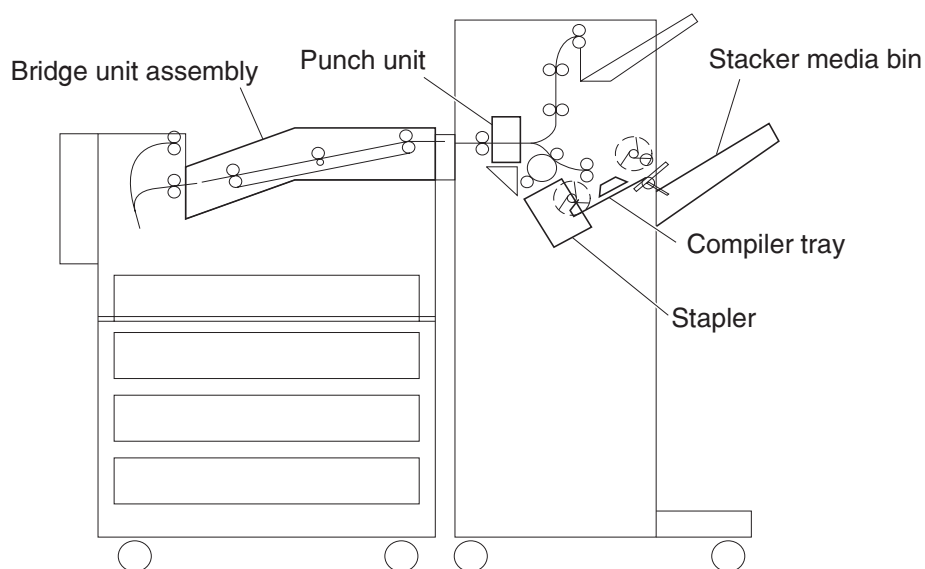
Unpacked: 30 kg

### ***Components***

The finisher is composed of the following components.

- Bridge unit assembly block to feed media from the printer to the finisher
- Punch block to punch media
- Compiler tray block to align media
- Stapler block to staple a set of media at specified positions

## ***Stacker media bin block to stack media***



## ***Media size and weight***

The following shows media sizes and weights that the finisher can handle, as well as applicable functions for each media size.

The printer and the finisher handle different media sizes and weights. For this reason, if the printer has printed media that the finisher cannot handle, the exit 1 diverter gate in the printer is switched to eject the media from Exit 2 onto the bridge unit assembly. Refer to the *Printer Service Manual* for additional information on the printer.

## Media size/orientation and applicable functions

Media description	Size	Short edge first (SEF)/ Long edge first (LEF)	Top tray	Stacker			
			Stack	Stack	Offset stack	Punch	Staple
B5	182 x 257 mm	SEF	Yes	No	No	No	No
		LEF	Yes	Yes	Yes	Yes <sup>a(2)</sup>	Yes
Executive	7.25 x 10.5 in. 184.2 x 270 mm	SEF	Yes	No	No	No	No
		LEF	Yes	Yes	Yes	Yes <sup>a(2,3,4)</sup>	No
Letter	8.5 x 11 in. 215.9 x 279.4 mm	SEF	Yes	Yes	Yes	Yes <sup>a(2)</sup>	Yes
		LEF	Yes	Yes	Yes	Yes <sup>a(2,3,4)</sup>	Yes
A4	210 x 297	SEF	Yes	Yes	Yes	Yes <sup>a(2)</sup>	Yes
		LEF	Yes	Yes	Yes	Yes <sup>a(2,3,4)</sup>	Yes
Folio (foolscap)	8,5 x 13 in.	SEF	Yes	Yes	Yes	Yes <sup>a(2)</sup>	Yes
Legal	8.5 x 14 in.	SEF	Yes	Yes	Yes	Yes <sup>a(2)</sup>	Yes
B4	257 x 364 mm	SEF	Yes	Yes	Yes	Yes <sup>a(2)</sup>	Yes
A3	297 x 420 mm	SEF	Yes	Yes	Yes	Yes <sup>a(2,3,4)</sup>	Yes
Ledger	11 x 17 in.	SEF	Yes	Yes	Yes	Yes <sup>a(2,3,4)</sup>	Yes
Custom size	Same width with standard size		Yes	Yes	Yes	Yes	Yes
Custom size	Besides above		Yes	Yes <sup>b</sup>	Yes <sup>b</sup>	No	No
<sup>a</sup> Numbers (2,3,4) mean 2 holes, 3 holes, and 4 holes, respectively. <sup>b</sup> Applicable within the following range: Media width: 203.2–297 mm Media length: 182–431.8 mm							

## Media weight

Description	Maximum weight
For punching	52– 176 gsm
For stapling	52– 226 gsm*
For ejecting in the stacker media bin	52– 226 gsm
For ejecting in the upper media bin	52– 226 gsm
* The amount of media capable of being stapled will be less than 50 if the media weight is greater than 90 g/m <sup>2</sup> .	

Features

Media processing requested	Destination of media
No post-processing	Upper media bin or stacker media bin
Punching	Upper media bin or stacker media bin
Stapling	Stacker media bin
Punching and stapling	Stacker media bin

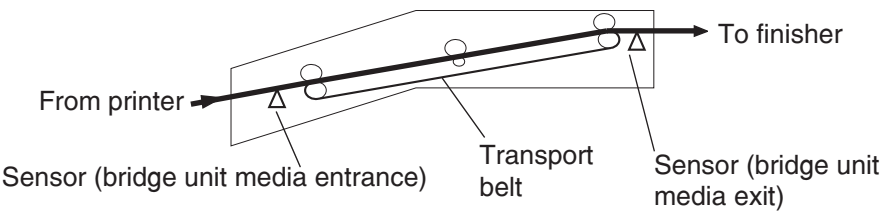
Finisher theory

Media transport

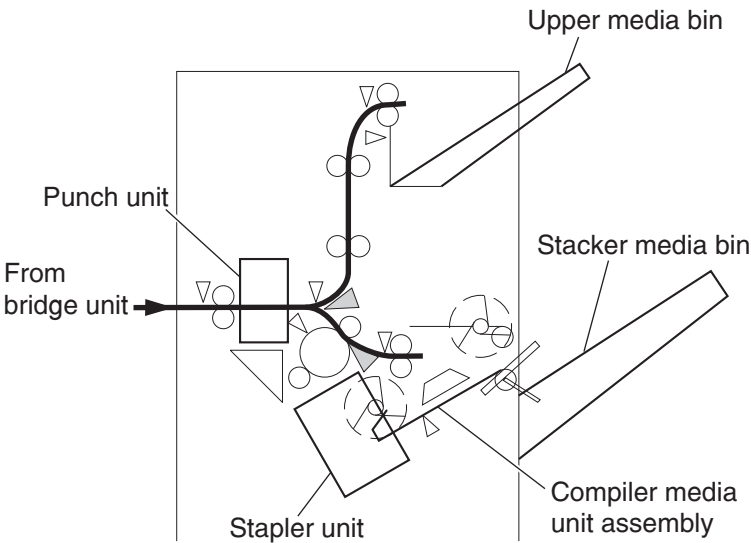
This section describes the transfer of media from the printer to a specified bin.

The following figures illustrate layouts (front view) of sensors, rollers, and main blocks, as well as a layout (rear view) of the main components.

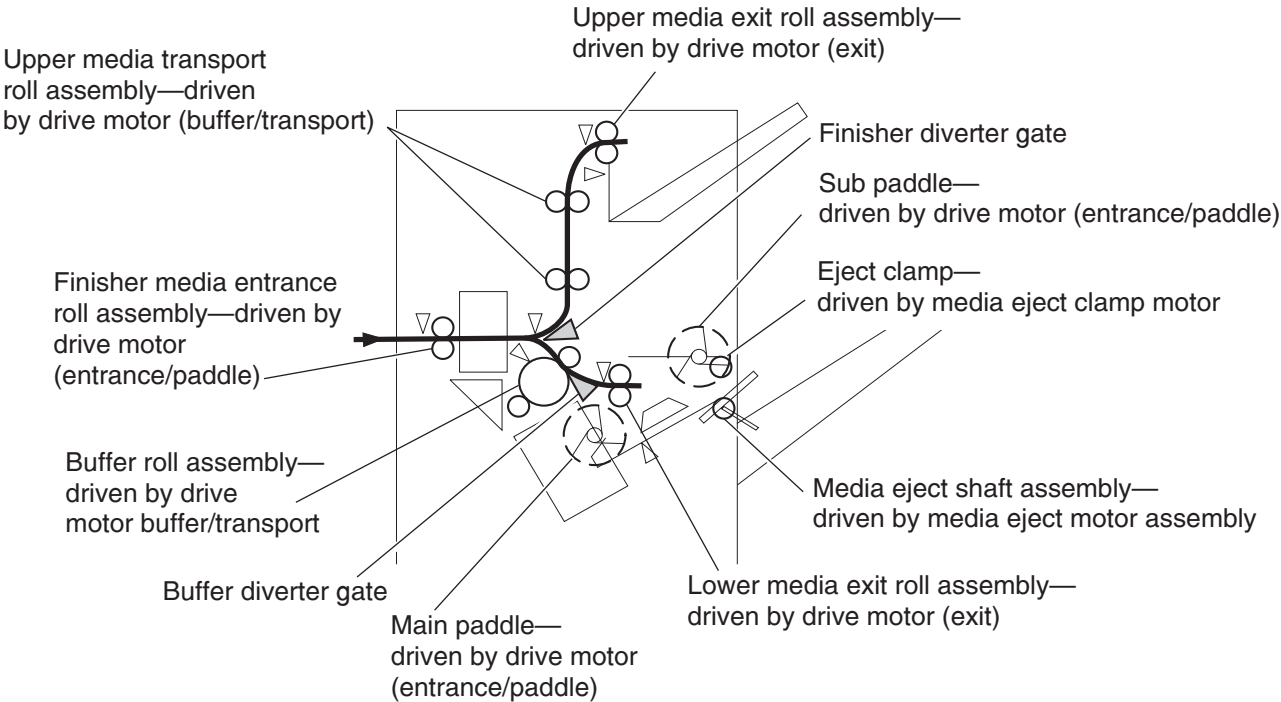
Bridge unit assembly paper path



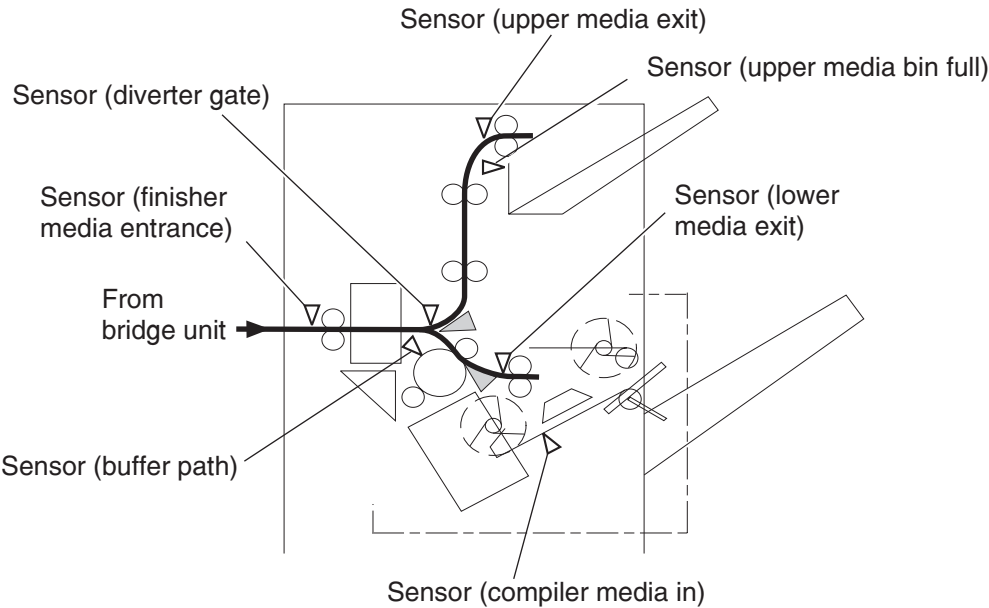
Finisher media path



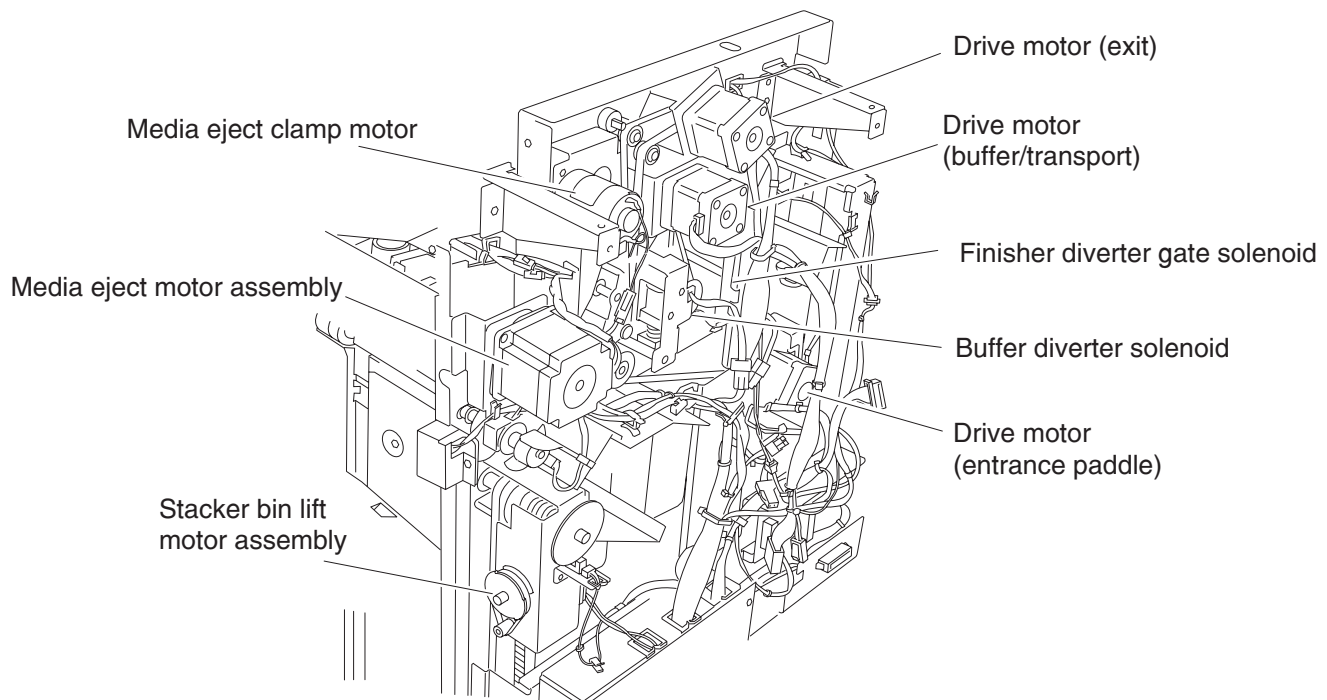
**Finisher roll assemblies**



**Finisher media path sensors**



## Finisher motors

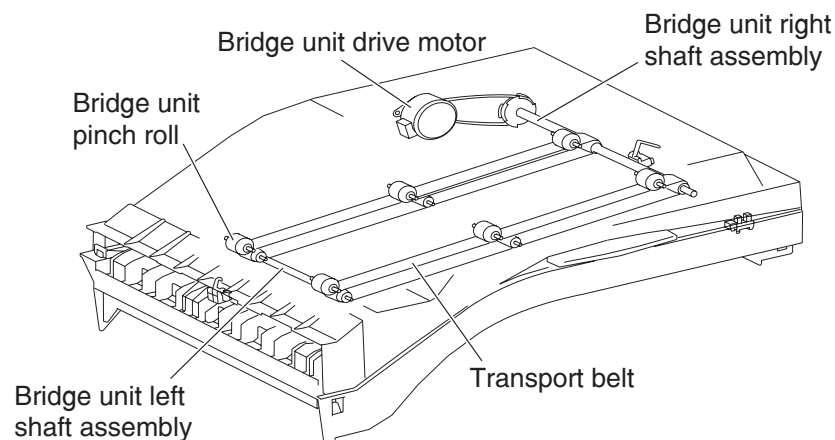


## Bridge unit assembly

When the printer designates the finisher, the media diverter gate in the printer activates and media is fed from the printer into the bridge unit assembly.

The bridge unit drive motor is activated by the trigger of the printer's registration clutch, which drives the transport belts in the bridge unit assembly. The motor power is transmitted to the two belts between the bridge unit right shaft assembly and the bridge unit left shaft assembly.

The media fed to the bridge unit assembly is securely held between the transport belts and the pinch rolls, and fed to the finisher.



## From bridge unit assembly to punch

The media fed from the bridge unit assembly is fed into the finisher by the media entrance roll assembly located on the entrance section of the finisher which is driven by the drive motor (entrance/paddle).

The media route inside the finisher is determined by the finisher diverter gate.

The finisher diverter gate is activated by the finisher diverter gate solenoid controlled by the printer.

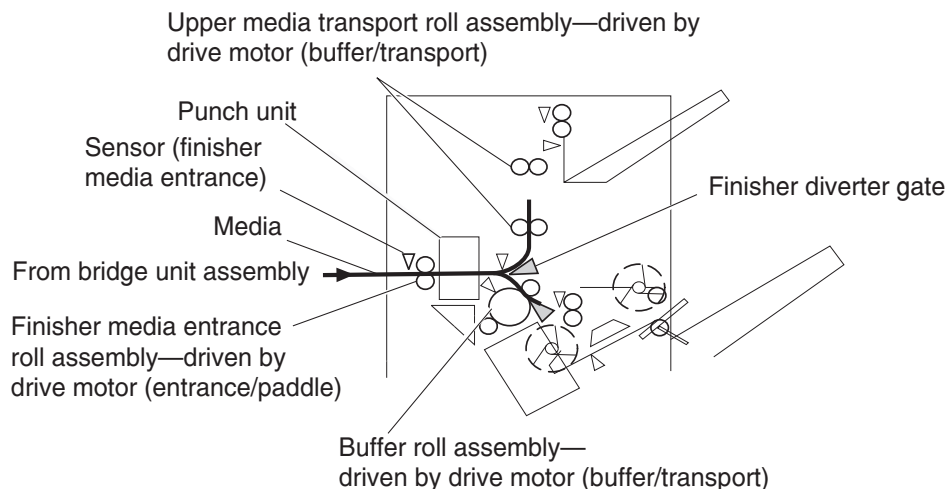
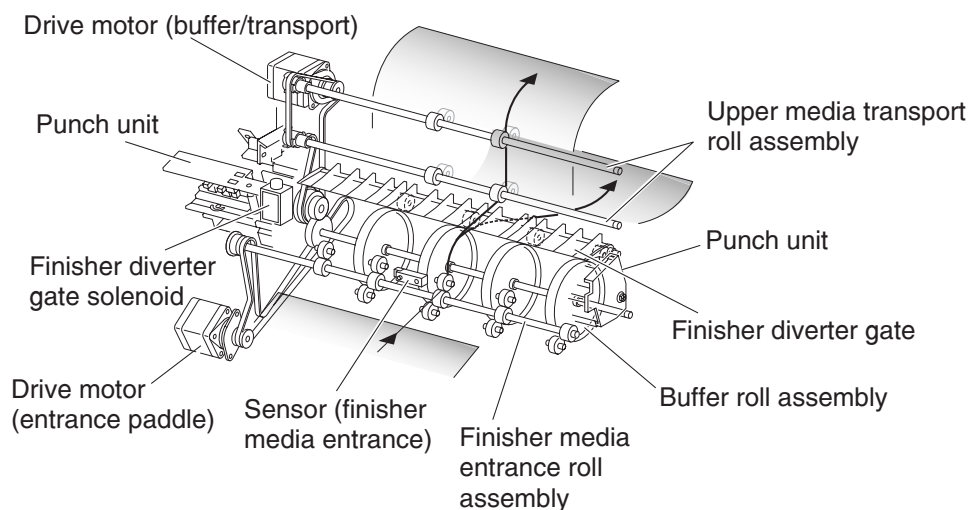
The media is further fed in the finisher by the two upper media transport roll assemblies, or the buffer roll assemblies that are driven by the motor (buffer/transport), and passes through the punch unit.

The sensor (finisher media entrance) becomes low upon detecting media. After a certain amount of time has passed and the level has transitioned to high, the motor (buffer/transport) that drives the upper media transport roll assembly or the buffer roll assembly starts reverse rotation.

The media is returned to the punch unit by the upper media transport roll assembly or the buffer roll assembly, and is stopped with its end gently pressed against the three punch media stopper assemblies.

The three punch media stopper assemblies in the punch unit drop to let media pass through when media is fed to the exit (while the motor (buffer/transport) is rotating forward), but rise when media is returned (while the motor (buffer/transport) is rotating reversely) to stop the media.

Thus, punch hole positions in the media feed direction are determined.



## From punch to compiler unit assembly

The media is transferred to the compiler unit assembly by the buffer roll assembly (driven by the motor (buffer/transport)) and by the lower media exit roll assembly (driven by the drive motor (exit)).

When the first media reaches the compiler unit assembly, the media eject clamp motor is activated to lower the media eject clamp so that the media eject clamp and the media eject shaft assembly can clamp the media.

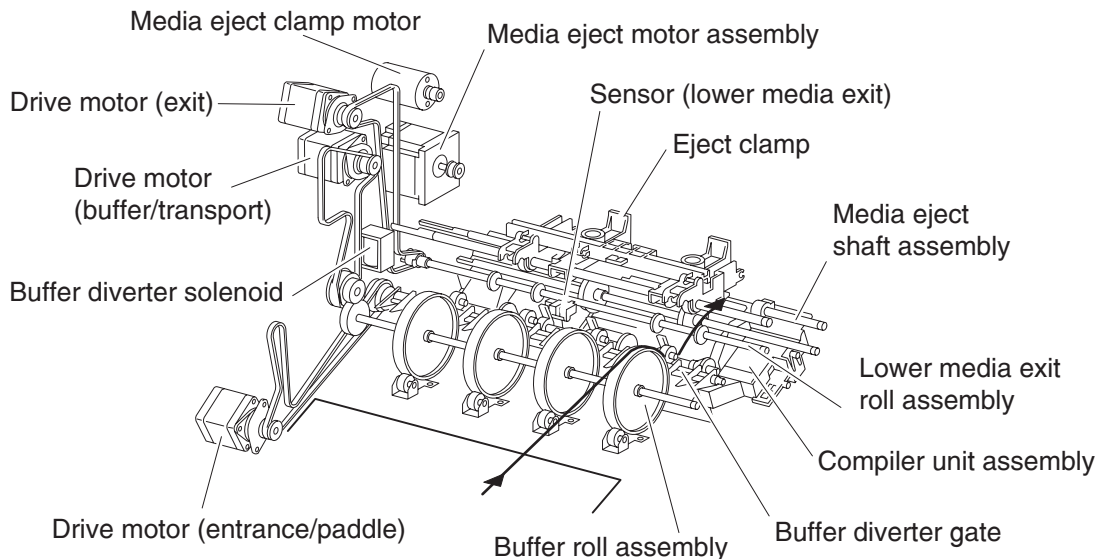
Thus, the media transferred from the punch unit is held by the media eject shaft assembly and the media eject clamp (driven by the media eject motor assembly) and is fed to the exit.

When the media trailing edge passes through the sensor (lower media exit), the media eject motor assembly starts reverse rotation to return the media to the compiler unit assembly.

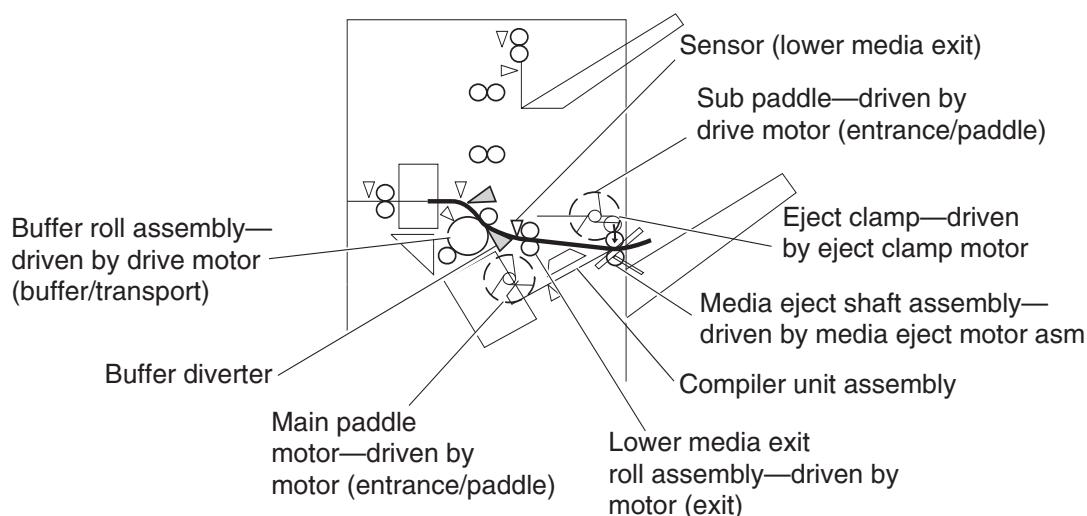
When the following media reaches the compiler unit assembly, the media eject clamp is raised, and the media that has passed through the lower media exit roll assembly falls on the compiler unit assembly.

At this time, the three main paddles are rotated by the main paddle shaft assembly to feed the media so that the media trailing edge butts against the rear wall of the compiler unit assembly.

The sub paddle solenoid of the media eject unit assembly is activated to lower the sub paddle so that the media can be fed to the compiler unit assembly.







When printing multiple sets, while stapling the first set on the compiler unit assembly or ejecting it to the stacker media bin, the first media of the second set will not be fed to the compiler unit assembly.

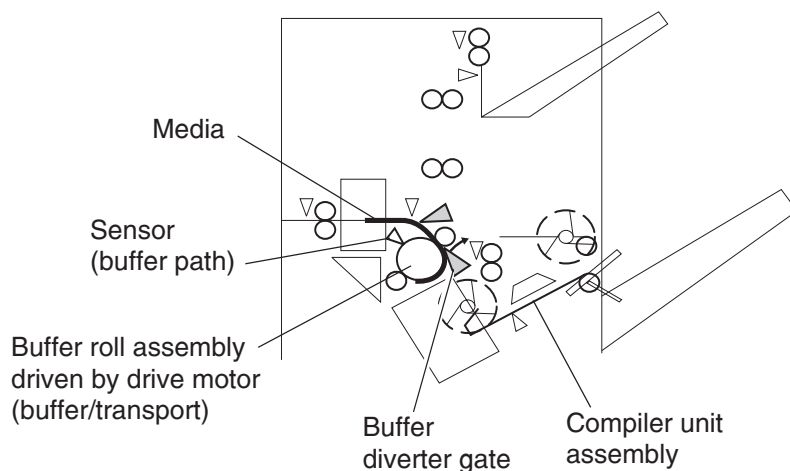
When the first media of the second set reaches the finisher, the buffer diverter solenoid is activated by the printer command and by the sensor (finisher media entrance) to switch the buffer diverter gate.

Thus, the media route is switched into the buffer roll assembly's circumferential direction. (This operation is called the buffer path.)

The first media of the second set is aligned with the second media, and then they are fed together to the compiler unit assembly.

Even for one sheet of media, the buffer path operation is executed in the same way. The media is stacked temporarily on the compiler unit assembly, and then ejected in the stacker media bin.

After the buffer path is executed for the first media, if a second media of a different size comes, the first media is fed to the compiler unit assembly, but the second one is fed to the compiler unit assembly without the buffer path. At this time, a certain delay time is provided to prevent the second media from colliding with the first one.



## From compiler unit assembly to stacker media bin

Stapled media on the compiler unit assembly (stapling mode) or aligned media (non-stapling mode) are held between the media eject clamp and the media eject shaft assembly.

The media eject shaft assembly is driven by the media eject motor assembly to transfer media to the stacker media bin.

After media is transferred to the stacker media bin, it is held by the clamp paddle attached to the media eject shaft assembly.

## From punch to upper media bin

The media to be ejected to the upper media bin is switched in the media path by the finisher diverter gate located behind the punch and fed in the upper media transport roll assembly direction.

The finisher diverter gate is switched by the finisher diverter gate solenoid. While the solenoid is activated, media is fed in the upper media transport roll assembly direction.

The two upper media transport roll assemblies driven by the motor (buffer/transport) feed media to the upper media exit roll assembly top at the top of the finisher.

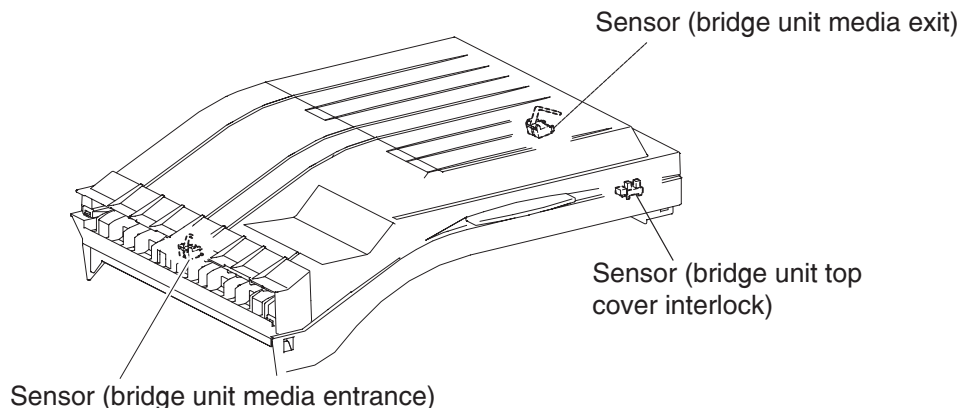
The upper media exit roll assembly top driven by the drive motor (exit) ejects the media to the upper media bin.

The upper media exit roll assembly decelerates after a specified period of time from the following trigger events.

## Functions of sensors along the media path

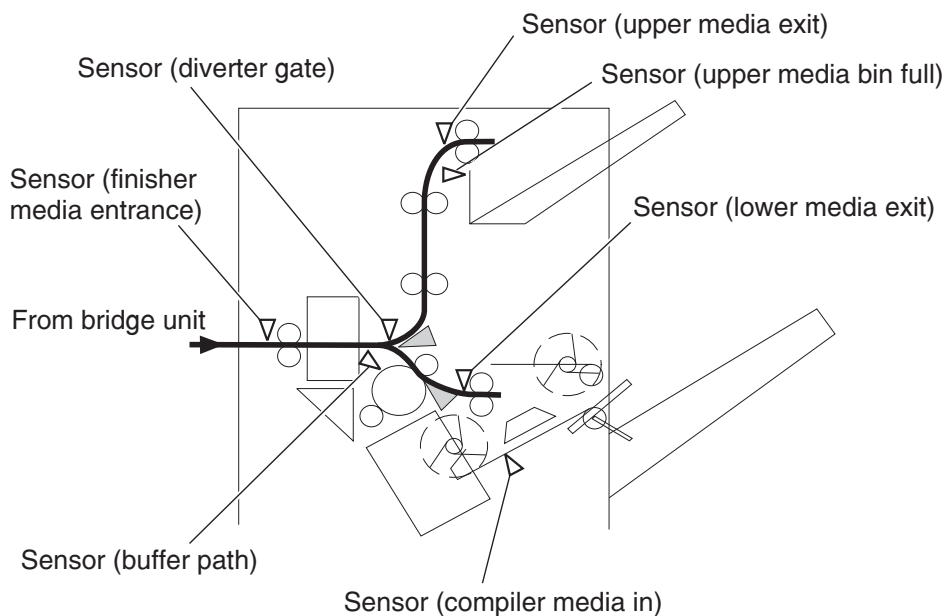
### Bridge unit assembly

- Sensor (bridge unit media entrance)
  - A photo-interrupter sensor that detects whether media is fed from the printer to the bridge unit assembly
  - It turns high (+5 V dc) (light receiving) when media enters the bridge unit assembly.
- Sensor (bridge unit media exit)
  - A photo-interrupter sensor that detects whether media passes through the bridge unit assembly
  - It turns high (+5 V dc) (light receiving) when media reaches this sensor, and turns low (0 V dc) when media exits from the bridge unit assembly.
- Sensor (bridge unit top cover interlock)
  - A photo-interrupter sensor that detects open/close of the bridge top cover assembly of the bridge unit assembly
  - It turns high (+5 V dc) (light receiving) when the bridge top cover assembly opens.



## Finisher

- **Sensor (finisher media entrance)**
  - A photo-reflective sensor detects whether media is fed from the bridge unit assembly to the finisher
  - It turns high (+5 V dc) while media is present within the sensing area.
  - When the level turns high due to the first media of the second set during multi-set printing, this sensor activates the buffer diverter solenoid to switch the buffer diverter gate so that the media goes in the buffer roll assembly's circumferential direction.
- **Sensor (diverter gate)**
  - A photo-reflective sensor that detects the leading edge of the media
  - It turns low (0 V) when the front end reaches the sensing area.
- **Sensor (lower media exit)**
  - A photo-interrupter sensor that detects whether media passes through the sensor (lower media exit)
  - It turns high (+5 V) (light receiving) when the actuator is driven out of the sensing area by the media.
  - When the level turns high, this sensor activates the front tamper motor and the rear tamper motor on the compiler unit assembly.
  - This sensor is also used to control on/off of the media eject motor assembly
- **Sensor (compiler media present)**
  - A photo-interrupter sensor that detects whether media is present or not on the compiler unit assembly.
  - While media is present, the actuator is outside the sensing area, and the sensor turns high (+5 V dc) (light receiving).
- **Sensor (buffer path)**
  - A photo-interrupter sensor that detects whether media is fed toward the buffer roll assembly
  - While media is present, the actuator is outside the sensing area, and the sensor turns at high (+5 V dc) (light receiving).
- **Sensor (upper media exit)**
  - A photo-interrupter sensor that detects whether media is fed to the upper media exit roll assembly top at the exit side of the upper media bin
  - When the media is fed, the actuator leaves from the sensing area, and the sensor turns high (+5 V dc).
- **Sensor (upper media bin full)**
  - A photo-reflective sensor that detects the stack volume of media in the upper media bin



## Punch unit

This section describes the media punching operation of the punch.

Two types of punch are provided: the 2/3-hole type and the 2/4-hole type.

The following explains the 2/3-hole type (2-hole/3-hole auto-switching).

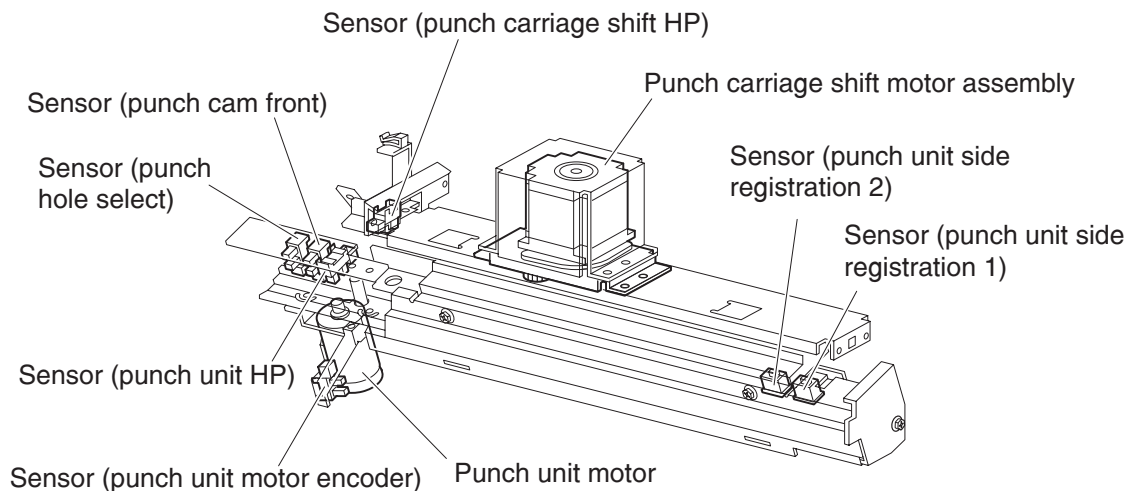
Every type has the same construction, except for the sensor (punch hole select) that is provided for the 2-hole type and 3-hole type only.

### Adjusting punching positions

The punching positions from the media edge in the direction of feed are determined by gently pressing the media against the three punch media stopper assemblies.

The three punching positions from the media edge in the direction of media width are determined by the following method.

- Activate the punch carriage shift motor assembly and move the punch to the front side until the sensor (punch carriage shift HP) turns low.
- Reversely rotate the motor and move the punch to the rear side until the sensor turns high to determine the home position.
- The punch carriage shift motor assembly is activated to move the punch to the front until the sensor (punch unit side registration 1) and the sensor (punch unit side registration 2) detects the media edge, and then the punch is further moved to the front according to the pulse-number determined by the media size. (The punch carriage shift motor assembly stops at this position.)



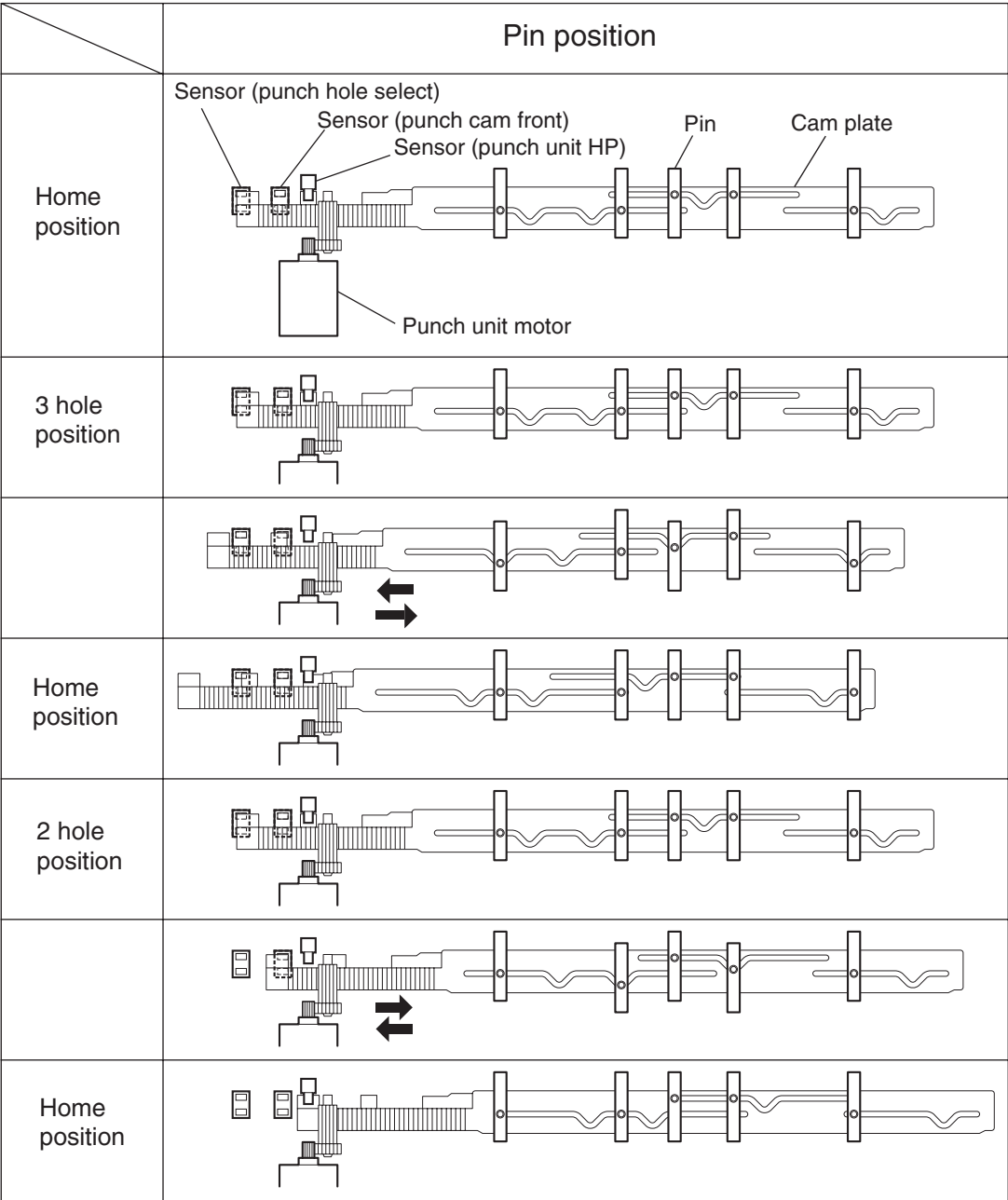
**Punching**

After punching positions are determined, the punch unit motor is activated to move the cam plate. With the movement of the cam plate, the pins descend along the guide holes to punch the media.

This operation is performed for each sheet of media.

The cam plate can lower the pins even while it is moving to the front or rear side.

The punch unit motor is rotated forward or reversely for each sheet of media, which is triggered by the sensor (punch cam front) being turned on/off.



## Detecting punch waste full

Punch waste is stored in the punch waste box.

A sensor is provided to detect punch waste full.

When punch waste full is detected, it is notified to the operator only once.

Even if punch waste is not removed, the finisher can still punch media. However it can spread punch waste inside the machine.

## Detecting punch waste box

The sensor (punch waste box set) detects whether the punch waste box is properly set.

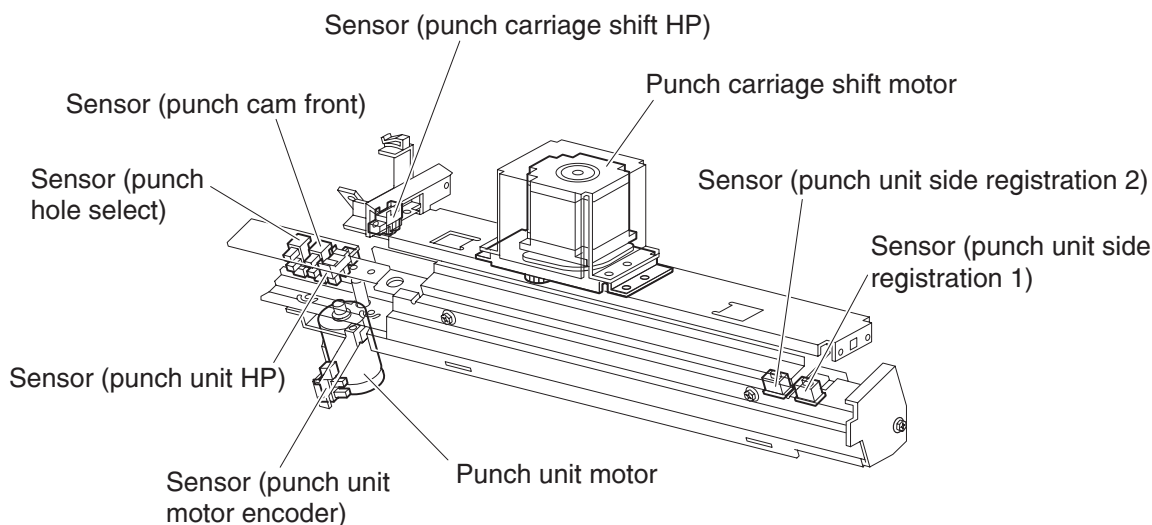
When the sensor (punch waste box set) does not detect that the punch waste box is properly set for four seconds, the punch waste box count is reset.

## Functions of punch sensors/motors

- Sensor (punch unit side registration 1)
  - A photo-reflective sensor that detects the side edge of large media
  - Media side edge is detected by On/Off of this sensor while shifting the punch (containing this sensor) in the direction of media width.
  - The sensor remains at high (+5 V dc) while media is present, and turns low when media side edge is detected.
- Sensor (punch unit side registration 2)
  - A photo-reflective sensor that detects the side edge of small media
  - This sensor has the same function as the sensor (punch unit side registration 1).
- Sensor (punch carriage shift HP)
  - A photo-interrupter sensor that detects the home position of the moving punch
  - It turns high (+5 V dc) (light blocking) when the home position is detected.
- Sensor (punch unit HP)
  - A photo-interrupter sensor that detects the home position of the cam plate that lowers the punching pins
  - It turns high (+5 V dc) when the home position is detected.
- Sensor (punch hole select)
  - A photo-interrupter sensor that detects the rear position of the cam plate
  - It turns high (+5 V dc) when the rear position is detected.
  - This sensor also detects the cam position to switch punch holes (2-hole/3-hole).
- Sensor (punch cam front)
  - A photo-interrupter sensor that detects the front position of the cam plate
  - It turns high (+5 V dc) when the front position is detected.
  - This sensor is used to determine to which side (front or rear) the cam plate should be moved.
- Sensor (punch unit motor encoder)
  - A photo-interrupter sensor that detects pulse generated by the encoder attached to the punch unit motor
  - It counts punch unit motor revolutions, and becomes a trigger to stop the motor (by shutting off the current).
- Punch carriage shift motor assembly
 

A stepping motor to move the punch in the media width direction
- Punch unit motor
  - A DC motor to move the cam plate that lowers the punching pins
  - Forward rotation of the motor moves the cam plate to the front side, and reverse rotation moves it to the rear side.

- Sensor (punch waste box set)
  - A photo-interrupter sensor that detects whether the waste box is properly set
  - When the punch waste box is properly set, the actuator of the box blocks the light transmission of the sensor, which turns the sensor to high (+5 V dc).
- Sensor (punch waste box full)
  - A photo-interrupter sensor that detects whether the punch waste box is filled with punch waste.



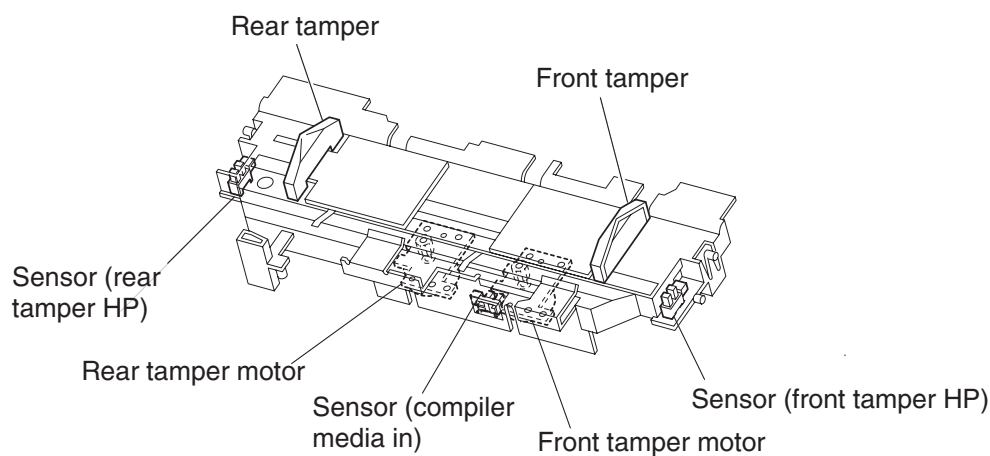
## Compiler unit assembly

This section describes the operation of the compiler unit assembly which aligns the media edge transferred from the punch unit.

### Outline of operation

When media is fed onto the compiler unit assembly, tamping is performed to align the media edge in the media width direction.

When ejecting stapled sets of media to the stacker media bin, if they are stacked in the stacker media bin with the same staple position, the height of the stapled portion will increase. This will cause improper compiling of media due to butting of the following media. To prevent such improper compiling, offsetting is required by shifting the staple position between sets of media.



## Capacity of compiler unit assembly

Media volume that can be stacked on the compiler unit assembly is limited as shown in the table below.

The number of sheets depends on whether media is stapled or not, as well as on media size.

If the number of sheets of one set to be stapled exceeds the limit, the exceeding sheets are not stacked on the compiler unit assembly, and are forcibly ejected to the stacker media bin without being stapled.

This forcible ejection is performed to prevent damage to the staple assembly.

When feeding large media in the non-staple mode, there may be a misalignment depending on media characteristics. For this reason, the default media capacity is set to a smaller value.

### Compiler unit assembly media capacity

Condition	Min.	Default	Max.
Staple mode	2	50	75
For small media (less than 216 mm in the feed direction) in non-staple mode	10	50	100
For large media (216 mm or more in the feed direction) in non-staple mode	10	25	100

## Compiler unit assembly operation with multiple media sizes

When two or more media sizes are used and their widths are the same (example: A4L and A3S), all the sheets are compiled and stapled as a set on the compiler unit assembly, and then ejected to the stacker media bin.

When two or more media sizes with different media width are used, stapling media on the compiler unit assembly is stopped when a different size is detected. Such different-size sheets of media are forcibly ejected to the stacker media bin.

## Tamping

When media is fed from the punch to the compiler unit assembly, tamping is performed to align the media in the media width direction on the compiler unit assembly.

Tamping is an operation to align media to the specified position on the compiler unit assembly. The front tamper or rear tamper is moved to the end of the media by its motor.

Tamping is executed each time when a sheet of media reaches the compiler unit assembly. Additional tamping is executed after the last sheet is tamped.

There are three types of tamping.

- Front tamping– Tamping by the rear tamper with the front tamper fixed at the home position
- Rear tamping– Tamping by the front tamper with the rear tamper fixed at the home position
- Center tamping– Tamping by the front and rear tampers to align media to the center

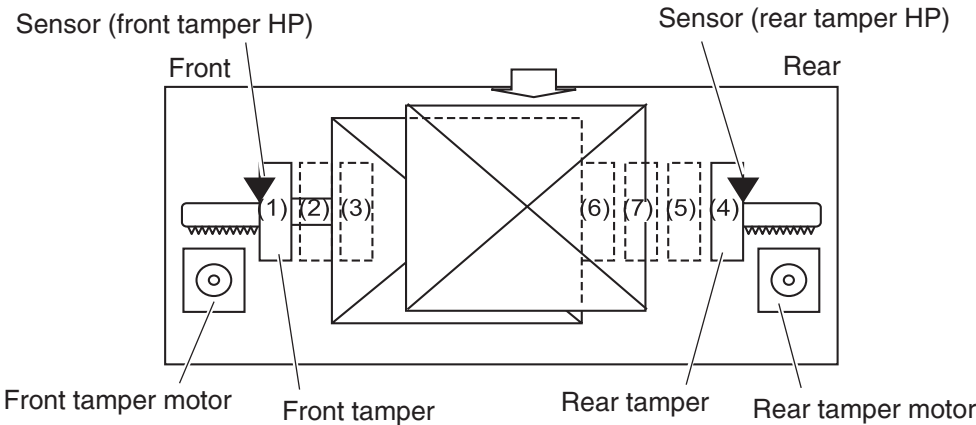


Front tamping

Front tamping is used in the following cases.

- In the non-staple mode
- When executing front stapling (corner)

The tamper positions during front tamping are shown below.



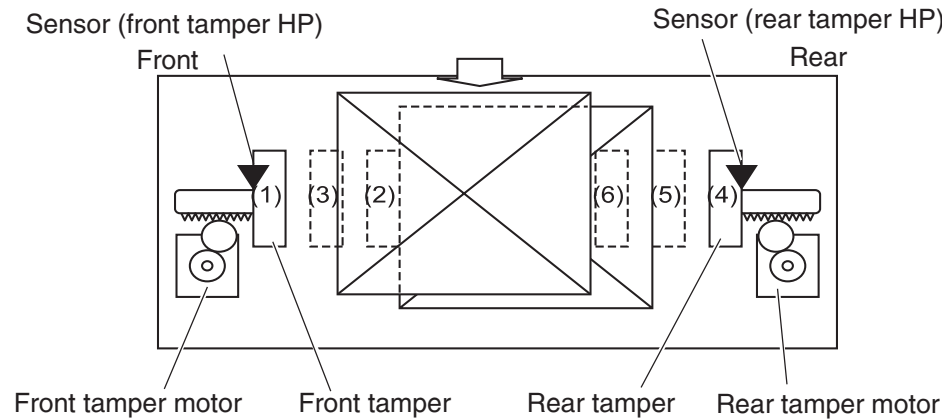
Position	Description
1	Front tamper home position– sensor (front tamper HP)
2	Front tamper size position
3	Front tamper offset position
4	Rear tamper home position– sensor (rear tamper HP)
5	Rear tamper standby position
6	Rear tamper tamping position
7	Rear tamper offset position

Rear tamping

Rear tamping is used in the following cases.

- When executing rear stapling (corner)
- When executing dual stapling

The tamper positions during rear tamping are shown below.

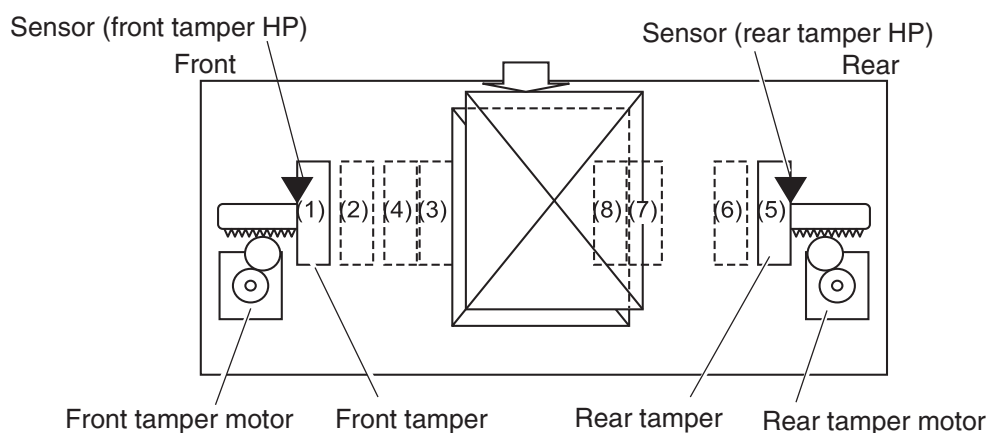


Position	Description
1	Front tamper home position– sensor (front tamper HP)
2	Front tamper tamping position
3	Front tamper offset position
4	Rear tamper home position– sensor (rear tamper HP)
5	Rear tamper size position
6	Rear tamper offset position

## Center tamping

Center tamping is used when executing rear stapling (straight).

The tamper positions during center tamping are shown below.



Position	Description
1	Front tamper home position– sensor (front tamper HP)
2	Front tamper standby position
3	Front tamper tamping position
4	Front tamper offset position
5	Rear tamper home position– sensor (rear tamper HP)
6	Rear tamper standby position
7	Rear tamper size position
8	Rear tamper offset position

## Determining tamper home position

When the sensor (lower media exit) turns high (+5 V dc) (light receiving), the front and rear tamper motors on the compiler unit assembly are activated, and the front and rear tampers start moving.

The front tamper home position is determined when the front tamper enters the sensor (front tamper HP) sensing area.

In the same way, the rear tamper home position is determined when the rear tamper enters the sensor (rear tamper HP) sensing area.

## Tamping

Tamping is executed after a preset time has passed after the sensor (compiler media present) turns high (+5 V dc) when media is detected on the compiler unit assembly.

## Offsetting

Offsetting is an operation to shift the position of media to be ejected to the stacker media bin so that boundaries between media units (sets of media, job units, etc.) can be easily recognized.

Offsetting is executed for staple positions:

- During front stapling (corner)– Shifts stapled sheets using the front tamper by 20 mm to the rear side before ejecting them to the stacker media bin
- During rear stapling (corner/straight)
  - For media with a width of 216 mm or more [rear staple (corner)]– Shifts stapled sheets using the rear tamper by 20 mm to the front side before ejecting them to the stacker media bin
  - For media with a width of less than 216 mm [rear staple (straight)]– Shifts stapled sheets using the front tamper by 9 mm to the rear side before ejecting them to the stacker media bin.

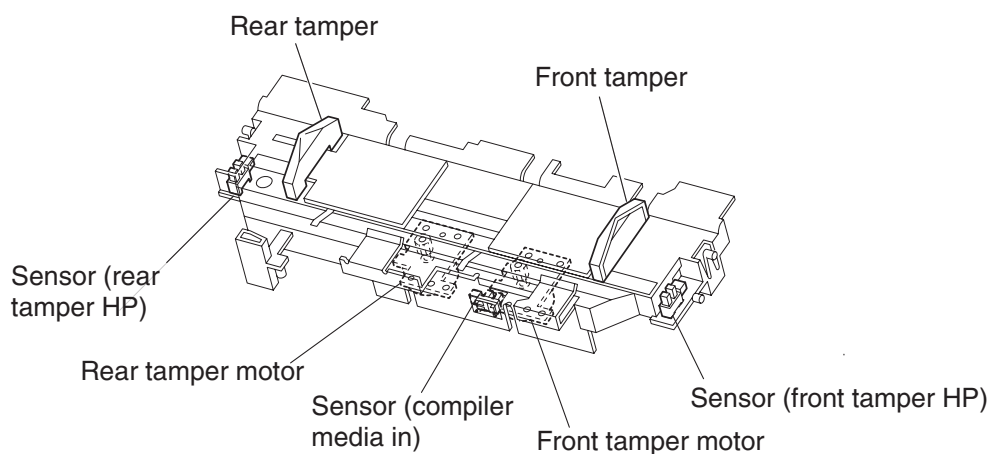
During dual stapling:

- Shifts stapled sheets using the front tamper by 9 mm to the rear side before ejecting them to the stacker media bin.
- Offsetting is not executed (0 mm) for small media.

## Functions of compiler unit assembly sensors/motors

- Sensor (compiler media in)
  - A photo-interrupter sensor that detects whether media is present or not on the compiler unit assembly
  - When media is detected, the actuator leaves the sensing area, which turns the sensor to high (+5 V dc) (light receiving).
- Sensor (front tamper HP)
  - A photo-interrupter sensor that detects the front tamper home position
  - When the front tamper comes to the home position, it enters the sensor's sensing area, which turns the sensor to high (+5 V dc) (light blocking).
- Sensor (rear tamper HP)
  - A photo-interrupter sensor that detects the rear tamper home position
  - When the rear tamper comes to the home position, it enters the sensor's sensing area, which turns the sensor to high (+5 V dc) (light blocking).
- Front tamper motor
  - A stepping motor that moves the front tamper for tamping
  - Clockwise rotation of this motor moves the front tamper to the rear side. Counterclockwise rotation of this motor moves the tamper to the front side.

- Rear tamper motor
  - A stepping motor that moves the rear tamper for tamping
  - Clockwise rotation of this motor moves the rear tamper to the front side. Counterclockwise rotation of this motor moves the tamper to the rear side.



## Stapler

This section describes the operation of the stapler.

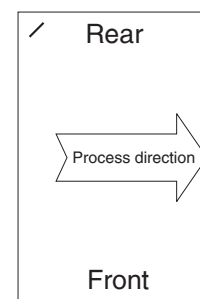
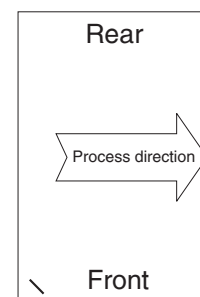
### Stapling operation

Sheets of media fed from the punch are tamped on the compiler unit assembly, and then stapled at specified positions by the command of the printer.

### Staple positions

There are four stapling modes:

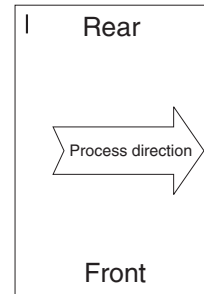
- Front staple (corner) [front corner]  
The stapler staples a set of media obliquely (45 degrees) after the rear tamper aligns the media to the front side.
- Rear staple (corner) [rear corner]  
This type of stapling is applied for media with a width of 216 mm or more.  
The stapler moves to the rear corner and staples a set of media obliquely (45 degrees) after the front tamper aligns the media to the rear side.



- **Rear Staple (Straight) [rear straight]**

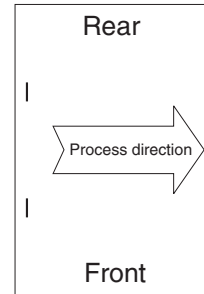
This type of stapling is applied for media with a width of less than 216 mm.

The Stapler staples a set of media in parallel with the media edge after the front tamper aligns the media to the rear side.



- **Dual Staple [dual]**

The Stapler staples a set of media at fixed positions (front/rear sides) in parallel with the media edge after the front tamper aligns the media to the specified position for each media size.



## Media sizes that allow stapling

Media size that allows stapling depends on stapling positions.

The following table shows media sizes and the applicability of stapling for each staple position.

	<b>Front corner</b>	<b>Rear corner</b>	<b>Rear straight</b>	<b>Dual</b>
A3 SEF	Yes	Yes	No	Yes
A4 LEF	Yes	Yes	No	Yes
11 x 17 in. SEF	Yes	Yes	No	Yes
8.5 x 11 in. LEF	Yes	Yes	No	Yes
8K SEF(GCO), 16K LEF(GCO)	Yes	Yes	No	Yes
B4 SEF, B5 LEF	Yes	Yes	No	Yes
8 x 10 in. LEF	Yes	Yes	No	Yes
8.5 x 14 in. SEF / 8.5 x 13 in. SEF / 8.5 x 11 in. SEF	Yes	No	Yes	Yes
A4 SEF	Yes	No	Yes	Yes
8 x 10 in. SEF	Yes	No	Yes	Yes
Yes: Applicable, No: Not applicable				

## Stapling one sheet

Upon receiving the stapling command from the printer with one sheet remaining on the compiler unit assembly, the finisher ejects the media to the stacker media bin without stapling it.

## Stapling multiple size media

When sheets with different sizes and the same width (example: A4L and A3S) are present on the compiler unit assembly, all the sheets are stapled and then ejected to the stacker media bin.

When sheets with different widths are present on the compiler unit assembly, stapling is stopped when a different width is detected. Such different-width sheets are forcibly ejected to the stacker media bin.

## Media limits for stapling

The number of sheets to be stapled is limited to prevent damage to the stapler.

- If the number of sheets of one set to be stapled exceeds the limit of the compiler unit assembly, the exceeding sheets are not stacked on the compiler unit assembly, and are forcibly ejected to the stacker media bin without being stapled.
- After the forcible ejection of media, if the number of following sheets of one set to be stapled exceeds the limit of the compiler unit assembly, the exceeding sheets are also ejected forcibly to the stacker media bin without being stapled.
- After that, even if the number of following sheets of one set to be stapled falls within the limit, the sheets are also ejected forcibly to the stacker media bin without being stapled.

The upper limit (and default) of the compiler unit assembly media capacity when stapling is 50 (variable (10 to 100) by the non-volatile memory)).

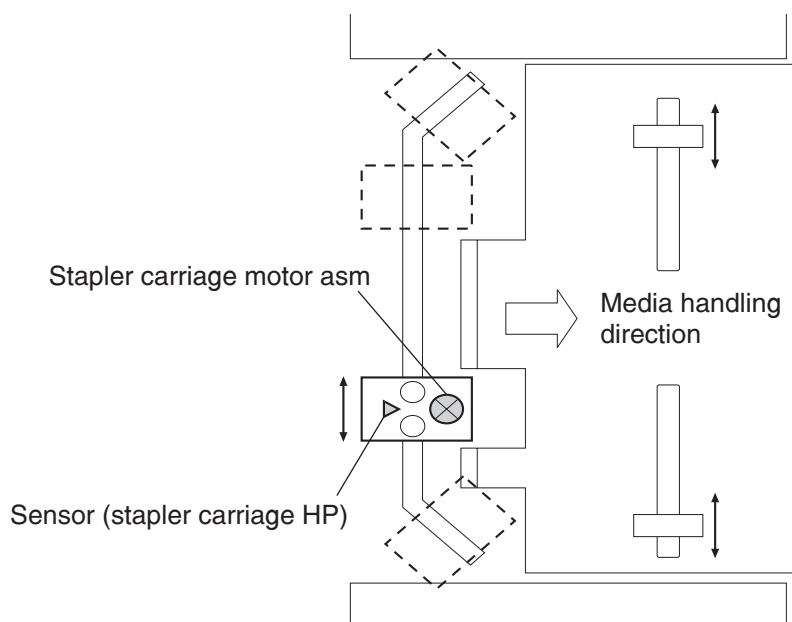
## Stapler operation

The stapler stays at the front home position, that is, at the front staple (corner) position when the power is turned on.

The stapler starts stapling when a set of sheets to be stapled is stacked on the compiler unit assembly.

The stapler does not move during stapling in the front staple mode.

In any mode other than the front staple mode, the stapler moves to the specified position, and then performs stapling.



## Stapler unit assembly

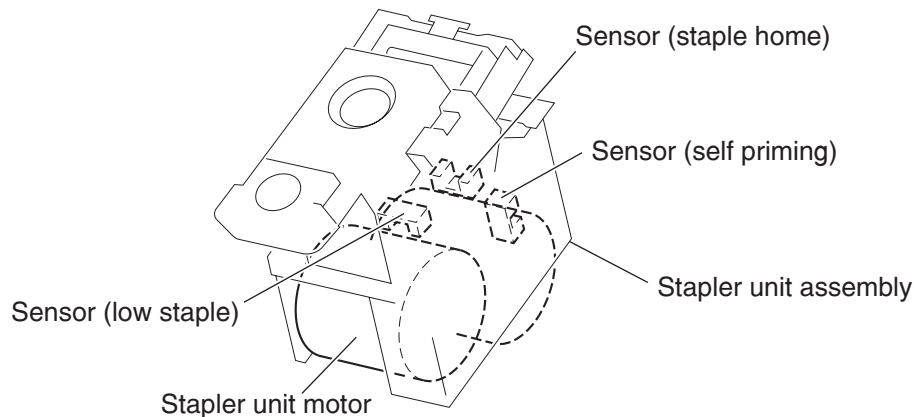
The stapling operation is executed by closing the stapler unit assembly.

The stapler unit assembly, containing the staple motor, the sensor (staple home), the sensor (self priming), and the sensor (low staple), is activated by the staple motor.

Forward (clockwise) rotation of the motor drives the stapler to staple a set of sheets, and returns the stapling unit to the home position.

If stapling fails, the motor rotates reversely (counterclockwise) to return the stapler unit assembly to the home position.

When staples become low, the low staple sensor detects it, and stapling stops automatically, displaying an alarm message. The message is also displayed when the staple cartridge is not installed.

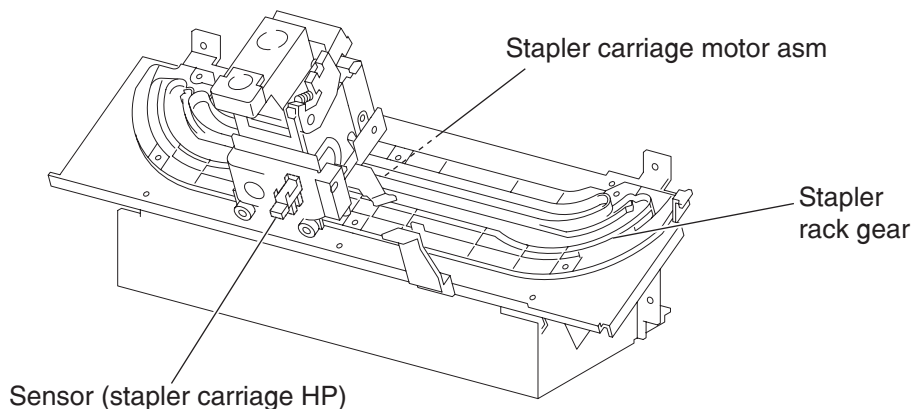


## Functions of stapler sensors/motors

- Sensor (stapler carriage HP)
  - A photo-interrupter sensor that detects the stapler home position, rear staple (corner) position, and rear staple (straight) position
  - It turns high (+5 V dc) (light blocking) when the stapler comes to the specified position.
- Stapler carriage motor assembly
  - A stepping motor that moves the stapler unit assembly
  - Clockwise rotation of this motor moves the stapler unit assembly to the rear side, while counterclockwise rotation moves the stapler unit assembly to the front side.
- Sensor (low staple) in the stapler unit assembly
  - A photo-interrupter sensor that detects when the stapler unit assembly is nearly out of staples
  - It turns high (+5 V dc) when 20 staples are left.
- Sensor (self priming) in the stapler unit assembly
  - A photo-interrupter sensor that detects that staples are at the stapler unit assembly end; it also detects failure in stapling
  - It turns low (0 V dc) (light blocking) when stapling is ready
- Sensor (staple home) in the stapler unit assembly
  - A photo-interrupter sensor that detects the stapler unit assembly home position; it also detects failure in stapling
  - This sensor also functions as a trigger to stop the staple motor.
  - It turns low (0 V dc) (light blocking) while the stapler unit assembly stays at the home position.



- Stapler unit motor (in the stapler unit assembly)
  - A DC motor to activate the stapler unit assembly for stapling
  - Clockwise rotation of this motor enables stapling, while counterclockwise rotation returns the stapler unit assembly.



## ***Upper media bin***

### **Operation**

The upper media bin contains the sensor (upper media bin full) to detect the media stack volume in the upper media bin.

Once the sensor detects a full stack (500 sheets) in the upper media bin, ejection of media to the upper media bin is inhibited until a full stack is reset.

### **Functions of upper media bin sensors**

- Sensor (upper media exit)
  - A photo-interrupter sensor that detects that media has come to the upper media exit roll assembly top at the exit of the upper media bin
  - When media reaches the upper media exit roll assembly top, the actuator leaves the sensing area, which turns the sensor to high (+5 V dc).
- Sensor (upper media bin full)
  - A photo-reflective sensor that detects the media stack volume in the upper media bin
  - It turns high (+5 V dc) when it detects a full stack.

## Stacker media bin

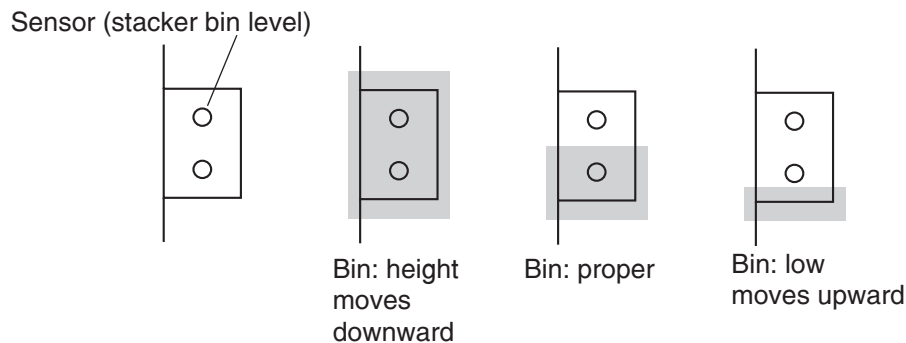
The stacker media bin goes up and down to an appropriate position according to the volume of media fed from the compiler unit assembly so as to properly stack media to a full stack.

### Operation

The stacker media bin moves to an appropriate position according to the volume of media fed from the compiler unit assembly. The sensor (stacker bin level 1) and the sensor (stacker bin level 2) detect the height of media in the stacker media bin, and the sensor (stacker bin level encoder) determines the volume of media in the tray.

When media or the stacker media bin comes between the light emitter and the photo-receiver of the sensor (stacker bin level 1) and sensor (stacker bin level 2), the emitted light is blocked, and the sensors turn high. The height of media or the stacker media bin is detected based on the levels of these sensors.

This sensor information is used to control the elevator motor. The motor is activated to move the stacker media bin while the sensor (stacker bin level) turns from the light blocking state to the light receiving state.

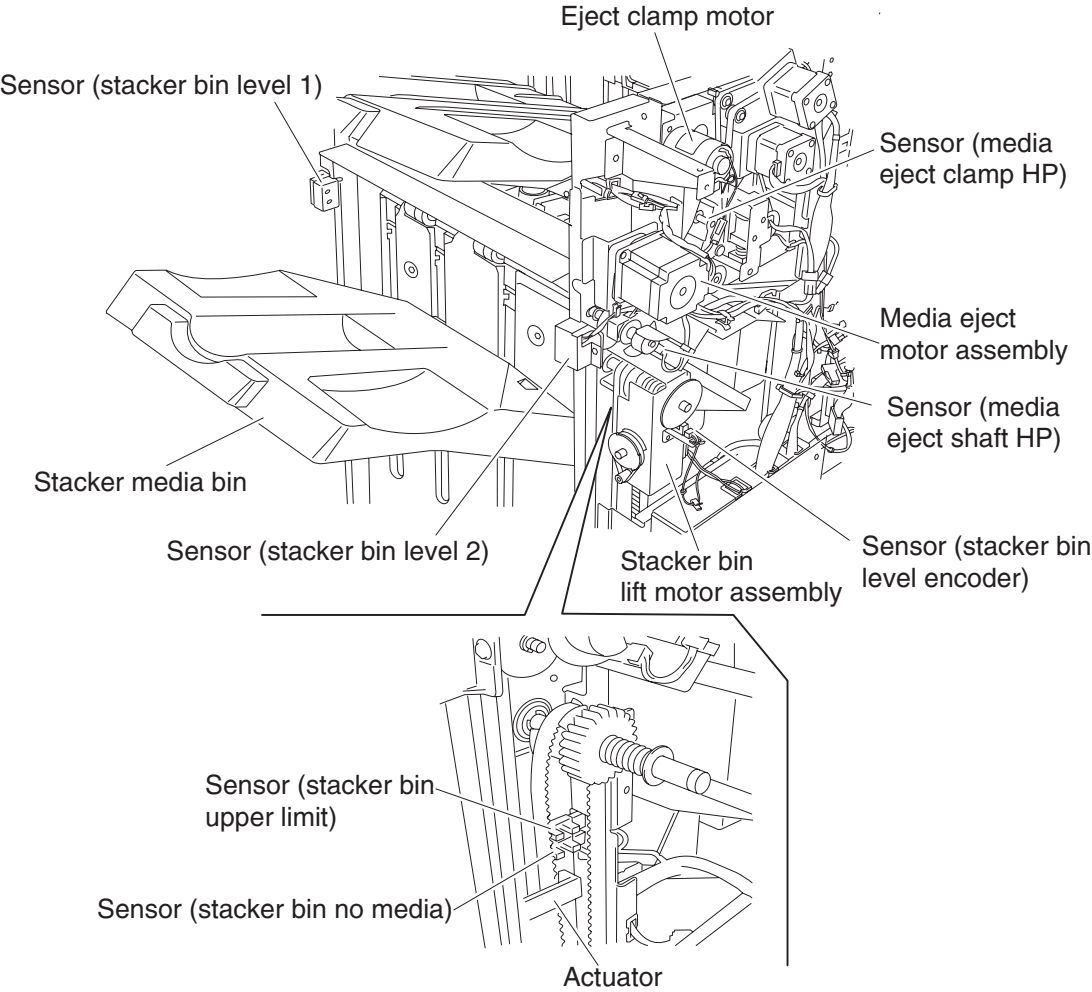


The sensor (stacker bin no media) is turned On or Off by the actuator attached to the carriage assembly right on the rear side of the finisher. In case the stacker media bin abnormally goes up above the sensor (stacker bin no media), the sensor (stacker bin upper limit) is installed above the sensor (stacker bin no media) for protection against abnormal operation.

If an operator removes media from the stacker media bin during printing, it is detected by the sensor (stacker bin level 2), and the ejection of media to the stacker media bin is inhibited. Then the elevator motor is activated to move the stacker media bin to the sensor (stacker bin level 1) sensing area. Thus, the ejection of media to the stacker media bin is restored.

If an operator removes media from the stacker media bin while printing is stopped, it is detected by the sensor (stacker bin level 2). After three seconds have passed, the elevator motor is activated to move the stacker media bin to the sensor (stacker bin level 1) sensing area. Thus, the ejection of media to the stacker media bin is restored.

The stacker media bin lowers according to the volume of media it contains. If any obstacle under the tray hinders the tray from lowering, stacker lower safety warning is detected, and the stacker media bin is stopped.



## Full stack detection

A full stack is detected when media in the stacker media bin becomes full to prevent media jam or falling of media to the floor. The stacker media bin can stack up to approximately 3000 sheets.

The media volume in the stacker media bin is detected at every 10% (approximately 300 sheets) and notified to the Controller.

Furthermore, the stacker media bin can stack up to 200 sets (default) of stapled media.

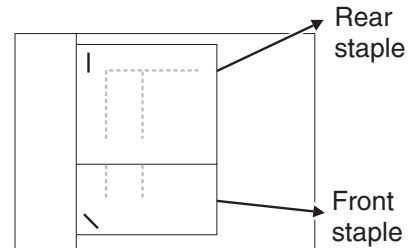
The stacker media bin can continue to stack media until media volume reaches either of the limits above.

In the mix stacking mode, all the sizes are allowed until a media volume of approximately 300 sheets in the stacker media bin is detected.

The mix stacking mode indicates one of the following cases:

- A larger (any size of media) sheet of media is stacked on a smaller sheet.  
For example: A4LEF (297x210) media is stacked on A4SEF (210x297) media.  
**Note:** When B5LEF (257x182) media is stacked on A4LEF (297x210) media, this is not mix stacking.
- A sheet of media of less than 11 inches is stacked in the stacker media bin with the Staple Mode changed.

Top view of finisher tray



- An operator put a sheet (or sheets) when no media is remaining in the stacker media bin.  
(The size and condition of media stacked in the tray are not identified.)
- Media was present in the stacker media bin when power was turned on.  
(The size and condition of media stacked in the tray are not identified.)
- The finisher entered the Sleep Mode with mix stacking and then has exited the Sleep Mode.
- The post-processing mode has changed.

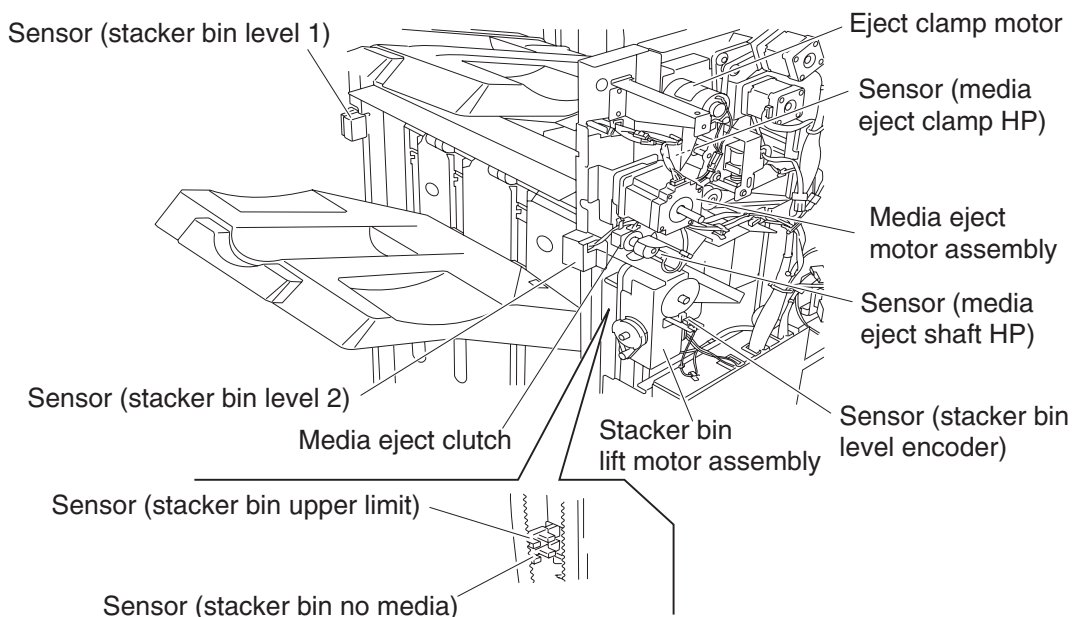
## Functions of stacker media bin sensors/motors

- Sensor (stacker bin level 1)
  - A light emitter and photo-receiver paired together to detect the height of media in the stacker media bin
  - This sensor is used to control the elevator motor.
  - When blocked by media or the tray, this sensor turns high, deciding that the stacker media bin is above the reference level.
  - To the contrary, when receiving light, this sensor turns low, deciding that the stacker media bin is below the reference level.
  - The high to low turning point of the sensor is defined as the reference level.
- Sensor (stacker bin level 2)
  - A light emitter and photo-receiver paired together to detect the height of media in the stacker media bin (same function as sensor (stacker bin level 1))
  - This sensor is also used to control the elevator motor.
  - When blocked by media or the tray, this sensor turns high, deciding that the stacker media bin is above the reference level.
  - To the contrary, when receiving light, this sensor turns low, deciding that the stacker media bin is below the reference level.

- **Sensor (stacker bin no media)**
  - A photo-interrupter sensor that detects that the stacker media bin is at the highest position; it also detects no media.
  - When the actuator attached to the carriage assembly right enters the sensing area, the emitted light is blocked, which turns the sensor to high (+5 V).
- **Sensor (stacker bin upper limit)**
  - A photo-interrupter sensor that detects the stacker media bin's abnormal elevation above the top position (sensor (stacker bin no media) position)
  - When the actuator attached to the carriage assembly right enters the sensing area, the emitted light is blocked, which turns the sensor to high (+5 V).
- **Sensor (stacker bin level encoder)**
  - A photo-interrupter sensor that counts the pulse of the Encoder attached to the Shaft-Elevator.
  - The media volume in the stacker media bin is detected based on this count.
- **Stacker bin lift motor**
  - A DC motor that elevates or lowers the stacker media bin
  - Clockwise rotation elevates the tray, and counterclockwise rotation lowers the tray.
- **Media eject motor assembly**
  - A stepper motor that ejects stapled or non-stapled media to the stacker media bin
  - Clockwise rotation ejects media to the stacker media bin, and counterclockwise rotation reverses the eject roll to feed the media from the punch to the compiler unit assembly.
- **Media eject clamp motor**

A DC motor that elevates or lowers the media eject clamp when feeding media from the punch to the compiler unit assembly or from the compiler unit assembly to the stacker media bin
- **Sensor (media eject clamp HP)**
  - A photo-interrupter sensor that detects the set clamp home position
  - This sensor functions as a trigger to control On/Off of the set clamp clutch.
- **Media eject clutch**

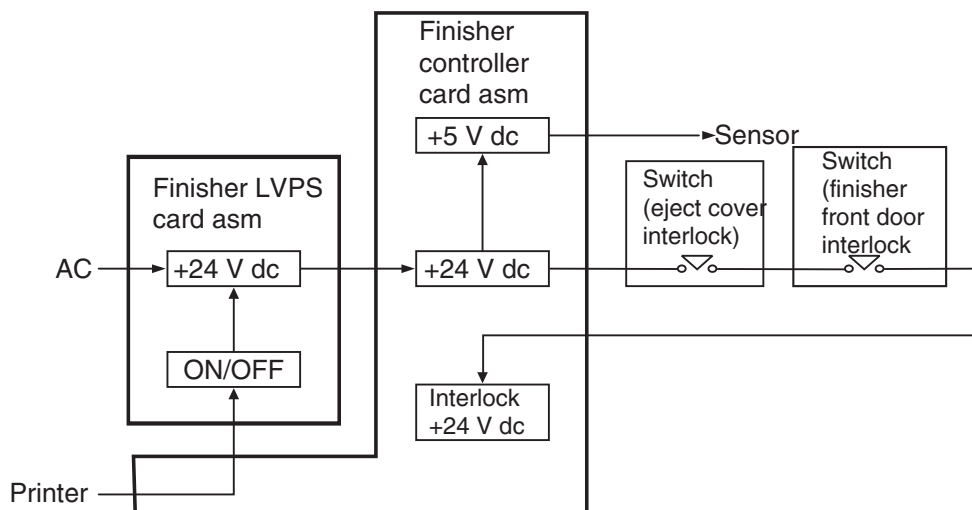
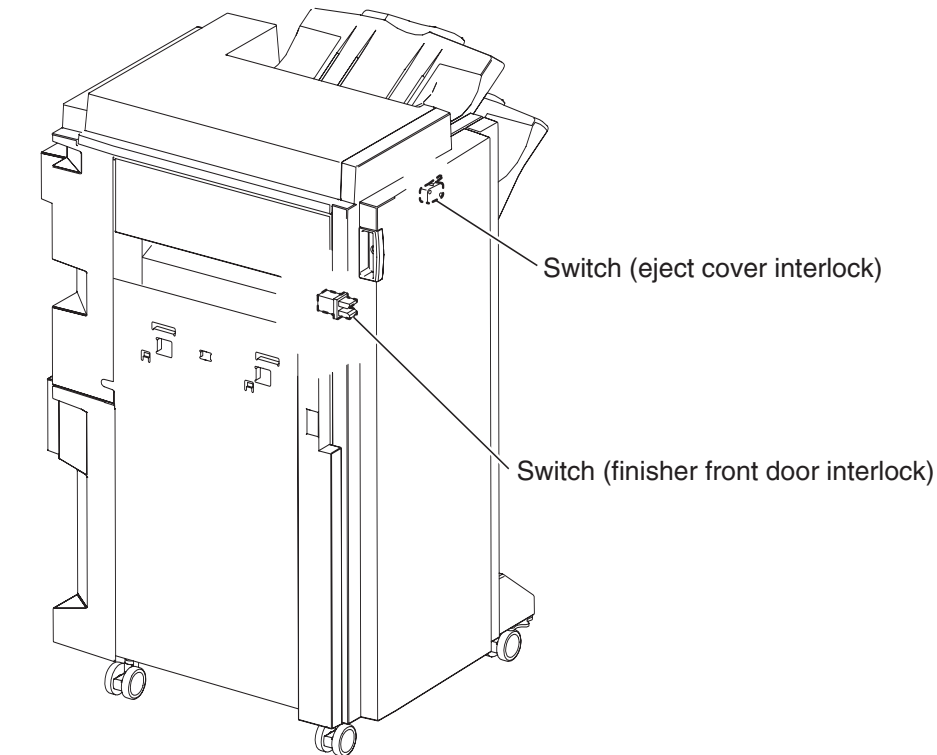
When this clutch is activated, it transmits the media eject motor assembly rotating power to the media eject shaft assembly.



## Power supply and interlock

The finisher is equipped with the following interlock switches.

- Switch (finisher front door interlock)— Turns off when the cover assembly front opens, shutting off the Interlock +24 V dc line in the finisher.
- Switch (eject cover interlock)— Turns off when the cover eject on the right side opens, shutting off the Interlock +24 V dc line in the finisher.



---

## Tools required for service

Flat-blade screwdriver  
 #1 Phillips screwdriver, magnetic  
 #2 Phillips screwdriver, magnetic  
 #2 Phillips screwdriver, magnetic short-blade  
 Needle nose pliers  
 Diagonal side cutters  
 Spring hook  
 5.5 mm hex driver, magnetic  
 Analog or digital multi-meter  
 Parallel wrap plug 1319128  
 Twinax/serial debug cable 1381963  
 Coax/serial debug cable 1381964

---

## Acronyms

2TM	2 Tray Module
AC	Alternating Current
ADF	Automatic Document Feeder
APS	Automatic Paper Size
ASIC	Application Specific Integrated Circuit
CRU	Customer Replaceable Unit
CSU	Customer Setup
CCW	Counterclockwise
CW	Clockwise
DC	Direct Current
DIMM	Dual Inline Memory Module
DRAM	Dynamic Random Access Memory
EDO	Enhanced Data Out
EP	Electrophotographic Process
EPROM	Erasable Programmable Read-only Memory
ESD	Electrostatic Discharge
FRU	Field Replaceable Unit
GB	Gigabyte
GFI	Ground Fault Interrupter
HCF	High-Capacity Feeder
HVPS	High Voltage Power Supply
LASER	Light Amplification by Stimulated Emission of Radiation
LCD	Liquid Crystal Display
LD	Laser Diode
LED	Light-Emitting Diode
LEF	Long Edge Feed
LVPS	Low Voltage Power Supply
MPF	Multi-Purpose Feeder
MS	Microswitch
NVM	Nonvolatile Memory
NVRAM	Nonvolatile Random Access Memory
OEM	Original Equipment Manufacturer
OPT	Optical Sensor
PC	Photoconductor
PEL	Picture element

POR	Power-on Reset
POST	Power-on Self Test
PPM	Pages Per Minute
PSC	Parallel Synchronous Communications
PSD	Position Sensing Device
PWM	Pulse Width Modulation
RFID	Radio Frequency Identification
RIP	Raster Imaging Processor
ROM	Read only Memory
RPM	Revolutions Per Minute
SDRAM	Synchronous Dual Random Access Memory
SEF	Short Edge Feed
SIMM	Single Inline Memory Module
SOS	Start of scan
SRAM	Static Random Access Memory
TTM	Tandem Tray Module
TVOC	Total Volatile Organic Compound
UPR	Used Parts Return
V	Volts
V ac	Volts alternating current
V dc	Volts direct current



## 2. Diagnostic information

### Start



**CAUTION:** Unplug the power cord from the electrical outlet before you connect or disconnect any cable or electronic board or assembly for personal safety and to prevent damage to the printer. Disconnect any connections between the printer and PCs/peripherals.

**CAUTION:** The MFP weighs approximately 70 kg (154 lb) and requires at least four people to lift it safely. Make sure your fingers are not under the MFP when you lift or set it down.

**CAUTION:** If the printer is kept on, never touch the conductive parts if not specifically required. The power switch and inlet of the low voltage power supply card (LVPS card) assembly is live even while the power supply is cut off. Never touch the live parts.

**Warning:** When operating the driving units using the diagnostics or other tools, be sure to keep them covered unless otherwise specified.

**Warning:** When operating the driving units using the diagnostics or other tools, never touch the driving units. When operating the driving units using diagnostics or other tools, be sure to follow the procedures in this manual.

**CAUTION:** Be careful to avoid burns by safely handling hot parts.

**Warning:** Servicers should wear a wrist band or the like to remove static electricity from their body, grounding their body while working. Go to **“Handling ESD-sensitive parts” on page 4-1.**

### Using service checks

- Verify the installation status. Go to **“Confirm the installation status” on page 2-2.**
- Does POR (Power-on Reset) stop? Check the POR sequence. Go to **“Power-on Reset sequence” on page 2-2.**

If the error code or message appears in the	Go to	For additional information, see
2X 500-Sheet Drawer (2TM)	<b>“Error code messages - 2X 500-sheet drawer (2TM)” on page 2-3.</b>	<b>“Service checks - 2X 500-sheet drawer (2TM)” on page 2-5.</b>
High Capacity Feeder (HCF)	<b>“Error code messages - HCF” on page 2-36.</b>	<b>“Service checks - HCF” on page 2-37.</b>
Finisher	<b>“Error code messages - finisher” on page 2-50.</b>	<b>“Service checks - finisher” on page 2-58.</b>

User attendance messages are in the *User’s Guide*.

**Note:** There may be printer error code messages that are not contained in this service manual. A more complete list appears in the *MFP Service Manual*.

---

## Confirm the installation status

Be sure to check the following items before starting the troubleshooting procedures.

- The power cord is free from breakage, a short-circuit, a disconnected wire, or an incorrect connection in the power cord.
- The printer is properly grounded. Check the power cord ground terminal.
- The printer is not installed at a place subjected to extreme temperature, extreme humidity, or rapid changes in temperature.
- The printer is not installed close to water service, a humidifier, a heat generating unit, or fire, in a very dusty place, or a place exposed to air flow from the air conditioning system.
- The printer is not installed in a place where volatile gas or inflammable gas is generated.
- The printer is not installed in direct sun.
- The printer is installed on a stout and stable surface.
- Media meets specifications and is installed properly.
- Customer maintenance parts have been replaced at the specified intervals.
- Check all attached options for proper attachment and electrical connection.
- Refer to the *User's Guide* for proper installation.

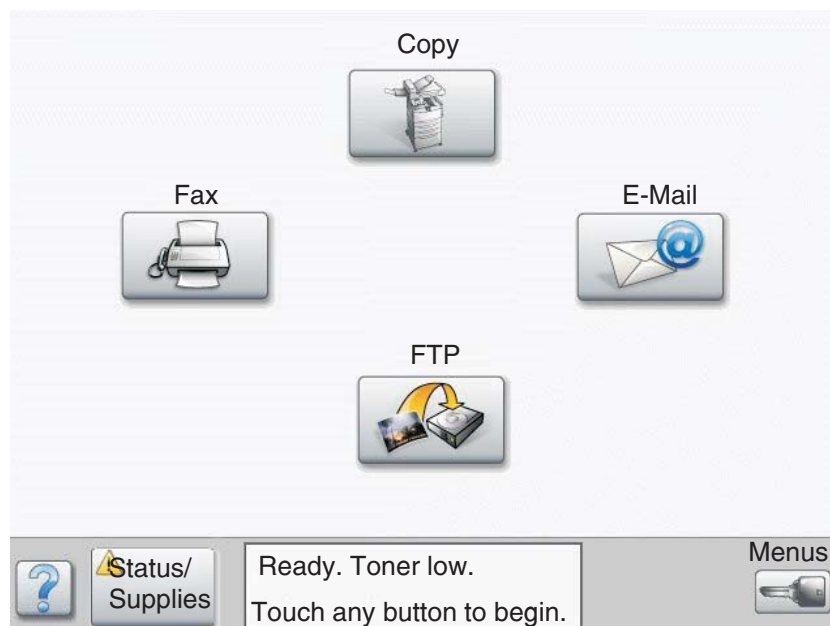
---

## Power-on Reset sequence

The following is an example of the events that occur during the POR sequence:

1. Turn the machine on.
2. The Lexmark splash screen appears with a progress bar in the center until the code is loaded.
3. The scanner exposure lamp flashes several times.
4. The fuser cooling fan turns on.
5. The fuser unit assembly lamps turn on.
6. The RIP card assembly cooling fan turns on.
7. Operator panel LED becomes solid.
8. The transport motor turns on.

The following is an example of the screen that appears after the code is loaded.



## Error code messages - 2X 500-sheet drawer (2TM)

Error code or message	Error contents	Description/Action
243.00 Paper jam Check tray 3	Sensor (pre-feed) on jam (tray 3 media feed)	The pre-feed sensor 3 is not turned on within the specified time after the tray 3 feed lift motor is turned on. Go to <b>"243.00 Sensor (pre-feed) on jam (tray 3 media feed)" on page 2-5.</b>
243.01 Paper jam Check areas C, tray 3	Sensor (tray 3 feed-out) on jam (tray 3 media feed)	The sensor (tray 3 feed-out) is not turned on within the specified time after the sensor (pre-feed) is turned on. Go to <b>"243.01 Sensor (tray 3 feed-out) on jam (tray 3 media feed)" on page 2-6.</b>
243.02 Paper jam Check areas A, B	Sensor (tray 2 feed-out) on jam (tray 3 media feed)	The sensor (tray 2 feed-out) is not turned on within the specified time after the sensor (tray 3 feed-out) is turned on. Go to <b>"243.02 Sensor (tray 2 feed-out) on jam (tray 3 media feed)" on page 2-8.</b>
243.03 Paper jam Check area B	Sensor (registration) on jam (tray 3 media feed)	The sensor (registration) is not turned on within the specified time after the sensor (tray 3 feed-out) is turned on. Go to <b>"243.03 Sensor (registration) on jam (tray 3 media feed)" on page 2-10.</b>
243.04 Paper jam Check area C	Sensor (tray 3 feed-out) static jam	Media remains on the sensor (tray 3 feed-out). Go to <b>"243.04 Sensor (tray 3 feed-out) static jam" on page 2-12.</b>
244.00 Paper jam Check areas C, tray 4	Sensor (tray 4 feed-out) on jam (tray 4 media feed)	The sensor (tray 4 feed-out) is not turned on within the specified time after the sensor (pre-feed) is turned on. Go to <b>"243.04 Sensor (tray 3 feed-out) static jam" on page 2-12.</b>
244.01 Paper jam Check areas C, tray 4	Sensor (tray 3 feed-out) on jam (tray 4 media feed)	The sensor (tray 3 feed-out) is not turned on within the specified time after the sensor (tray 4 feed-out) is turned on. Go to <b>"244.01 Sensor (tray 3 feed-out) on jam (tray 4 media feed)" on page 2-14.</b>
244.02 Paper jam Check areas B, C	Sensor (tray 2 feed-out) on jam (tray 4 media feed)	The sensor (tray 2 feed-out) is not turned on within the specified time after the sensor (tray 4 feed-out) is turned on. Go to <b>"244.02 Sensor (tray 2 feed-out) on jam (tray 4 media feed)" on page 2-16.</b>
244.03 Paper jam Check area B	Sensor (registration) on jam (tray 4 media feed)	The sensor (registration) is not turned on within the specified time after the sensor (tray 4 feed-out) is turned on. Go to <b>"244.03 Sensor (registration) on jam (tray 4 media feed)" on page 2-18.</b>
244.04 Paper jam Check tray 4	Sensor (pre-feed) on jam (tray 4 media feed)	The sensor (pre-feed) is not turned on within the specified time after the tray 4 feed lift motor is turned on. Go to <b>"244.04 Sensor (pre-feed) on jam (tray 4 media feed)" on page 2-20.</b>

Error code or message	Error contents	Description/Action
244.05 Paper jam Check areas C, tray 4	Sensor (tray 4 feed-out) static jam	Media remains on the sensor (tray 4 feed-out). Go to <b>"244.05 Sensor (tray 4 feed-out) static jam" on page 2-22.</b>
34 Incorrect media Check tray 3 guides	Tray 3 media size mismatch in length	The media length detected by the sensor (registration) after the media is fed from tray 3 does not match the length detected by the tray 3 switch (media size). Go to <b>"Tray 3 media size mismatch in length" on page 2-31.</b>
34 Incorrect media Check tray 4 guides	Tray 4 media size mismatch in length	The media length detected by the sensor (registration) after the media is fed from tray 4 does not match the length detected by the tray 4 switch (media size). Go to <b>"Tray 4 media size mismatch in length" on page 2-33.</b>
943.00 Service tray 3 failure	Tray 3 lift up / no tray failure	The tray 3 sensor (media level) is not turned on within the specified time after the feed lift motor is turned on. The 2TM-tray 3 switch (media size) detected no tray. Go to <b>"943.00 Tray 3 lift up / no tray failure" on page 2-23.</b>
944.00 Service tray 4 failure	Tray 4 lift up / no tray failure	The tray 4 sensor (media level) is not turned on within the specified time after the feed lift motor is turned on. The 2TM-tray 4 switch (media size) detected no tray. Go to <b>"944.00 Tray 4 lift up / no tray failure" on page 2-24.</b>
980.00 Service tray 3 comm.	2TM/TTM controller card assembly communication failure	A communication error occurred between the printer engine card assembly and the 2TM/TTM controller card assembly. Go to <b>"980.00 2TM/TTM controller card assembly communication failure" on page 2-26.</b>
Check tray 3 guides	Tray 3 media size failure	Although the tray 3 is set in the 2TM, the media size is not detected properly. Go to <b>"Tray 3 media size failure" on page 2-26.</b>
Check tray 3 or Check tray 4 guides	Media size mismatch in width	The media width is incorrect. Go to <b>"Media size mismatch in width" on page 2-30.</b>
Check tray 4 guides	Tray 4 media size failure	Although the tray 4 is set in the 2TM, the media size is not detected properly. Go to <b>"Tray 4 media size failure" on page 2-27.</b>
Close door C	2TM/TTM left door assembly open.	The 2TM/TTM left door is open. Go to <b>"2TM/TTM left door assembly open" on page 2-28.</b>
Load tray 3 or Load tray 4 with <media>	No media in the select media tray	Media is not loaded in the tray. Go to <b>"No media in the select media tray" on page 2-29.</b>

## Service checks - 2X 500-sheet drawer (2TM)

### 243.00 Sensor (pre-feed) on jam (tray 3 media feed)

Step	Check	Yes	No
1	Check the media condition. Is the media in the tray crumpled or damaged?	Replace the media.	Go to step 2.
2	Check the media size setup. Does the media size in use match the size set for tray 3?	Go to step 3.	Replace the media, or change the media size setup.
3	Check the tray 3 rolls. Pull out tray 3, and check it. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>"2X 500-sheet drawer (2TM)– feed roll removal"</b> on page 4-28, <b>"2X 500-sheet drawer (2TM)– separation roll removal"</b> on page 4-32, and <b>"2X 500-sheet drawer (2TM)– pick roll removal"</b> on page 4-34.
4	Check the media position. Open the 2TM/TTM left door assembly, and visually check it. Does the media touch the sensor (pre-feed) of the tray 3 media feed unit assembly?	Remove the media.	Go to step 5.
5	Check the sensor (pre-feed) for tray 3 for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 3</b> . 5. Touch <b>Pre-feed</b> .  Remove the media tray assembly. Does the operator panel display change every time a white piece of paper is placed over the sensing area of the above sensor?	Ensure the feed unit front guide is properly installed. Go to step 7.	Go to step 6.
6	Check the sensor (pre-feed) connection on tray 3. Is the above sensor connected properly?	Replace the sensor (pre-feed). Go to <b>"2X 500-sheet drawer (2TM)– sensor (pre-feed) removal"</b> on page 4-25.	Replace the connection.
7	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 8.	Replace the connection.

Step	Check	Yes	No
8	<p>Check the tray 3 media feed lift motor for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Printer Motor Tests.</b></li> <li>4. Touch <b>Tray 3 feed mtr.</b></li> </ol> <p>Does the above media feed lift motor operate properly?</p>	Go to step 11.	Go to step 9.
9	<p>Check the tray 3 media feed lift motor for proper connection.</p> <p>Is the above media feed lift motor connected properly?</p>	<p>Replace the media feed lift motor.</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– media feed lift motor removal" on page 4-17.</b></p>	Replace the connection.
10	<p>Check the tray 3 media feed lift motor for proper operation.</p> <p>Replace the media feed lift motor for tray 3 with that for tray 4.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Printer Motor Tests.</b></li> <li>4. Touch <b>Tray 3 feed mtr.</b></li> </ol> <p>Does the above media feed lift motor operate properly?</p>	<p>Reinstall the media feed lift motor for tray 4 as it previously was, and replace the media feed lift motor for tray 3 with a new one.</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– media feed lift motor removal" on page 4-17.</b></p>	Go to step 11.
11	<p>Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection.</p> <p>Are connectors P541 and P413 on the above cards connected properly?</p>	Go to step 12.	Replace the connection.
12	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the 2TM/TTM controller card assembly.</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal" on page 4-43.</b></p> <p>Go to step 13.</p>	Problem solved.
13	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### 243.01 Sensor (tray 3 feed-out) on jam (tray 3 media feed)

Step	Check	Yes	No
1	<p>Check the media condition.</p> <p>Is the media in the tray crumpled or damaged?</p>	Replace the media.	Go to step 2.

Step	Check	Yes	No
2	Check the media size setup. Does the size of media in use match the size set for tray 3?	Go to step 3.	Replace the media or change the media size setup.
3	Check the tray 3 rolls. Pull out tray 3, and check it. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>"2X 500-sheet drawer (2TM)– feed roll removal" on page 4-28, "2X 500-sheet drawer (2TM)– separation roll removal" on page 4-32, and "2X 500-sheet drawer (2TM)– pick roll removal" on page 4-34.</b>
4	Check the media position. Open the 2TM/TTM left door assembly, and visually check it. Does the media touch the sensor (pre-feed) or the sensor (tray 3 feed-out) of the tray 3 media feed unit assembly?	Remove the media.	Go to step 5.
5	Check the sensor (tray 3 feed-out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Tray 3.</b> 5. Touch <b>Feed-out.</b>  Open the 2TM/TTM left door assembly, and check it. Does the operator panel display change every time the actuator on the above sensor operates?	Go to step 7.	Go to step 6.
6	Check the sensor (tray 3 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 3 feed-out).  Go to <b>"2X 500-sheet drawer (2TM)– sensor (tray 3 feed-out) removal" on page 4-37.</b>	Replace the connection.
7	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 8.	Replace the connection.

Step	Check	Yes	No
8	<p>Check the tray 3 sensor (pre-feed) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Tray 3</b>.</li> <li>5. Touch <b>Pre-feed</b>.</li> </ol> <p>Remove the media tray assembly.</p> <p>Does the operator panel display change every time a white piece of paper is placed over the sensing area of the above sensor?</p>	Go to step 10.	Go to step 9.
9	<p>Check the tray 3 sensor (pre-feed) for proper connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (pre-feed).</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– sensor (pre-feed) removal” on page 4-25.</b></p>	Replace the connection.
10	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the 2TM/TTM controller card assembly.</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b></p> <p>Go to step 11.</p>	Problem solved.
11	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### 243.02 Sensor (tray 2 feed-out) on jam (tray 3 media feed)

Step	Check	Yes	No
1	<p>Check the media condition.</p> <p>Is the media in the tray crumpled or damaged?</p>	Replace the media.	Go to step 2.
2	<p>Check the media size setup.</p> <p>Does the media size in use match the size set for tray 3?</p>	Go to step 3.	Replace the media or change the media size setup.



Step	Check	Yes	No
3	<p>Check the tray 3 rolls.</p> <p>Pull out tray 3, and check it.</p> <p>Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?</p>	Go to step 4.	<p>Clean or replace the feed roll, separation roll, and pick roll.</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– feed roll removal” on page 4-28, “2X 500-sheet drawer (2TM)– separation roll removal” on page 4-32, and “2X 500-sheet drawer (2TM)– pick roll removal” on page 4-34.</b></p>
4	<p>Check the media position.</p> <p>Open the printer left lower door assembly, and visually check it.</p> <p>Does the media touch the sensor (tray 2 feed-out)?</p>	Remove the media.	Go to step 5.
5	<p>Check the media position.</p> <p>Open the 2TM/TTM left door assembly, and visually check it.</p> <p>Does the media touch the sensor (tray 3 feed-out)?</p>	Remove the media.	Go to step 6.
6	<p>Check the sensor (tray 2 feed-out) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Tray 2.</b></li> <li>5. Touch <b>Feed-out.</b></li> </ol> <p>Open the printer left lower door assembly, and visually check it.</p> <p>Does the operator panel display change every time a piece of white paper is placed over the sensing area of the above sensor?</p>	Go to step 8.	Go to step 7.
7	<p>Check the sensor (tray 2 feed-out) for proper connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (tray 2 feed-out).</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Replace the connection.
8	<p>Check the sensor (tray 3 feed-out) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Tray 3.</b></li> <li>5. Touch <b>Feed-out.</b></li> </ol> <p>Open the 2TM/TTM left door assembly, and visually check it.</p> <p>Does the operator panel display change every time the actuator on the above sensor operates?</p>	Go to step 10.	Go to step 9.

Step	Check	Yes	No
9	Check the sensor (tray 3 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 3 feed-out). Go to <b>“2X 500-sheet drawer (2TM)– sensor (tray 3 feed-out) removal” on page 4-37.</b>	Replace the connection.
10	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 11.	Replace the connection.
11	Perform a print test. Does the error still occur?	Replace the 2TM/TTM controller card assembly. Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b> Go to step 12.	Problem solved.
12	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 243.03 Sensor (registration) on jam (tray 3 media feed)

Step	Check	Yes	No
1	Check the media condition. Is the media in the tray crumpled or damaged?	Replace the media.	Go to step 2.
2	Check the media size setup. Does the media size in use match the size set for tray 3?	Go to step 3.	Replace the media or change the media size setup.
3	Check the tray 3 rolls. Pull out tray 3, and check it. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll. Go to <b>“2X 500-sheet drawer (2TM)– feed roll removal” on page 4-28, “2X 500-sheet drawer (2TM)– separation roll removal” on page 4-32, and “2X 500-sheet drawer (2TM)– pick roll removal” on page 4-34.</b>

Step	Check	Yes	No
4	Check the media position. Open the printer left door assembly, and visually check it. Does the media touch the sensor (registration)?	Remove the media.	Go to step 5.
5	Check the media position. Open the 2TM/TTM left door assembly, and visually check it. Does the media touch the sensor (tray 3 feed-out)?	Remove the media.	Go to step 6.
6	Check the sensor (registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>BASE Sensor Test</b> . 3. Touch <b>Media Path</b> . 4. Touch <b>Registration</b> .  Open the printer left door assembly, and visually check it. Does the operator panel display change every time the actuator for the above sensor operates?	Go to step 8.	Go to step 7.
7	Check the sensor (registration) for proper connection. Is the above sensor connected properly?	Replace the sensor (registration). Refer to the <i>Printer Service Manual</i> .	Replace the connection.
8	Check the sensor (tray 3 feed-out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 3</b> . 5. Touch <b>Feed-out</b> .  Open the 2TM/TTM left door assembly, and visually check it. Does the operator panel display change every time the actuator for the above sensor operates?	Go to step 10.	Go to step 9.
9	Check the sensor (tray 3 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 3 feed-out). Go to <b>"2X 500-sheet drawer (2TM)– sensor (tray 3 feed-out) removal"</b> on page 4-37.	Replace the connection.
10	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 11.	Replace the connection.

Step	Check	Yes	No
11	Perform a print test. Does the error still occur?	Replace the 2TM/ TTM controller card assembly.  Go to <b>“2X 500- sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b> Go to step 12.	Problem solved.
12	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

#### 243.04 Sensor (tray 3 feed-out) static jam

Step	Check	Yes	No
1	Check the media position. Open the 2TM/TTM left door assembly, and visually check it. Does the media touch the tray 3 feed-out sensor?	Remove the media.	Go to step 2.
2	Check the sensor (tray 3 feed-out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 3</b> . 5. Touch <b>Feed-out</b> .  Open the 2TM/TTM left door assembly, and visually check it. Does the operator panel display change every time the actuator for the above sensor operates?	Go to step 4.	Go to step 3.
3	Check the sensor (tray 3 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 3 feed-out).  Go to <b>“2X 500- sheet drawer (2TM)– sensor (tray 3 feed-out) removal” on page 4-37.</b>	Replace the connection.
4	Perform a print test. Does the error still occur?	Replace the 2TM/ TTM controller card assembly.  Go to <b>“2X 500- sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b> Go to step 5.	Problem solved.

Step	Check	Yes	No
5	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 244.00 Sensor (tray 4 feed-out) on jam (tray 4 media feed)

Step	Check	Yes	No
1	Check the media condition. Is the media in the tray crumpled or damaged?	Replace the media.	Go to step 2.
2	Check the media size setup. Pull out tray 4, and check it. Does the media size in use match the size set for tray 4?	Go to step 3.	Replace the media or change the media size setup.
3	Check the tray 4 rolls. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>"2X 500-sheet drawer (2TM)– feed roll removal" on page 4-28</b> , <b>"2X 500-sheet drawer (2TM)– separation roll removal" on page 4-32</b> , and <b>"2X 500-sheet drawer (2TM)– pick roll removal" on page 4-34</b> .
4	Check the media position. Open the 2TM/TTM left door assembly, and visually check it. Does the media touch the sensor (pre-feed) of the tray 4 media feed unit assembly or the sensor (tray 4 feed-out)?	Remove the media.	Go to step 5.
5	Check the sensor (tray 4 pre-feed) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 4</b> . 5. Touch <b>Pre-feed</b> .  Remove the media tray assembly. Does the operator panel display change every time a white piece of paper is placed over the sensing area of the above sensor?	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Check the tray 4 pre-feed sensor for proper connection. Is the above sensor connected properly?	Replace the sensor (pre-feed). Go to <b>“2X 500-sheet drawer (2TM)– sensor (pre-feed) removal” on page 4-25.</b>	Replace the connection.
7	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 8.	Replace the connection.
8	Check the sensor (tray 4 feed-out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Tray 4.</b> 5. Touch <b>Feed-out.</b>  Open the 2TM/TTM left door assembly, and visually check it.  Does the operator panel display change every time the actuator on the above sensor operates?	Go to step 10.	Go to step 9.
9	Check the sensor (tray 4 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 4 feed-out). Go to <b>“2X 500-sheet drawer (2TM)– sensor (tray 4 feed-out) removal” on page 4-38.</b>	Replace the connection.
10	Perform a print test. Does the error still occur?	Replace the 2TM/TTM controller card assembly. Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b> Go to step 11.	Problem solved.
11	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

#### 244.01 Sensor (tray 3 feed-out) on jam (tray 4 media feed)

Step	Check	Yes	No
1	Check the media condition. Is the media in the tray crumpled or damaged?	Replace the media.	Go to step 2.

Step	Check	Yes	No
2	Check the media size setup. Does the media size in use match the size set for tray 4?	Go to step 3.	Replace the media or change the media size setup.
3	Check the tray 4 rolls. Pull out tray 4, and check it. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>“2X 500-sheet drawer (2TM)– feed roll removal” on page 4-28, “2X 500-sheet drawer (2TM)– separation roll removal” on page 4-32, and “2X 500-sheet drawer (2TM)– pick roll removal” on page 4-34.</b>
4	Check the media position. Open the 2TM/TTM left door assembly, and visually check it. Does the media touch the sensor (tray 3 feed-out) or the sensor (tray 4 feed-out)?	Remove the media.	Go to step 5.
5	Check the sensor (tray 4 feed-out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 4</b> . 5. Touch <b>Feed-out</b> .  Open the 2TM/TTM left door assembly, and visually check it. Does the operator panel display change every time the actuator for the above sensor operates?	Go to step 7.	Go to step 6.
6	Check the sensor (tray 4 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 4 feed-out).  Go to <b>“2X 500-sheet drawer (2TM)– sensor (tray 4 feed-out) removal” on page 4-38.</b>	Replace the connection.
7	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 10.	Replace the connection.

Step	Check	Yes	No
8	<p>Check the sensor (tray 3 feed-out) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Tray 3</b>.</li> <li>5. Touch <b>Feed-out</b>.</li> </ol> <p>Open the 2TM/TTM left door assembly, and visually check it.</p> <p>Does the operator panel display change every time the actuator for the above sensor operates?</p>	<p>Replace the sensor (tray 3 feed-out).</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– sensor (tray 3 feed-out) removal” on page 4-37</b>.</p>	Go to step 9.
9	<p>Check the sensor (tray 3 feed-out) for proper connection.</p> <p>Is the above sensor connected properly?</p>	Go to step 10.	Replace the connection.
10	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the 2TM/TTM controller card assembly.</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43</b>.</p> <p>Go to step 11.</p>	Problem solved.
11	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

#### 244.02 Sensor (tray 2 feed-out) on jam (tray 4 media feed)

Step	Check	Yes	No
1	<p>Check the media condition.</p> <p>Is the media in the tray crumpled or damaged?</p>	Replace the media.	Go to step 2.
2	<p>Check the media size setup.</p> <p>Does the media size in use match the size set for tray 4?</p>	Go to step 3.	Replace the media or change the media size setup.



Step	Check	Yes	No
3	<p>Check the tray 4 rolls.</p> <p>Pull out tray 4, and check it.</p> <p>Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?</p>	Go to step 4.	<p>Clean or replace the feed roll, separation roll, and pick roll.</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– feed roll removal” on page 4-28, “2X 500-sheet drawer (2TM)– separation roll removal” on page 4-32, and “2X 500-sheet drawer (2TM)– pick roll removal” on page 4-34.</b></p>
4	<p>Check the media position.</p> <p>Open the printer left lower door assembly, and visually check it.</p> <p>Does the media touch the sensor (tray 2 feed-out)?</p>	Remove the media.	Go to step 5.
5	<p>Check the media position.</p> <p>Open the 2TM/TTM left door assembly, and visually check it.</p> <p>Does the media touch the sensor (tray 4 feed-out)?</p>	Remove the media.	Go to step 6.
6	<p>Check the sensor (tray 2 feed-out) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Tray 2.</b></li> <li>5. Touch <b>Feed-out.</b></li> </ol> <p>Open the printer left lower door assembly, and visually check it.</p> <p>Does the operator panel display change every time a piece of white paper is placed over the sensing area of the above sensor?</p>	Go to step 8.	Go to step 7.
7	<p>Check the sensor (tray 2 feed-out) for proper connection.</p> <p>Is the above sensor connected properly?</p>	Go to step 8.	Replace the connection.
8	<p>Check the sensor (tray 4 feed-out) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Tray 4.</b></li> <li>5. Touch <b>Feed-out.</b></li> </ol> <p>Open the 2TM/TTM left door assembly, and visually check it.</p> <p>Does the operator panel display change every time the actuator for the above sensor operates?</p>	Go to step 10.	Go to step 9.

Step	Check	Yes	No
9	Check the sensor (tray 4 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 3 feed-out). Go to <b>“2X 500-sheet drawer (2TM)– sensor (tray 3 feed-out) removal” on page 4-37.</b>	Replace the connection.
10	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 11.	Replace the connection.
11	Perform a print test. Does the error still occur?	Replace the 2TM/TTM controller card assembly. Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b> Go to step 12.	Problem solved.
12	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 244.03 Sensor (registration) on jam (tray 4 media feed)

Step	Check	Yes	No
1	Check the media condition. Is the media in the tray crumpled or damaged?	Replace the media.	Go to step 2.
2	Check the media size setup. Does the media size in use match the size set for tray 4?	Go to step 3.	Replace the media or change the media size setup.
3	Check the tray 4 rolls. Pull out tray 4, and check it. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>“2X 500-sheet drawer (2TM)– feed roll removal” on page 4-28, “2X 500-sheet drawer (2TM)– separation roll removal” on page 4-32, and “2X 500-sheet drawer (2TM)– pick roll removal” on page 4-34.</b>

Step	Check	Yes	No
4	Check the media position. Open the printer left door assembly, and visually check it. Does the media touch the sensor (registration)?	Remove the media.	Go to step 5.
5	Check the media position. Open the 2TM/TTM left door assembly, and visually check it. Does the media touch the tray 4 feed-out sensor?	Remove the media.	Go to step 6.
6	Check the sensor (registration) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>BASE Sensor Test</b> . 3. Touch <b>Media Path</b> . 4. Touch <b>Registration</b> .  Open the printer left door assembly, and visually check it. Does the operator panel display change every time the actuator for the above sensor operates?	Go to step 8.	Go to step 7.
7	Check the sensor (registration) for proper connection. Is the above sensor connected properly?	Replace the sensor (registration). Refer to the <i>Printer Service Manual</i> .	Replace the connection.
8	Check the sensor (tray 3 feed-out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 3</b> . 5. Touch <b>Feed-out</b> .  Open the 2TM/TTM left door assembly, and visually check it. Does the operator panel display change every time the actuator for the above sensor operates?	Go to step 10.	Go to step 9.
9	Check the sensor (tray 4 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 4 feed-out).  Go to <b>"2X 500-sheet drawer (2TM)– sensor (tray 4 feed-out) removal"</b> on page 4-38.	Replace the connection.
10	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 11.	Replace the connection.

Step	Check	Yes	No
11	Perform a print test. Does the error still occur?	Replace the 2TM/ TTM controller card assembly.  Go to <b>“2X 500- sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b>  Go to step 12.	Problem solved.
12	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

#### 244.04 Sensor (pre-feed) on jam (tray 4 media feed)

Step	Check	Yes	No
1	Check the media condition. Is the media in the tray crumpled or damaged?	Replace the media.	Go to step 2.
2	Check the media size setup. Does the media size in use match the size set for tray 4?	Go to step 3.	Replace the media or change the media size setup.
3	Check the tray 4 rolls. Pull out tray 4, and check it. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?	Go to step 4.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>“2X 500- sheet drawer (2TM)– feed roll removal” on page 4-28,</b> <b>“2X 500-sheet drawer (2TM)– separation roll removal” on page 4-32, and</b> <b>“2X 500-sheet drawer (2TM)– pick roll removal” on page 4-34.</b>
4	Check the media position. Does the media touch the tray 4 pre-feed media feed unit sensor?	Remove the media.	Go to step 5.

Step	Check	Yes	No
5	<p>Check the sensor (tray 4 pre-feed) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Tray 4</b>.</li> <li>5. Touch <b>Pre-feed</b>.</li> </ol> <p>Remove the media tray assembly.</p> <p>Does the operator panel display change every time a white piece of paper is placed over the sensing area of the above sensor?</p>	<p>Ensure the Feed unit front guide is properly installed.</p> <p>Go to step 7.</p>	Go to step 6.
6	<p>Check the tray 4 pre-feed sensor for proper connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (pre-feed).</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– sensor (pre-feed) removal" on page 4-25.</b></p>	Replace the connection.
7	<p>Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection.</p> <p>Are connectors P541 and P413 on the above cards connected properly?</p>	Go to step 10.	Replace the connection.
8	<p>Check the tray 4 media feed lift motor for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Printer Motor Tests</b>.</li> <li>4. Touch <b>Tray 4 feed mtr.</b></li> </ol> <p>Does the above media feed lift motor operate properly?</p>	Go to step 11.	Go to step 9.
9	<p>Check the tray 4 media feed lift motor for proper connection.</p> <p>Is the above media feed lift motor connected properly?</p>	Go to step 10.	Replace the connection.
10	<p>Check the tray 4 media feed lift motor for proper operation.</p> <p>Replace the media feed lift motor for tray 4 with that for tray 3.</p> <p>Does the replaced media feed lift motor operate properly?</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Printer Motor Tests</b>.</li> <li>4. Touch <b>Tray 4 feed mtr.</b></li> </ol> <p>Does the above media feed lift motor operate properly?</p>	<p>Reinstall the media feed lift motor for tray 3 as it previously was, and then replace the media feed lift motor for tray 4 with a new one.</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– media feed lift motor removal" on page 4-17.</b></p>	Go to step 11.
11	<p>Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection.</p> <p>Are connectors P541 and P413 on the above cards connected properly?</p>	Go to step 12.	Replace the connection.

Step	Check	Yes	No
12	Perform a print test. Does the error still occur?	Replace the 2TM/ TTM controller card assembly.  Go to <b>“2X 500- sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b>  Go to step 13.	Problem solved.
13	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 244.05 Sensor (tray 4 feed-out) static jam

Step	Check	Yes	No
1	Check the media position. Open the 2TM/TTM left door assembly, and visually check it. Does the media touch the tray 4 feed-out sensor?	Remove the media.	Go to step 2.
2	Check the sensor (tray 4 feed-out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 4</b> . 5. Touch <b>Feed-out</b> .  Open the 2TM/TTM left door assembly, and visually check it. Does the operator panel display change every time the actuator for the above sensor operates?	Go to step 4.	Go to step 3.
3	Check the sensor (tray 4 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 4 feed-out).  Go to <b>“2X 500- sheet drawer (2TM)– sensor (tray 4 feed-out) removal” on page 4-38.</b>	Replace the connection.
4	Perform a print test. Does the error still occur?	Replace the 2TM/ TTM controller card assembly.  Go to <b>“2X 500- sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b>  Go to step 5.	Problem solved.

Step	Check	Yes	No
5	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 943.00 Tray 3 lift up / no tray failure

Step	Check	Yes	No
1	Check the media. Pull out tray 3, and visually check it. Is any media loaded in tray 3?	Go to step 2.	Load media.
2	Check the tray. Is the tray 3 lift sector gear 12T damaged or any of the tray 3 surrounding parts.	Go to step 3.	Replace the tray lift sector gear 12T or any other damaged components.  Go to <b>"2X 500-sheet drawer (2TM)– tray lift gear group removal"</b> on page 4-16.
3	Check the tray 3 media feed lift motor for proper operation.  <b>Warning:</b> Only perform this test with the paper tray assembly removed from the machine or abnormal grinding noises will occur. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS</b> . 3. Touch <b>Printer Tests</b> . 4. Touch <b>Tray 3 lift mtr</b> .  Does the tray 3 media feed lift motor operate properly?	Go to step 6.	Go to step 4.
4	Check the tray 3 media feed lift motor for proper connection. Is the above motor connected properly?	Replace the media feed lift motor.  Go to <b>"2X 500-sheet drawer (2TM)– media feed lift motor removal"</b> on page 4-17.	Replace the connection.
5	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 6.	Replace the connection.

Step	Check	Yes	No
6	<p>Check the tray 3 sensor (media level) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Tray 3</b>.</li> <li>5. Touch <b>Media level</b>.</li> </ol> <p>Remove the media tray assembly, and move the pick roll with your finger in an up and down motion. Avoid touching the rubber roll surface.</p> <p>Does the operator panel change every time the sensing area is blocked on the above sensor?</p>	Go to step 8.	Go to step 7.
7	<p>Check the tray 3 sensor (media level) for proper connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (media level).</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– sensor (media level) removal"</b> on page 4-23.</p>	Replace the connection.
8	<p>Check the tray 3 switch (media size) for proper connection.</p> <p>Is the above switch connected properly?</p>	<p>Replace the switch (media size).</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– switch (media size) assembly removal"</b> on page 4-8.</p>	Replace the connection.
9	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the 2TM/TTM controller card assembly.</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal"</b> on page 4-43.</p> <p>Go to step 10.</p>	Problem solved.
10	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### 944.00 Tray 4 lift up / no tray failure

Step	Check	Yes	No
1	<p>Check the media.</p> <p>Pull out tray 4, and visually check it.</p> <p>Is any media loaded in tray 4?</p>	Go to step 2.	Load media.



Step	Check	Yes	No
2	Check the tray. Are the tray lift sector gear 12T of tray 4 or the surrounding parts of it damaged?	Go to step 3.	Replace the tray lift sector gear 12T or any other damaged components.
3	Check the tray 4 media feed lift motor for proper operation. <b>Warning:</b> Only perform this test with the paper tray assembly removed from the machine or abnormal grinding noises will occur. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS</b> . 3. Touch <b>Printer Tests</b> . 4. Touch <b>Tray 4 lift mtr</b> .  Does the tray 4 media feed lift motor operate properly?	Go to step 6.	Go to step 4.
4	Check the tray 4 media feed lift motor for proper connection. Is the above motor connected properly?	Replace the media feed lift motor. Go to <b>"2X 500-sheet drawer (2TM)– media feed lift motor removal" on page 4-17</b>	Replace the connection.
5	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 6.	Replace the connection.
6	Check the tray 4 sensor (media level) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 4</b> . 5. Touch <b>Media level</b> .  Remove the media tray assembly, and move the pick roll with your finger in an up and down motion. Avoid touching the rubber roll surface. Does the operator panel change every time the sensing area is blocked on the above sensor?	Go to step 8.	Go to step 7.
7	Check the tray 4 sensor (media level) for proper connection. Is the above sensor connected properly?	Replace the sensor (media level). Go to <b>"2X 500-sheet drawer (2TM)– sensor (media level) removal" on page 4-23</b> .	Replace the connection.
8	Check the tray 4 switch (media size) for proper connection. Is the above switch connected properly?	Replace the switch (media size). Go to <b>"2X 500-sheet drawer (2TM)– switch (media size) assembly removal" on page 4-8</b> .	Replace the connection.

Step	Check	Yes	No
9	Perform a print test. Does the error still occur?	Replace the 2TM/ TTM controller card assembly.  Go to <b>“2X 500- sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b>  Go to step 10.	Problem solved.
10	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 980.00 2TM/TTM controller card assembly communication failure

Step	Check	Yes	No
1	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Problem solved.	Replace the connection.
2	Perform a print test. Does the error still occur?	Replace the 2TM/ TTM controller card assembly.  Go to <b>“2X 500- sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b>  Go to step 3.	Problem solved.
3	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### Tray 3 media size failure

Step	Check	Yes	No
1	Check the media. Pull out tray 3, and visually check it. Is the media loaded in tray 3 properly?	Go to step 2.	Load media properly.
2	Check the media. Pull out tray 3, and visually check it. Are the front media tray guide assembly and rear media tray guide on tray 3 set properly?	Go to step 3.	Set the parts properly.

Step	Check	Yes	No
3	Check the tray 3 switch (media size) for proper operation. Pull out tray 3, and visually check it. Is the switch (media size) for tray 3 installed properly?	Go to step 4.	Install the switch (media size) for tray 3 properly.  Go to <b>“2X 500-sheet drawer (2TM)– switch (media size) assembly removal” on page 4-8.</b>
4	Check the switch (media size) for proper connection. Is the above switch connected properly?	Replace the switch (media size).  Go to <b>“2X 500-sheet drawer (2TM)– switch (media size) assembly removal” on page 4-8.</b>	Replace the connection.
5	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 6.	Replace the connection.
6	Perform a print test. Does the error still occur?	Replace the 2TM/TTM controller card assembly.  Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b>  Go to step 7.	Problem solved.
7	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### Tray 4 media size failure

Step	Check	Yes	No
1	Check the media. Pull out tray 4, and visually check it. Is the media loaded in tray 3 properly?	Go to step 2.	Load media properly.
2	Check the media. Pull out tray 4, and visually check it. Are the front media tray guide assembly and rear media tray guide on tray 4 set properly?	Go to step 3.	Set the parts properly.

Step	Check	Yes	No
3	Check the tray 4 switch (media size) for proper operation. Pull out tray 4, and visually check it. Is the tray 4 switch (media size) installed properly?	Go to step 4.	Install the switch (media size) for tray 4 properly.  Go to <b>“2X 500-sheet drawer (2TM)– switch (media size) assembly removal” on page 4-8.</b>
4	Check the switch (media size) for proper connection. Is the above switch connected properly?	Replace the switch (media size).  Go to <b>“2X 500-sheet drawer (2TM)– switch (media size) assembly removal” on page 4-8.</b>	Replace the connection.
5	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 6.	Replace the connection.
6	Perform a print test. Does the error still occur?	Replace the 2TM/TTM controller card assembly.  Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b>  Go to step 7.	Problem solved.
7	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### **2TM/TTM left door assembly open**

Step	Check	Yes	No
1	Check the 2TM/TTM left door assembly for opening and closing. Does the 2TM/TTM left door assembly open or close properly?	Go to step 2.	Check the 2TM/TTM left door assembly for deformation, and reinstall it.  Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM left door assembly removal” on page 4-6.</b>

Step	Check	Yes	No
2	<p>Check the switch (2TM/TTM left door interlock) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>BASE Sensor Test</b>.</li> <li>3. Touch <b>Cover and Door</b>.</li> <li>4. Touch <b>Door C 2TM/TTM</b>.</li> </ol> <p>Open the 2TM/TTM left door assembly, and visually check it.</p> <p>Does the operator panel display change every time the actuator on the above switch operates?</p>	Go to step 4.	Go to step 3.
3	<p>Check switch (2TM/TTM left door interlock) for proper connection.</p> <p>Is the above switch connected properly?</p>	<p>Replace the switch (2TM/TTM left door interlock).</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– switch (2TM/TTM left door interlock) removal” on page 4-42.</b></p>	Replace the connection.
4	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the 2TM/TTM controller card assembly.</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b></p> <p>Go to step 3.</p>	Problem solved.
5	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### ***No media in the select media tray***

Step	Check	Yes	No
1	<p>Check the media.</p> <p>Is the media loaded in the selected tray?</p>	Go to step 2.	Load media.

Step	Check	Yes	No
2	<p>Check the sensor (media out) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Tray 3</b>.</li> <li>5. Touch <b>Media out</b>.</li> </ol> <p>1. Enter the Diagnostics Menu.</p> <ol style="list-style-type: none"> <li>2. Touch <b>INPUT TRAY TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Tray 4</b>.</li> <li>5. Touch <b>Media out</b>.</li> </ol> <p>Remove the appropriate media tray assembly.</p> <p>Does the operator panel display change every time the sensing area on the above sensor is blocked by the media out actuator?</p>	Go to step 4.	Go to step 3.
3	<p>Check the sensor (media out) for proper connection.</p> <p>Check tray 3 or tray 4.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the appropriate sensor (media out).</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– sensor (media out) removal"</b> on page 4-24.</p>	Replace the connection.
4	<p>Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection.</p> <p>Are connectors P541 and P413 on the above cards connected properly?</p>	Go to step 5.	Replace the connection.
5	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the 2TM/TTM controller card assembly.</p> <p>Go to <b>"2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal"</b> on page 4-43.</p> <p>Go to step 6.</p>	Problem solved.
6	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### **Media size mismatch in width**

Step	Check	Yes	No
1	<p>Check the media.</p> <p>Is the media loaded in the tray properly?</p> <p>Pull out the tray, and visually check it.</p>	Go to step 2.	Load media properly.

Step	Check	Yes	No
2	Check the media. Pull out each tray, and visually check it. Are the front media tray guide assembly and rear media tray guide on tray 3 and tray 4 set properly?	Go to step 3.	Set the parts properly.
3	Check the switches (media size) for proper installation. Pull out each tray, and visually check it. Are the switches (media size) for tray 3 and tray 4 installed properly?	Go to step 4.	Install the switch (media size) for each tray properly.  Go to <b>“2X 500-sheet drawer (2TM)– switch (media size) assembly removal” on page 4-8.</b>
4	Check the switches (media size) for proper connection. Is the above switches for tray 3 and 4 connected properly?	Go to step 6.	Connect the connectors properly.
5	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 9.	Replace the connection.
6	Perform a print test. Does the error still occur?	Replace the 2TM/TTM controller card assembly.  Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b>  Go to step 7.	Problem solved.
7	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### **Tray 3 media size mismatch in length**

Step	Check	Yes	No
1	Check the media. Pull out tray 3, and visually check it. Is the media loaded in tray 3 properly?	Go to step 2.	Load media properly.
2	Check the media. Pull out tray 3, and visually check it. Are the front media tray guide assembly and rear media tray guide on tray 3 set properly?	Go to step 3.	Set the parts properly.

Step	Check	Yes	No
3	Check the tray 3 switch (media size) for proper installation. Pull out tray 3, and visually check it. Is the switch (media size) for tray 3 installed properly?	Go to step 5.	Install the switch (media size) for tray 3 properly.  Go to <b>"2X 500-sheet drawer (2TM)– switch (media size) assembly removal" on page 4-8.</b>
4	Check the switch (media size) for proper connection. Is the above switch connected properly?	Replace the switch (media size).  Go to <b>"2X 500-sheet drawer (2TM)– switch (media size) assembly removal" on page 4-8.</b>	Replace the connection.
5	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 6.	Replace the connection.
6	Check the tray 3 rolls. Pull out tray 3, and check it. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination?	Go to step 7.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>"2X 500-sheet drawer (2TM)– feed roll removal" on page 4-28, "2X 500-sheet drawer (2TM)– separation roll removal" on page 4-32, and "2X 500-sheet drawer (2TM)– pick roll removal" on page 4-34.</b>
7	Check the media position. Open the printer left door assembly, and visually check it. Does the media touch the sensor (registration)?	Remove the media.	Go to step 8.
8	Check the roll. Open the printer left door assembly, and visually check it. Is the media transport roll assembly for transport free of excess wear and contamination?	Go to step 9.	Clean or replace the media transport roll assembly.
9	Check the roll. Open the printer left door assembly, and visually check it. Is the registration roll assembly for transport free of excess wear and contamination?	Go to step 10.	Clean or replace the registration roll assembly.



Step	Check	Yes	No
10	<p>Check the sensor (registration) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>BASE Sensor Test</b>.</li> <li>3. Touch <b>Media Path</b>.</li> <li>4. Touch <b>Registration</b>.</li> </ol> <p>Open the printer left door assembly, and visually check it.</p> <p>Does the operator panel display change every time the actuator on the above sensor operates?</p>	Go to step 12.	Go to step 11.
11	<p>Check the sensor (registration) for proper connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (registration).</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Replace the connection.
12	<p>Check the registration clutch for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Printer Motor Tests</b>.</li> <li>4. Touch <b>Registrat clutch</b>.</li> </ol> <p>Does the above component make an audible clicking sound every time it is activated?</p>	Go to step 14	Go to step 13.
13	<p>Check the registration clutch for proper connection.</p> <p>Is the above component connected properly?</p>	Replace the registration clutch.	Replace the connection.
14	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the 2TM/TTM controller card assembly.</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b></p> <p>Go to step 15.</p>	Problem solved.
15	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### Tray 4 media size mismatch in length

Step	Check	Yes	No
1	<p>Check the media.</p> <p>Pull out tray 4, and visually check it.</p> <p>Is the media loaded in tray 4 properly?</p>	Go to step 2.	Load media properly.

Step	Check	Yes	No
2	Check the media. Are the front media tray guide assembly and rear media tray guide on tray 4 set properly? Pull out tray 4, and visually check it.	Go to step 3.	Set the parts properly.
3	Check the tray 4 switch (media size) for proper installation. Pull out tray 4, and visually check it. Is the tray 4 switch (media size) installed properly?	Go to step 5.	Install the switch (media size) for tray 4 properly.
4	Check the tray 4 switch (media size) for proper connection. Is the above switch connected properly?	Replace the switch (media size). Go to <b>"2X 500-sheet drawer (2TM)– switch (media size) assembly removal" on page 4-8.</b>	Replace the connection.
5	Check the 2TM/TTM controller card assembly and the printer engine card assembly for proper connection. Are connectors P541 and P413 on the above cards connected properly?	Go to step 6.	Replace the connection.
6	Check the tray 4 rolls. Are the feed roll, separation roll, and pick roll for transport free of excess wear and contamination? Pull out tray 4, and check it.	Go to step 7.	Clean or replace the feed roll, separation roll, and pick roll.  Go to <b>"2X 500-sheet drawer (2TM)– feed roll removal" on page 4-28, "2X 500-sheet drawer (2TM)– separation roll removal" on page 4-32, and "2X 500-sheet drawer (2TM)– pick roll removal" on page 4-34.</b>
7	Check the media position. Does the media touch the sensor (registration)? Open the printer left door assembly and check it (visual check).	Remove the media.	Go to step 8.
8	Check the roll. Open the printer left door assembly, and visually check it. Is the media transport roll assembly for transport free of excess wear and contamination?	Go to step 9.	Clean or replace the media transport roll assembly.
9	Check the roll. Open the printer left door assembly, and visually check it. Is the registration roll assembly for transport free of excess wear and contamination?	Go to step 10.	Clean or replace the registration roll assembly.

Step	Check	Yes	No
10	<p>Check the sensor (registration) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>BASE Sensor Test</b>.</li> <li>3. Touch <b>Media Path</b>.</li> <li>4. Touch <b>Registration</b>.</li> </ol> <p>Open the printer left door assembly, and visually check it.</p> <p>Does the operator panel display change every time the actuator on the above sensor operates?</p>	Go to step 12.	Go to step 11.
11	<p>Check the sensor (registration) for proper connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (registration).</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Replace the connection.
12	<p>Check the registration clutch for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Printer Motor Tests</b>.</li> <li>4. Touch <b>Registrat clutch</b>.</li> </ol> <p>Does the above component make an audible clicking sound every time it is activated?</p>	Go to step 14.	Go to step 13.
13	<p>Check the registration clutch for proper connection.</p> <p>Is the above component connected properly?</p>	<p>Replace the registration clutch.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Replace the connection.
14	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the 2TM/TTM controller card assembly.</p> <p>Go to <b>“2X 500-sheet drawer (2TM)– 2TM/TTM controller card assembly removal” on page 4-43.</b></p> <p>Go to step 15.</p>	Problem solved.
15	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

## Error code messages - HCF

Error code or message	Error Contents	Description/Action
245.00 Paper jam Check areas K, tray 5	Sensor (tray 5 feed-out) on jam	The sensor (tray 5 feed-out) is not turned on within the specified time after the HCF feed lift motor is turned on. Go to <b>"245.00 Sensor (tray 5 feed-out) on jam" on page 2-37.</b>
245.01 Paper jam Check area K	Sensor (tray 2 feed-out) on jam	The sensor (tray 2 feed-out) on the printer is not turned on within the specified time after the HCF feed lift motor is turned on. Go to <b>"245.01 Sensor (tray 2 feed-out) on jam" on page 2-39.</b>
245.02 Paper jam Check area B	Sensor (registration) on jam	The sensor (registration) on the printer is not turned on within the specified time after the sensor (tray 2 feed-out) on the printer comes on. Go to <b>"245.02 Sensor (registration) on jam" on page 2-40.</b>
245.03 Paper jam Check area K	Sensor (tray 5 feed-out) static jam	Paper remains on the sensor (tray 5 feed-out). Go to <b>"245.03 Sensor (tray 5 feed-out) static jam" on page 2-42.</b>
945.00 Service tray 5 failure	Media tray 5 lift up / no tray failure	The sensor (HCF media level) is not turned on within the specified time after the HCF feed lift motor is turned on. Go to <b>"945.00 HCF unit media tray lift failure" on page 2-44.</b>
945.01 Service tray 5 failure	Tray 5 HCF unit NVM R/W failure	A read/write error has occurred on the NVM of the tray 5 HCF controller card assembly. Go to <b>"945.01 HCF unit NVM R/W failure" on page 2-45.</b>
980.01 Service tray 5 comm.	Tray 5 HCF communication failure	A communication error occurred between the printer engine card assembly and the HCF controller card assembly. Go to <b>"980.01 Tray 5 HCF communication failure" on page 2-45.</b>
Close cover K	HCF top door assembly open	The tray 5 HCF top door is open. Go to <b>"HCF top door assembly open" on page 2-46.</b>
Load tray 5 with <media>	No media in the selected media tray.	Media is not loaded in the tray. Go to <b>"No media in the selected media tray" on page 2-48.</b>
Tray 5 missing	HCF unit docking failure or HCF tray 5 set failure	The tray 5 HCF unit is not properly docked with the printer, or the HCF tray 5 is not set. Go to <b>"HCF unit docking failure or tray 5 set failure" on page 2-47.</b>

## Service checks - HCF

### 245.00 Sensor (tray 5 feed-out) on jam

Step	Check	Yes	No
1	<p>Check the paper path.</p> <p>Open the HCF top door assembly.</p> <p>Open the HCF media feed unit assembly.</p> <p>Check these items by turning them with your fingers.</p> <p>Are the pick roll, feed roll, separation roll, HCF media transport roll assembly, and the roll attached on the HCF top door assembly installed properly?</p>	Go to step 2.	<p>Clean or replace the appropriate roll, and clean the paper path.</p> <p>Go to <b>“HCF pick roll assembly removal” on page 4-68, “HCF feed roll assembly removal” on page 4-69, “HCF separation roll assembly removal” on page 4-71, and “HCF media transport roll assembly removal” on page 4-75.</b></p>
2	<p>Are the pick roll, feed roll, separation roll, HCF media transport roll assembly, and the roll attached on the HCF top door assembly free of excess wear and contamination?</p>	Go to step 3.	<p>Clean or replace the appropriate roll, and clean the paper path.</p> <p>Go to <b>“HCF pick roll assembly removal” on page 4-68, “HCF feed roll assembly removal” on page 4-69, “HCF separation roll assembly removal” on page 4-71, and “HCF media transport roll assembly removal” on page 4-75.</b></p>
3	<p>Check the sensor (pre-feed) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Tray 5.</b></li> <li>5. Touch <b>Pre-feed.</b></li> </ol> <p>Pull the HCF unit assembly from the printer.</p> <p>Open the HCF top door assembly.</p> <p>Open the HCF media feed unit assembly.</p> <p>Does the display on the screen change every time a piece of white paper is placed over the sensing area of the above sensor?</p>	Go to step 5.	Go to step 4.

Step	Check	Yes	No
4	Check the sensor (pre-feed) for proper connection. Is the above sensor connected properly?	Replace the sensor (pre-feed). Go to <b>"HCF sensor (pre-feed) removal" on page 4-63.</b>	Replace the connection.
5	Check the HCF feed unit cable assembly for proper connection. Is the above cable assembly connected properly?	Go to step 6.	Replace the connection.
6	Check the sensor (tray 5 feed-out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Tray 5.</b> 5. Touch <b>Feed-out.</b>  Pull the HCF unit assembly from the printer. Open the HCF top door assembly. Does the display on the screen change every time the actuator on the above sensor operates?	Go to step 8.	Go to step 7.
7	Check the sensor (tray 5 feed-out) for proper connection. Is the above sensor connected properly?	Replace the sensor (tray 5 feed-out). Go to <b>"HCF sensor (tray 5 feed-out) removal" on page 4-74.</b>	Replace the connection.
8	Check the HCF feed lift motor for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Printer Motor Tests.</b> 4. Touch <b>Tray 5 feed mtr.</b>  Does the above motor operate properly?	Go to step 10.	Go to step 9.
9	Check the HCF feed lift motor for proper connection. Is the above motor connected properly?	Replace the HCF media feed lift motor.	Replace the connection.
10	Check the HCF pick solenoid assembly for proper operation. Perform the HCF pick solenoid test. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Printer Motor Tests.</b> 4. Touch <b>HCF pick solenoid.</b>  Does the HCF pick solenoid operate properly?	Go to step 12.	Go to step 11.
11	Check the HCF pick solenoid assembly for proper connection. Is the above component connected properly?	Replace the HCF pick solenoid. Go to <b>"HCF pick solenoid assembly removal" on page 4-62.</b>	Replace the connection.

Step	Check	Yes	No
12	Perform a print test. Does the error still occur?	Replace the HCF controller card assembly.  Go to <b>“HCF controller card assembly removal” on page 4-78.</b>  Go to step 13.	Problem solved.
13	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 245.01 Sensor (tray 2 feed-out) on jam

Step	Check	Yes	No
1	Check the paper path. Open the HCF top door assembly. Open the HCF media feed unit assembly. Check these items by turning them with your fingers. Are the pick roll, feed roll, separation roll, HCF media transport roll assembly, and the roll attached on the HCF top door assembly installed properly?	Go to step 2.	Clean or replace the appropriate roll, and clean the paper path.  Go to <b>“HCF pick roll assembly removal” on page 4-68, “HCF feed roll assembly removal” on page 4-69, “HCF separation roll assembly removal” on page 4-71, and “HCF media transport roll assembly removal” on page 4-75.</b>
2	Are the pick roll, feed roll, separation roll, HCF media transport roll assembly, and the roll attached on the HCF top door assembly free of excess wear and contamination?	Go to step 3.	Clean or replace the appropriate roll, and clean the paper path.  Go to <b>“HCF pick roll assembly removal” on page 4-68, “HCF feed roll assembly removal” on page 4-69, “HCF separation roll assembly removal” on page 4-71, and “HCF media transport roll assembly removal” on page 4-75.</b>

Step	Check	Yes	No
3	<p>Check the sensor (tray 2 feed-out) on the printer for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Tray 2</b>.</li> <li>5. Touch <b>Feed-out</b>.</li> </ol> <p>Open the printer left lower door assembly.</p> <p>Does the operator panel display change every time a piece of white paper is placed over the sensing area of the above sensor?</p>	Go to step 5.	Go to step 4.
4	<p>Check the sensor (tray 2 feed-out) for proper connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (tray 2 feed-out).</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Replace the connection.
5	<p>Check the media transport motor for proper operation.</p> <p>Perform a print test from tray 5.</p> <p>Does the above motor operate properly?</p>	Go to step 7.	Go to step 6.
6	<p>Check the media transport motor for proper connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace the media transport motor.</p> <p>Go to: <b>“HCF media transport motor assembly removal” on page 4-76</b></p>	Replace the connection.
7	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the HCF controller card assembly.</p> <p>Go to <b>“HCF controller card assembly removal” on page 4-78</b>.</p> <p>Go to step 8.</p>	Problem solved.
8	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### 245.02 Sensor (registration) on jam

Step	Check	Yes	No
1	<p>Check the paper path.</p> <p>Open the HCF top door assembly.</p> <p>Check these items by turning them with your fingers.</p> <p>Are the HCF media transport roll assembly and the roll attached on the HCF top door assembly installed properly?</p>	Go to step 2.	<p>Clean or replace the appropriate roll, and clean the paper path.</p> <p>Go to <b>“HCF media transport roll assembly removal” on page 4-75</b>.</p>



Step	Check	Yes	No
2	Are the HCF media transport roll assembly and the roll attached on the HCF top door assembly free of excess wear and contamination?	Go to step 3.	Clean or replace the appropriate roll, and clean the paper path. Go to <b>“HCF media transport roll assembly removal” on page 4-75.</b>
3	Check the sensor (registration) in the printer for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>BASE Sensor Test.</b> 3. Touch <b>Media Path.</b> 4. Touch <b>Registration.</b>  Open the printer left door assembly. Does the display on the screen change every time the actuator on the above sensor operates?	Go to step 5.	Go to step 4.
4	Check the sensor (registration) for proper connection. Is the above sensor connected properly?	Replace the sensor (registration). Refer to the <i>Printer Service Manual</i> .	Replace the connection.
5	Check the media transport motor for proper operation. Perform a print test from tray 5. Does the above motor operate properly?	Go to step 7.	Go to step 6.
6	Check the HCF media transport motor for proper connection. Is the above motor connected properly?	Replace the HCF media transport motor. Go to <b>“HCF media transport motor assembly removal” on page 4-76.</b>	Replace the connection.
7	Perform a print test. Does the error still occur?	Replace the HCF controller card assembly. Go to <b>“HCF controller card assembly removal” on page 4-78.</b> Go to step 8.	Problem solved.
8	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

**245.03 Sensor (tray 5 feed-out) static jam**

Step	Check	Yes	No
1	<p>Check the paper path.</p> <p>Open the HCF top door assembly.</p> <p>Open the HCF media feed unit assembly.</p> <p>Check these items by turning them with your fingers.</p> <p>Are the pick roll, feed roll, separation roll, HCF media transport roll assembly, and the roll attached on the HCF top door assembly installed properly?</p>	Go to step 2.	<p>Clean or replace the appropriate roll, and clean the paper path.</p> <p>Go to <b>“HCF pick roll assembly removal” on page 4-68, “HCF feed roll assembly removal” on page 4-69, “HCF separation roll assembly removal” on page 4-71, and “HCF media transport roll assembly removal” on page 4-75.</b></p>
2	<p>Are the pick roll, feed roll, separation roll, HCF media transport roll assembly, and the roll attached on the HCF top door assembly free of excess wear and contamination?</p>	Go to step 3.	<p>Clean or replace the appropriate roll, and clean the paper path.</p> <p>Go to <b>“HCF pick roll assembly removal” on page 4-68, “HCF feed roll assembly removal” on page 4-69, “HCF separation roll assembly removal” on page 4-71, and “HCF media transport roll assembly removal” on page 4-75.</b></p>
3	<p>Check the sensor (tray 5 feed-out) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Tray 5.</b></li> <li>5. Touch <b>Feed-out.</b></li> </ol> <p>Pull the HCF unit assembly from the printer.</p> <p>Open the HCF top door assembly.</p> <p>Does the display on the screen change every time the actuator on the above sensor operates?</p>	Go to step 5.	Go to step 4.
4	<p>Check the sensor (tray 5 feed-out) for proper connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (tray 5 feed-out).</p> <p>Go to <b>“HCF sensor (tray 5 feed-out) removal” on page 4-74.</b></p>	Replace the connection.
5	<p>Check the HCF feed unit cable assembly for proper connection.</p> <p>Is the above cable assembly connected properly?</p>	Go to step 6.	Replace the connection.

Step	Check	Yes	No
6	<p>Check the HCF feed lift motor for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Printer Motor Tests</b>.</li> <li>4. Touch <b>Tray 5 feed mtr</b>.</li> </ol> <p>Does the above motor operate properly?</p>	Go to step 8.	Go to step 7.
7	<p>Check the HCF feed lift motor for proper connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace the HCF feed lift motor.</p> <p>Go to <b>“HCF feed lift motor removal” on page 4-58.</b></p>	Replace the connection.
8	<p>Check the HCF media transport motor for proper operation.</p> <p>Perform a print test from tray 5.</p> <p>Does the above motor operate properly?</p>	Go to step 10.	Go to step 9.
9	<p>Check the HCF media transport motor for proper connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace the HCF media transport motor.</p> <p>Go to <b>“HCF media transport motor assembly removal” on page 4-76.</b></p>	Replace the connection.
10	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the HCF controller card assembly.</p> <p>Go to <b>“HCF controller card assembly removal” on page 4-78.</b></p> <p>Go to step 11.</p>	Problem solved.
11	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

**945.00 HCF unit media tray lift failure**

Step	Check	Yes	No
1	<p>Check sensor (HCF media level) for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>INPUT TRAY TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Tray 5</b>.</li> <li>5. Touch <b>Media level</b>.</li> </ol> <p>Pull the HCF unit from the printer.</p> <p>Open the HCF top door assembly.</p> <p>Open the HCF feed unit assembly, and move the pick roll in an up and down motion. Avoid touching the rubber roll surface.</p> <p>Does the operator panel display change every time the sensing area is blocked on the above sensor?</p>	Go to step 9.	Go to step 2.
2	<p>Check the sensor (HCF media level) for proper connection.</p> <p>Is the above sensor connected properly?</p> <p>Does the operator panel display change every time the sensing area is blocked on the above sensor?</p>	<p>Replace the sensor (media level).</p> <p>Go to <b>"HCF sensor (media level) removal" on page 4-65.</b></p>	Replace the connection.
3	<p>Check the HCF pick solenoid for proper operation.</p> <p>Perform the HCF pick solenoid test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Printer Motor Tests</b>.</li> <li>4. Touch <b>HCF pick solenoid</b>.</li> </ol> <p>Does the HCF pick solenoid operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Check the HCF pick solenoid for proper connection.</p> <p>Is the above component connected properly?</p>	<p>Replace the HCF pick solenoid.</p> <p>Go to <b>"HCF pick solenoid assembly removal" on page 4-62.</b></p>	Replace the connection.
5	<p>Check the HCF feed unit cable assembly for proper connection.</p> <p>Is the above cable assembly connected properly?</p>	Go to step 6.	Replace the connection.
6	<p>Check the HCF feed lift motor for proper operation.</p> <p><b>Warning:</b> Only perform this test with the paper tray assembly removed from the machine or abnormal grinding noises will occur.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Printer Tests</b>.</li> <li>4. Touch <b>Tray 5 lift mtr</b></li> </ol> <p>Does the tray 5 media feed lift motor operate properly?</p>	Go to step 8.	Go to step 7.

Step	Check	Yes	No
7	Check the HCF feed lift motor for proper connection. Is the above motor connected properly?	Replace the HCF feed lift motor. Go to <b>“HCF feed lift motor removal” on page 4-58.</b>	Replace the connection.
8	Perform a print test. Does the error still occur?	Replace the HCF controller card assembly. Go to <b>“HCF controller card assembly removal” on page 4-78.</b> Go to step 9.	Problem solved.
9	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 945.01 HCF unit NVM R/W failure

Step	Check	Yes	No
1	Turn the main switch off and on several times. Does the error still occur when the power is on?	Go to step 2.	Problem solved.
2	Check the HCF controller card assembly and printer engine card assembly for proper connection. Are the connectors connected to the HCF controller card assembly and are connectors P414 and P415 on the printer engine card assembly connected properly?	Go to step 3.	Replace the connection.
3	Perform a print test. Does the error still occur?	Replace the HCF controller card assembly. Go to <b>“HCF controller card assembly removal” on page 4-78.</b> Go to step 4.	Problem solved.
4	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 980.01 Tray 5 HCF communication failure

Step	Check	Yes	No
1	Turn the main switch off and on several times. Does the error still occur when the power is on?	Go to step 2.	Problem solved.

Step	Check	Yes	No
2	Check the HCF controller card assembly and printer engine card assembly for proper connection. Are the connectors connected to the HCF controller card assembly and are connectors P414 and P415 on the printer engine card assembly connected properly?	Go to step 3.	Replace the connection.
3	Perform a print test. Does the error still occur?	Replace the HCF controller card assembly. Go to <b>“HCF controller card assembly removal” on page 4-78.</b> Go to step 4.	Problem solved.
4	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### **HCF top door assembly open**

Step	Check	Yes	No
1	Check the HCF top door assembly for deformation. Does the actuator on the HCF top door assembly operate the actuator on the HCF top door interlock switch?	Go to step 2.	Replace the HCF top door assembly. Go to <b>“HCF top door assembly removal” on page 4-72.</b>
2	Check the switch (HCF top door interlock) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>BASE Sensor Test.</b> 3. Touch <b>Cover and Door.</b> 4. Touch <b>Door K HCF top.</b>  Open the HCF top door assembly. Does the operator panel display change every time the actuator on the above switch operates?	Go to step 9.	Go to step 3.
3	Check the switch (HCF top door interlock) for proper connection. Is the above switch connected properly?	Replace the switch (HCF top door interlock). Go to <b>“HCF switch (top door interlock) removal” on page 4-73.</b>	Replace the connection.
4	Perform a print test. Does the error still occur?	Replace the HCF controller card assembly. Go to <b>“HCF controller card assembly removal” on page 4-78.</b> Go to step 5.	Problem solved.

Step	Check	Yes	No
5	Perform a print test. Does the error still occur?	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

### ***HCF unit docking failure or tray 5 set failure***

Step	Check	Yes	No
1	Check the HCF unit for proper installation. Is the HCF unit installed to the printer properly?	Go to step 2.	Remove and reinstall the HCF unit.
2	Check the switch (HCF unit docking interlock) for damage. Is the switch (HCF unit docking interlock) damaged?	Go to step 3.	Replace the switch (HCF unit docking interlock).  Go to <b>“HCF switch (unit docking interlock) removal” on page 4-77.</b>
3	Check the switch (HCF unit docking interlock) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 5</b> . 5. Touch <b>HCF unit docking</b> .  Pull the HCF unit from the printer. Does the display on the screen change every time the actuator on the above switch operates?	Go to step 5.	Go to step 4.
4	Check the switch (HCF unit docking interlock) for proper connection. Is the above switch connected properly?	Replace the switch (HCF unit docking interlock).  Go to <b>“HCF switch (unit docking interlock) removal” on page 4-77.</b>	Replace the connection.
5	Check the sensor (HCF media tray set) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 5</b> . 5. Touch <b>Tray set</b> .  Pull the HCF media tray assembly out. Does the display on the screen change every time the actuator on the above switch operates?	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Check the sensor (HCF media tray set) for proper connection. Is the above sensor connected properly.	Replace the sensor (HCF media tray set). Go to <b>“HCF sensor (HCF media tray set) removal” on page 4-48.</b>	Replace the connection.
7	Perform a print test. Does the error still occur?	Replace the HCF controller card assembly. Go to <b>“HCF controller card assembly removal” on page 4-78.</b> Go to step 8.	Problem solved.
8	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### ***No media in the selected media tray***

Step	Check	Yes	No
1	Check the media. Is the media loaded in the selected tray?	Go to step 2.	Load media.
2	Check the sensor (media out) for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>INPUT TRAY TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Tray 5</b> . 5. Touch <b>Media out</b> .  Pull the HCF unit away from the printer, open the HCF top door, and open the HCF feed unit.  Does the operator panel display change every time the sensing area on the above sensor is blocked by the media out actuator?	Go to step 4.	Go to step 3.
3	Check the sensor (media out) for proper connection. Is the above sensor connected properly?	Replace the sensor (media out). Go to <b>“HCF sensor (media out) removal” on page 4-66.</b>	Replace the connection.
4	Check the HCF controller card connection PF103 and the HCF hookup connection on the rear of the printer. Are the connections listed above connected properly?	Go to step 5.	Replace the connection.



Step	Check	Yes	No
5	Perform a print test. Does the error still occur?	Replace the HCF controller card assembly. Go to <b>“HCF controller card assembly removal” on page 4-78.</b> Go to step 6.	Problem solved.
6	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

## Error code messages - finisher

Error code or message	Error contents	Description/action
280.00 Paper jam Check area A	Sensor (bridge unit media entrance) on jam	The sensor (bridge unit media entrance) is not turned on within the specified time after the sensor (fuser exit) in the printer is turned on. Go to <b>"280.00 Sensor (bridge unit media entrance) on Jam" on page 2-58.</b>
280.01 Paper jam Check area A	Sensor (bridge unit media entrance) Static jam A	Paper remains on the sensor (bridge unit media entrance). Go to <b>"280.01 Sensor (bridge unit media entrance) static jam A" on page 2-59.</b>
280.02 Paper jam Check area F	Sensor (bridge unit media entrance) Static jam B	Paper remains on the sensor (bridge unit media entrance). Go to <b>"280.02 Sensor (bridge unit media entrance) static jam B" on page 2-60.</b>
281.00 Paper jam Check area A	Sensor (bridge unit media exit) on jam A	The sensor (bridge unit media exit) is not turned on within the specified time after the sensor (bridge unit media entrance) is turned on. At this time, the sensor (fuser exit) in the printer is turned on. Go to <b>"281.00 Sensor (bridge unit media exit) On Jam A" on page 2-62.</b>
281.01 Paper jam Check area F	Sensor (bridge unit media exit) on jam B	The sensor (bridge unit media exit) is not turned on within the specified time after the sensor (bridge unit media entrance) is turned on. At this time, the sensor (bridge unit media entrance) is turned on. Go to <b>"281.01 Sensor (bridge unit media exit) On Jam B" on page 2-63.</b>
281.02 Paper jam Check area F	Sensor (Bridge unit media exit) on jam C	The sensor (bridge unit media exit) is not turned on within the specified time after the sensor (bridge unit media entrance) is turned on. Go to <b>"281.02 Sensor (bridge unit media exit) On Jam C" on page 2-65.</b>
281.03 Paper jam Check area F	Sensor (bridge unit media exit) Static jam A	Paper remains on the sensor (bridge unit media exit). Go to <b>"281.03 Sensor (bridge unit media exit) static jam A" on page 2-66.</b>
282.00 Paper jam Check area F	Sensor (finisher media entrance) on jam	The sensor (finisher media entrance) is not turned on with the specified time after the sensor (bridge unit media exit) is turned on. Go to <b>"282.00 Sensor (finisher media entrance) on jam" on page 2-67.</b>
282.01 Paper jam Check area F	Sensor (finisher media entrance) Static jam A	Paper remains on the sensor (finisher media entrance). At this time, the sensor (bridge unit media exit) is turned on. Go to <b>"282.01 Sensor (finisher media entrance) static jam A" on page 2-69.</b>

Error code or message	Error contents	Description/action
283.00 Paper jam Check areas G, G4	Sensor (buffer path) on jam A	The sensor (buffer path) is not turned on within the specified time after the sensor (finisher media entrance) is turned on.  Go to <b>"283.00 Sensor (buffer path) on jam A" on page 2-70.</b>
283.01 Paper jam Check area G2	Sensor (buffer path) on jam B	The sensor (buffer path) is not turned on within the specified time after the sensor (finisher media entrance) is turned on.  At this time, the sensor (diverter gate) is turned on.  Go to <b>"283.01 Sensor (buffer path) on jam B" on page 2-74.</b>
283.02 Paper jam Check areas G2, G3	Sensor (buffer path) Static jam A	Paper remains on the sensor (finisher buffer path). At this time, both sensor (diverter gate) and sensor (transport exit) are turned on.  Go to <b>"283.02 Sensor (buffer path) static jam A" on page 2-77.</b>
283.03 Paper jam Check area G2	Sensor (buffer path) Static jam B	Paper remains on the sensor (finisher buffer path). At this time, the sensor (diverter gate) is turned on, but the sensor (finisher media entrance) is turned off.  Go to <b>"283.03 Sensor (buffer path) static jam B" on page 2-78.</b>
283.04 Paper jam Check area G4	Sensor (buffer path) Static jam C	Paper remains on the sensor (finisher buffer path). At this time, the sensor (diverter gate) is turned off.  Go to <b>"283.04 Sensor (buffer path) static jam C" on page 2-79.</b>
284.00 Paper jam Check area F	Sensor (lower media exit) off jam A	The sensor (lower media exit) is not turned off within the specified time after the finisher sensor (lower media exit) is turned on.  At this time, the sensor (bridge unit media exit) is turned on.  Go to <b>"284.00 Sensor (lower media exit) off jam A." on page 2-80.</b>
284.01 Paper jam Check area F	Sensor (lower media exit) on jam A	The sensor (buffer path) is not turned on within the specified time after the sensor (finisher media entrance) is turned on.  At this time the sensor (bridge unit media exit) is turned on.  Go to <b>"284.01 Sensor (lower media exit) on jam A" on page 2-81.</b>
284.02 Paper jam Check areas G2, G3	Sensor (lower media exit) on jam B	The sensor (buffer path) is not turned on within the specified time after the sensor (bridge unit media entrance) is turned on.  At this time, the sensor (finisher media entrance) is turned on.  Go to <b>"284.02 Sensor (lower media exit) on jam B" on page 2-83.</b>

Error code or message	Error contents	Description/action
284.03 Paper jam Check area G2	Sensor (lower media exit) on jam C	Finisher sensor (lower media exit) not turned on within the specified time after the sensor (buffer path) is turned on. Go to <b>“284.03 Sensor (lower media exit) on jam C” on page 2-86.</b>
284.04 Paper jam Check area H	Sensor (lower media exit) off jam B	Finisher sensor (lower media exit) is not turned off within the specified time after the finisher sensor (lower media exit) is turned on. At this time, the sensor (finisher media entrance) is turned on. Go to <b>“284.04 Sensor (lower media exit) off jam B.” on page 2-88.</b>
284.05 Paper jam Check areas H, G3	Sensor (lower media exit) Static jam	Paper remains on the sensor (lower media exit). Go to <b>“284.05 Sensor (lower media exit) static jam” on page 2-90.</b>
285.00 Paper jam Check area H	Finisher eject set jam	Finisher sensor (compiler media in) is not turned on within the specified time after the media eject motor is turned on. Go to <b>“285.00 Finisher eject set jam” on page 2-92.</b>
286.00 Paper jam Check area H	Sensor (compiler media in) Static jam	Paper remains on the sensor (compiler media in). Go to <b>“286.00 Sensor (compiler media in) static jam” on page 2-93.</b>
287.00 Paper jam Check area F	Sensor (upper media exit) on jam A	The sensor (upper media exit) is not turned on within the specified time after the sensor (finisher media entrance) is turned on. At this time, the sensor (bridge unit media exit) is turned on. Go to <b>“287.00 Sensor (upper media exit) on jam A” on page 2-94.</b>
287.01 Paper jam Check area F	Sensor (upper media exit) off jam A	The sensor (upper media exit) is not turned off within the specified time after the sensor (upper media exit) is turned on. At this time, the sensor (bridge unit media exit) is turned on. Go to <b>“287.01 Sensor (upper media exit) off jam A.” on page 2-96.</b>
287.02 Paper jam Check areas G1, G3	Sensor (upper media exit) on jam B	The sensor (upper media exit) is not turned on within the specified time after the sensor (finisher media entrance) is turned on. At this time, the sensor (bridge unit media exit) is turned on. Go to <b>“287.02 Sensor (upper media exit) on jam B” on page 2-98.</b>

Error code or message	Error contents	Description/action
287.03 Paper jam Check area G1	Sensor (upper media exit) on jam C	The sensor (upper media exit) is not turned on within the specified time after the sensor (finisher media entrance) is turned on. At this time, the sensor (bridge unit media exit) is turned on. Go to <b>“287.03 Sensor (upper media exit) on jam C” on page 2-100.</b>
287.04 Paper jam Check area G	Sensor (upper media exit) off jam B	The sensor (upper media exit) is not turned off within the specified time after the sensor (upper media exit) is turned on. At this time, the sensor (bridge unit media exit) is turned off. Go to <b>“287.04 Sensor (upper media exit) off jam B.” on page 2-101.</b>
287.05 Paper jam Check area F	Sensor (upper media exit) Static jam A	Paper remains on the sensor (upper media exit). At this time, the sensor (bridge unit media exit) is turned on. Go to <b>“287.05 Sensor (upper media exit) static jam A” on page 2-103.</b>
287.06 Paper jam Check areas G1, G3	Sensor (upper media exit) Static jam B	Paper remains on the sensor (upper media exit). At this time, the sensor (bridge unit media exit) is off but the finisher sensor (finisher media entrance) is turned on. Go to <b>“287.06 Sensor (upper media exit) static jam B” on page 2-105.</b>
287.07 Paper jam Check area G1	Sensor (upper media exit) Static jam C	Paper remains on the sensor (upper media exit). At this time, both the sensor (bridge unit media exit) and the sensor (finisher media entrance) are turned off. Go to <b>“287.07 Sensor (upper media exit) static jam C” on page 2-106.</b>
288.00 Paper jam Check area F	Sensor (diverter gate) on jam	The sensor (diverter gate) is not turned on within the specified time after the sensor (bridge unit media exit) is turned on. Go to <b>“288.00 Sensor (diverter gate) on jam” on page 2-107.</b>
288.01 Paper jam Check area F	Sensor (diverter gate) Static jam (to top bin) A	Paper remains on the sensor (diverter gate) when the finisher is in the upper bin exit mode. At this time the sensor (bridge unit media exit) is turned on. Go to <b>“288.01 Sensor (diverter gate) static jam (to top bin) A” on page 2-110.</b>
288.02 Paper jam Check areas G1, G3	Sensor (diverter gate) Static jam (to top bin) B	Paper remains on the sensor (diverter gate) when the finisher is in the upper bin exit mode. At this time, the sensor (finisher media entrance) is turned on, but the sensor (bridge unit media exit) is turned off. Go to <b>“288.02 Sensor (diverter gate) static jam (to top bin) B” on page 2-111.</b>

Error code or message	Error contents	Description/action
288.03 Paper jam Check area G1	Sensor (diverter gate) Static jam (to top bin) C	Paper remains on the sensor (diverter gate) when the finisher is in the upper bin exit mode. At this time, both the sensor (finisher media entrance) and the sensor (bridge unit media exit) are turned off. Go to <b>“288.03 Sensor (diverter gate) static jam (to top bin) C” on page 2-112.</b>
288.04 Paper jam Check area F	Sensor (diverter gate) Static jam (to stacker bin) A	Paper remains on the sensor (diverter gate) when the finisher is in the stacker bin exit mode. At this time, the sensor (bridge unit media exit) is turned on. Go to <b>“288.04 Sensor (diverter gate) static jam (to stacker bin) A” on page 2-113.</b>
288.05 Paper jam Check areas G2, G3	Sensor (diverter gate) Static jam (to stacker bin) B	Paper remains on the sensor (diverter gate) when the finisher is in the stacker bin exit mode. At this time, the sensor (finisher media entrance) is turned on, but the sensor (bridge unit media exit) is turned off. Go to <b>“288.05 Sensor (diverter gate) static jam (to stacker bin) B” on page 2-115.</b>
288.06 Paper jam Check area G2	Sensor (diverter gate) Static jam (to stacker bin) C	Paper remains on the sensor (diverter gate) when the finisher is in the stacker bin exit mode. At this time, both sensor (finisher media entrance) and sensor (bridge unit media exit) are turned off. Go to <b>“288.06 Sensor (diverter gate) static jam (to stacker bin) C” on page 2-116.</b>
980.02 Service finisher comm.	Finisher communication failure	A communication error occurred between the printer engine card assembly and the finisher. Go to <b>“980.02 Finisher communication failure” on page 2-117.</b>
981.00 Service finisher error	Stacker bin failure	The sensor (stacker bin level) is not turned on within the specified period after the stacker bin starts rising. Go to <b>“981.00 Stacker bin failure” on page 2-118.</b>
981.01 Service finisher error	Stacker bin upper limit failure	The stacker bin abnormally rises beyond the specified upper limit position (stacker bin level). Go to <b>“981.01 Stacker bin upper limit failure” on page 2-119.</b>
981.02 Service finisher error	Stacker bin lower limit failure	The stacker bin abnormally lowers beyond the specified lower limit position (full stack). Go to <b>“981.02 Stacker bin lower limit failure” on page 2-121.</b>
982.00 Service finisher error	Sensor (front tamper HP) on failure	The sensor (front tamper HP) is not turned on after the front tamper starts moving to the front tamper home position. Go to <b>“982.00 Sensor (front tamper HP) on failure” on page 2-124.</b>

Error code or message	Error contents	Description/action
982.01 Service finisher error	Sensor (front tamper HP) off failure	<p>The sensor (front tamper HP) is not turned off within the specified time after the front tamper starts leaving from the front tamper home position.</p> <p>Or the sensor (front tamper HP) is turned on again after the sensor (front tamper HP) is turned off and the front tamper has stopped moving.</p> <p>Go to <b>“982.01 Sensor (front tamper HP) off failure” on page 2-125.</b></p>
983.00 Service finisher error	Sensor (rear tamper HP) on failure	<p>The sensor (rear tamper HP) is not turned on after the rear tamper starts moving to the rear tamper home position.</p> <p>Go to <b>“983.00 Sensor (rear tamper HP) on failure” on page 2-126.</b></p>
983.01 Service finisher error	Sensor (rear tamper HP) off failure	<p>The sensor (rear tamper HP) is not turned off within the specified time after the rear tamper starts leaving from the rear tamper home position.</p> <p>Or the sensor (rear tamper HP) is turned on again after the sensor (rear tamper HP) is turned off and the rear tamper has stopped moving.</p> <p>Go to <b>“983.01 Sensor (rear tamper HP) off failure” on page 2-128.</b></p>
984.00 Service finisher error	Sensor (punch unit HP) on failure	<p>The sensor (punch unit HP) is not turned on even when the specified time has passed after the punch unit motor is turned on.</p> <p>Go to <b>“984.00 Sensor (punch unit HP) on failure” on page 2-129.</b></p>
984.01 Service finisher error	Sensor (punch unit HP) off failure	<p>The sensor (punch unit HP) is not turned off even when the specified time has passed after the punch unit motor is turned on.</p> <p>Go to <b>“984.01 Sensor (punch unit HP) off failure” on page 2-130.</b></p>
985.00 Service finisher error	Sensor (punch carriage shift HP) on failure	<p>The sensor (punch carriage shift HP) is not turned on even when the specified time has passed after the punch carriage shift motor assembly is turned on.</p> <p>Or the sensor (punch carriage shift HP) is turned off again after the sensor (punch carriage shift HP) is turned on and the punch carriage shift motor assembly stops its rotation.</p> <p>Go to <b>“985.00 Sensor (punch carriage shift HP) on failure” on page 2-131.</b></p>
985.01 Service finisher error	Sensor (punch carriage shift HP) off failure	<p>The sensor (punch carriage shift HP) is not turned off even when the specified time has passed after the punch carriage shift motor assembly is turned on.</p> <p>Or the sensor (punch carriage shift HP) is turned on again after the sensor (punch carriage shift HP) is turned off and the punch carriage shift motor assembly stops its rotation.</p> <p>Go to <b>“985.01 Sensor (punch carriage shift HP) off failure” on page 2-133.</b></p>
986.00 Service finisher error	Sensor (media eject clamp HP) on failure	<p>The sensor (media eject clamp HP) is not turned on within 500 ms after the media eject clamp up starts.</p> <p>Go to <b>“986.00 Sensor (media eject clamp HP) on failure” on page 2-134.</b></p>

Error code or message	Error contents	Description/action
986.01 Service finisher error	Sensor (media eject clamp HP) off failure	The sensor (media eject clamp HP) is not turned off within 200 ms after the media eject clamp down starts. Go to <b>"986.01 Sensor (media eject clamp HP) off failure" on page 2-135.</b>
987.00 Service finisher error	Sensor (media eject shaft HP) on failure	The sensor (media eject shaft HP) is not turned on within 200 ms after the set clamp starts operating. Go to <b>"987.00 Sensor (media eject shaft HP) on failure" on page 2-136.</b>
987.01 Service finisher error	Sensor (media eject shaft HP) off failure	The sensor (media eject shaft HP) is not turned off within the specified time after the set clamp ends operating. Go to <b>"987.01 Sensor (media eject shaft HP) off failure" on page 2-138.</b>
988.00 Service finisher error	Sensor (punch unit side reg1) on failure Sensor (punch unit side reg2) on failure	The sensor (punch unit side reg1) or sensor (punch unit side reg2) did not detect the media properly or is defective. Go to <b>"988.00 Sensor (punch unit side reg) on failure" on page 2-139.</b>
988.01 Service finisher error	Sensor (punch unit side reg1) off failure Sensor (punch unit side reg2) off failure	The sensor (punch unit side reg1) or sensor (punch unit side reg2) did not detect the media properly or is defective. Go to <b>"988.01 Sensor (punch unit side reg) off failure" on page 2-141.</b>
989.00 Service finisher error	Stapler unit failure	The off/on status of the sensor (stapler unit motor HP) is not detected within the specified time after the stapler unit motor is on (forward operation). Or the sensor (stapler unit motor HP) is not turned on within the specified timer after the stapler unit motor is on (reverse operation). Go to <b>"989.00 Stapler unit failure" on page 2-143.</b>
990.00 Service finisher error	Sensor (stapler carriage HP) on failure	The sensor (stapler carriage HP) is not turned on within two seconds after the stapler starts moving toward the staple position and within two seconds after the sensor (stapler carriage HP) is off. Or the sensor (stapler carriage HP) is not turned on after the stapler is moved to the staple position. Or the sensor (stapler carriage HP) is turned off again after the sensor (stapler carriage HP) is turned on and the stapler stops moving. Go to <b>"990.00 Sensor (stapler carriage HP) on failure" on page 2-144.</b>
990.01 Service finisher error	Sensor (stapler carriage HP) off failure	The sensor (stapler carriage HP) is not turned off within 500 ms after the stapler starts moving to the staple position and the sensor (stapler carriage HP) is off. Or the sensor (stapler carriage HP) is not turned off after the stapler is moved to the staple position. Or the sensor (stapler carriage HP) is turned on again after the sensor (stapler carriage HP) is turned off and the stapler stops moving. Go to <b>"990.01 Sensor (stapler carriage HP) off failure" on page 2-145.</b>



Error code or message	Error contents	Description/action
995.00 Service finisher NV	Finisher NVM R/W failure	A read/write error occurred on the NVM of the finisher controller card assembly. Go to <b>“995.00 Finisher NVRAM R/W failure” on page 2-146.</b>
996.00 Service wrong finisher	Finisher type failure	An incorrect type of finisher is connected. Go to <b>“996.00 Finisher type failure” on page 2-146.</b>
999.00 Service finisher error	Finisher engine/RIP functional failure	The engine reported a finisher failure that the RIP card assembly did not recognize. Go to <b>“999.00 Finisher engine/RIP functional failure” on page 2-146.</b>
Close cover F	Bridge unit cover is open	Finisher bridge unit cover is open. Go to <b>“999.00 Finisher engine/RIP functional failure” on page 2-146.</b>
Close door G	Finisher front door open	The finisher front cover is open. Go to <b>“Finisher front door open” on page 2-149.</b>
Close surface H	Eject cover is open	The finisher eject cover is open. Go to <b>“Finisher eject cover open” on page 2-150.</b>
Empty hole punch box	Punch waste box full	The punch waste box is filled. Go to <b>“Punch waste box full” on page 2-152.</b>
Insert hole punch box	Punch waste box missing	No punch waste box. Go to <b>“No punch waste box.” on page 2-151.</b>
Load staples	Staple cartridge empty	Go to <b>“Staple cartridge empty” on page 2-159.</b>
Remove paper from Bin 1	Finisher upper media bin full	The upper media bin has reached maximum capacity. Go to <b>“Finisher upper media bin full” on page 2-150.</b>
Remove paper from bin 2	Stacker set over count	The stapled media exceeds the specified value on the stacker bin. Go to <b>“Stacker set over count failure” on page 2-158.</b>
Remove paper from Bin 2	Stacker media bin full (no mix)	The stacker media bin has reached maximum capacity (same media size). Go to <b>“Stacker media bin full (no mix)” on page 2-155.</b>
Remove paper from Bin 2	Stacker media bin full (mix size)	The stacker media bin has reached maximum capacity (mixed media size). Go to <b>“Stacker media bin full (mix size)” on page 2-153.</b>

## Service checks - finisher

### 280.00 Sensor (bridge unit media entrance) on Jam

Step	Check	Yes	No
1	<p>Check the media path.</p> <p>Open the bridge unit top cover assembly of the bridge unit assembly.</p> <p>Check the two transport belts and the six bridge unit pinch rolls attached on the bridge unit top cover assembly by turning them with your fingers.</p> <p>Are the transport belts and the bridge unit pinch rolls installed properly?</p>	Go to step 2.	Clean or replace the transport belts and bridge unit pinch rolls, and clean the media path.
2	<p>Are the two transport belts and the six bridge unit pinch rolls free of damage?</p>	Go to step 3.	Clean or replace the transport belts and bridge unit pinch roll, and clean the media path.
3	<p>Check the sensor (bridge unit media entrance) for proper operation.</p> <p>Perform the sensor (bridge unit media entrance) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Bridge media ent</b>.</li> </ol> <p>Open the bridge unit top cover assembly.</p> <p>Does the operator panel display change every time the actuator of the sensor (bridge unit media entrance) is operated?</p>	Go to step 5.	Go to step 4.
4	<p>Check the sensor (bridge unit media entrance) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (bridge unit media entrance).</p> <p>Go to <b>“Sensor (bridge unit media entrance) removal” on page 4-93.</b></p>	Replace the connection.
5	<p>Check the bridge unit drive motor for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Bridge unit drv mtr</b>.</li> </ol> <p>Open the top cover on the bridge unit.</p> <p>Does the bridge unit drive motor operate properly?</p>	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Check the bridge unit drive motor connection. Is the above motor properly connected?	Replace the bridge unit drive motor.  Go to <b>“Bridge unit drive motor assembly removal” on page 4-90.</b>	Replace the connection.
7	Perform a print test. Does the error still occur?	Replace the bridge unit interface card assembly.  Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b> Go to step 8.	Problem solved.
8	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 280.01 Sensor (bridge unit media entrance) static jam A

Step	Check	Yes	No
1	Perform the sensor (bridge unit media entrance) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 1.</b> 5. Touch <b>Bridge media ent.</b>  Open the bridge unit top cover assembly. Does the operator panel display change every time the actuator of the sensor (bridge unit media entrance) is operated?	Go to step 3.	Go to step 2.
2	Check the sensor (bridge unit media entrance) connection Is the above sensor connected properly?	Replace the sensor (bridge unit media entrance).  Go to <b>“Sensor (bridge unit media entrance) removal” on page 4-93.</b>	Replace the connection.

Step	Check	Yes	No
3	<p>Check the bridge unit drive motor for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Bridge unit drv mtr.</b></li> </ol> <p>Open the top cover on the bridge unit. Does the bridge unit drive motor operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Check the bridge unit drive motor connection. Is the above motor connected properly?</p>	<p>Replace the bridge unit drive motor.</p> <p>Go to <b>“Bridge unit drive motor assembly removal” on page 4-90.</b></p>	Replace the connection.
5	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the bridge unit interface card assembly.</p> <p>Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b></p>	Problem solved.
6	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

### 280.02 Sensor (bridge unit media entrance) static jam B

Step	Check	Yes	No
1	<p>Check the sensor (bridge unit media entrance) for proper operation.</p> <p>Perform the sensor (bridge unit media entrance) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Bridge media ent.</b></li> </ol> <p>Open the bridge unit top cover assembly.</p> <p>Does the operator panel display change every time the actuator of the sensor (bridge unit media entrance) is operated?</p>	Go to step 3.	Go to step 2.

Step	Check	Yes	No
2	Check the sensor (bridge unit media entrance) connection. Is the above sensor connected properly?	Replace the sensor (bridge unit media entrance).  Go to <b>“Sensor (bridge unit media entrance) removal” on page 4-93.</b>	Replace the connection.
3	Check the bridge unit drive motor for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Bridge unit drv mtr.</b>  Open the top cover on the bridge unit. Does the bridge unit drive motor operate properly?	Go to step 5.	Go to step 4.
4	Check the bridge unit drive motor connection. Is the above motor connected properly?	Replace the bridge unit drive motor.  Go to <b>“Bridge unit drive motor assembly removal” on page 4-90.</b>	Replace the connection.
5	Perform a print test. Does the error still occur?	Replace the bridge unit interface card assembly.  Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b>	Problem solved.
6	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

**281.00 Sensor (bridge unit media exit) On Jam A**

Step	Check	Yes	No
1	<p>Check the media path.</p> <ol style="list-style-type: none"> <li>1. Open the bridge unit top cover assembly of the bridge unit assembly.</li> <li>2. Check the two transport belts and the six bridge unit pinch rolls attached on the bridge unit top cover assembly by turning them with your fingers.</li> </ol> <p>Are the transport belts and the bridge unit pinch rolls installed properly?</p>	Go to step 2.	Clean or replace the transport belts and bridge unit pinch rolls, and clean the media path.
2	<p>Are the two transport belts and the six bridge unit pinch rolls free of damage?</p>	Go to step 3.	Clean or replace the transport belts and bridge unit pinch roll, and clean the media path.
3	<p>Check the sensor (bridge unit media exit) for proper operation.</p> <p>Perform the sensor (bridge unit media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Bridge media exit.</b></li> </ol> <p>Open the bridge unit top cover assembly.</p> <p>Does the operator panel display change every time the actuator of the sensor (bridge unit media exit) is operated?</p>	Go to step 5.	Go to step 4.
4	<p>Check the sensor (bridge unit media exit) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (bridge unit media exit).</p> <p>Go to <b>“Sensor (bridge unit media exit) removal” on page 4-94.</b></p>	Replace the connection.
5	<p>Check the bridge unit drive motor for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Bridge unit drv mtr.</b></li> </ol> <p>Open the top cover on the bridge unit.</p> <p>Does the bridge unit drive motor operate properly?</p>	Go to step 7.	Go to step 6.
6	<p>Check the bridge unit drive motor connection.</p> <p>Is the above motor properly connected?</p>	<p>Replace the bridge unit drive motor.</p> <p>Go to <b>“Bridge unit drive motor assembly removal” on page 4-90.</b></p>	Replace the connection.

Step	Check	Yes	No
7	Perform a print test. Does the error still occur?	Replace the bridge unit interface card assembly.  Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b>  Go to step 8.	Problem solved.
8	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 281.01 Sensor (bridge unit media exit) On Jam B

Step	Check	Yes	No
1	Check the media path. 1. Open the bridge unit top cover assembly of the bridge unit assembly. 2. Check the two transport belts and the six bridge unit pinch rolls attached on the bridge unit top cover assembly by turning them with your fingers. Are the transport belts and the bridge unit pinch rolls installed properly?	Go to step 2.	Clean or replace the transport belts and bridge unit pinch rolls, and clean the media path.
2	Are the two transport belts and the six bridge unit pinch rolls free of damage?	Go to step 3.	Clean or replace the transport belts and bridge unit pinch roll, and clean the media path.
3	Check the sensor (bridge unit media exit) for proper operation. Perform the sensor (bridge unit media exit) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 1.</b> 5. Touch <b>Bridge media exit.</b>  Open the bridge unit top cover assembly. Does the operator panel display change every time the actuator of the sensor (bridge unit media exit) is operated?	Go to step 5.	Go to step 4.

Step	Check	Yes	No
4	Check the sensor (bridge unit media exit) connection. Is the above sensor connected properly?	Replace the sensor (bridge unit media exit).  Go to <b>“Sensor (bridge unit media exit) removal” on page 4-94.</b>	Replace the connection.
5	Check the bridge unit drive motor for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Bridge unit drv mtr.</b>  Open the top cover on the bridge unit. Does the bridge unit drive motor operate properly?	Go to step 7.	Go to step 6.
6	Check the bridge unit drive motor connection. Is the above motor properly connected?	Replace the bridge unit drive motor.  Go to <b>“Bridge unit drive motor assembly removal” on page 4-90.</b>	Replace the connection.
7	Perform a print test. Does the error still occur?	Replace the bridge unit interface card assembly.  Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b> Go to step 8.	Problem solved.
8	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.



## 281.02 Sensor (bridge unit media exit) On Jam C

Step	Check	Yes	No
1	<p>Check the media path.</p> <ol style="list-style-type: none"> <li>1. Open the bridge unit top cover assembly of the bridge unit assembly.</li> <li>2. Check the two transport belts and the six bridge unit pinch rolls attached on the bridge unit top cover assembly by turning them with your fingers.</li> </ol> <p>Are the transport belts and the bridge unit pinch rolls installed properly?</p>	Go to step 2.	Clean or replace the transport belts and bridge unit pinch rolls, and clean the media path.
2	<p>Are the two transport belts and the six bridge unit pinch rolls free of damage?</p>	Go to step 3.	Clean or replace the transport belts and bridge unit pinch roll, and clean the media path.
3	<p>Check the sensor (bridge unit media exit) for proper operation.</p> <p>Perform the sensor (bridge unit media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Bridge media exit.</b></li> </ol> <p>Open the bridge unit top cover assembly.</p> <p>Does the operator panel display change every time the actuator of the sensor (bridge unit media exit) is operated?</p>	Go to step 5.	Go to step 4.
4	<p>Check the sensor (bridge unit media exit) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (bridge unit media exit).</p> <p>Go to <b>“Sensor (bridge unit media exit) removal” on page 4-94.</b></p>	Replace the connection.
5	<p>Check the bridge unit drive motor for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Bridge unit drv mtr.</b></li> </ol> <p>Open the top cover on the bridge unit.</p> <p>Does the bridge unit drive motor operate properly?</p>	Go to step 7.	Go to step 6.
6	<p>Check the bridge unit drive motor connection.</p> <p>Is the above motor properly connected?</p>	<p>Replace the bridge unit drive motor.</p> <p>Go to <b>“Bridge unit drive motor assembly removal” on page 4-90.</b></p>	Replace the connection.

Step	Check	Yes	No
7	Perform a print test. Does the error still occur?	Replace the bridge unit interface card assembly.  Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b>  Go to step 8.	Problem solved.
8	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 281.03 Sensor (bridge unit media exit) static jam A

Step	Check	Yes	No
1	Check the sensor (bridge unit media exit) for proper operation.  Perform the sensor (bridge unit media exit) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 1.</b> 5. Touch <b>Bridge media exit.</b>  Open the bridge unit top cover assembly.  Does the operator panel display change every time the actuator of the sensor (bridge unit media exit) is operated?	Go to step 4.	Go to step 2.
2	Check the sensor (bridge unit media exit) connection. Is the above sensor connected properly?	Replace the sensor (bridge unit media exit).  Go to <b>“Sensor (bridge unit media exit) removal” on page 4-94.</b>	Replace the connection.
3	Check the bridge unit drive motor for proper operation. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Bridge unit drv mtr.</b>  Open the top cover on the bridge unit.  Does the bridge unit drive motor operate properly?	Go to step 5.	Go to step 4.

Step	Check	Yes	No
4	Check the bridge unit drive motor connection. Are the connectors of the bridge unit cable assembly connected to the bridge unit drive motor and bridge unit interface card assembly?	Replace the bridge unit drive motor. Go to <b>“Bridge unit drive motor assembly removal” on page 4-90.</b>	Replace the connection.
5	Perform a print test. Does the error still occur?	Replace the bridge unit interface card assembly. Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b>	Problem solved.
6	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 282.00 Sensor (finisher media entrance) on jam

Step	Check	Yes	No
1	Check the media path. 1. Open the bridge unit top cover assembly of the bridge unit assembly. 2. Check the two transport belts and the six bridge unit pinch rolls attached on the bridge unit top cover assembly by turning them with your fingers. Are transport belts and the bridge unit pinch rolls installed properly?	Go to step 2.	Clean or replace the transport belts and bridge unit pinch rolls, and clean the media path.
2	Are the two transport belts and the six bridge unit pinch rolls free of damage?	Go to step 3.	Clean or replace the transport belts and bridge unit pinch rolls, and clean the media path.

Step	Check	Yes	No
3	<p>Check sensor (bridge unit media exit) for proper operation.</p> <p>Perform the Bridge media exit test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Bridge media exit.</b></li> </ol> <p>Open the bridge unit top cover assembly.</p> <p>Does the operator panel display change every time the actuator of the sensor (bridge unit media exit) is operated?</p>	Go to step 6.	Go to step 4.
4	<p>Check the sensor (bridge unit media exit) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (bridge unit media exit).</p> <p>Go to <b>“Sensor (bridge unit media exit) removal” on page 4-94.</b></p>	Replace the connection.
5	<p>Check the sensor (finisher media entrance) for proper operation.</p> <p>Perform the sensor (finisher media entrance) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Fin media ent.</b></li> </ol> <p>Detach the finisher from the MFP.</p> <p>Insert a sheet of white media into the finisher media path entrance.</p> <p>Does the display change every time a piece of white media is placed over the sensing area of the above sensor?</p>	Go to step 7.	Go to step 6.
9	<p>Check the sensor (finisher media entrance) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (finisher media entrance).</p> <p>Go to <b>“Sensor (finisher media entrance) removal” on page 4-175.</b></p>	Replace the connection.
7	<p>Check the bridge unit drive motor for proper operation.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Bridge unit drv mtr.</b></li> </ol> <p>Open the top cover on the bridge unit.</p> <p>Does the bridge unit drive motor operate properly?</p>	Go to step 9.	Go to step 8.

Step	Check	Yes	No
8	Is the bridge unit drive motor connected properly?	Replace the bridge unit drive motor. Go to <b>“Bridge unit drive motor assembly removal” on page 4-90.</b>	Replace the connection.
9	Perform a print test. Does the error still occur?	Replace the bridge unit interface card assembly. Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b> Go to step 10.	Problem solved.
10	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 282.01 Sensor (finisher media entrance) static jam A

Step	Check	Yes	No
1	<p>Check the sensor (finisher media entrance) for proper operation.</p> <p>Perform the sensor (finisher media entrance) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Fin media ent.</b></li> </ol> <p>Detach the finisher from the MFP.</p> <p>Insert a sheet of white media into the finisher media path entrance.</p> <p>Does the display change every time a piece of white media is placed over the sensing area of the above sensor?</p>	Go to step 3.	Go to step 2.

Step	Check	Yes	No
2	Check the sensor (finisher media entrance) connection. Is the above sensor connected properly?	Replace the sensor (finisher media entrance).  Go to <b>“Sensor (finisher media entrance) removal” on page 4-175.</b>	Replace the connector.
3	Check the drive motor (entrance/paddle) for proper operation. Perform the drive motor (entrance/paddle) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Motor (entrance/paddle).</b>  Does the motor (entrance/paddle) operate properly?	Go to step 5.	Go to step 4.
4	Check the drive motor (entrance/paddle) connection. Are the connections of the main drive cable assembly properly connected?	Replace the drive motor (entrance/paddle).  Go to <b>“Drive motor (entrance/paddle) and belt (entrance/paddle) removal” on page 4-177.</b>	Replace the connection.
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 283.00 Sensor (buffer path) on jam A

Step	Check	Yes	No
1	Check the media path. 1. Open the finisher front door assembly. 2. Open the entrance pinch guide assembly upward. 3. Check the media entrance roll assembly and the media entrance pinch guide pinch roll attached on the media entrance pinch guide assembly by turning them with your fingers. Are the media entrance roll assembly and the media entrance pinch guide pinch rolls operating properly?	Go to step 2.	Clean or replace the appropriate rolls and clean the media path.

Step	Check	Yes	No
2	Are the media entrance roll assembly and the media entrance pinch guide pinch rolls free of damage, and do they rotate smoothly?	Go to step 3.	Clean or replace the appropriate rolls and clean the paper path.
3	Check the media path. 1. Open the finisher front door assembly. 2. Open the lower pinch guide assembly to the right. 3. Check the buffer roll assembly by turning it with your fingers. Is the buffer roll assembly installed properly, and is it free of damage and contamination?	Go to step 4.	Clean or replace the appropriate rolls, and clean the media path.
4	Are the four buffer pinch guide pinch rolls attached on the lower pinch guide assembly installed properly?	Go to step 5.	Clean or replace the appropriate rolls and clean the media path.
5	Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Media Path 2</b> . 5. Touch <b>Diverter gate</b> .  Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate). Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?	Go to step 7.	Go to step 6.
6	Check the sensor (diverter gate) connection. Is the above sensor connected properly?	Replace the sensor (diverter gate). Go to <b>"Sensor (diverter gate) removal"</b> on page 4-187.	Replace the connection.

Step	Check	Yes	No
7	<p>Check the buffer diverter gate solenoid for proper operation.</p> <p>Perform the fin buffer solenoid test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Tests.</b></li> <li>4. Touch <b>Fin buffer solenoid.</b></li> <li>5. Touch <b>Forward or reverse.</b></li> </ol> <p>Open and override the finisher front door interlock switch and observe the buffer solenoid gate.</p> <p>Move the lower pinch guide assembly to the right.</p> <p>Does the buffer diverter gate solenoid operate properly, that is, does the buffer diverter gate move up and down?</p>	Go to step 9.	Go to step 8.
8	<p>Check the buffer diverter gate solenoid connection.</p> <p>Is the above solenoid connected properly?</p>	<p>Replace the buffer diverter gate solenoid.</p> <p>Go to <b>“Buffer diverter gate solenoid removal” on page 4-180.</b></p>	Problem solved.
9	<p>Check the sensor (buffer path) for proper operation.</p> <p>Perform the buffer path test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Buffer path.</b></li> </ol> <p>Open the finisher front door.</p> <p>Lower the buffer pinch guide assembly.</p> <p>Push a sheet of media into the buffer path and around the buffer roll assembly in a clockwise direction.</p> <p>Does the operator panel display change every time the actuator of the sensor (buffer path) is operated?</p>	Go to step 9.	Go to step 8.
10	<p>Check the sensor (buffer path) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (buffer path).</p> <p>Go to <b>“Sensor (buffer path) removal” on page 4-170.</b></p>	Replace the connection.



Step	Check	Yes	No
11	<p>Check the drive motor (buffer/transport) for proper operation.</p> <p>Perform the drive motor (buffer/transport) test.</p> <p>Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (buffer/transport).</b></li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 13.	Go to step 12.
12	<p>Check the drive motor (buffer/transport) connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace the drive motor (buffer/transport).</p> <p>Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b></p>	Problem solved.
13	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the bridge unit interface card assembly.</p> <p>Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b></p> <p>Go to step 14.</p>	Problem solved.
14	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

**283.01 Sensor (buffer path) on jam B**

Step	Check	Yes	No
1	<p>Check the media path.</p> <ol style="list-style-type: none"> <li>1. Open the finisher front door assembly.</li> <li>2. Remove the top cover and left upper cover.</li> <li>3. Open the entrance pinch guide assembly upward.</li> <li>4. Check the media entrance roll assembly and the media entrance pinch guide pinch roll attached on the media entrance pinch guide assembly by turning them with your fingers.</li> </ol> <p>Are the media entrance roll assembly and the media entrance pinch guide pinch rolls operating properly?</p>	Go to step 2.	Clean or replace the appropriate rolls and clean the media path.
2	<p>Are the media entrance roll assembly and the media entrance pinch guide pinch rolls free of damage, and do they rotate smoothly?</p>	Go to step 3.	Clean or replace the appropriate rolls and clean the paper path.
3	<p>Check the media path.</p> <ol style="list-style-type: none"> <li>1. Open the finisher front door assembly.</li> <li>2. Remove the top cover and left upper cover.</li> <li>3. Open the lower pinch guide assembly to the right.</li> <li>4. Check the buffer roll assembly by turning it with your fingers.</li> </ol> <p>Is the buffer roll assembly installed properly, and is it free of damage and contamination?</p>	Go to step 4.	Clean or replace the appropriate rolls, and clean the media path.
4	<p>Are the four buffer pinch guide pinch rolls attached on the lower pinch guide assembly installed properly?</p>	Go to step 5.	Clean or replace the appropriate rolls and clean the media path.
5	<p>Check the sensor (diverter gate) for proper operation.</p> <p>Perform the sensor (diverter gate) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 2</b>.</li> <li>5. Touch <b>Diverter gate</b>.</li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide assembly to the right.</p> <p>Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate).</p> <p>Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?</p>	Go to step 7.	Go to step 6.
6	<p>Check the sensor (diverter gate) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (diverter gate).</p> <p>Go to <b>“Sensor (diverter gate) removal” on page 4-187</b>.</p>	Replace the connection.

Step	Check	Yes	No
7	<p>Check the sensor (buffer path) for proper operation. Perform the buffer path test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Buffer path.</b></li> </ol> <p>Open the finisher front door. Lower the buffer pinch guide assembly. Push a sheet of media into the buffer path and around the buffer roll assembly in a clockwise direction. Does the operator panel display change every time the actuator of the sensor (buffer path) is operated?</p>	Go to step 9.	Go to step 8.
8	<p>Check the sensor (buffer path) connection. Is the above sensor connected properly?</p>	<p>Replace the sensor (buffer path). Go to <b>“Sensor (buffer path) removal” on page 4-170.</b></p>	Replace the connection.
9	<p>Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (buffer/transport).</b></li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 11.	Go to step 10.
10	<p>Check the drive motor (buffer/transport) connection. Is the above motor connected properly?</p>	<p>Replace the drive motor (buffer/transport). Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b></p>	Problem solved.

Step	Check	Yes	No
11	<p>Check the finisher diverter gate solenoid for proper operation.</p> <p>Perform the fin diverter solenoid test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Tests</b>.</li> <li>4. Touch <b>Fin diverter solenoid</b>.</li> <li>5. Touch <b>Forward or reverse</b>.</li> </ol> <p>Open and override the finisher front door interlock switch.</p> <p>Move the lower pinch guide assembly to the right.</p> <p>Does the finisher diverter gate solenoid operate properly, that is, does the finisher diverter gate move up and down?</p>	Go to step 13.	Go to step 12.
12	<p>Check the finisher diverter gate solenoid connection.</p> <p>Is the above solenoid connected properly?</p>	<p>Replace the finisher diverter gate solenoid.</p> <p>Go to <b>“Finisher diverter gate solenoid removal” on page 4-179.</b></p>	Problem solved.
13	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the bridge unit interface card assembly.</p> <p>Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b></p> <p>Go to step 12.</p>	Problem solved.
14	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

## 283.02 Sensor (buffer path) static jam A

Step	Check	Yes	No
1	<p>Check the sensor (buffer path) for proper operation. Perform the buffer path test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Buffer path</b>.</li> </ol> <p>Open the finisher front door. Lower the buffer pinch guide assembly. Push a sheet of media into the buffer path and around the buffer roll assembly in a clockwise direction. Does the operator panel display change every time the actuator of the sensor (buffer path) is operated?</p>	Go to step 3.	Go to step 2.
2	<p>Check the sensor (buffer path) connection. Is the above sensor connected properly?</p>	<p>Replace the sensor (buffer path). Go to <b>"Sensor (buffer path) removal" on page 4-170</b>.</p>	Replace the connection.
3	<p>Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>"Rear upper cover removal" on page 4-101</b>.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Motor (buffer/transport)</b>.</li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Check the drive motor (buffer/transport) connection. Is the above motor connected properly?</p>	<p>Replace the drive motor (buffer/transport). Go to <b>"Drive motor (buffer/transport) and belt (buffer/transport) removal" on page 4-192</b>.</p>	Replace the connection.
5	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the finisher controller card assembly. Go to <b>"Finisher controller card assembly removal" on page 4-195</b>.</p>	Problem solved.

**283.03 Sensor (buffer path) static jam B**

Step	Check	Yes	No
1	<p>Check the sensor (buffer path) for proper operation. Perform the buffer path test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Buffer path</b>.</li> </ol> <p>Open the finisher front door. Lower the buffer pinch guide assembly. Push a sheet of media into the buffer path and around the buffer roll assembly in a clockwise direction. Does the operator panel display change every time the actuator of the sensor (buffer path) is operated?</p>	Go to step 3.	Go to step 2.
2	<p>Check the sensor (buffer path) connection. Is the above sensor connected properly?</p>	<p>Replace the sensor (buffer path). Go to <b>"Sensor (buffer path) removal" on page 4-170.</b></p>	Replace the connection.
3	<p>Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>"Rear upper cover removal" on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Motor (buffer/transport)</b>.</li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Check the drive motor (buffer/transport) connection. Is the above motor connected properly?</p>	<p>Replace the drive motor (buffer/transport). Go to <b>"Drive motor (buffer/transport) and belt (buffer/transport) removal" on page 4-192.</b></p>	Replace the connection.
5	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the finisher controller card assembly. Go to <b>"Finisher controller card assembly removal" on page 4-195.</b></p>	Problem solved.

## 283.04 Sensor (buffer path) static jam C

Step	Check	Yes	No
1	<p>Check the sensor (buffer path) for proper operation. Perform the buffer path test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Buffer path</b>.</li> </ol> <p>Open the finisher front door. Lower the buffer pinch guide assembly. Push a sheet of media into the buffer path and around the buffer roll assembly in a clockwise direction. Does the operator panel display change every time the actuator of the sensor (buffer path) is operated?</p>	Go to step 3.	Go to step 2.
2	<p>Check the sensor (buffer path) connection. Is the above sensor connected properly?</p>	<p>Replace the sensor (buffer path). Go to <b>"Sensor (buffer path) removal" on page 4-170</b>.</p>	Replace the connection.
3	<p>Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>"Rear upper cover removal" on page 4-101</b>.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Motor (buffer/transport)</b>.</li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Check the drive motor (buffer/transport) connection. Is the above motor connected properly?</p>	<p>Replace the drive motor (buffer/transport). Go to <b>"Drive motor (buffer/transport) and belt (buffer/transport) removal" on page 4-192</b>.</p>	Replace the connection.
5	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the finisher controller card assembly. Go to <b>"Finisher controller card assembly removal" on page 4-195</b>.</p>	Problem solved.

**284.00 Sensor (lower media exit) off jam A.**

Step	Check	Yes	No
1	Check the media path. Open the finisher front door assembly. Check the lower media exit roll assembly by turning it with your fingers. Is the lower media exit roll assembly installed properly?	Go to step 2.	Clean or replace the lower media exit roll assembly, and clean the media path.
2	Is the lower media exit roll assembly free of damage?	Go to step 3.	Clean or replace the lower media exit roll assembly, and clean the media path.
3	Check the sensor (lower media exit) for proper operation. Perform the sensor (lower media exit) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Media Path 1</b> . 5. Touch <b>Lower media exit</b> .  Open the finisher front door. Move the lower media guide assembly to the right. Push a sheet of media into the paper path towards the sensor (lower media exit). Does the operator panel display change every time the actuator of the sensor (lower media exit) is operated?	Go to step 5.	Go to step 4.
4	Check the sensor (lower media exit) connection. Is the above sensor connected properly?	Replace the sensor (lower media exit).  Go to <b>"Sensor (lower media exit) removal" on page 4-157.</b>	Replace the connection.
5	Check the drive motor (exit) for proper operation. Perform the drive motor (exit) test. Remove the finisher rear upper cover. Go to <b>"Rear upper cover removal" on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS</b> . 3. Touch <b>Finisher Motor Tests</b> . 4. Touch <b>Motor (exit)</b> .  Does the motor (exit) operate properly?	Go to step 7.	Go to step 6.
6	Check the drive motor (exit) connection. Is the above motor connected properly?	Replace the drive motor (exit).  Go to <b>"Drive motor (exit) assembly and belt (exit) removal" on page 4-190</b>	Replace the connection.



Step	Check	Yes	No
7	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal”</b> on page 4-195.	Problem solved.

### 284.01 Sensor (lower media exit) on jam A

Step	Check	Yes	No
1	Check the media path. 1. Open the finisher front door assembly. 2. Open the lower pinch guide assembly to the right. 3. Open the buffer pinch guide assembly downward. 4. Check the buffer roll assembly by turning the rolls with your fingers. Is the buffer roll assembly installed properly?	Go to step 2.	Clean or replace the appropriate roll, and clean the media path.
2	Is the buffer roll assembly free of damage?	Go to step 3.	Clean or replace the appropriate roll, and clean the media path.
3	Are the buffer pinch guide pinch rolls attached to the buffer pinch guide assembly properly?	Go to step 4.	Clean or replace the appropriate roller, and clean the media path.
4	Are the buffer pinch guide pinch rolls free of damage?	Go to step 5.	Clean or replace the appropriate roller, and clean the media path.
5	Check the sensor (buffer path) for proper operation. Perform the buffer path test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Media Path 1</b> . 5. Touch <b>Buffer path</b> .  Open the finisher front door. Lower the buffer pinch guide assembly. Push a sheet of media into the buffer path and around the buffer roll assembly in a clockwise direction. Does the operator panel display change every time the actuator of the sensor (buffer path) is operated?	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Check the sensor (buffer path) connection. Is the above sensor connected properly?	Replace the sensor (buffer path). Go to <b>“Sensor (buffer path) removal” on page 4-170.</b>	Replace the connection.
7	Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Motor (buffer/transport).</b>  Does the drive motor (buffer/transport) operate properly?	Go to step 9.	Go to step 8.
8	Check the drive motor (buffer/transport) connection. Is the above motor connected properly?	Replace the drive motor (buffer/transport). Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b>	Replace the connection.
9	Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 2.</b> 5. Touch <b>Diverter gate.</b>  Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate).  Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?	Go to step 11.	Go to step 10.
10	Check the sensor (diverter gate) for connection. Is the above sensor connected properly?	Replace the sensor (diverter gate). Go to <b>“Sensor (diverter gate) removal” on page 4-187.</b>	Replace the connection.

Step	Check	Yes	No
11	<p>Check the sensor (lower media exit) for proper operation.</p> <p>Perform the sensor (lower media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Lower media exit</b>.</li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide assembly to the right.</p> <p>Push a sheet of media into the paper path towards the sensor (lower media exit).</p> <p>Does the operator panel display change every time the actuator of the sensor (lower media exit) is operated?</p>	Go to step 13.	Go to step 12.
12	<p>Check the sensor (lower media exit) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (lower media exit).</p> <p>Go to <b>“Sensor (lower media exit) removal” on page 4-157</b>.</p>	Replace the connection.
13	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195</b>.</p>	Problem solved.

### 284.02 Sensor (lower media exit) on jam B

Step	Check	Yes	No
1	<p>Check the media path.</p> <ol style="list-style-type: none"> <li>1. Open the finisher front door assembly.</li> <li>2. Open the lower pinch guide assembly to the right.</li> <li>3. Open the buffer pinch guide assembly downward.</li> <li>4. Check the buffer roll assembly by turning the rolls with your fingers.</li> </ol> <p>Is the buffer roll assembly installed properly?</p>	Go to step 2.	Clean or replace the appropriate roll, and clean the media path.
2	<p>Is the buffer roll assembly free of damage?</p>	Go to step 3.	Clean or replace the appropriate roll, and clean the media path.
3	<p>Are the buffer pinch guide pinch rolls attached to the buffer pinch guide assembly properly?</p>	Go to step 4.	Clean or replace the appropriate roller, and clean the media path.

Step	Check	Yes	No
4	Are the buffer pinch guide pinch rolls free of damage?	Go to step 5.	Clean or replace the appropriate roller, and clean the media path.
5	<p>Check the sensor (buffer path) for proper operation. Perform the buffer path test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Buffer path</b>.</li> </ol> <p>Open the finisher front door. Lower the buffer pinch guide assembly. Push a sheet of media into the buffer path and around the buffer roll assembly in a clockwise direction. Does the operator panel display change every time the actuator of the sensor (buffer path) is operated?</p>	Go to step 7.	Go to step 6.
6	<p>Check the sensor (buffer path) connection. Is the above sensor connected properly?</p>	<p>Replace the sensor (buffer path). Go to <b>“Sensor (buffer path) removal” on page 4-170.</b></p>	Replace the connection.
7	<p>Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Motor (buffer/transport)</b>.</li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 9.	Go to step 8.
8	<p>Check the drive motor (buffer/transport) connection. Is the above motor connected properly?</p>	<p>Replace the drive motor (buffer/transport). Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b></p>	Replace the connection.

Step	Check	Yes	No
9	<p>Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Diverter gate.</b></li> </ol> <p>Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate). Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?</p>	Go to step 11.	Go to step 10.
10	<p>Check the sensor (diverter gate) for connection. Is the above sensor connected properly?</p>	<p>Replace the sensor (diverter gate). Go to <b>"Sensor (diverter gate) removal" on page 4-187.</b></p>	Replace the connection.
11	<p>Check the sensor (lower media exit) for proper operation. Perform the sensor (lower media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Lower media exit.</b></li> </ol> <p>Open the finisher front door. Move the lower media guide assembly to the right. Push a sheet of media into the paper path towards the sensor (lower media exit). Does the operator panel display change every time the actuator of the sensor (lower media exit) is operated?</p>	Go to step 13.	Go to step 12.
12	<p>Check the sensor (lower media exit) connection. Is the above sensor connected properly?</p>	<p>Replace the sensor (lower media exit). Go to <b>"Sensor (lower media exit) removal" on page 4-157.</b></p>	Replace the connection.

Step	Check	Yes	No
13	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 284.03 Sensor (lower media exit) on jam C

Step	Check	Yes	No
1	Check the media path. 1. Open the finisher front door assembly. 2. Open the lower pinch guide assembly to the right. 3. Open the buffer pinch guide assembly downward. 4. Check the buffer roll assembly by turning the rolls with your fingers. Is the buffer roll assembly installed properly?	Go to step 2.	Clean or replace the appropriate roll, and clean the media path.
2	Is the buffer roll assembly free of damage?	Go to step 3.	Clean or replace the appropriate roll, and clean the media path.
3	Are the buffer pinch guide pinch rolls attached to the buffer pinch guide assembly properly?	Go to step 4.	Clean or replace the appropriate roller, and clean the media path.
4	Are the buffer pinch guide pinch rolls free of damage?	Go to step 5.	Clean or replace the appropriate roller, and clean the media path.
5	Check the sensor (buffer path) for proper operation. Perform the buffer path test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 1.</b> 5. Touch <b>Buffer path.</b>  Open the finisher front door. Lower the buffer pinch guide assembly. Push a sheet of media into the buffer path and around the buffer roll assembly in a clockwise direction. Does the operator panel display change every time the actuator of the sensor (buffer path) is operated?	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Check the sensor (buffer path) connection. Is the above sensor connected properly?	Replace the sensor (buffer path).  Go to <b>“Sensor (buffer path) removal” on page 4-170.</b>	Replace the connection.
7	Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Motor (buffer/transport).</b>  Does the drive motor (buffer/transport) operate properly?	Go to step 9.	Go to step 8.
8	Check the drive motor (buffer/transport) connection. Is the above motor connected properly?	Replace the drive motor (buffer/transport).  Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b>	Replace the connection.
9	Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 2.</b> 5. Touch <b>Diverter gate.</b>  Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate).  Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?	Go to step 11.	Go to step 10.
10	Check the sensor (diverter gate) for connection. Is the above sensor connected properly?	Replace the sensor (diverter gate).  Go to <b>“Sensor (diverter gate) removal” on page 4-187.</b>	Replace the connection.

Step	Check	Yes	No
11	<p>Check the sensor (lower media exit) for proper operation.</p> <p>Perform the sensor (lower media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Lower media exit</b>.</li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide assembly to the right.</p> <p>Push a sheet of media into the paper path towards the sensor (lower media exit).</p> <p>Does the operator panel display change every time the actuator of the sensor (lower media exit) is operated?</p>	Go to step 13.	Go to step 12.
12	<p>Check the sensor (lower media exit) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (lower media exit).</p> <p>Go to <b>“Sensor (lower media exit) removal” on page 4-157</b>.</p>	Replace the connection.
13	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195</b>.</p>	Problem solved.

#### 284.04 Sensor (lower media exit) off jam B.

Step	Check	Yes	No
1	<p>Check the media path.</p> <p>Open the finisher front door assembly. Check the lower media exit roll assembly by turning it with your fingers.</p> <p>Is the lower media exit roll assembly installed properly?</p>	Go to step 2.	Clean or replace the lower media exit roll assembly, and clean the media path.
2	<p>Is the lower media exit roll assembly free of damage?</p>	Go to step 3.	Clean or replace the lower media exit roll assembly, and clean the media path.



Step	Check	Yes	No
3	<p>Check the sensor (lower media exit) for proper operation.</p> <p>Perform the sensor (lower media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Lower media exit.</b></li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide assembly to the right.</p> <p>Push a sheet of media into the paper path towards the sensor (lower media exit).</p> <p>Does the operator panel display change every time the actuator of the sensor (lower media exit) is operated?</p>	Go to step 5.	Go to step 4.
4	<p>Check the sensor (lower media exit) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (lower media exit).</p> <p>Go to <b>“Sensor (lower media exit) removal” on page 4-157.</b></p>	Replace the connection.
5	<p>Check the drive motor (exit) for proper operation.</p> <p>Perform the drive motor (exit) test.</p> <p>Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (exit).</b></li> </ol> <p>Does the motor (exit) operate properly?</p>	Go to step 7.	Go to step 6.
6	<p>Check the drive motor (exit) connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace the drive motor (exit).</p> <p>Go to <b>“Drive motor (exit) assembly and belt (exit) removal” on page 4-190</b></p>	Replace the connection.
7	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

**284.05 Sensor (lower media exit) static jam**

Step	Check	Yes	No
1	<p>Check the sensor (lower media exit) for proper operation.</p> <p>Perform the sensor (lower media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Lower media exit</b>.</li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide assembly to the right.</p> <p>Push a sheet of media into the paper path towards the sensor (lower media exit).</p> <p>Does the operator panel display change every time the actuator of the sensor (lower media exit) is operated?</p>	Go to step 3.	Go to step 2.
2	<p>Check the sensor (lower media exit) assembly connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (lower media exit).</p> <p>Go to <b>“Sensor (lower media exit) removal” on page 4-157.</b></p>	Replace the connection.
3	<p>Check the buffer diverter gate solenoid for proper operation.</p> <p>Perform the fin buffer solenoid test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Tests</b>.</li> <li>4. Touch <b>Fin buffer solenoid</b>.</li> <li>5. Touch <b>Forward or reverse</b>.</li> </ol> <p>Open and override the finisher front door interlock switch and observe the buffer solenoid gate.</p> <p>Move the lower pinch guide assembly to the right.</p> <p>Does the buffer diverter gate solenoid operate properly, that is, does the buffer diverter gate move up and down?</p>	Go to step 5.	Go to step 4.
4	<p>Check the buffer diverter gate solenoid connection.</p> <p>Is the above solenoid connected properly?</p>	<p>Replace the buffer diverter gate solenoid.</p> <p>Go to <b>“Buffer diverter gate solenoid removal” on page 4-180.</b></p>	Problem solved.

Step	Check	Yes	No
5	<p>Check the drive motor (exit) for proper operation. Perform the drive motor (exit) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (exit).</b></li> </ol> <p>Does the motor (exit) operate properly?</p>	Go to step 7.	Go to step 6.
6	<p>Check the drive motor (exit) connection. Is the above motor connected properly?</p>	<p>Replace the drive motor (exit). Go to <b>“Drive motor (exit) assembly and belt (exit) removal” on page 4-190.</b></p>	Replace the connection.
7	<p>Check the finisher diverter gate solenoid for proper operation. Perform the fin diverter solenoid test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Tests.</b></li> <li>4. Touch <b>Fin diverter solenoid.</b></li> <li>5. Touch <b>Forward or reverse.</b></li> </ol> <p>Open and override the finisher front door interlock switch. Move the lower pinch guide assembly to the right. Does the finisher diverter gate solenoid operate properly, that is, does the finisher diverter gate move up and down?</p>	Go to step 9.	Go to step 8.
8	<p>Check the finisher diverter gate solenoid connection. Is the above solenoid connected properly?</p>	<p>Replace the finisher diverter gate solenoid. Go to <b>“Finisher diverter gate solenoid removal” on page 4-179.</b></p>	Problem solved.
9	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

**285.00 Finisher eject set jam**

Step	Check	Yes	No
1	<p>Check the media path.</p> <p>Check the media eject shaft by turning it with your fingers.</p> <p>Is the media eject shaft assembly installed properly, meaning does it rotate smoothly?</p>	Go to step 2.	Clean or replace the media eject shaft assembly and clean the media path.
2	<p>Check the media eject clamp motor for proper operation.</p> <p>Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Tests.</b></li> <li>4. Touch <b>Media eject clamp mtr.</b></li> </ol> <p>Does the media eject clamp motor operate properly?</p>	Go to step 4.	Go to step 3.
3	<p>Check the media eject motor connection.</p> <p>Is the above motor connected properly?</p>	<p>Disconnect then reconnect the connector P8304 on the finisher controller card assembly.</p> <p>Perform a print test, if the error still occurs replace the media eject motor assembly.</p>	Replace the connection.
4	<p>Check the compiler media in actuator for proper operation.</p> <p>Is the actuator operating properly?</p>	Go to step 5.	<p>Reinstall the compiler media in actuator.</p> <p>Go to <b>“Sensor (compiler media in) removal” on page 4-150.</b></p>
5	<p>Check the sensor (compiler media in) for proper operation.</p> <p>Perform the sensor (compiler media in) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Compiler media in.</b></li> </ol> <p>Insert sheet of media into the compiler unit assembly.</p> <p>Does the operator panel display change every time the compiler media in actuator of the sensor (compiler media in) is operated?</p>	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Check the sensor (compiler media in) connection. Are the connections of the compiler unit cable assembly properly connected?	Replace the sensor (compiler media in).  Go to <b>“Sensor (compiler media in) removal” on page 4-150.</b>	Replace the connection.
7	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved

### 286.00 Sensor (compiler media in) static jam

Step	Check	Yes	No
1	Check the media eject clamp motor for proper operation.  Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b>  1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Tests.</b> 4. Touch <b>Media eject clamp mtr.</b>  Does the media eject clamp motor operate properly?	Go to step 3.	Go to step 2.
2	Check the media eject clamp motor connection. Are the connections of the main drive cable assembly properly connected?	Replace the media eject clamp motor.  Go to <b>“Media eject clamp motor assembly removal” on page 4-143.</b>	Replace the connector.
3	Check the sensor (compiler media in) for proper operation. Perform the sensor (compiler media in) test.  1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 1.</b> 5. Touch <b>Compiler media in.</b>  Insert sheet of media into the compiler unit assembly. Does the operator panel display change every time the compiler media in actuator of the sensor (compiler media in) is operated?	Go to step 5.	Go to step 4.

Step	Check	Yes	No
4	Check the sensor (compiler media in) connection. Is the above sensor connected properly?	Replace the sensor (compiler media in).  Go to <b>“Sensor (compiler media in) removal” on page 4-150.</b>	Replace the connection.
5	Check the media eject motor assembly. Perform the media eject motor test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Tests.</b> 4. Touch <b>Media eject mtr.</b>  Does the media eject motor assembly operate properly?	Go to step 7.	Go to step 6.
6	Check the media eject motor assembly connection. Are the connections of the main drive cable assembly properly connected?	Replace the media eject motor assembly.  Go to <b>“Media eject motor assembly removal” on page 4-155.</b>	Replace the connection.
7	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 287.00 Sensor (upper media exit) on jam A

Step	Check	Yes	No
1	Check the media path. 1. Open the finisher front door assembly. 2. Remove the top cover and left upper cover. 3. Open the entrance pinch guide assembly upward. 4. Check the four media entrance pinch guide pinch rolls of the entrance pinch guide assembly and the media entrance roll assembly by turning them with your fingers. Are the media entrance pinch guide pinch rolls installed properly and do they rotate smoothly?	Go to step 2.	Clean or replace the appropriate roller, and clean the media path.

Step	Check	Yes	No
2	Are the four media entrance pinch guide pinch rolls of the entrance pinch guide assembly and media entrance roll assembly free of damage?	Go to step 3.	Clean or replace the appropriate roller and clean the media path.
3	Check the media path. 1. Open the upper pinch guide assembly to the right. 2. Check these items by turning them with your fingers. Are the four upper pinch guide pinch rolls of the upper pinch guide assembly and the two upper media transport roll assemblies installed properly, meaning do they rotate smoothly?	Go to step 4.	Clean or replace the appropriate roller and clean the media path.
4	Are the four upper pinch guide pinch rolls of the upper pinch guide assembly and the two upper media transport roll assemblies free of damage?	Go to step 5.	Clean or replace the appropriate roller and clean the media path.
5	Check the sensor (upper media exit) for proper operation. Perform the sensor (upper media exit) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Media Path 1</b> . 5. Touch <b>Upper media exit</b> .  Open the finisher front door. Move the lower media guide to the right. Move the upper media guide to the right. Push a sheet of media into the paper path towards the sensor (upper media exit). Does the operator panel display change every time the actuator of the sensor (upper media exit) is operated?	Go to step 7.	Go to step 6.
6	Check the sensor (upper media exit) and the main sensor cable assembly connections. Is the above sensor connected properly?	Replace the sensor (upper media exit).  Go to <b>"Sensor (upper media exit) removal" on page 4-181</b> .	Replace the connection.
7	Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>"Rear upper cover removal" on page 4-101</b> . 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS</b> . 3. Touch <b>Finisher Motor Tests</b> . 4. Touch <b>Motor (buffer/transport)</b> .  Does the drive motor (buffer/transport) operate properly?	Go to step 9.	Go to step 8.

Step	Check	Yes	No
8	Check the drive motor (buffer/transport/connection). Is the above motor properly connected?	Replace the drive motor (buffer/transport).  Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b>	Replace the connection.
9	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 287.01 Sensor (upper media exit) off jam A.

Step	Check	Yes	No
1	Check the media path. 1. Open the upper pinch guide assembly to the right. 2. Check the four upper pinch guide pinch rolls on the upper pinch guide assembly and the two upper media transport roll assemblies by turning them with your fingers. Are the upper pinch guide pinch rolls and the upper media transport roll assemblies installed properly and do they rotate smoothly?	Go to step 2.	Clean or replace the appropriate roller and clean the media path.
2	Are the four upper pinch guide pinch rolls on the upper pinch guide assembly and the two upper media transport roll assemblies free of damage?	Go to step 3.	Clean or replace the appropriate roller and clean the media path.
3	Check the sensor (upper media exit) for proper operation. Perform the sensor (upper media exit) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 1.</b> 5. Touch <b>Upper media exit.</b>  Open the finisher front door. Move the lower media guide to the right. Move the upper media guide to the right. Push a sheet of media into the paper path towards the sensor (upper media exit). Does the operator panel display change every time the actuator of the sensor (upper media exit) is operated?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Go to step 4.



Step	Check	Yes	No
4	Check the sensor (upper media exit) and the main sensor cable assembly connections. Is the above sensor connected properly?	Replace the sensor (upper media exit).  Go to <b>“Sensor (upper media exit) removal” on page 4-181.</b>	Replace the connection.
5	Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Motor (buffer/transport).</b>  Does the drive motor (buffer/transport) operate properly?	Go to step 7.	Go to step 6.
6	Check the drive motor (buffer/transport) connection. Is the above motor connected properly?	Replace drive motor (buffer/transport).  Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b>	Replace the connection.
7	Check the drive motor (exit) for proper operation. Perform the drive motor (exit) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Motor (exit).</b>  Does the motor (exit) operate properly?	Go to step 9.	Go to step 8.
8	Check the drive motor (exit) connection. Is the above motor connected properly?	Replace the drive motor (exit).  Go to <b>“Drive motor (exit) assembly and belt (exit) removal” on page 4-190.</b>	Replace the connection.

Step	Check	Yes	No
9	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 287.02 Sensor (upper media exit) on jam B

Step	Check	Yes	No
1	Check the media path. 1. Open the finisher front door assembly. 2. Remove the top cover and left upper cover. 3. Open the entrance pinch guide assembly upward. 4. Check the four media entrance pinch guide pinch rolls of the entrance pinch guide assembly and the media entrance roll assembly by turning them with your fingers. Are the media entrance pinch guide pinch rolls installed properly and do they rotate smoothly?	Go to step 2.	Clean or replace the appropriate roller, and clean the media path.
2	Are the four media entrance pinch guide pinch rolls of the entrance pinch guide assembly and media entrance roll assembly free of damage?	Go to step 3.	Clean or replace the appropriate roller, and clean the media path.
3	Check the media path. 1. Open the upper pinch guide assembly to the right. 2. Check the upper pinch guide assembly by rotating them with your fingers. Are the four upper pinch guide pinch rolls of the upper pinch guide assembly and the two upper media transport roll assemblies installed properly, meaning do they rotate smoothly?	Go to step 4.	Clean or replace the appropriate roller and clean the media path.
4	Are the four upper pinch guide pinch rolls of the upper pinch guide assembly and the two upper media transport roll assemblies free of damage?	Go to step 5.	Clean or replace the appropriate roller and clean the media path.

Step	Check	Yes	No
5	<p>Check the sensor (upper media exit) for proper operation.</p> <p>Perform the sensor (upper media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Upper media exit.</b></li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide to the right.</p> <p>Move the upper media guide to the right.</p> <p>Push a sheet of media into the paper path towards the sensor (upper media exit).</p> <p>Does the operator panel display change every time the actuator of the sensor (upper media exit) is operated?</p>	Go to step 7.	Go to step 6.
6	<p>Check the sensor (upper media exit) and the main sensor cable assembly connections.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (upper media exit).</p> <p>Go to <b>“Sensor (upper media exit) removal” on page 4-181.</b></p>	Replace the connection.
7	<p>Check the drive motor (buffer/transport) for proper operation.</p> <p>Perform the drive motor (buffer/transport) test.</p> <p>Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (buffer/transport).</b></li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 9.	Go to step 8.
8	<p>Check the drive motor (buffer/transport/connection).</p> <p>Is the above motor properly connected?</p>	<p>Replace the drive motor (buffer/transport).</p> <p>Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b></p>	Replace the connection.
9	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

**287.03 Sensor (upper media exit) on jam C**

Step	Check	Yes	No
1	<p>Check the media path.</p> <ol style="list-style-type: none"> <li>1. Open the finisher front door assembly.</li> <li>2. Remove the top cover and left upper cover.</li> <li>3. Open the entrance pinch guide assembly upward.</li> <li>4. Check the four media entrance pinch guide pinch rolls of the entrance pinch guide assembly and the media entrance roll assembly by turning them with your fingers.</li> </ol> <p>Are the media entrance pinch guide pinch rolls installed properly and do they rotate smoothly?</p>	Go to step 2.	Clean or replace the appropriate roller, and clean the media path.
2	<p>Are the four media entrance pinch guide pinch rolls of the entrance pinch guide assembly and media entrance roll assembly free of damage?</p>	Go to step 3.	Clean or replace the appropriate roller and clean the media path.
3	<p>Check the media path.</p> <ol style="list-style-type: none"> <li>1. Open the upper pinch guide assembly to the right.</li> <li>2. Check these items by turning them with your fingers.</li> </ol> <p>Are the four upper pinch guide pinch rolls of the upper pinch guide assembly and the two upper media transport roll assemblies installed properly, meaning do they rotate smoothly?</p>	Go to step 4.	Clean or replace the appropriate roller and clean the media path.
4	<p>Are the four upper pinch guide pinch rolls of the upper pinch guide assembly and the two upper media transport roll assemblies free of damage?</p>	Go to step 5.	Clean or replace the appropriate roller and clean the media path.
5	<p>Check the sensor (upper media exit) for proper operation.</p> <p>Perform the sensor (upper media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Upper media exit.</b></li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide to the right.</p> <p>Move the upper media guide to the right.</p> <p>Push a sheet of media into the paper path towards the sensor (upper media exit).</p> <p>Does the operator panel display change every time the actuator of the sensor (upper media exit) is operated?</p>	Go to step 7.	Go to step 6.
6	<p>Check the sensor (upper media exit) and THE main sensor cable assembly connections.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (upper media exit).</p> <p>Go to <b>“Sensor (upper media exit) removal” on page 4-181.</b></p>	Replace the connection.

Step	Check	Yes	No
7	<p>Check the drive motor (buffer/transport) for proper operation.</p> <p>Perform the drive motor (buffer/transport) test.</p> <p>Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (buffer/transport).</b></li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 9.	Go to step 8.
8	<p>Check the drive motor (buffer/transport) connection.</p> <p>Is the above motor properly connected?</p>	<p>Replace the drive motor (buffer/transport).</p> <p>Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b></p>	Replace the connection.
9	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

#### 287.04 Sensor (upper media exit) off jam B.

Step	Check	Yes	No
1	<p>Check the media path.</p> <ol style="list-style-type: none"> <li>1. Open the upper pinch guide assembly to the right.</li> <li>2. Check the four upper pinch guide pinch rolls on the upper pinch guide assembly and the two upper media transport roll assemblies by turning them with your fingers.</li> </ol> <p>Are the upper pinch guide pinch roll and the upper media transport roll assemblies installed properly and do they rotate smoothly?</p>	Go to step 2.	Clean or replace the appropriate roller and clean the media path.
2	<p>Are the four upper pinch guide pinch rolls on the upper pinch guide assembly and the two upper media transport roll assemblies free of damage?</p>	Go to step 3.	Clean or replace the appropriate roller and clean the media path.

Step	Check	Yes	No
3	<p>Check the sensor (upper media exit) for proper operation.</p> <p>Perform the sensor (upper media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Upper media exit.</b></li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide to the right.</p> <p>Move the upper media guide to the right.</p> <p>Push a sheet of media into the paper path towards the sensor (upper media exit).</p> <p>Does the operator panel display change every time the actuator of the sensor (upper media exit) is operated?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Go to step 4.
4	<p>Check the sensor (upper media exit) and the main sensor cable assembly connections.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (upper media exit).</p> <p>Go to <b>“Sensor (upper media exit) removal” on page 4-181.</b></p>	Replace the connection.
5	<p>Check the drive motor (buffer/transport) for proper operation.</p> <p>Perform the drive motor (buffer/transport) test.</p> <p>Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (buffer/transport).</b></li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 7.	Go to step 6.
6	<p>Check the drive motor (buffer/transport) connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace drive motor (buffer/transport).</p> <p>Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b></p>	Replace the connection.

Step	Check	Yes	No
7	<p>Check the drive motor (exit) for proper operation. Perform the drive motor (exit) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (exit).</b></li> </ol> <p>Does the motor (exit) operate properly?</p>	Go to step 9.	Go to step 8.
8	<p>Check the drive motor (exit) connection. Is the above motor connected properly?</p>	<p>Replace the drive motor (exit). Go to <b>“Drive motor (exit) assembly and belt (exit) removal” on page 4-190.</b></p>	Replace the connection.
9	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

### 287.05 Sensor (upper media exit) static jam A

Step	Check	Yes	No
1	<p>Check the sensor (upper media exit) for proper operation. Perform the sensor (upper media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Upper media exit.</b></li> </ol> <p>Open the finisher front door. Move the lower media guide to the right. Move the upper media guide to the right. Push a sheet of media into the paper path towards the sensor (upper media exit). Does the operator panel display change every time the actuator of the sensor (upper media exit) is operated?</p>	Go to step 3.	Go to step 2.

Step	Check	Yes	No
2	<p>Check the sensor (upper media exit) and the main sensor cable assembly connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (upper media exit).</p> <p>Go to <b>“Sensor (upper media exit) removal” on page 4-181.</b></p>	<p>Replace the connection.</p>
3	<p>Check the drive motor (buffer/transport) for proper operation.</p> <p>Perform the drive motor (buffer/transport) test.</p> <p>Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (buffer/transport).</b></li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	<p>Go to step 5.</p>	<p>Go to step 4.</p>
4	<p>Check the drive motor (buffer/transport) connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace the drive motor (buffer/transport).</p> <p>Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b></p>	<p>Replace the connection.</p>
5	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	<p>Problem solved.</p>



**287.06 Sensor (upper media exit) static jam B**

Step	Check	Yes	No
1	<p>Check the sensor (upper media exit) for proper operation.</p> <p>Perform the sensor (upper media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 1.</b></li> <li>5. Touch <b>Upper media exit.</b></li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide to the right.</p> <p>Move the upper media guide to the right.</p> <p>Push a sheet of media into the paper path towards the sensor (upper media exit).</p> <p>Does the operator panel display change every time the actuator of the sensor (upper media exit) is operated?</p>	Go to step 3.	Go to step 2.
2	<p>Check the sensor (upper media exit) and the main sensor cable assembly connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (upper media exit).</p> <p>Go to <b>“Sensor (upper media exit) removal” on page 4-181.</b></p>	Replace the connection.
3	<p>Check the drive motor (buffer/transport) for proper operation.</p> <p>Perform the drive motor (buffer/transport) test.</p> <p>Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (buffer/transport).</b></li> </ol> <p>Does the drive motor (buffer/transport) operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Check the drive motor (buffer/transport) connection.</p> <p>Is the above motor connected properly?</p>	<p>Replace the drive motor (buffer/transport).</p> <p>Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b></p>	Replace the connection.

Step	Check	Yes	No
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 287.07 Sensor (upper media exit) static jam C

Step	Check	Yes	No
1	Check the sensor (upper media exit) for proper operation. Perform the sensor (upper media exit) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 1.</b> 5. Touch <b>Upper media exit.</b>  Open the finisher front door. Move the lower media guide to the right. Move the upper media guide to the right. Push a sheet of media into the paper path towards the sensor (upper media exit). Does the operator panel display change every time the actuator of the sensor (upper media exit) is operated?	Go to step 3.	Go to step 2.
2	Check the sensor (upper media exit) and the main sensor cable assembly connection. Is the above sensor connected properly?	Replace the sensor (upper media exit). Go to <b>“Sensor (upper media exit) removal” on page 4-181.</b>	Replace the connection.
3	Check the drive motor (buffer/transport) for proper operation. Perform the drive motor (buffer/transport) test. Remove the finisher rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Motor (buffer/transport).</b>  Does the drive motor (buffer/transport) operate properly?	Go to step 5.	Go to step 4.

Step	Check	Yes	No
4	Check the drive motor (buffer/transport) connection. Is the above motor connected properly?	Replace the drive motor (buffer/transport).  Go to <b>“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.</b>	Replace the connection.
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 288.00 Sensor (diverter gate) on jam

Step	Check	Yes	No
1	Check the media path. 1. Open the bridge unit top cover assembly of the bridge unit assembly. 2. Check the six bridge unit pinch rolls on the bridge unit top cover assembly and the two transport belts by turning them with your fingers. Are the bridge unit pinch rolls and transport belts installed properly?	Go to step 2.	Clean or replace the appropriate transport belts and bridge unit pinch rolls, and clean the media path.
2	Are the six bridge unit pinch rolls on the bridge unit top cover assembly and the two transport belts free of damage?	Go to step 3.	Clean or replace the appropriate transport belts and bridge unit pinch rolls, and clean the media path.
3	Check the media path. 1. Open the finisher front door assembly. 2. Remove the top cover and left upper cover. 3. Open the entrance pinch guide assembly to upward. 4. Check the media entrance pinch guide pinch roll on the entrance pinch guide assembly and the media entrance roll assembly by turning them with your fingers. Are the media entrance pinch guide pinch roll and the media entrance roll assembly installed properly?	Go to step 4.	Clean or replace the appropriate transport belts and bridge unit pinch rolls, and clean the media path.

Step	Check	Yes	No
4	Are the media entrance pinch guide pinch roll on the entrance pinch guide assembly and the media entrance roll assembly free of damage?	Go to step 5.	Clean or replace the appropriate transport belts and bridge unit pinch rolls, and clean the media path.
5	<p>Check the sensor (bridge unit media exit) for proper operation.</p> <p>Perform the sensor (bridge unit media exit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Bridge media exit</b>.</li> </ol> <p>Open the bridge unit top cover assembly.</p> <p>Does the operator panel display change every time the actuator of the sensor (bridge unit media exit) is operated?</p>	Go to step 7.	Go to step 6
6	<p>Check the sensor (bridge unit media exit) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (bridge unit media exit).</p> <p>Go to <b>“Sensor (bridge unit media exit) removal” on page 4-94.</b></p>	Replace the connection.
7	<p>Check the sensor (finisher media entrance) for proper operation.</p> <p>Perform the sensor (finisher media entrance) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 1</b>.</li> <li>5. Touch <b>Fin media ent</b>.</li> </ol> <p>Detach the finisher from the MFP.</p> <p>Insert a sheet of white media into the finisher media path entrance.</p> <p>Does the display change every time a piece of white media is placed over the sensing area of the above sensor?</p>	Go to step 9.	Go to step 8.
8	<p>Check the sensor (finisher media entrance) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (finisher media entrance).</p> <p>Go to <b>“Sensor (finisher media entrance) removal” on page 4-175.</b></p>	Replace the connection.

Step	Check	Yes	No
9	<p>Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 2</b>.</li> <li>5. Touch <b>Diverter gate</b>.</li> </ol> <p>Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate). Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?</p>	Go to step 11.	Go to step 10.
10	<p>Check the sensor (diverter gate) connection. Are the connectors of the diverter gate sensor cable assembly properly connected?</p>	<p>Replace the sensor (diverter gate). Go to <b>“Sensor (diverter gate) removal” on page 4-187</b>.</p>	Replace the connection.
11	<p>Check the drive motor (entrance/paddle) for proper operation. Perform the drive motor (entrance/paddle) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101</b>.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Motor (entrance/paddle)</b>.</li> </ol> <p>Does the motor (entrance/paddle) operate properly?</p>	Go to step 13.	Go to step 12.
12	<p>Check the drive motor (entrance/paddle) connection. Are the connections of the main drive cable assembly properly connected?</p>	<p>Replace the drive motor (entrance/paddle). Go to <b>“Drive motor (entrance/paddle) and belt (entrance/paddle) removal” on page 4-177</b>.</p>	Replace the connection.
13	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195</b>.</p>	Problem solved.

**288.01 Sensor (diverter gate) static jam (to top bin) A**

Step	Check	Yes	No
1	<p>Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 2</b>.</li> <li>5. Touch <b>Diverter gate</b>.</li> </ol> <p>Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate).  Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?</p>	Go to step 3.	Go to step 2.
2	<p>Check the sensor (diverter gate) connection. Is the above sensor connected properly?</p>	<p>Replace the sensor (diverter gate).  Go to <b>“Sensor (diverter gate) removal” on page 4-187</b>.</p>	Replace the connection.
3	<p>Check the drive motor (entrance/paddle) for proper operation. Perform the drive motor (entrance/paddle) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101</b>.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Motor (entrance/paddle)</b>.</li> </ol> <p>Does the motor (entrance/paddle) operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Is the drive motor (entrance/paddle) connected properly?</p>	<p>Replace the drive motor (entrance/paddle).  Go to <b>“Drive motor (entrance/paddle) and belt (entrance/paddle) removal” on page 4-177</b>.</p>	Replace the connection.

Step	Check	Yes	No
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 288.02 Sensor (diverter gate) static jam (to top bin) B

Step	Check	Yes	No
1	Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test. <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Diverter gate.</b></li> </ol> Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate). Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?	Go to step 3.	Go to step 2.
2	Check the sensor (diverter gate) connection. Is the above sensor connected properly?	Replace the sensor (diverter gate).  Go to <b>“Sensor (diverter gate) removal” on page 4-187.</b>	Replace the connection.
3	Check the drive motor (entrance/paddle) for proper operation. Perform the drive motor (entrance/paddle) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (entrance/paddle).</b></li> </ol> Does the motor (entrance/paddle) operate properly?	Go to step 5.	Go to step 4.

Step	Check	Yes	No
4	Is the drive motor (entrance/paddle) connected properly?	Replace the drive motor (entrance/paddle). Go to <b>“Drive motor (entrance/paddle) and belt (entrance/paddle) removal” on page 4-177.</b>	Replace the connection.
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 288.03 Sensor (diverter gate) static jam (to top bin) C

Step	Check	Yes	No
1	<p>Check the sensor (diverter gate) for proper operation.</p> <p>Perform the sensor (diverter gate) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Diverter gate.</b></li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide assembly to the right.</p> <p>Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate).</p> <p>Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?</p>	Go to step 3.	Go to step 2.
2	<p>Check the sensor (diverter gate) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the sensor (diverter gate).</p> <p>Go to <b>“Sensor (diverter gate) removal” on page 4-187.</b></p>	Replace the connection.



Step	Check	Yes	No
3	<p>Check the drive motor (entrance/paddle) for proper operation.</p> <p>Perform the drive motor (entrance/paddle) test.</p> <p>Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (entrance/paddle).</b></li> </ol> <p>Does the motor (entrance/paddle) operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Is the drive motor (entrance/paddle) connected properly?</p>	<p>Replace the drive motor (entrance/paddle).</p> <p>Go to <b>“Drive motor (entrance/paddle) and belt (entrance/paddle) removal” on page 4-177.</b></p>	Replace the connection.
5	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

#### 288.04 Sensor (diverter gate) static jam (to stacker bin) A

Step	Check	Yes	No
1	<p>Check the sensor (diverter gate) for proper operation.</p> <p>Perform the sensor (diverter gate) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Diverter gate.</b></li> </ol> <p>Open the finisher front door.</p> <p>Move the lower media guide assembly to the right.</p> <p>Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate).</p> <p>Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?</p>	Go to step 3.	Go to step 2.

Step	Check	Yes	No
2	Is the sensor (diverter gate) connected properly?	Replace the sensor (diverter gate). Go to <b>“Sensor (diverter gate) removal” on page 4-187.</b>	Replace the connection.
3	Check the drive motor (entrance/paddle) for proper operation. Perform the drive motor (entrance/paddle) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Motor Tests.</b> 4. Touch <b>Motor (entrance/paddle).</b>  Does the motor (entrance/paddle) operate properly?	Go to step 5.	Go to step 4.
4	Check the main drive cable assembly connection. Are the connections of the main drive cable assembly properly connected?	Replace the drive motor (entrance/paddle). Go to <b>“Drive motor (entrance/paddle) and belt (entrance/paddle) removal” on page 4-177.</b>	Replace the connection.
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

**288.05 Sensor (diverter gate) static jam (to stacker bin) B**

Step	Check	Yes	No
1	<p>Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS</b>.</li> <li>3. Touch <b>Sensor Test</b>.</li> <li>4. Touch <b>Media Path 2</b>.</li> <li>5. Touch <b>Diverter gate</b>.</li> </ol> <p>Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate). Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?</p>	Go to step 3.	Go to step 2.
2	Is the sensor (diverter gate) connected properly?	<p>Replace the sensor (diverter gate). Go to <b>“Sensor (diverter gate) removal” on page 4-187</b>.</p>	Replace the connection.
3	<p>Check the drive motor (entrance/paddle) for proper operation. Perform the drive motor (entrance/paddle) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101</b>.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Motor (entrance/paddle)</b>.</li> </ol> <p>Does the motor (entrance/paddle) operate properly?</p>	Go to step 5.	Go to step 4.
4	<p>Check the main drive cable assembly connection. Are the connections of the main drive cable assembly properly connected?</p>	<p>Replace the drive motor (entrance/paddle). Go to <b>“Drive motor (entrance/paddle) and belt (entrance/paddle) removal” on page 4-177</b>.</p>	Replace the connection.

Step	Check	Yes	No
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 288.06 Sensor (diverter gate) static jam (to stacker bin) C

Step	Check	Yes	No
1	Check the sensor (diverter gate) for proper operation. Perform the sensor (diverter gate) test. <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Diverter gate.</b></li> </ol> Open the finisher front door. Move the lower media guide assembly to the right. Insert a sheet of white media beneath the media diverter gate. Then push the media to the sensor (diverter gate). Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (diverter gate)?	Go to step 3.	Go to step 2.
2	Is the sensor (diverter gate) connected properly?	Replace the sensor (diverter gate).  Go to <b>“Sensor (diverter gate) removal” on page 4-187.</b>	Replace the connection.
3	Check the drive motor (entrance/paddle) for proper operation. Perform the drive motor (entrance/paddle) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Motor (entrance/paddle).</b></li> </ol> Does the motor (entrance/paddle) operate properly?	Go to step 5.	Go to step 4.

Step	Check	Yes	No
4	Check the main drive cable assembly connection. Are the connections of the main drive cable assembly properly connected?	Replace the drive motor (entrance/paddle). Go to <b>“Drive motor (entrance/paddle) and belt (entrance/paddle) removal” on page 4-177.</b>	Replace the connection.
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 980.02 Finisher communication failure

Step	Check	Yes	No
1	Check the printer and finisher installation. Is the finisher installed to the printer properly?	Go to step 2.	Remove the finisher. Go to <b>“Finisher removal” on page 4-79.</b> Reinstall the finisher properly.
2	Turn the power on and off. Does the error still occur when the power is on?	Go to step 3.	Problem solved.
3	Check the finisher controller card assembly connection. Are the connections of the finisher controller card assembly properly connected?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b> Go to step 4.	Replace the connection.
4	Perform a print test. Does the problem remain?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

**981.00 Stacker bin failure**

Step	Check	Yes	No
1	Check the vertical transport mechanism of the stacker bin for obstacles and deformation.  Are there any obstacles in the vertical transport mechanism of the stacker bin?	Remove obstacles.	Go to step 2.
2	Is there any deformation in the vertical transport mechanism of the stacker bin?	Replace deformed part.	Go to step 3.
3	Check the sensor (stacker bin level 1) for proper operation.  Perform the sensor (stacker bin level1) test. <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin level1.</b></li> </ol> Does the operator panel display change every time the sensing area of the sensor (stacker bin level 1) is blocked by a multiple page document or your finger?	Go to step 5.	Go to step 4.
4	Is the sensor (stacker bin level 1) connected properly?	Replace the sensor (stacker bin level 1).  Go to <b>“Sensor (stacker bin level 1) removal” on page 4-111.</b>	Replace the connection.
5	Check the sensor (stacker bin level 2) for proper operation.  Perform the sensor (stacker bin level2) test. <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin level2.</b></li> </ol> Does the operator panel display change every time the sensing area of the sensor (stacker bin level 2) is blocked by a piece of media or your finger?	Go to step 7.	Go to step 6.
6	Is the sensor (stacker bin level 2) connected properly?	Replace the sensor (stacker bin level 2).  Go to <b>“Sensor (stacker bin level 2) removal” on page 4-111.</b>	Replace the connection.

Step	Check	Yes	No
7	<p>Check the stacker bin lift motor assembly. Perform the stacker bin lift motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher tests.</b></li> <li>4. Touch <b>Stacker lift mtr.</b></li> <li>5. Touch <b>Forward or Reverse.</b></li> </ol> <p>Does the stacker bin lift motor assembly operate properly?</p>	Go to step 9.	Go to step 8.
8	<p>Is the stacker bin lift motor assembly connected properly?</p>	<p>Replace the stacker bin lift motor assembly.</p> <p>Go to <b>“Stacker bin lift motor assembly removal” on page 4-115.</b></p>	Replace the connection.
9	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

### 981.01 Stacker bin upper limit failure

Step	Check	Yes	No
1	<p>Check the sensor (stacker bin level 1) for proper operation. Perform the sensor (stacker bin level1) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin level1.</b></li> </ol> <p>Does the operator panel display change every time the sensing area of the sensor (stacker bin level 1) is blocked by a multiple page document or your finger?</p>	Go to step 3.	Go to step 2.
2	<p>Check the sensor (stacker bin level 1) connection. Are the connections of the main sensor cable assembly properly connected?</p>	<p>Replace the sensor (stacker bin level 1).</p> <p>Go to <b>“Sensor (stacker bin level 1) removal” on page 4-111.</b></p>	Replace the connection.

Step	Check	Yes	No
3	<p>Check the sensor (stacker bin level 2) for proper operation.</p> <p>Perform the sensor (stacker bin level2) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin level2.</b></li> </ol> <p>Does the operator panel display change every time the sensing area of the sensor (stacker bin level 2) is blocked by a piece of media or your finger?</p>	Go to step 5.	Go to step 4.
4	<p>Check the sensor (stacker bin level 2) connection.</p> <p>Are the connections of the main sensor cable assembly properly connected?</p>	<p>Replace the sensor (stacker bin level 2).</p> <p>Go to <b>“Sensor (stacker bin level 2) removal” on page 4-111.</b></p>	Replace the connection.
5	<p>Check the media stacker bin actuator for proper operation.</p> <p>Is the media stacker bin actuator installed properly?</p> <p>Does it enter the sensing area of the sensor (stacker bin upper limit)?</p>	Go to step 6.	Repair the media stacker bin actuator.
6	<p>Check the sensor (stacker bin upper limit) for proper operation.</p> <p>Perform the sensor (stacker bin upper limit) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin upper limit.</b></li> </ol> <p>Does the operator panel display change every time the sensing area of the sensor (stacker bin upper limit) is blocked?</p>	Go to step 8.	Go to step 7.
7	<p>Check the sensor (stacker bin upper limit) connection.</p> <p>Are the connections of the main sensor cable assembly properly connected?</p>	<p>Replace the sensor (stacker bin upper limit).</p> <p>Go to <b>“Sensor (stacker bin upper limit) or sensor (stacker bin no media) removal” on page 4-113.</b></p>	Replace the connection.



Step	Check	Yes	No
8	<p>Check the stacker bin lift motor assembly. Perform the stacker bin lift motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher tests.</b></li> <li>4. Touch <b>Stacker lift mtr.</b></li> <li>5. Touch <b>Forward or Reverse.</b></li> </ol> <p>Does the stacker bin lift motor assembly operate properly?</p>	Go to step 10.	Go to step 9.
9	<p>Check the stacker bin lift motor assembly connection. Is the connection of the stacker bin lift motor assembly connected to the finisher controller card assembly securely?</p>	<p>Replace the stacker bin lift motor assembly.</p> <p>Go to <b>“Stacker bin lift motor assembly removal” on page 4-115.</b></p>	Replace the connection.
10	<p>Perform a print test. Does the error still occur?</p>	<p>Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### 981.02 Stacker bin lower limit failure

Step	Check	Yes	No
1	<p>Check the media stacker bin actuator for proper operation. Is the media stacker bin actuator installed properly? Does it enter the sensing area of the sensor (stacker bin upper limit)?</p>	Go to step 2.	Repair the media stacker bin actuator.
2	<p>Check the sensor (stacker bin no media) for proper operation. Perform the sensor (stacker bin no media) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin no media.</b></li> </ol> <p>Does the operator panel display change every time the sensing area of the sensor (stacker bin no media) is blocked?</p>	Go to step 4.	Go to step 3.
3	<p>Is the sensor (stacker bin no media) connected properly?</p>	Replace the sensor (stacker bin no media).	Replace the connection.

Step	Check	Yes	No
4	<p>Check the sensor (stacker bin level 1) for proper operation.</p> <p>Perform the sensor (stacker bin level1) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin level1.</b></li> </ol> <p>Does the operator panel display change every time the sensing area of the sensor (stacker bin level 1) is blocked by a multiple page document or your finger?</p>	Go to step 6.	Go to step 5.
5	<p>Is the sensor (stacker bin level 1) connected properly?</p>	<p>Replace the sensor (stacker bin level 1).</p> <p>Go to <b>“Sensor (stacker bin level 1) removal” on page 4-111.</b></p>	Replace the connection.
6	<p>Check the sensor (stacker bin level2) for proper operation.</p> <p>Perform the sensor (stacker bin level2) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin level2.</b></li> </ol> <p>Does the operator panel display change every time the sensing area of the sensor (stacker bin level 2) is blocked by a piece of media or your finger?</p>	Go to step 8.	Go to step 7.
7	<p>Is the sensor (stacker bin level 2) connected properly?</p>	<p>Replace the sensor (stacker bin level 2).</p> <p>Go to <b>“Sensor (stacker bin level 2) removal” on page 4-111.</b></p>	Replace the connection.

Step	Check	Yes	No
8	<p>Check the sensor (stacker bin level encoder) for proper operation.</p> <p>Perform the sensor (stacker bin level encoder) test.</p> <p>Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Bin Level.</b></li> <li>5. Touch <b>Stacker bin level encod.</b></li> </ol> <p>Does the operator panel display change when the belt of the stacker bin lift motor assembly is moved by hand?</p>	Go to step 10.	Go to step 9.
9	<p>Is the sensor (stacker bin level encoder) connected properly?</p>	<p>Replace the sensor (stacker bin level encoder).</p> <p>Go to <b>“Sensor (stacker bin level encoder) removal” on page 4-112.</b></p>	Replace the connection.
10	<p>Check the stacker bin lift motor assembly.</p> <p>Perform the stacker bin lift motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher tests.</b></li> <li>4. Touch <b>Stacker lift mtr.</b></li> <li>5. Touch <b>Forward or Reverse.</b></li> </ol> <p>Does the stacker bin lift motor assembly operate properly?</p>	Go to step 12.	Go to step 11.
11	<p>Check the stacker bin lift motor assembly connection.</p> <p>Is the connector of the stacker bin lift motor assembly properly connected to the finisher controller card assembly?</p>	<p>Replace the stacker bin lift motor assembly.</p> <p>Go to <b>“Stacker bin lift motor assembly removal” on page 4-115.</b></p>	Replace the connection.
12	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

**982.00 Sensor (front tamper HP) on failure**

Step	Check	Yes	No
1	<p>Check the tamper mechanism by moving it with your fingers.</p> <p>Does the tamper mechanism operate smoothly?</p>	Go to step 2.	<p>Replace the media compiler unit assembly.</p> <p>Go to <b>“Media compiler unit assembly removal” on page 4-146.</b></p>
2	<p>Check the sensor (front tamper HP) for proper operation.</p> <p>Perform the sensor (front tamper HP) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Front tamper HP.</b></li> </ol> <p>Move the front tamper side to side manually by hand.</p> <p>Does the operator panel display change every time the sensing area of the sensor (front tamper HP) is blocked?</p>	Go to step 4.	Go to step 3.
3	<p>Is the sensor (front tamper HP) connected properly?</p>	<p>Replace the sensor (front tamper HP).</p> <p>Go to <b>“Sensor (front tamper HP) and sensor (rear tamper HP) removals” on page 4-149.</b></p>	Replace the connection.
4	<p>Check the front tamper drive motor for proper operation.</p> <p>Perform the front tamper motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Front tamper mtr</b></li> <li>5. Touch <b>Forward or Reverse.</b></li> </ol> <p>Observe the front tamper at the finisher stacker bin exit.</p> <p>Does the front tamper drive motor operate properly, that is, does the tamper move back and forth?</p>	Go to step 6.	Go to step 5.
5	<p>Check the compiler unit cable assembly connection.</p> <p>Are the connections of the compiler unit cable assembly properly connected?</p>	<p>Replace the media compiler unit assembly.</p> <p>Go to <b>“Media compiler unit assembly removal” on page 4-146.</b></p>	Replace the connection.

Step	Check	Yes	No
6	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 982.01 Sensor (front tamper HP) off failure

Step	Check	Yes	No
1	Check the tamper mechanism by moving it with your fingers. Does the tamper mechanism operate smoothly?	Go to step 2.	Replace the media compiler unit assembly.  Go to <b>“Media compiler unit assembly removal” on page 4-146.</b>
2	Check the sensor (front tamper HP) for proper operation. Perform the sensor (front tamper HP) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 2.</b> 5. Touch <b>Front tamper HP.</b>  Move the front tamper side to side manually by hand. Does the operator panel display change every time the sensing area of the sensor (front tamper HP) is blocked?	Go to step 4.	Go to step 3.
3	Is the sensor (front tamper HP) connected properly?	Replace the sensor (front tamper HP).  Go to <b>“Sensor (front tamper HP) and sensor (rear tamper HP) removals” on page 4-149.</b>	Replace the connection.

Step	Check	Yes	No
4	<p>Check the front tamper drive motor for proper operation.</p> <p>Perform the front tamper motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Front tamper mtr</b></li> <li>5. Touch <b>Forward or Reverse</b>.</li> </ol> <p>Observe the front tamper at the finisher stacker bin exit.</p> <p>Does the front tamper drive motor operate properly, that is, does the tamper move back and forth?</p>	Go to step 6.	Go to step 5.
5	<p>Check the compiler unit cable assembly connection.</p> <p>Are the connections of the compiler unit cable assembly properly connected?</p>	<p>Replace the media compiler unit assembly.</p> <p>Go to <b>“Media compiler unit assembly removal” on page 4-146.</b></p>	Replace the connection.
6	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

### 983.00 Sensor (rear tamper HP) on failure

Step	Check	Yes	No
1	<p>Check the tamper mechanism by moving it with your fingers.</p> <p>Does the tamper mechanism operate smoothly?</p>	Go to step 2.	<p>Replace the media compiler unit assembly.</p> <p>Go to <b>“Media compiler unit assembly removal” on page 4-146.</b></p>

Step	Check	Yes	No
2	<p>Check the sensor (rear tamper HP) for proper operation.</p> <p>Perform the sensor (rear tamper HP) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Rear tamper HP.</b></li> </ol> <p>Move the rear tamper side to side manually by hand.</p> <p>Does the operator panel display change every time the sensing area of the sensor (rear tamper HP) is blocked?</p>	Go to step 4.	Go to step 3.
3	Is the sensor (rear tamper HP) connected properly?	<p>Replace the sensor (rear tamper HP).</p> <p>Go to <b>“Sensor (front tamper HP) and sensor (rear tamper HP) removals” on page 4-149.</b></p>	Replace the connection.
4	<p>Check the rear tamper drive motor for proper operation.</p> <p>Perform the rear tamper motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Rear tamper mtr.</b></li> <li>5. Touch <b>Forward or Reverse.</b></li> </ol> <p>Observe the rear tamper at the finisher stacker bin exit.</p> <p>Does the rear tamper drive motor operate properly, that is, does the tamper move back and forth?</p>	Go to step 6.	Go to step 5.
5	<p>Check the compiler unit cable assembly connection.</p> <p>Are the connections of the compiler unit cable assembly properly connected?</p>	Replace the compiler unit assembly.	Replace the connection.
6	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

**983.01 Sensor (rear tamper HP) off failure**

Step	Check	Yes	No
1	<p>Check the tamper mechanism by moving it with your fingers.</p> <p>Does the tamper mechanism operate smoothly?</p>	Go to step 2.	<p>Replace the media compiler unit assembly.</p> <p>Go to <b>“Media compiler unit assembly removal” on page 4-146.</b></p>
2	<p>Check the sensor (rear tamper HP) for proper operation.</p> <p>Perform the sensor (rear tamper HP) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Rear tamper HP.</b></li> </ol> <p>Move the rear tamper side to side manually by hand.</p> <p>Does the operator panel display change every time the sensing area of the sensor (rear tamper HP) is blocked?</p>	Go to step 4.	Go to step 3.
3	<p>Is the sensor (rear tamper HP) connected properly?</p>	<p>Replace the sensor (rear tamper HP).</p> <p>Go to <b>“Sensor (front tamper HP) and sensor (rear tamper HP) removals” on page 4-149.</b></p>	Replace the connection.
4	<p>Check the rear tamper drive motor for proper operation.</p> <p>Perform the rear tamper motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Motor Tests.</b></li> <li>4. Touch <b>Rear tamper mtr.</b></li> <li>5. Touch <b>Forward or Reverse.</b></li> </ol> <p>Observe the rear tamper at the finisher stacker bin exit.</p> <p>Does the rear tamper drive motor operate properly, that is, does the tamper move back and forth?</p>	Go to step 6.	Go to step 5.
5	<p>Check the compiler unit cable assembly connection.</p> <p>Are the connections of the compiler unit cable assembly properly connected?</p>	<p>Replace the media compiler unit assembly.</p> <p>Go to <b>“Media compiler unit assembly removal” on page 4-146.</b></p>	Replace the connection.



Step	Check	Yes	No
6	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 984.00 Sensor (punch unit HP) on failure

Step	Check	Yes	No
1	Check the punch unit by moving it with your fingers. Does the punch unit move smoothly?	Go to step 2.	Remove obstacles.
2	Check the sensor (punch unit HP) for proper operation. Perform the sensor (punch unit HP) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Punch and Staple.</b> 5. Touch <b>Punch unit HP.</b>  Move the rack gear in the punch unit assembly manually by hand.  Does the operator panel display change every time the sensing area of the sensor (punch unit HP) is blocked?	Go to step 4.	Go to step 3.
3	Are the sensor (punch unit HP) and punch sensor cable assembly connected properly?	Replace the sensor (punch unit HP).  Go to <b>“Sensor (punch hole select), sensor (punch cam front), and sensor (punch unit HP) removal” on page 4-126.</b>	Replace the connection.

Step	Check	Yes	No
4	<p>Check the punch unit motor for proper operation. Perform the punch unit motor test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostic Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Punch unit mtr.</b></li> <li>4. Touch <b>Forward or Reverse.</b></li> </ol> <p>Open and override the finisher front door interlock switch.</p> <p>Does the punch unit motor operate properly, that is, does the punch cam (rack gear) move forward and reverse?</p>	Go to step 6.	Go to step 5.
5	Are the punch unit motor and punch drive cable assembly connected properly?	<p>Replace the punch unit motor.</p> <p>Go to <b>“Punch unit motor assembly removal” on page 4-124.</b></p>	Replace the connection.
6	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

### 984.01 Sensor (punch unit HP) off failure

Step	Check	Yes	No
1	<p>Check the punch unit by moving it with your fingers.</p> <p>Does the punch unit move smoothly?</p>	Go to step 2.	Remove obstructions.
2	<p>Check the sensor (punch unit HP) for proper operation. Perform the sensor (punch unit HP) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Punch and Staple.</b></li> <li>5. Touch <b>Punch unit HP.</b></li> </ol> <p>Move the rack gear in the punch unit assembly manually by hand.</p> <p>Does the operator panel display change every time the sensing area of the sensor (punch unit HP) is blocked?</p>	Go to step 4.	Go to step 3.

Step	Check	Yes	No
3	Are the sensor (punch unit HP) and punch sensor cable assembly connected properly?	Replace the sensor (punch unit HP). Go to <b>“Sensor (punch hole select), sensor (punch cam front), and sensor (punch unit HP) removal” on page 4-126.</b>	Replace the connection.
4	Check the punch unit motor for proper operation. Perform the punch unit motor test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostic Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Punch unit mtr.</b> 4. Touch <b>Forward or Reverse.</b>  Open and override the finisher front door interlock switch.  Does the punch unit motor operate properly, that is, does the punch cam (rack gear) move forward and reverse?	Go to step 6.	Go to step 5.
5	Are the punch unit motor and punch drive cable assembly connected properly?	Replace the punch unit motor. Go to <b>“Punch unit motor assembly removal” on page 4-124.</b>	Replace the connection.
6	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 985.00 Sensor (punch carriage shift HP) on failure

Step	Check	Yes	No
1	Check the punch carriage for proper operation. Does the punch carriage move back and forth smoothly? Check this item by moving it with your fingers.	Go to step 2.	Remove obstacles.

Step	Check	Yes	No
2	<p>Check the sensor (punch carriage shift HP) for proper operation.</p> <p>Perform the sensor (punch carriage shift HP) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Punch and Staple.</b></li> <li>5. Touch <b>Punch carriage shift HP.</b></li> </ol> <p>Open the finisher front door assembly.</p> <p>Move the punch carriage assembly back and forth.</p> <p>Does the operator panel display change every time the sensing area of the sensor (punch carriage shift HP) is blocked?</p>	Go to step 4.	Go to step 3.
3	<p>Check the sensor (punch carriage shift HP) connection.</p> <p>Are the connections of the punch sensor cable assembly properly connected?</p>	<p>Replace the sensor (punch carriage shift HP).</p> <p>Go to <b>“Sensor (punch carriage shift HP) removal” on page 4-128.</b></p>	Replace the connection.
4	<p>Check the punch carriage shift motor assembly.</p> <p>Perform the punch carriage shift motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Tests.</b></li> <li>4. Touch <b>Punch carriage shift mtr.</b></li> <li>5. Touch <b>Forward or Reverse.</b></li> </ol> <p>Open and override the finisher front door interlock switch.</p> <p>Does the punch carriage shift motor assembly operate properly?</p>	Go to step 6.	Go to step 9.
5	<p>Is the punch carriage shift motor assembly connected properly?</p>	<p>Replace the punch carriage shift motor assembly.</p> <p>Go to <b>“Punch carriage shift motor assembly removal” on page 4-120.</b></p>	Replace the connection.
6	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

**985.01 Sensor (punch carriage shift HP) off failure**

Step	Check	Yes	No
1	Check the punch carriage by moving it with your fingers. Does the punch carriage move back and forth smoothly?	Go to step 2.	Remove obstructions.
2	Check the sensor (punch carriage shift HP) for proper operation. Perform the sensor (punch carriage shift HP) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Punch and Staple</b> . 5. Touch <b>Punch carriage shift HP</b> .  Open the finisher front door assembly. Move the punch carriage assembly back and forth. Does the operator panel display change every time the sensing area of the sensor (punch carriage shift HP) is blocked?	Go to step 4.	Go to step 3.
3	Check the sensor (punch carriage shift HP) connection. Are the connections of the punch sensor cable assembly properly connected?	Replace the sensor (punch carriage shift HP). Go to <b>“Sensor (punch carriage shift HP) removal” on page 4-128.</b>	Replace the connection.
4	Check the punch carriage shift motor assembly. Perform the punch carriage shift motor test. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS</b> . 3. Touch <b>Finisher Tests</b> . 4. Touch <b>Punch carriage shift mtr.</b> 5. Touch <b>Forward or Reverse</b> .  Open and override the finisher front door interlock switch. Does the punch carriage shift motor assembly operate properly?	Go to step 6.	Go to step 5.
5	Is the punch carriage shift motor assembly connected properly?	Replace the punch carriage shift motor assembly. Go to <b>“Punch carriage shift motor assembly removal” on page 4-120.</b>	Replace the connection.

Step	Check	Yes	No
6	Perform a print test. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 986.00 Sensor (media eject clamp HP) on failure

Step	Check	Yes	No
1	Check the media eject clamp mechanism by opening the finisher front door assembly and then closing it. Does the media eject clamp mechanism move up and down smoothly?	Go to step 2.	Remove obstacles.
2	Check the sensor (media eject clamp HP) for proper operation. Perform the sensor (media eject clamp HP) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostic Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 2.</b> 5. Touch <b>Media eject clamp HP.</b>  Rotate the eject clamp gears manually by hand. Does the operator panel display change every time the sensing area of the sensor (media eject clamp HP) is blocked?	Go to step 4.	Go to step 3.
3	Check the sensor (media eject clamp HP) connection. Is the above sensor connected properly?	Replace the sensor (media eject clamp HP). Go to <b>“Sensor (media eject clamp HP) removal” on page 4-144.</b>	Replace the connection.
4	Check the media eject clamp motor for proper operation. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Tests.</b> 4. Touch <b>Media eject clamp mtr.</b>  Does the media eject clamp motor operate properly?	Go to step 6.	Go to step 5.

Step	Check	Yes	No
5	Is the media eject clamp motor connected properly?	Replace the media eject clamp motor. Go to <b>“Media eject clamp motor assembly removal” on page 4-143.</b>	Replace the connection.
6	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 986.01 Sensor (media eject clamp HP) off failure

Step	Check	Yes	No
1	Check the media eject clamp mechanism by opening the finisher front door assembly and then closing it. Does the media eject clamp mechanism move up and down smoothly?	Go to step 2.	Remove obstacles.
2	Check the sensor (media eject clamp HP) for proper operation. Perform the sensor (media eject clamp HP) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostic Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 2.</b> 5. Touch <b>Media eject clamp HP.</b>  Rotate the eject clamp gears manually by hand. Does the operator panel display change every time the sensing area of the sensor (media eject clamp HP) is blocked?	Go to step 4.	Go to step 3.
3	Is the sensor (media eject clamp HP) connected properly?	Replace the sensor (media eject clamp HP). Go to <b>“Sensor (media eject clamp HP) removal” on page 4-144.</b>	Replace the connection.

Step	Check	Yes	No
4	<p>Check the media eject clamp motor for proper operation.</p> <p>Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b></p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS.</b></li> <li>3. Touch <b>Finisher Tests.</b></li> <li>4. Touch <b>Media eject clamp mtr.</b></li> </ol> <p>Does the media eject clamp motor operate properly?</p>	Go to step 6.	Go to step 5.
5	<p>Is the media eject clamp motor connected properly?</p>	<p>Replace the media eject clamp motor.</p> <p>Go to <b>“Media eject clamp motor assembly removal” on page 4-143.</b></p>	Replace the connection.
6	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the finisher controller card assembly.</p> <p>Go to <b>“Finisher controller card assembly removal” on page 4-195.</b></p>	Problem solved.

### 987.00 Sensor (media eject shaft HP) on failure

Step	Check	Yes	No
1	<p>Check the media eject shaft assembly by rotating it with your fingers.</p> <p>Does the media eject shaft assembly rotate smoothly?</p>	Go to step 2.	Remove obstructions.
2	<p>Check the sensor (media eject shaft HP) for proper operation.</p> <p>Perform the sensor (media eject shaft HP) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostic Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Media Path 2.</b></li> <li>5. Touch <b>Media eject shaft HP.</b></li> </ol> <p>Rotate the media clutch actuator manually by hand.</p> <p>Does the operator panel display change every time the sensing area of the sensor (media eject shaft HP) is blocked?</p>	Go to step 4.	Go to step 3.



Step	Check	Yes	No
3	Check the sensor (media eject shaft HP) connection. Are the connections of the main sensor cable assembly properly connected?	Replace the sensor (media eject shaft HP). Go to <b>“Sensor (media eject shaft HP) removal” on page 4-156.</b>	Replace the connection.
4	Check the media eject motor assembly. Perform the media eject motor test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Tests.</b> 4. Touch <b>Media eject mtr.</b>  Does the media eject motor assembly operate properly?	Go to step 6.	Go to step 5.
5	Is the media eject motor assembly connected properly?	Replace the media eject motor assembly. Go to <b>“Media eject motor assembly removal” on page 4-155.</b>	Replace the connection.
6	Check the media eject clutch assembly. Perform the media eject clutch test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Tests.</b> 4. Touch <b>Media eject clutch.</b>  Does the media eject clutch assembly produce an audible clicking noise?	Go to step 8.	Go to step 7.
7	Check the media eject clutch assembly connection. Is the above component connected properly?	Replace the media eject clutch assembly. Go to <b>“Media eject clutch assembly removal” on page 4-154.</b>	Replace the connection.

Step	Check	Yes	No
8	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 987.01 Sensor (media eject shaft HP) off failure

Step	Check	Yes	No
1	Check the media eject shaft assembly by rotating it with your fingers. Does the media eject shaft assembly rotate smoothly?	Go to step 2.	Remove obstructions.
2	Check the sensor (media eject shaft HP) for proper operation. Perform the sensor (media eject shaft HP) test. 1. Enter the Diagnostic Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Media Path 2.</b> 5. Touch <b>Media eject shaft HP.</b>  Rotate the media clutch actuator manually by hand. Does the operator panel display change every time the sensing area of the sensor (media eject shaft HP) is blocked?	Go to step 4.	Go to step 3.
3	Check the sensor (media eject shaft HP) connection. Are the connections of the main sensor cable assembly properly connected?	Replace the sensor (media eject shaft HP).  Go to <b>“Sensor (media eject shaft HP) removal” on page 4-156.</b>	Replace the connection.
4	Check the media eject motor assembly. Perform the media eject motor test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Tests.</b> 4. Touch <b>Media eject mtr.</b>  Does the media eject motor assembly operate properly?	Go to step 6.	Go to step 5.

Step	Check	Yes	No
5	Is the media eject motor assembly connected properly?	Replace the media eject motor assembly.  Go to <b>“Media eject motor assembly removal” on page 4-155.</b>	Replace the connection.
6	Check the media eject clutch assembly. Perform the media eject clutch test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS.</b> 3. Touch <b>Finisher Tests.</b> 4. Touch <b>Media eject clutch.</b>  Does the media eject clutch assembly produce an audible clicking noise?	Go to step 8.	Go to step 7.
7	Is the media eject clutch assembly connected properly?	Replace the media eject clutch assembly.  Go to <b>“Media eject clutch assembly removal” on page 4-154.</b>	Replace the connection.
8	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### 988.00 Sensor (punch unit side reg) on failure

**Note:** This procedure pertains to sensor punch unit reg1 and reg2.

Step	Check	Yes	No
1	Check the punch carriage by moving it with your fingers.  Does the punch carriage move back and forth smoothly?	Go to step 2.	Remove obstructions.

Step	Check	Yes	No
2	<p>Check the sensor (punch unit side reg1) for proper operation.</p> <p>Perform the sensor (punch unit side reg1) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Punch and Staple.</b></li> <li>5. Touch <b>Punch side reg1.</b></li> </ol> <p>Open the finisher front door.</p> <p>Insert a fragment of a sheet of white media under the punch unit side reg1.</p> <p>Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (punch unit side reg1)?</p>	Go to step 3.	Go to step 4.
3	<p>Check the sensor (punch unit side reg2) for proper operation.</p> <p>Perform the sensor (punch unit side reg2) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Punch and Staple.</b></li> <li>5. Touch <b>Punch side reg2.</b></li> </ol> <p>Open the finisher front door.</p> <p>Insert a fragment of a sheet of white media under the punch unit side reg2.</p> <p>Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (punch unit side reg2)?</p>	Go to step 5.	Go to step 4.
4	<p>Check the appropriate sensor (punch unit side reg) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the appropriate sensor (punch unit side reg pair).</p> <p>Go to <b>“Sensor (punch unit side registration pair) with bracket removal” on page 4-121.</b></p>	Replace the connection.

Step	Check	Yes	No
5	<p>Check the punch carriage shift motor assembly. Perform the punch carriage shift motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Tests</b>.</li> <li>4. Touch <b>Punch carriage shift mtr.</b></li> <li>5. Touch <b>Forward or Reverse</b>.</li> </ol> <p>Open and override the finisher front door interlock switch.</p> <p>Does the punch carriage shift motor assembly operate properly?</p>	Go to step 7.	Go to step 6.
6	Is the punch carriage shift motor assembly connected properly?	<p>Replace the punch carriage shift motor assembly.</p> <p>Go to <b>“Punch carriage shift motor assembly removal” on page 4-120.</b></p>	Replace the connection.
7	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### 988.01 Sensor (punch unit side reg) off failure

**Note:** This procedure pertains to sensor punch unit reg1 and reg2.

Step	Check	Yes	No
1	<p>Check the punch carriage by moving it with your fingers.</p> <p>Does the punch carriage move back and forth smoothly?</p>	Go to step 2.	Remove obstructions.

Step	Check	Yes	No
2	<p>Check the sensor (punch unit side reg1) for proper operation.</p> <p>Perform the sensor (punch unit side reg1) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Punch and Staple.</b></li> <li>5. Touch <b>Punch side reg1.</b></li> </ol> <p>Open the finisher front door.</p> <p>Insert a fragment of a sheet of white media under the punch unit side reg1.</p> <p>Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (punch unit side reg1)?</p>	Go to step 3.	Go to step 4.
3	<p>Check the sensor (punch unit side reg2) for proper operation.</p> <p>Perform the sensor (punch unit side reg2) test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>FINISHER TESTS.</b></li> <li>3. Touch <b>Sensor Test.</b></li> <li>4. Touch <b>Punch and Staple.</b></li> <li>5. Touch <b>Punch side reg2.</b></li> </ol> <p>Open the finisher front door.</p> <p>Insert a fragment of a sheet of white media under the punch unit side reg2.</p> <p>Does the operator panel display change every time a piece of white media is placed over the sensing area of the sensor (punch unit side reg2)?</p>	Go to step 5.	Go to step 4.
4	<p>Check the appropriate sensor (punch unit side reg) connection.</p> <p>Is the above sensor connected properly?</p>	<p>Replace the appropriate sensor (punch unit side reg).</p> <p>Go to <b>“Sensor (punch unit side registration pair) with bracket removal” on page 4-121.</b></p>	Replace the connection.

Step	Check	Yes	No
5	<p>Check the punch carriage shift motor assembly. Perform the punch carriage shift motor test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Tests</b>.</li> <li>4. Touch <b>Punch carriage shift mtr.</b></li> <li>5. Touch <b>Forward or Reverse</b>.</li> </ol> <p>Open and override the finisher front door interlock switch.</p> <p>Does the punch carriage shift motor assembly operate properly?</p>	Go to step 7.	Go to step 6.
6	Is the punch carriage shift motor assembly connected properly?	<p>Replace the punch carriage shift motor assembly.</p> <p>Go to <b>“Punch carriage shift motor assembly removal” on page 4-120.</b></p>	Replace the connection.
7	<p>Perform a print test.</p> <p>Does the error still occur?</p>	<p>Replace the printer engine card assembly.</p> <p>Refer to the <i>Printer Service Manual</i>.</p>	Problem solved.

### 989.00 Stapler unit failure

Step	Check	Yes	No
1	<p>Check the stapler unit assembly for proper operation.</p> <p><b>Warning:</b> Ensure there are no loose staples in the stapler unit after performing this test.</p> <p>Perform the Staple test.</p> <ol style="list-style-type: none"> <li>1. Enter the Diagnostics Menu.</li> <li>2. Touch <b>MOTOR TESTS</b>.</li> <li>3. Touch <b>Finisher Motor Tests</b>.</li> <li>4. Touch <b>Stapler unit mtr.</b></li> </ol> <p>Open and override the finisher front door interlock switch</p> <p>Does the motor in the stapler unit assembly operate properly and staple the media?</p>	<p>Check for staples and staple jams.</p> <p>Problem resolved.</p>	Go to step 2.
2	Is the stapler unit assembly connected properly?	<p>Replace the stapler unit assembly.</p> <p>Go to <b>“Stapler unit assembly removal” on page 4-133.</b></p>	Replace the connection.

Step	Check	Yes	No
3	Perform a print test stapled document. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 990.00 Sensor (stapler carriage HP) on failure

Step	Check	Yes	No
1	Check the stapler by moving it with your fingers. Does the Stapler carriage move smoothly?	Go to step 2.	Remove obstructions.
2	Check the sensor (stapler carriage HP) for proper operation. Perform the sensor (stapler carriage shift HP) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Punch and Staple</b> . 5. Touch <b>Stapler carriage shift HP</b> .  Open the finisher front door assembly. Does the operator panel display change every time the sensing area of the sensor (stapler carriage HP) is moved by hand and placed in front of the interrupt flag of the stapler rack gear?	Go to step 4.	Go to step 3.
3	Is the sensor (stapler carriage HP) connected properly?	Replace the sensor (stapler carriage HP). Go to <b>"Sensor (stapler carriage HP) removal" on page 4-135</b> .	Replace the connection.
4	Check the stapler carriage motor assembly. Perform the stapler carriage motor test. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS</b> . 3. Touch <b>Finisher Tests</b> . 4. Touch <b>Stapler carriage mtr.</b> 5. Touch <b>Forward or Reverse</b> .  Open and override the finisher front door interlock switch. Does the stapler carriage motor assembly operate properly?	Go to step 6.	Go to step 5.
5	Is the stapler carriage motor assembly connected properly?	Replace the stapler carriage motor assembly.	Replace the connection



Step	Check	Yes	No
6	Perform a print test stapled document. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

### 990.01 Sensor (stapler carriage HP) off failure

Step	Check	Yes	No
1	Check the stapler by moving it with your fingers. Does the Stapler carriage move smoothly?	Go to step 2.	Remove obstructions.
2	Check the sensor (stapler carriage HP) for proper operation. Perform the sensor (stapler carriage shift HP) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Punch and Staple</b> . 5. Touch <b>Stapler carriage shift HP</b> .  Open the finisher front door assembly. Does the operator panel display change every time the sensing area of the sensor (stapler carriage HP) is moved by hand and placed in front of the interrupt flag of the stapler rack gear?	Go to step 4.	Go to step 3.
3	Is the sensor (stapler carriage HP) connected properly?	Replace the sensor (stapler carriage HP). Go to <b>"Sensor (stapler carriage HP) removal" on page 4-135</b> .	Replace the connection.
4	Check the stapler carriage motor assembly. Perform the stapler carriage motor test. 1. Enter the Diagnostics Menu. 2. Touch <b>MOTOR TESTS</b> . 3. Touch <b>Finisher Tests</b> . 4. Touch <b>Stapler carriage mtr.</b> 5. Touch <b>Forward or Reverse</b> .  Open and override the finisher front door interlock switch. Does the stapler carriage motor assembly operate properly?	Go to step 6.	Go to step 5.
5	Is the stapler carriage motor assembly connected properly?	Replace the stapler carriage motor assembly.	Replace the connection.

Step	Check	Yes	No
6	Perform a print test on a stapled document. Does the error still occur?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

**995.00 Finisher NVRAM R/W failure**

Step	Check	Yes	No
1	Turn the finisher off and on several times. Does the error still occur when the power is on?	Go to step 2.	Problem solved.
2	Checking the finisher controller card assembly for connection. Are the connections of the finisher controller card assembly properly connected?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem resolved.

**996.00 Finisher type failure**

Step	Check	Yes	No
1	Check the printer and finisher installation. Is the finisher installed to the printer properly?	Go to step 2.	Reinstall the finisher.
2	Turn the power on and off. Does the error still occur when the power is back on?	Go to step 3.	Problem solved.
3	Check the finisher controller card assembly connection. Are the connections of the finisher controller card assembly properly connected?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Replace the connection.

**999.00 Finisher engine/RIP functional failure**

Step	Check	Yes	No
1	Turn the printer off and on several times. Does the error still occur when the power is on?	Go to step 2.	Problem solved.

Step	Check	Yes	No
2	Check the finisher controller card assembly connections. Are the connections of the finisher controller card assembly properly connected?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195</b>	Problem solved.
3	Check the printer engine card assembly connections. Are the connections of the printer engine card assembly properly connected?	Replace the printer engine card assembly. Refer to the <i>MFP Service Manual</i> .	Problem solved.
4	Check the RIP card assembly connections. Are the connections of the RIP card assembly properly connected?	Replace the RIP card assembly. Refer to the <i>MFP Service Manual</i> .	Problem solved.

### **Bridge unit top cover open**

Step	Check	Yes	No
1	Open and close the bridge unit top cover assembly on the bridge unit assembly. Does it open or close smoothly?	Go to step 2.	Check that the bridge unit top cover assembly is installed properly, and correct any deformations. If this does not correct the problem, replace the bridge unit top cover assembly. Go to <b>“Bridge unit top cover assembly removal” on page 4-84.</b>
2	Check the bridge unit top cover assembly on the bridge unit assembly for shape and operation. Is the actuator of the bridge unit top cover assembly that enters the sensor (bridge unit top cover interlock) bent or damaged?	Reshape the actuator so it fits into the cover sensor. If this does not correct the problem, replace the bridge unit top cover assembly. Go to <b>“Bridge unit top cover assembly removal” on page 4-84.</b>	Go to step 3.

Step	Check	Yes	No
3	Check the bridge unit assembly top cover actuator. Paint both faces of the actuator with a black permanent marker. Does the error continue?	Go to step 4	Problem solved.
4	Check the sensor (bridge unit top cover interlock) installation. Is the sensor (bridge unit top cover interlock) installed properly?	Go to step 5.	Reinstall the sensor (bridge unit top cover interlock).  Go to <b>“Sensor (bridge unit top cover interlock) removal” on page 4-92.</b>
5	Check the sensor (bridge unit top cover interlock) for proper operation. Perform the sensor (bridge unit top cover interlock) test.  1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Cover and Door.</b> 5. Touch <b>Door F bridge top.</b>  Does the operator panel display change every time the detection point of the sensor (bridge unit top cover interlock) is blocked?	Go to step 7.	Go to step 6.
6	Is the sensor (bridge unit top cover interlock) connected properly?	Replace the sensor (bridge unit top cover interlock).  Go to <b>“Sensor (bridge unit top cover interlock) removal” on page 4-92.</b>	Replace the connection.
7	Does the error still occur when the power is turned on?	Go to step 8.	Problem solved.
8	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b> Does the error still occur when the power is turned on?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

**Finisher front door open**

Step	Check	Yes	No
1	Open and close the finisher front door assembly. Does it open or close smoothly?	Go to step 2.	Check the finisher front door assembly for installation, correct deformations, or replace it.  Go to <b>“Finisher front door assembly removal”</b> on page 4-104.
2	Check the switch (finisher front door interlock) installation  Is the switch (finisher front door interlock) installed properly?	Go to step 3.	Reinstall the switch (finisher front door interlock).  Go to <b>“Switch (finisher front door interlock) removal”</b> on page 4-103.
3	Check the switch (finisher front door interlock) for proper operation. Perform the switch (finisher front door interlock) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Cover and Door</b> . 5. Touch <b>Door G fin front</b> .  Does the operator panel display change every time the detection point of the switch (finisher front door interlock) is pressed by the tip of the screwdriver?	Go to step 5.	Go to step 4.
4	Is the switch (finisher front door interlock) connected properly?	Replace the switch (finisher front door interlock).  Go to <b>“Switch (finisher front door interlock) removal”</b> on page 4-103.	Replace the connection.
5	Does the error still occur when the power is turned off and back on?	Go to step 6.	Problem solved.
6	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal”</b> on page 4-195.  Does the error still occur when the power is turned off and back on?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

**Finisher eject cover open**

Step	Check	Yes	No
1	Check the switch (eject cover interlock) installation. Is the switch (eject cover interlock) installed properly?	Go to step 2.	Reinstall the switch (media eject cover).
2	Check the operation of the switch (eject cover interlock). Perform the switch (eject cover interlock) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Cover and Door</b> . 5. Touch <b>Surface H fin eject</b> .  Does the operator panel display change every time the actuator of the switch is activated?	Go to step 4.	Go to step 3.
3	Is the switch (media cover interlock) connected properly?	Replace the switch (eject cover interlock).  Go to <b>“Switch (eject cover interlock) removal” on page 4-145.</b>	Replace the connection.
4	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

**Finisher upper media bin full**

Step	Check	Yes	No
1	Check the sensor (upper media bin full) for proper operation. Perform the sensor (upper media bin full) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Sensor Test</b> . 4. Touch <b>Bin Level</b> . 5. Touch <b>Fin upper bin full</b> .  Does the display of the operator panel change every time a piece of white media is placed over the sensing area of the sensor (upper media bin full)?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Go to step 2.

Step	Check	Yes	No
2	Is the sensor (upper media bin full) connected properly?	Replace the sensor (upper media bin full).  Go to <b>“Sensor (upper media bin full) removal” on page 4-185.</b>	Replace the connection.
3	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

**No punch waste box.**

Step	Check	Yes	No
1	Check the sensor (punch waste box present) for proper operation. Is the sensor installed properly?	Go to step 2.	Reinstall the sensor (punch waste box set).  Go to <b>“Sensor (punch waste box set) removal” on page 4-129.</b>
2	Check the sensor (punch waste box set). Perform sensor (punch waste box set) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Punch and Staple.</b> 5. Touch <b>Punch box set.</b>  Open the finisher front door. Remove the punch waste box. Does the operator panel display change every time the sensing area of the sensor (punch waste box set) is blocked?	Go to step 4.	Go to step 3.
3	Is the sensor (punch waste box set) properly connected?	Replace the sensor (punch waste box set).  Go to <b>“Sensor (punch waste box set) removal” on page 4-129.</b>	Replace the connection.

Step	Check	Yes	No
4	Perform a print test. Does the error still occur?	Replace the bridge interface card assembly. Go to <b>“Bridge unit interface card assembly removal” on page 4-194.</b> Go to step 5.	Problem solved.
5	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### ***Punch waste box full***

Step	Check	Yes	No
1	Check the sensor (punch waste box full) for correct installation. Is the sensor installed properly?	Go to step 2.	Reinstall the sensor (punch waste box full). Go to <b>“Sensor (punch waste box full) removal” on page 4-130.</b>
2	Check the sensor (punch waste box full). Perform the sensor (punch waste box full) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Punch and Staple.</b> 5. Touch <b>Punch waste box full.</b>  Open the finisher front door. Remove the punch waste box. Insert a sheet of white media into the sensing area of the sensor (punch waste box full). Does the operator panel display change every time the sensing area of the sensor (punch waste box full) is blocked?	Go to step 4.	Go to step 3.
3	Perform a print test. Does the error still occur?	Replace the sensor (punch waste box full). Go to <b>“Sensor (punch waste box full) removal” on page 4-130.</b>	Replace the connection.



Step	Check	Yes	No
4	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### **Stacker media bin full (mix size)**

Step	Check	Yes	No
1	Check the stacker bin for obstructions. Are there any obstructions on the upper and lower parts of the stacker bin?	Remove the obstructions.	Go to step 2.
2	Check the sensor (stacker bin level 1) for proper operation. Perform the sensor (stacker bin level1) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Bin Level.</b> 5. Touch <b>Stacker bin level1.</b>  Does the operator panel display change every time the sensing area of the sensor (stacker bin level 1) is blocked by a multiple page document or your finger?	Go to step 4.	Go to step 3.
3	Is the sensor (stacker bin level 1) connected properly?	Replace the sensor (stacker bin level 1).  Go to <b>“Sensor (stacker bin level 1) removal” on page 4-111.</b>	Replace the connection.
4	Check the sensor (stacker bin level2) for proper operation. Perform the sensor (stacker bin level2) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Bin Level.</b> 5. Touch <b>Stacker bin level2.</b>  Does the operator panel display change every time the sensing area of the sensor (stacker bin level 2) is blocked by a piece of media or your finger?	Go to step 6.	Go to step 5.

Step	Check	Yes	No
5	Is the sensor (stacker bin level 2) connected properly?	Replace the sensor (stacker bin level 2). Go to <b>“Sensor (stacker bin level 2) removal” on page 4-111.</b>	Replace the connection.
6	Check the encoder of the sensor (stacker bin level encoder) installation. Is the encoder installed properly? Does it enter the detection point of the sensor (stacker bin level encoder)?	Go to step 7.	Replace the encoder.
7	Check the sensor (stacker bin level encoder) for proper operation. Perform the sensor (stacker bin level encoder) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Bin Level.</b> 5. Touch <b>Stacker bin level encod.</b>  Does the operator panel display change when the belt of the stacker bin lift motor assembly is moved by hand?	Go to step 9.	Go to step 8.
8	Is the sensor (stacker bin level encoder) connected properly?	Replace the sensor (stacker bin level encoder). Go to <b>“Sensor (stacker bin level encoder) removal” on page 4-112.</b>	Replace the connection.
9	Check the stacker bin lift motor assembly by blocking the lower hole in either of the sensors (stacker bin level). The stacker bin should lower slightly. Does the stacker bin lift motor assembly operate properly?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Go to step 10.
10	Is the stacker bin lift motor assembly connected properly?	Replace the stacker bin lift motor assembly. Go to <b>“Stacker bin lift motor assembly removal” on page 4-115.</b>	Replace the connection.

Step	Check	Yes	No
11	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### ***Stacker media bin full (no mix)***

Step	Check	Yes	No
1	Check the stacker bin for obstructions. Are there any obstructions on the upper and lower parts of the stacker bin?	Remove the obstructions.	Go to step 2.
2	Check the sensor (stacker bin level 1) for proper operation. Perform the sensor (stacker bin level1) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Bin Level.</b> 5. Touch <b>Stacker bin level1.</b>  Does the operator panel display change every time the sensing area of the sensor (stacker bin level 1) is blocked by a multiple page document or your finger?	Go to step 4.	Go to step 3.
3	Is the sensor (stacker bin level 1) installed properly?	Replace the sensor (stacker bin level 1).  Go to <b>“Sensor (stacker bin level 1) removal” on page 4-111.</b>	Replace the connection.
4	Check the sensor (stacker bin level2) for proper operation. Perform the sensor (stacker bin level2) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Bin Level.</b> 5. Touch <b>Stacker bin level2.</b>  Does the operator panel display change every time the sensing area of the sensor (stacker bin level 2) is blocked by a piece of media or your finger?	Go to step 5.	Go to step 6.

Step	Check	Yes	No
5	Is the sensor (stacker bin level 2) connected properly?	Replace the sensor (stacker bin level 2). Go to <b>“Sensor (stacker bin level 2) removal” on page 4-111.</b>	Replace the connection.
6	Check the encoder of the sensor (stacker bin level encoder) installation. Is the encoder installed properly? Does it enter the detection point of the sensor (stacker bin level encoder)?	Go to step 7.	Replace the encoder.
7	Check the sensor (stacker bin level encoder) for proper operation. Perform the sensor (stacker bin level encoder) test. Remove the rear upper cover. Go to <b>“Rear upper cover removal” on page 4-101.</b> 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Bin Level.</b> 5. Touch <b>Stacker bin level encod.</b>  Does the operator panel display change when the belt of the stacker bin lift motor assembly is moved by hand?	Go to step 9.	Go to step 8.
8	Is the sensor (stacker bin level encoder) connected properly?	Replace the sensor (stacker bin level encoder). Go to <b>“Sensor (stacker bin level encoder) removal” on page 4-112.</b>	Replace the connection.
9	Check the stacker bin lift motor assembly for proper operation. Check the above motor by blocking the lower hole in either of the sensors (stacker bin level). The stacker bin should lower slightly. Does the stacker bin lift motor assembly operate properly?	Go to step 11.	Go to step 10.
10	Is the stacker bin lift motor assembly connected properly?	Replace the stacker bin lift motor assembly. Go to <b>“Stacker bin lift motor assembly removal” on page 4-115.</b>	Replace the connection.

Step	Check	Yes	No
11	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### **Stacker lower safety failure**

Step	Check	Yes	No
1	Check the vertical transport mechanism of the stacker bin for obstructions and deformation.  Are there any obstructions in the vertical transport mechanism of the stacker bin?	Remove obstructions.	Go to step 2.
2	Is there any deformation in the vertical transport mechanism of the stacker bin?	Replace deformed part.	Go to step 3.
3	Check the sensor (stacker bin level 1) for proper operation.  Perform the sensor (stacker bin level1) test.  1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Bin Level.</b> 5. Touch <b>Stacker bin level1.</b>  Does the operator panel display change every time the sensing area of the sensor (stacker bin level 1) is blocked by a multiple page document or your finger?	Go to step 5.	Go to step 4.
4	Is the sensor (stacker bin level 1) connected properly?	Replace the sensor (stacker bin level 1).  Go to <b>“Sensor (stacker bin level 1) removal” on page 4-111.</b>	Replace the connection.
5	Check the sensor (stacker bin level2) for proper operation.  Perform the sensor (stacker bin level2) test.  1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS.</b> 3. Touch <b>Sensor Test.</b> 4. Touch <b>Bin Level.</b> 5. Touch <b>Stacker bin level2.</b>  Does the operator panel display change every time the sensing area of the sensor (stacker bin level 2) is blocked by a piece of media or your finger?	Go to step 7.	Go to step 6.

Step	Check	Yes	No
6	Check the sensor (stacker bin level 2) connection. Are the connections of the main sensor cable assembly properly connected?	Replace the sensor (stacker bin level 2). Go to <b>“Sensor (stacker bin level 2) removal” on page 4-111.</b>	Replace the connection.
7	Check the stacker bin lift motor assembly by blocking the lower hole in either of the sensors (stacker bin level). The stacker bin should lower slightly. Does the stacker bin lift motor assembly operate properly?	Go to step 9.	Go to step 8.
8	Is the stacker bin lift motor assembly connected properly?	Replace the stacker bin lift motor assembly. Go to <b>“Stacker bin lift motor assembly removal” on page 4-115.</b>	Replace the connection.
9	Perform a print test. Does the error still occur?	Replace the finisher controller card assembly. Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.

### **Stacker set over count failure**

Step	Check	Yes	No
1	Check connectors of the finisher controller card assembly connection. Are all the connectors connected to the finisher controller card assembly properly connected?	Go to step 3.	Replace the connection.
2	Does the error still occur when the power is turned on?	Go to step 3.	Problem solved.
3	Replace the finisher controller card assembly. Does the error still occur when the power is turned on?	Replace the printer engine card assembly. Refer to the <i>Printer Service Manual</i> .	Problem solved.

**Staple cartridge empty**

Step	Check	Yes	No
1	Check the staple cartridge for new and unused staples. Does the staple cartridge have a sufficient amount of new and unused staples?	Go to step 2.	Refill the cartridge with new and unused staples.
2	Check the staple cartridge for correct installation. Is the staple cartridge installed properly?	Go to step 3.	Install the staple cartridge properly.
3	Check the staple cartridge for damage. Is the staple cartridge damaged?	Go to step 4.	Replace the staple cartridge.
4	Check the sensor (low staple) for proper operation. Perform the sensor (low staple) test. 1. Enter the Diagnostics Menu. 2. Touch <b>FINISHER TESTS</b> . 3. Touch <b>Punch and Staple</b> . 4. Touch <b>Low Staple</b> .  Does the operator panel display change every time an undamaged and filled staple cartridge is removed and reinserted into the stapler unit assembly?	Go to step 6.	Go to step 5.
5	Check the stapler unit cable assembly connection. Are all the connections of the stapler unit cable assembly connected properly?	Replace the stapler unit assembly.  Go to <b>“Stapler unit assembly removal” on page 4-133.</b>	Replace the connection.
6	Perform a stapled print test. Does the error still occur?	Replace the finisher controller card assembly.  Go to <b>“Finisher controller card assembly removal” on page 4-195.</b>	Problem solved.
7	Perform a stapled print test.	Replace the printer engine card assembly.  Refer to the <i>Printer Service Manual</i> .	Problem solved.

7500-XXX



### 3. Diagnostic aids

This chapter explains the tests and procedures to identify printer failures and to verify that repairs have corrected the problem.

---

#### Accessing service menus

Access the following menus to identify problems with the printer and run diagnostic tests.

Diagnostics Menu	<ol style="list-style-type: none"><li>1. Turn off the printer.</li><li>2. Press and hold the <b>3</b> and <b>6</b> buttons simultaneously.</li><li>3. Turn on the printer.</li><li>4. Release the buttons after 10 seconds.</li></ol>	<p>The Diagnostics Menu group consists of menus, settings, and operations that are used to diagnose various printer problems.</p> <p>Note: While the Diagnostics Menu Group is active, all host interfaces are offline.</p> <p>See <b>“Entering Diagnostics Menus” on page 3-2</b> for more information.</p>
Configuration Menu	<ol style="list-style-type: none"><li>1. Turn off the printer.</li><li>2. Press and hold the <b>2</b> and <b>6</b> buttons simultaneously.</li><li>3. Turn on the printer.</li><li>4. Release the buttons after 10 seconds.</li></ol>	<p>The Configuration Menu group contains a set of menus, settings, and operations which are infrequently required by a user. Generally, the options made available in this menu group are used to configure a printer for operation.</p> <p>See <b>“Entering Configuration Menu” on page 3-33</b> for more information.</p>

## Diagnostics Menus

### Entering Diagnostics Menus

1. Turn off the printer.
2. Press and hold the **3** and **6** buttons simultaneously.
3. Turn on the printer.
4. Release the buttons after 10 seconds.

### Available tests

Tests appear on the LCD in the order shown:

<b>MOTOR TESTS</b>	See <b>"MOTOR TESTS"</b> on page 3-5.
<b>Finisher Motor Tests</b>	
Sub paddle solenoid	
Media eject clutch	
Stapler unit mtr	
Bridge unit drv mtr	
Motor (entrance/paddle)	
Motor (buffer/transport)	
Motor (exit)	
Media eject clamp mtr	
Media eject mtr	
Punch unit mtr	
Fin diverter solenoid	
Fin Buffer solenoid	
Punch carriage shift mtr	
Front tamper mtr	
Rear tamper mtr	
Stapler carriage mtr	
Stacker lift mtr	
<b>Printer Motor Tests</b>	
Transport mtr	
2TM/TTM drv mtr	
2TM/TTM Clutch	
HCF transport mtr	
HCF pick solenoid	
MPF/Transport mtr	
Fuser cooling fan	
PC unit cooling fan	
Toner add mtr	
Drum unit	
Registrat clutch	

Tray 1 feed mtr	
Tray 2 feed mtr	
Tray 3 feed mtr	
Tray 4 feed mtr	
Tray 5 feed mtr	
MPF pick solenoid	
Duplex drv mtr	
Diverter solenoid	
Exit 2 cooling fan	
Tray 1 lift mtr	
Tray 2 lift mtr	
Tray 3 lift mtr	
Tray 4 lift mtr	
Tray 5 lift mtr	
Exit 1 shift mtr	
Exit 2 shift mtr	
Exit 2 drive mtr	
<b>Scanner Motor Tests</b>	
Feed drv mtr	
Exposure lamp	
Scanner cooling fan	
Reg drv	
Scanner drv	
Inverter solenoid	
Pick roll position mtr	
<b>PRINT TESTS</b>	See <b>“PRINT TESTS”</b> on page 3-6.
Tray 1	
Tray 2	
Tray 3	
Tray 4	
Tray 5 (if installed)	
MP Feeder	
Printing Quality Test Pages	See <b>“Print Quality Test Pages”</b> on page 3-6.
<b>HARDWARE TESTS</b>	
Panel Test	See <b>“Panel Test”</b> on page 3-7.
Button Test	See <b>“Button Test”</b> on page 3-7.
DRAM Test	See <b>“DRAM Test”</b> on page 3-8.
CACHE Test	See <b>“CACHE Test”</b> on page 3-9.
Parallel Wrap Test	See <b>“Parallel Wrap”</b> on page 3-9.
<b>DUPLEX TESTS</b>	
Quick Test	See <b>“Quick Test”</b> on page 3-10.
Sensor Test	See <b>“Sensor Test (duplex)”</b> on page 3-10.
<b>INPUT TRAY TESTS</b>	

Feed Tests	See <b>“Feed Tests”</b> on page 3-10.
Sensor Test	See <b>“Sensor Test (input tray)”</b> on page 3-11.
<b>OUTPUT BIN TESTS</b>	
Feed Tests	See <b>“Feed Tests (output bins)”</b> on page 3-12.
Feed To All Bins	See <b>“Feed To All Bins”</b> on page 3-12.
Sensor Test	See <b>“Sensor Test (output bin)”</b> on page 3-13.
<b>FINISHER TESTS</b>	
Staple Test	See <b>“Staple Test”</b> on page 3-13.
Hole Punch Test	See <b>“Hole Punch Test”</b> on page 3-14.
Feed Tests	See <b>“Feed Tests (Finisher)”</b> on page 3-14.
Sensor Tests	See <b>“Sensor Test (Finisher)”</b> on page 3-14.
<b>BASE SENSOR TESTS</b>	
Cover and Door	
Devices	
Exit Level	
Media Path	
<b>DEVICE TESTS</b>	
Quick Disk Test	See <b>“DEVICE TESTS”</b> on page 3-17.
Disk Test/Clean	
<b>PRINTER SETUP</b>	
Defaults	See <b>“Defaults”</b> on page 3-19.
Printed Page Count	See <b>“Printed Page Count”</b> on page 3-20.
Permanent Page Count	See <b>“Permanent Page Count”</b> on page 3-20.
Serial Number	See <b>“Serial Number”</b> on page 3-20.
Engine Setting 1 to 4	See <b>“Engine Setting 1 to 4”</b> on page 3-20.
Model Number	See <b>“Model Name”</b> on page 3-20.
Configuration ID	See <b>“Configuration ID”</b> on page 3-20.
Edge to Edge	See <b>“Edge to Edge”</b> on page 3-21.
Parallel Strobe Adjustment	<b>“Parallel Strobe Adjustment (Par S Strobe Adj)”</b> on page 3-22.
<b>EVENT LOG</b>	
Display Log	See <b>“Display the Event Log”</b> on page 3-22.
Print Log	See <b>“Print the Event Log”</b> on page 3-24.
Clear Log	See <b>“Clear the Event Log”</b> on page 3-24.
<b>SCANNER TESTS</b>	
ASIC Test	See <b>“ASIC Test”</b> on page 3-25.
Feed Test	See <b>“Feed Test”</b> on page 3-25.
Scanner Manual Registration	See <b>“Scanner Manual Registration”</b> on page 3-26.
Sensor Tests	See <b>“Sensor Test (Scanner Tests)”</b> on page 3-31.
<b>Exit Diagnostics Menu</b>	See <b>“Exiting Diagnostics Menu”</b> on page 3-32.

## MOTOR TESTS

The tests in this group allow you to test specific motors, and on some motors run them forward or reverse.

To run the MOTOR TESTS:

1. Touch **MOTOR TESTS** from the Diagnostics Menu.
2. Touch the test to run.

### The following Finisher Motor Tests are available:

- Sub paddle solenoid
- Media eject clutch
- Stapler unit mtr
- Bridge unit drv mtr
- Motor (entrance/paddle)
- Motor (buffer/transport)
- Motor (exit)
- Media eject clamp mtr
- Media eject mtr
- Punch unit mtr
- Fin diverter solenoid
- Fin Buffer solenoid
- Punch carriage shift mtr
- Front tamper mtr
- Rear tamper mtr
- Stapler carriage mtr
- Stacker lift mtr

### The following Printer Motor Tests are available:

- Transport mtr
- 2TM/TTM drv mtr
- 2TM/TTM Clutch
- HCF transport mtr
- HCF pick solenoid
- MPF/Transport mtr
- Fuser cooling fan
- PC unit cooling fan
- Toner add mtr
- Drum unit
- Registrat clutch
- Tray 1 feed mtr
- Tray 2 feed mtr
- Tray 3 feed mtr
- Tray 4 feed mtr
- Tray 5 feed mtr
- MPF pick solenoid
- Duplex drv mtr
- Diverter solenoid
- Exit 2 cooling fan
- Tray 1 lift mtr
- Tray 2 lift mtr
- Tray 3 lift mtr
- Tray 4 lift mtr
- Tray 5 lift mtr
- Exit 1 shift mtr
- Exit 2 shift mtr
- Exit 2 drive mtr

### The following Scanner Motor Tests are available:

- ADF feed drv mtr
- Exposure lamp
- Scanner cooling fan
- ADF registration drv mtr
- Scanner drv mtr
- Inverter solenoid
- Pick roll position mtr
- Document set LED

3. During the test, Motor Running... appears on the LCD.

**Note:** If available, **Forward** and **Reverse** options appear on the LCD for selected tests.


Press **Stop**  to stop the test.

## PRINT TESTS

To run the Print Tests:

1. Touch **PRINT TESTS** from the Diagnostics Menu.
2. Touch **[Input Source]** to verify that the printer can generate output from that source's media.
3. Touch **Printing Quality Test Pages** to view information about the printer's current settings and to test the printer's ability to generate quality output.

Input source	Appears on the LCD
Tray 1	Tray 1 Printing...
Tray 2	Tray 2 Printing...
Tray 3	Tray 3 Printing...
Tray 4	Tray 4 Printing...
Tray 5 (if installed)	Tray 5 Printing...
MP Feeder	MP Feeder Printing...
Printing Quality Test Pages	Printing Quality Test Pages...

4. Touch **Single** or **Continuous**.
  - If **Single** is selected, a single page is printed.
  - If **Continuous** is selected, printing continues until **Stop**  is pressed to cancel the test. If a source is selected that contains envelopes, an envelope test pattern is printed. If **Continuous** is selected, the test pattern is printed only on the first envelope.

After a Single test has printed or a Continuous test canceled, the LCD returns to PRINT TESTS.

### Input Source Print Test

Regardless of the input source selected, the printer always generates a simplex version of the Print Test page using its default resolution.

### Print Quality Test Pages

This setting enables you to view the values of a broad range of the device's settings and to test the device's ability to generate acceptable printed output.

The printer automatically generates four pages in English. The device always uses the media that is currently installed in Tray 1 to print this report. Once started, printing cannot be canceled and all key presses are ignored until printing completes.

If Duplex is activated, this report will be printed on both sides of the paper; otherwise, it will be printed on the front sides of the paper only.

## Print Quality Pages Content by Report Page Number

Page Number	Content
1	General printer information includes: <ul style="list-style-type: none"> <li>• A circular graphic with spokes emanating from a dark center</li> <li>• Device Information</li> <li>• (Envelope Enhance)</li> <li>• Engine Setting 1 to 4</li> <li>• Edge to Edge</li> <li>• Current values of each variable listed</li> <li>• A repeated string of characters in varying font sizes</li> </ul>
2	Page is gray with two black squares
3	Page is solid black
4	Page is blank (this page verifies that the device does not streak or smear toner)


## HARDWARE TESTS

Touch the following Hardware Tests from this menu:

- Panel Test
- Button Test
- DRAM Test
- CACHE Test
- Parallel Wrap

### Panel Test

This test automatically toggles all pixels on the LCD through every contrast level beginning with the darkest to the brightest. This test shows non-functioning pixels as blank spaces during the darkest contrast.

This test continues until you press **Stop** , then the LCD returns to HARDWARE TESTS.

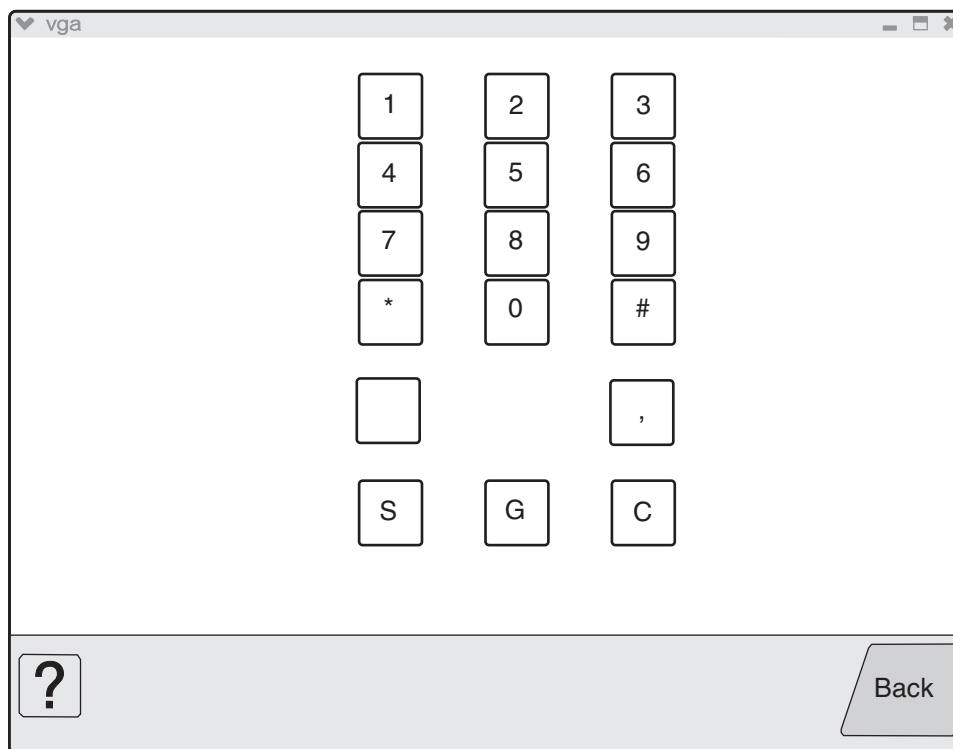
### Button Test

The Button Test is used to verify the operation of each button on the operator panel.

To perform the Button Test:

1. Touch **HARDWARE TESTS** from the Diagnostics Menu.
2. Touch **Button Test**. The LCD displays a graphic of the operator panel buttons that matches the layout of the operator panel buttons.
3. Press any button on the operator panel and that button on the LCD appears shaded.

4. Release the button and the shading is removed.



Touch **Back** to exit the test.

## DRAM Test

The DRAM Test is used to check the validity of standard and optional DRAM memory. The test writes patterns of data to DRAM to verify that each bit in memory can be set and read correctly.

To run the DRAM Test:

1. Touch **HARDWARE TESTS** from the Diagnostics Menu.
2. Touch **DRAM Test**. DRAM Test Testing... appears on the LCD. Then the message Resetting the Printer appears and the power LED is green. While the DRAM test executes, the power indicator *blinks* amber. The printer automatically performs a POR.

The following type of message appears:

DRAM Test	256 MB	P:#####	F:#####
-----------	--------	---------	---------

- P:##### represents the number of times the memory test has passed and finished successfully. Initially 000000 displays with the maximum pass count being 999,999.
- F:##### represents the number of times the memory test has failed and finished with errors. Initially 0000 displays with the maximum fail count being 99,999. Initially only four digits appear, but additional digits appear as needed.

To stop this test before completion, turn the printer off.



# CACHE Test

This test is used to verify the printer processor cache.

To run the CACHE Test:

1. Touch **HARDWARE TESTS** from the Diagnostics Menu.
2. Touch **CACHE Test**. CACHE Test Testing... appears on the LCD. Then the message Resetting the Printer appears. While the CACHE test executes, the power LED is green. The printer automatically performs a POR.

The following type of message appears:

CACHE Test	x100	P:#####	F:####
------------	------	---------	--------

- P:##### represents the number of times the cache has passed and finished successfully. Initially 000000 displays with the maximum pass count being 999,999.
- F:#### represents the number of times the cache has failed and finished with errors. Initially 0000 displays with the maximum fail count being 99,999. Initially only four digits appear, but additional digits appear as needed.

Each time a test is completed, the number of passes and failures is incremented. If the test fails, the message Failure appears for approximately three seconds, and the failure count increases by one.

The test continues until all of the printer processor's cache has been tested. Once the maximum pass count or fail count is reached, the test is stopped, and the final results display.

To stop this test before completion, turn the printer off.

# Parallel Wrap


This test verifies the proper functioning of the parallel port hardware using a wrap plug. Each parallel signal is tested.

To run the Parallel Wrap tests:

1. Disconnect the parallel interface cable, and install the parallel wrap plug.
2. Touch **HARDWARE TESTS** from the Diagnostics Menu.
3. Touch **Parallel Wrap** and the following appears on the LCD.


Parallel Wrap Testing...
Pass Count: 0
Fail Count: 0

Each time the printer finishes a test, it increments Pass Count or Fail Count by one according to the success or failure of the parallel port hardware. When the maximum number of tests have been executed, the test stops and displays the results.

Press **Stop**  to stop the test. Parallel Wrap Cancelled appears on the LCD, and then returns to the HARDWARE TESTS menu.

## DUPLEX TESTS


### Quick Test

This test prints a duplex version of the Quick Test that can be used to verify that the correct placement of the top margin on the back side of a duplex page. You can run one duplexed page (**Single**), or continue printing duplexed pages (**Continuous**) until is pressed **Stop** .

Make sure either letter or A4 size paper is loaded in the default paper source. If the default source only supports envelopes, then the Quick Test will be printed from Tray 1.

To run the Quick Test:


1. Touch **DUPLEX TESTS** from the Diagnostics Menu.
2. Touch **Quick Test**.
3. Touch **Single** or **Continuous**. `Quick Test Printing...` appears on the LCD.
  - The single Duplex Quick test cannot be canceled.
  - The printer attempts to print the Quick Test Page from the default paper source. If the default paper source only supports envelopes, then the page is printed from Tray 1.
  - Check the Quick Test Page for the correct registration between the placement of the first scan line on the front and back side of a duplexed sheet.

The single test stops automatically when a single duplex sheet is printed, and the continuous test continues until you press **Stop** .

### Sensor Test (duplex)

This test is used to determine whether or not the duplex sensors and switches are working correctly. The test allows you to actuate the duplex input sensor located in the back part of the duplex unit and the duplex exit sensor located in the return paper path.

1. Touch **DUPLEX TESTS** from the Diagnostics Menu.
2. Touch **Sensor Test**.
3. Touch **Duplex wait**. `Duplex wait Testing...` appears on the LCD.
4. Manually actuate each of the duplex wait sensors. When the sensor is closed, `Closed` displays; when the sensor is open, `Open` displays.

Press **Stop**  to cancel the test.

## INPUT TRAY TESTS

### Feed Tests

Use this test to observe the paper path of media as it passes through the printer. To observe the paper path, open the upper read door while this test executes. No information is printed on the feed test pages since the laser is not engaged during this test.


**Note:** The upper front door (used to access the print cartridge) cannot be opened during the feed test.

You can perform the feed test using media from any installed input source. All pages used during the feed test are dropped into the default output bin.

To run the Input Tray Tests:

1. Touch **INPUT TRAY TESTS** from the Diagnostics Menu.
2. Touch the input source.

Input source	Appears on the LCD
Tray 1	Tray 1 Feeding...
Tray 2	Tray 2 Feeding...
Tray 3	Tray 3 Feeding...
Tray 4	Tray 4 Feeding...
Tray 5 (if installed)	Tray 5 Feeding...
MP Feeder	MP Feeder Feeding...

3. Touch either **Single** or **Continuous**.
  - **Single**– Feeds one sheet of media from the selected source.
  - **Continuous**– Media continues feeding from the selected input source until **Stop**  is pressed.

### Sensor Test (input tray)

This test is used to verify that a specific input tray's sensors are working correctly.

To run the Input Tray Sensor Test:

1. Touch **INPUT TRAY TESTS** from the Diagnostics Menu.
2. Touch **Sensor Test**.

After selecting **Sensor Test**, the LCD displays each installed input source, one source per line. When you select an input source, the LCD displays the selected input source in the header row, and then displays the name of each of the source's sensors below the header row, one to a line. You must select a specific sensor from this list in order to view and toggle the sensor's state. The table below indicates which sensors are available in each input tray.

Input source	Sensors							
	Pre-feed <sup>1</sup>	Feed-out <sup>2</sup>	Media out <sup>3</sup>	Media level <sup>4</sup>	HCF unit docking <sup>5</sup>	HCF media tray set <sup>6</sup>	HCF media size L	HCF media size R
Tray 1	Yes	No	Yes	Yes	No	No	No	No
Tray 2	Yes	Yes	Yes	Yes	No	No	No	No
Tray 3	Yes	Yes	Yes	Yes	No	No	No	No
Tray 4	Yes	Yes	Yes	Yes	No	No	No	No
Tray 5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MP Feeder	No	No	Yes	No	No	No	No	No

<sup>1</sup>Pre-feed Testing... appears on the LCD with the sensor's current state (Open or Closed).

<sup>2</sup>Feed-out Testing... appears on the LCD with the sensor's current state (Open or Closed).

<sup>3</sup>Media out Testing... appears on the LCD with the sensor's current state (Open or Closed).

<sup>4</sup>Media level Testing... appears on the LCD with the sensor's current state (Open or Closed).

<sup>5</sup>Hcf unit docking Testing... appears on the LCD with the sensor's current state (Open or Closed).

<sup>6</sup>Hcf media tray set Testing... appears on the LCD with the sensor's current state (Open or Closed). After selecting a specific sensor, you can manipulate the printer in such a way as to toggle the sensor between its two values (Open or Closed).


Press **Stop**  to exit the test.


## OUTPUT BIN TESTS


### Feed Tests (output bins)

Use these tests to verify that media can be fed to a specific output bin. Media is fed from the default input source to the selected output bin. No information is printed on the media fed to the output bin because the printhead is not engaged during this test. These tests can use any media size or envelope supported by the printer.

To run the Feed Tests for the output bins:

1. Touch **OUTPUT BIN TESTS** from the Diagnostics Menu.
2. Touch **Feed Tests**.
3. Touch the output bin you want the paper to exit into. The standard bin as well as any output option bin installed on the printer is shown on the menu. (The output bins are displayed in the order installed on the printer.)
  - Standard Bin
  - Output Bin 1
  - Output Bin 2
4. Touch either **Single** or **Continuous**.
  - **Single**— Feeds one sheet of media from the selected source.
  - **Continuous**— Media continues feeding from the selected source until **Stop**  is pressed.

Press **Stop**  to return to OUTPUT BIN TESTS.

While this test runs, [Selected Output Bin] Feeding... appears on the LCD. During Single tests, no buttons are active. However, during Continuous tests, you can press **Stop**  to cancel the test. If a test is canceled, [Selected Output Bin] Canceled appears on the LCD.


### Feed To All Bins

This test can be used to verify that the printer can feed media to the standard bin or any installed output options. No information will be printed on the test pages, as the printhead is not engaged during the feed test. The media feeds from the default paper source.

To run the Feed To All Bins Test:

1. Touch **OUTPUT BIN TESTS** from the Diagnostics Menu.
2. Touch **Feed To All Bins**.

The printer feeds media from the default source to each installed bin. After the test is selected, the printer feeds a separate piece of media to the standard bin first, then it feeds a separate piece of media to each output bin installed. While this test runs, All Bin Test Feeding... appears on the LCD.

The test is continuous until **Stop**  is pressed. If a test is canceled, All Bin Test Canceled... appears on the LCD and feeds any remaining media in the paper path to the appropriate output destination.

## Sensor Test (output bin)

This test is used to verify that a specific output bin's sensors are working correctly.

To run the Output Bin Sensor Test

1. Touch **OUTPUT BIN TESTS** from the Diagnostics Menu.
2. Touch **Sensor Test**.

The panel displays each installed bin, one bin per line. When you select an output bin, the panel displays the selected output bin in the header row, and then displays the name of each of the bin's sensors. You must select a specific sensor from this list in order to view and toggle the sensor's state. After selecting a specific sensor, [Sensor Name] Testing... the LCD displays the sensor's name in the header row and, below the header row, the sensor's name and current state. The table below indicates which sensors are available in each output bin.

Output Bin	Std bin full exit1	Std bin full exit2	Fin upper bin full	Stacker bin level1	Stacker bin level2
Standard Bin	✓	✓			
Output Bin 1			✓		
Output Bin 2				✓	✓

When you select a specific sensor, the LCD displays the sensor's current state (Open or Closed). You can manipulate the printer in such a way as to actuate the selected sensor. The LCD displays **Closed** when the sensor is closed or **Open** when the sensor is open. If the wrong message is displayed, then the sensor must be malfunctioning.

Press **Stop**  to exit the test.

## FINISHER TESTS

### Staple Test

This test is used to verify the functioning of the finisher's staple mechanism.

To run the Staple Test

1. Touch **FINISHER TESTS** from the Diagnostics Menu.
2. Touch **Staple Test**.

The printer feeds eight pieces of media from the default input source to the output bin that supports stapling. After all eight pieces of media are deposited, the device staples the packet. While this test runs, **Staple Test Running...** appears on the LCD.

Press **Stop**  to cancel the test.

## Hole Punch Test

This test is used to verify that media can be fed to a finisher output bin and then hole punched. No information is printed on the feed test pages.

To run the Hole Punch Test:

1. Touch **FINISHER TESTS** from the Diagnostics Menu.
2. Touch **Hole Punch Test**.

Eight sheets of paper are fed, and then the pages are hole-punched with a 2-hole or 3-hole pattern depending on the selected punch test. Media is initially requested from the default input source and then output to the Finisher output bin.

The Hole Punch Test cannot be canceled. No buttons are active during this test. During the test, **Hole Punch Test Running...** appears on the LCD. After completion of the test, the display returns to the Hole Punch Test screen.

## Feed Tests (Finisher)

This test is used to verify that media can be fed to a finisher output bin. This test feeds one sheet of media from the printer's default input source to a finisher output bin. The device can perform this test using any paper size that is supported by the finisher. No information is printed on the test page.

To run the Feed Test:

1. Touch **FINISHER TESTS** from the Diagnostics Menu.
2. Touch **Feed Tests**.

You cannot specify the output bin to which the device will feed the test page. Once begun, the Feed Test cannot be canceled. No buttons are active during the test. During this test, **Feed Test Running...** appears on the LCD.

## Sensor Test (Finisher)

This test verifies that the sensors in the finisher are operating properly.

To run the Feed Test:

1. Touch **FINISHER TESTS** from the Diagnostics Menu.
2. Touch **Sensor Test**.

The LCD displays the option's name in the header row and each of the option's sensors below the header row. You must select a specific sensor from this list in order to view and toggle the sensor's state. After selecting a specific sensor, **[Sensor Name] Testing...** appears on the LCD with the sensor's current state below this message. The tables below indicate which sensors are available for testing.

Available Cover and Door Sensors

Sensor Name	Description
Cover F bridge top	Sensor (bridge unit top cover interlock)
Door G finisher front	Switch (finisher front door interlock)
Surface H finisher eject	Switch (eject cover interlock)

## Available Bin Level Sensors

Sensor Name	Description
Bin upper bin full	Sensor (upper media bin full)
Stacker bin level1	Sensor (stacker bin level 1)
Stacker bin level2	Sensor (stacker bin level 2)
Stacker bin upper limit	Sensor (stacker bin upper limit)
Stacker bin no media	Sensor (stacker bin no media)
Stacker bin level encod	Sensor (stacker bin level encoder)

## Available Media Path 1 Sensors

Sensor Name	Description
Bridge media entrance	Sensor (bridge media entrance)
Bridge media exit	Sensor (bridge unit exit)
Finisher media enter	Sensor (finisher media enter)
Buffer path	Sensor (buffer path)
Upper media exit	Sensor (upper media exit)
Lower media exit	Sensor (lower media exit)
Compiler media in	Sensor (complier media in)

## Available Media Path 2 Sensors

Sensor Name	Description
Diverter gate	Sensor (diverter gate)
Front tamper hp	Sensor (front tamper HP)
Rear tamper hp	Sensor (rear tamper HP)
Eject clamp hp	Sensor (media eject clamp HP)
Media eject shaft hp	Sensor (media eject shaft HP)

## Available Punch and Staple Sensors

Sensor Name	Description
Punch side reg1	Sensor (punch unit side reg 1)
Punch side reg2	Sensor (punch unit side reg 2)
Punch box set	Sensor (punch waste box set)
Punch waste full	Sensor (punch waste box full)
Low staple	Sensor (low staple)
Punch carriage shift hp	Sensor (punch carriage shift HP)
Punch unit hp	Sensor (punch unit HP)
Stapler carriage shift hp	Sensor (stapler carriage HP)
Punch cam front	Sensor (punch unit cam front)
Punch hole select	Sensor (punch hole select)

After selecting one of the available sensors, you can manually toggle the sensor between its two values (**Open** or **Closed**). The LCD displays *Open* when the sensor is open, and *Closed* when the sensor is closed.

Press **Stop**  to exit the test.

## BASE SENSOR TEST

This test verifies that the sensors in the base machine are operating properly.

To run the Base Sensor Test:

Touch **BASE SENSOR TEST** from the Diagnostics Menu. The panel displays **BASE SENSOR TEST** in the header row and the following categories of sensors below the header row:

- Cover and Door
- Devices
- Exit Level
- Media Path

After you select a category of sensors, the panel displays the name of the selected category in the header row and each sensor in that category. You must select a specific sensor from this list to view and toggle the sensor's state. After you select a specific sensor, *[Sensor Name] Testing...* appears on the LCD and displays the sensor's name in the header row and the sensor's name and current state appears below the header row.

### Cover and Door Sensors

Sensor Name	Description
Door A printer left	Switch (printer left door interlock)
Door B printer left/lower	Switch (left lower door interlock)
Door C 2TM/TTM left	Switch (2TM/TTM left door interlock)
Door D duplex left	Switch (duplex left door interlock)
Door E exit 2 left	Switch (exit 2 left door interlock)
Door J front	Switch (printer front door interlock)
Door K HCF top	Switch (HCF top door interlock)

### Device Present Functions

Sensor Name	Description
PC unit present	Indicates the PC cartridge is installed
Exit2 present	Indicates the exit 2 unit assembly is installed

### Exit Level Sensors

Sensor Name	Description
Std bin full exit 1	Sensor (std bin full exit 1)
Std bin full exit 2	Sensor (std bin full exit 2)



## Media Path Sensors

Sensor Name	Description
Registration	Sensor (registration)
Fuser exit	Sensor (fuser exit)
Exit1 shift hp	Sensor (exit 1 media shift HP)
Exit2	Sensor (exit 2)
Exit2 shift hp	Sensor (exit 2 media shift HP)

To test any of the displayed sensors, you must manipulate the appropriate area of the printer so the sensor's value will toggle.

If the panel inaccurately displays the sensor's status, then the sensor must be malfunctioning.

Press **Stop**  to cancel the test. Base Sensor Test Canceled appears on the LCD.

## DEVICE TESTS

### Quick Disk Test

This test will perform a non-destructive read/write on one block per track on the disk.

To run the Quick Disk Test:

1. Touch **DEVICE TESTS** from the Diagnostics Menu.
2. Touch **Quick Disk Test**.

Quick Disk Test Testing... appears on the LCD. This test cannot be canceled. After the test finishes, either Quick Disk Test Passed or Quick Disk Test Failed appears on the LCD. This message remains until you touch **Back**.

### Disk Test/Clean

This test performs a low-level format of the hard disk.

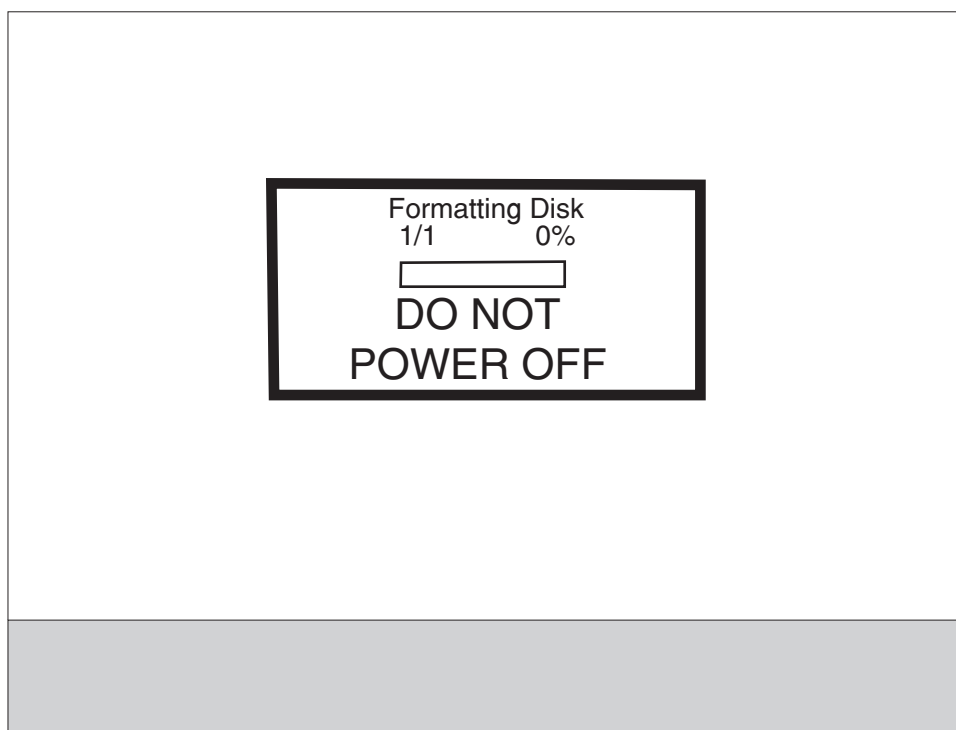
**Warning:** This test destroys all data on the disk and should never be performed on a good disk. Use this test only when the disk contains bad data and is unusable. When this test completes, the disk automatically initializes with a new file system; therefore it is unnecessary to format the disk.


To run the Disk Test/Clean Test:

1. Touch **DEVICE TESTS** from the Diagnostics Menu.
2. Touch **Disk Test/Clean Test**.

Contents will be lost. Continue? appears on the LCD. To exit this test and return to DEVICE TESTS, touch **No**. This is your only chance to exit this test; once the test has begun, it cannot be stopped.

While this test runs, the following graphic appears:



This test cannot be interrupted once it has begun. After the test finishes, either Disk Test/Clean Test Passed or Disk Test/Clean Test Failed appears on the LCD. Press **Stop**  to clear the final message and return to DEVICE TESTS.

# **PRINTER SETUP**

To enter the PRINTER SETUP screen, touch **PRINTER SETUP** from the Diagnostics Menu. The following graphic appears on the LCD:

PRINTER SETUP

Defaults

◀

U.S.

▶

▲

Printed Page Count

24

Perm Page Count

0

Serial Number

NV26T470

Envelope Entrance

◀

Medium

▶

Engine Setting 1

◀

0

▶

▼

?

Submit

Back

## **Defaults**

The value of this setting determines whether the printer uses the US or Non-US factory default value for the printer settings listed below:

Printer Setting	US Value	Non-US Value
Paper Sizes (applies only to input sources which do not have hardware size sensing capability)	Letter	A4
Envelope Size (applies only to envelope feeding sources which do not have hardware size sensing capability)	10 Envelope	DL Envelope
PCL Symbol Set	PC-8	PC-850
PPDS Code Page	437	850
Universal Units of Measure	Inches	Millimeters

Touch **Submit** to change the value of this setting, then the LCD returns to the Diagnostics menu. To return to the PRINTER SETUP menu without changing the value of this setting, touch **Back**.

## Printed Page Count

The value of this setting enables you to gauge the amount of usage on a device.

The Printed Page Count cannot be reset by the servicer.

## Permanent Page Count

The value of this setting indicates the total number of pages that have been printed by the printer.

The Permanent Page Count cannot be reset.

## Serial Number

This printer setting records the printer's serial number that was assigned by the manufacturer. When you select this setting, a replica of a keyboard appears on the LCD that enables you to edit the serial number.

## Engine Setting 1 to 4

These settings are used by Engine code ECs to fix field problems.

**Warning:** Do not change these settings unless requested to do so by your next level of support.

## Model Name

The model name can only be viewed and cannot be changed.

## Configuration ID

The two configuration IDs are used to communicate information about certain areas of the printer that cannot be determined using hardware sensors. The configuration IDs are originally set at the manufacturer, however you may need to reset Configuration ID 1 or Configuration ID 2 when you replace the printer engine card assembly. This printer uses two Configuration IDs, each of which consists of eight digits. The first seven digits in each ID are hexadecimal numbers while the last digit is a checksum of the preceding seven hexadecimal digits. Each ID can contain a combination of the digits 0 through 9 and the characters A to F.

If the printer's firmware detects that either of the printer's Configuration IDs has not been defined or is invalid, then the following occurs:

1. The firmware automatically uses the Configuration IDs defined for the printer's standard model.
2. The Configuration ID setting is the only item that appears when you open the Diagnostics menu.
3. When the printer is not in Diagnostics mode, Check Config ID appears on the LCD.

**Note:** Each of the above conditions will remain until a valid value is entered for Configuration ID 1 and Configuration ID 2.

The Configuration ID setting allows you to set both Configuration IDs simultaneously. To set one or both Configuration IDs:

1. From the PRINTER SETUP menu, touch the icon to the right of the Configuration ID menu item. The screen displays the value of both Configuration IDs. By default, the cursor appears on the Configuration ID 1 line.

The screenshot shows a window titled 'vga' with two text input fields. The first field, 'Config ID1', contains the hexadecimal string 'CC 00 01 81'. The second field, 'Config ID2', contains 'B0 55 70 0C'. Below these fields is a keypad with circular buttons for digits 1 through 9, 0, and a backspace key (a left-pointing arrow). There are also buttons for lowercase letters 'a' through 'f'. At the bottom of the screen, there is a 'Submit' button, a 'Back' button, and a question mark icon.

2. To change the value of Configuration ID 1, touch the **Backspace** key to erase any of the existing characters. Then enter the correct ID using the number and letter keys that appear on the screen.
3. To edit the value of Configuration ID 2, touch a section of the display screen that appears inside of the text box containing the current value of Configuration ID 2. The cursor appears in the text box containing the current value of Configuration ID 2.
4. To change the value of Configuration ID 2, touch the **Backspace** key to erase any of the existing characters. Then enter the correct ID using the number and letter keys that appear on the screen.

**Note:** To exit the Configuration ID screen and return to the PRINTER SETUP menu, touch **Back**.

**Note:** Although it is recommended that all unused and reserved bits be set to zero, the code will not validate or enforce this condition.

5. To save the values of both Configuration IDs, touch **Submit**. The printer validates both IDs. If either ID is invalid, the printer posts `Invalid ID`, discards any changes, and displays the original Configuration IDs. If both IDs are valid, the printer automatically returns to the PRINTER SETUP menu.

## Edge to Edge

When this setting is On, the text and graphics are shifted to the physical edges of the paper for all margins. When this setting is Off, the normal margins are restored.

## Parallel Strobe Adjustment (Par S Strobe Adj)

This setting enables you to adjust the amount of time the strobe is sampled in order to determine if valid data is available on the parallel port. Each time this value is incremented by 1, the strobe is sampled 50 ns longer. Each time this value is decreased by 1, the strobe is sampled 50 ns less. When the value of this setting is 0, the factory default value is used to determine the length of time the strobe is sampled.

If you increases the value of this setting from 0 to 3, then the strobe will be sampled for 150 ns more than the factory default value. Or, if you reduced the value of this setting from 0 to -1, then the strobe will be sampled for 50 ns less than the factory default value.

## EVENT LOG

The exact number of events recorded in the Event Log will vary since each event requires a different amount of storage space. When the Event Log requires more space to record an event, it overwrites the oldest currently logged event(s) and inserts the new event into the first log position. Consecutive log entries may be identical if the same event occurred twice in a row.

The Event Log records the following types of events:

- All 9xx Service Errors
- 2xx Paper Jams
- Maintenance Count Resets
- NV Resets
- JFFS2 Partition Format (Security Files)
- JFFS2 Partition Format (BookmarkMgrData)

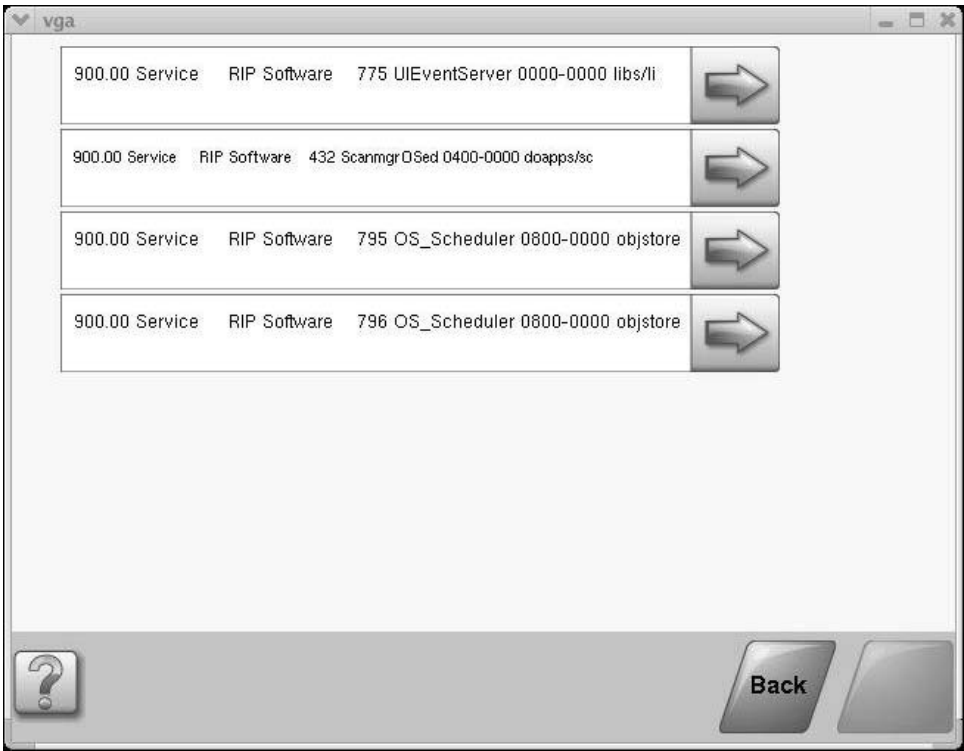
Touch **EVENT LOG** from the Diagnostics Menu, and the following options are displayed:

Display Log  
Print Log  
Clear Log

### Display the Event Log

**Note:** The displayed version of the Event Log shows only a subset of the information contained in the Diagnostics version of the printed Event Log. For the most comprehensive information about each logged event, print the Event Log. See **“Print the Event Log” on page 3-24.**

Touch **Display Log**, and a graphic similar to the following appears on the LCD:



Each logged event is identified by the text that appeared when the event occurred. For instance, if the log recorded a 900 Service Error, the Display Log would show 900 Service RIP Software. Log entries appear in chronological order.

If additional log entries exist, touch ▼ to view the next log entries. Continue following this procedure until you reach the end of the logged entries. To view earlier log entries, touch ▲.

Touch **Back** to return to the EVENT LOG.






## SCANNER TESTS

### ASIC Test

This operation performs a diagnostic test on the scanner ASIC that cycles through all of the scanner ASIC's memory.

To perform the ASIC Test:

1. Touch **SCANNER TESTS** from the Diagnostics Menu.
2. Touch **ASIC Test**.

During this test, **ASIC Test Running...** appears on the LCD. At the completion of this test, **ASIC Test Passed** or **ASIC Test Failed** appears on the LCD. To clear the message, press **Stop** .

### Feed Test

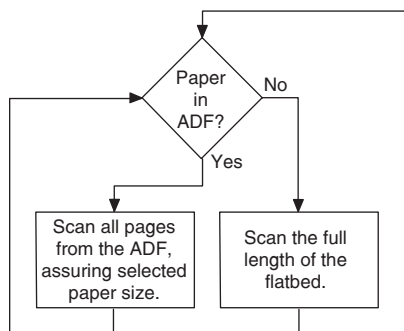
This test continuously executes flatbed and/or ADF scans but does not produce any printed output.

To perform the Feed Test:

1. Touch **SCANNER TESTS** from the Diagnostics Menu.
2. Touch **Feed Test**.


You are prompted to select a paper size for the ADF. For flatbed scans, the full length of the flatbed is traversed.

The device decides whether to run the flatbed or the ADF according to the following flowchart:



During the test, **Running... Flatbed:xxxxx ADF:xxxxx** appears on the LCD. The Flatbed number increases each time the scanner performs a flatbed scan, and the ADF number increases each time the scanner performs an ADF scan.

Press **Stop**  to end this test.

If an error occurs (such as a scanner jam), **Feed Test Failed Flatbed:xxxxx ADF:xxxxx** appears on the LCD. To clear the message, press **Stop** .

## Scanner Manual Registration

**Note:** All scanner and ADF manual registration alignment verifications must be done in standard user mode, not in configuration or diagnostic mode.

**Note:** You should verify the printer registration alignment before conducting the manual scanner registration process. For information on the printer registration process, see **“REGISTRATION” on page 3-36**.

You can adjust the device's scanner and ADF registration through a manual process. Perform this operation when any of the following events occur:

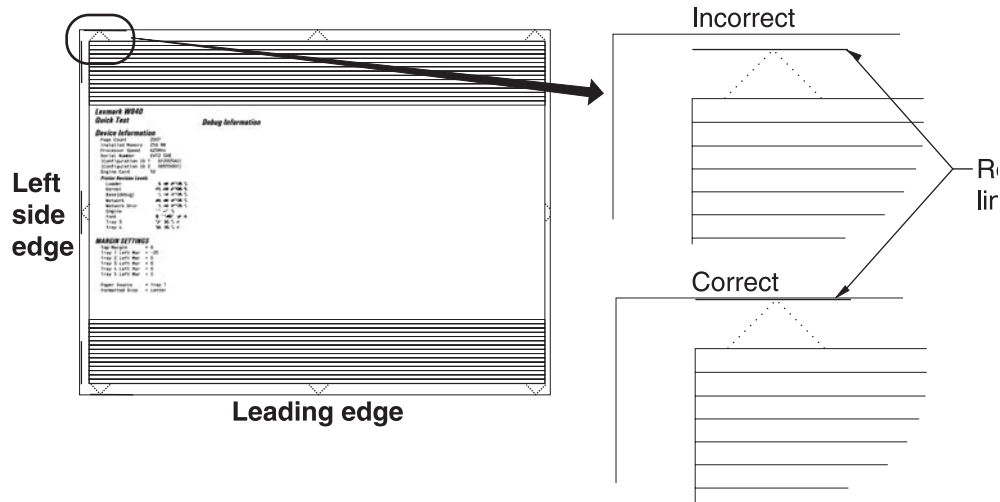
- The flatbed scanner unit assembly has been replaced.
- The ADF unit assembly has been replaced.
- The CCD card/lens assembly has been replaced.
- Symptoms indicate that the scanner is not properly aligned.

### Printing the registration test original page

Perform this process to acquire the registration test original page. This is the page required to align the registration for the flatbed scanner and ADF side 1 and ADF side 2.

1. Ensure the printer media tray registration in all trays is set correctly.
2. Enter configuration menu. Go to **“Configuration Menu” on page 3-33**.
3. Touch **REGISTRATION**.
4. Touch **Quick Test**. At this time the registration test original page will be printed.

The registration test original page should appear as shown in graphic below:



## Testing the manual scanner registration

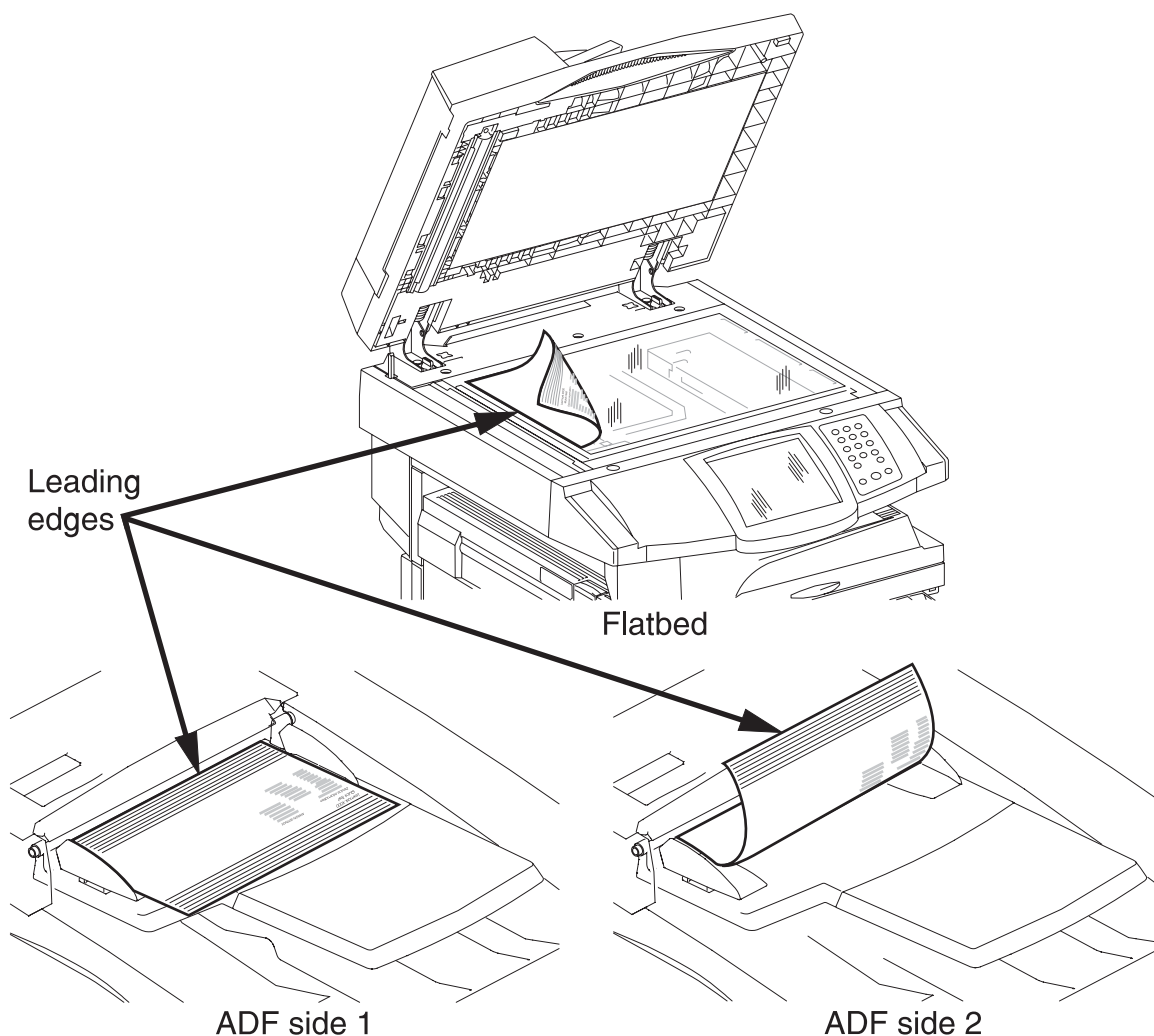
**Note:** Machine must be in Standard User Mode.

To properly position the registration test original page on the flatbed scanner and the ADF side 1 and ADF side 2, follow the graphic below:

**Warning:** Ensure that the registration test original page is properly positioned according to the diagrams or registration and margins cannot be properly adjusted.

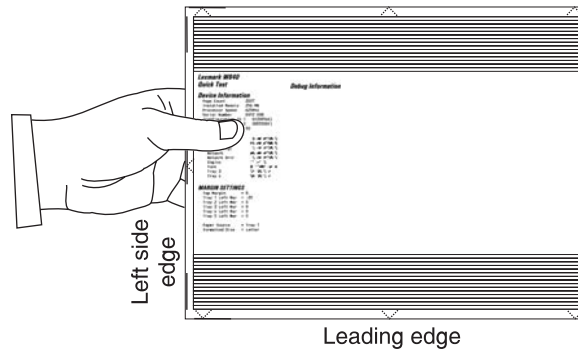
1. Place the registration test original page on the flatbed scanner according to the graphic below.
2. Make a copy of the registration test original page and mark it "Flatbed".
3. Place the registration test original page, image side up, in the ADF according to the diagram below. This will be the ADF side 1 registration test.
4. Make a copy of the registration test original page and mark it "ADF side 1".
5. Place the registration test original page, image side down, in the ADF according to the diagram below. This will be the ADF side 2 registration test.
6. Select "2 sided to 2 sided" while in copy mode to ensure that the rear side of the test original is copied.
7. Make a copy of the registration test original page and mark it "ADF side 2".

**Note:** You should now have three test copies of the registration test original page.



## Analyzing the manual scanner registration copies

1. To analyze the manual scanner registration of the flatbed, ADF side 1, and ADF side 2, hold the test copy according to the diagram below.



2. Compare the three copies to the registration test original page for image placement. Ideally, the image should be centered on the page by measuring the paper edge arrows or the black lines with a ruler.
3. If the leading and side margin edges are out of adjustment, then proceed to manually adjust the scanner and/or ADF side 1 and ADF side 2 registration.

**Note:** Margin tolerance is +/- 2 mm.

## Manually adjusting the scanner's registration

1. Enter Diagnostics Menu. Go to **"Diagnostics Menu"** on page 3-1.
2. Touch **SCANNER TESTS**.
3. Touch **Scanner Manual Registration**.

**Note:** Refer to analyzing the manual scanner registration copies. See **"Analyzing the manual scanner registration copies"** on page 3-28.

4. Make required adjustments and touch **Submit**.

**Note:** All reference to Side Registration in the graphic below, refers to the left side edge.

Scanner Manual Registration

Flatbed Side Registration	◀	XX	▶
Flatbed Lead Registration	◀	XX	▶
ADF Side 1 Side Registration	◀	XX	▶
ADF Side 1 Lead Registration	◀	XX	▶
ADF Side 2 Side Registration	◀	XX	▶
ADF Side 2 Lead Registration	◀	XX	▶

Submit

△

Status  
Supplies

Back

5. Turn the machine off and then back on in order to make a copy.
6. Using the registration test original page, make a copy using the flatbed scanner and the ADF side 1 and ADF side 2 to verify adjustments for accuracy.
7. If further adjustments are required, reenter Diagnostic Menu and repeat items 2 through 6 as needed.

The panel displays the following settings:

Margin Setting	Range <sup>1</sup>	Units
Flatbed Side Registration <sup>2</sup>	0 - 240	1/300 inch
Flatbed Lead Registration <sup>3</sup>	16 -184	1/300 inch
ADF Side1 Side Registration <sup>4</sup>	0 - 240	1/300 inch
ADF Side1 Lead Registration <sup>5</sup>	0 - 214	1/300 inch
ADF Side2 Side Registration <sup>4</sup>	0 - 240	1/300 inch
ADF Side2 Lead Registration <sup>5</sup>	0 - 214	1/300 inch

<sup>1</sup>Each increment of adjustment corresponds to:

- 1 scan at 300 dpi for the Lead Margin setting or
- 1 pel at 300 dpi for each Side Margin setting

<sup>2</sup>Decreasing the registration value moves the text toward the left side edge of the page; increasing the registration value moves the text away from the left side edge of the page. The entire image moves left or right on the page; therefore, no compression or expansion of the image occurs to preserve the left side margin.

<sup>3</sup>Decreasing the registration value moves the text toward the lead edge of the page and narrows the lead margin; increasing the registration value moves the text away from the lead edge of the page and widens the lead margin. The entire image moves up or down on the page; therefore, no compression or expansion of the image occurs to preserve the lead margin.

<sup>4</sup>Decreasing the registration value moves the text away from the left side edge of the page; increasing the registration value moves the text toward the left side edge of the page. The entire image moves left or right on the page; therefore, no compression or expansion of the image occurs to preserve the left side margin.

<sup>5</sup>Decreasing the registration value moves text away from the lead edge of the page and widens the lead margin; increasing the registration value moves the text toward the lead edge of the page and narrows the lead margin. The entire image moves up or down on the page; therefore, no compression or expansion of the image occurs to preserve the lead margin.

Touch **Submit** to save the changes. Submitting Changes . . . appears on the LCD.

Touch **Back** to return to the Scanner Manual Registration screen without saving changes.

### ***Scanner manual registration factory defaults***

The factory scanner manual registration default settings are located on a label at the rear of the machine. Use the label values to reset the factory default settings when the current settings appear to be extremely out of range.

**An example of this label is shown below.**

**Note:** The values listed below should be consider examples. They may not match the label attached to the rear of the machine.

Chain-Function	Values
715-050	89
715-053	127
711-140	183
711-141	193
715-110	124
715-111	127

Use the following diagram to cross reference the chain-function on the label to the text on the touch screen found in diagnostic mode when resetting the scanner manual registration factory default values.

Chain-Function	Values	Touch screen description
715-050	89	Flatbed lead registration
715-053	127	Flatbed side registration
711-140	183	ADF side 1 lead registration
711-141	193	ADF side 2 lead registration
715-110	124	ADF side 1 side registration
715-111	127	ADF side 2 side registration


## Sensor Test (Scanner Tests)

To perform the Sensor Test:

1. Touch **SCANNER TESTS** from the Diagnostics Menu.
2. Touch **Sensor Test**.

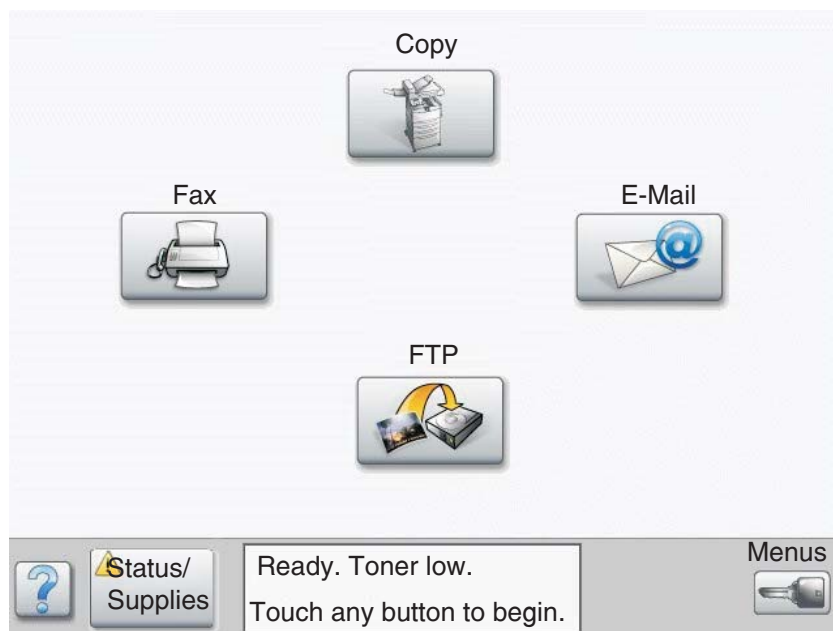
The following example appears on the LCD:

Platen length APS 1  
Platen length APS 2  
ADF left cover interlock  
ADF pre registration  
ADF registration  
Sheet through  
ADF inverter  
Tray media width 1  
Tray media width 2  
Tray media width 3  
ADF width APS 1  
ADF width APS 2  
ADF width APS 3  
Tray media length 1  
Tray media length 2  
Pick roll position HP  
Document set  
ADF angle  
Scanner HP  
Platen interlock

Press **Stop** , to return to the SCANNER TESTS.

## Exiting Diagnostics Menu

From the Diagnostics Menu, touch **Back** until a graphic appears with **Exit Diag Menu** in the lower right corner. Touch **Exit Diag Menu** to perform a POR, and the following graphic appears on the LCD:





## Configuration Menu

### Entering Configuration Menu

1. Turn off the printer.
2. Press and hold the **2** and **6** buttons simultaneously.
3. Turn on the printer.
4. Release the buttons after 10 seconds.

### Available menus

<b>Maintenance Count Value</b>	See <b>“Maintenance Counter Value”</b> on page 3-35.
<b>Reset Maintenance Counter</b>	See <b>“Reset Maintenance Counter”</b> on page 3-35.
<b>REGISTRATION</b>	See <b>“REGISTRATION”</b> on page 3-36.
Top Margin	
Tray 1 Left Margin	
Tray 2 Left Margin	
Tray 3 Left Margin (if installed)	
Tray 4 Left Margin (if installed)	
Tray 5 Left Margin (if installed)	
Quick Test	See <b>“Quick Test”</b> on page 3-37.
<b>Print Quality Pages</b>	See <b>“Print Quality Pages (Configuration Menu)”</b> on page 3-38.
<b>SIZE SENSING</b>	See <b>“SIZE SENSING”</b> on page 3-39.
Tray 1 Sensing	
Tray 2 Sensing	
Tray 3 Sensing (if installed)	
Tray 4 Sensing (if installed)	
Tray 5 Sensing (if installed)	
Statement/A5	See <b>“A5/Statement”</b> on page 3-40.
Executive/B5	See <b>“B5/Executive”</b> on page 3-40.
<b>Panel Menus</b>	See <b>“Panel Menus”</b> on page 3-40.
<b>PPDS Emulation</b>	See <b>“PPDS Emulation”</b> on page 3-40.
<b>Factory Defaults</b>	See <b>“Energy Conserve”</b> on page 3-41.
<b>Energy Conserve</b>	See <b>“Energy Conserve”</b> on page 3-41.
<b>Min Copy Memory</b>	See <b>“Min Copy Memory”</b> on page 3-41.
<b>Format Fax Storage</b>	See <b>“Format Fax Storage”</b> on page 3-42.
<b>EVENT LOG</b>	See <b>“EVENT LOG (Configuration Menu)”</b> on page 3-42.
<b>ADF Edge Erase</b>	See <b>“ADF Edge Erase”</b> on page 3-42.
<b>FB Edge Erase</b>	See <b>“FB Edge Erase”</b> on page 3-42.
<b>Paper Prompts</b>	See <b>“Paper Prompts”</b> on page 3-43.
<b>Envelope Prompts</b>	See <b>“Envelope Prompts”</b> on page 3-43.
<b>Jobs On Disk</b>	See <b>“Jobs On Disk”</b> on page 3-43.
<b>Disk Encryption</b>	See <b>“Disk Encryption”</b> on page 3-43.

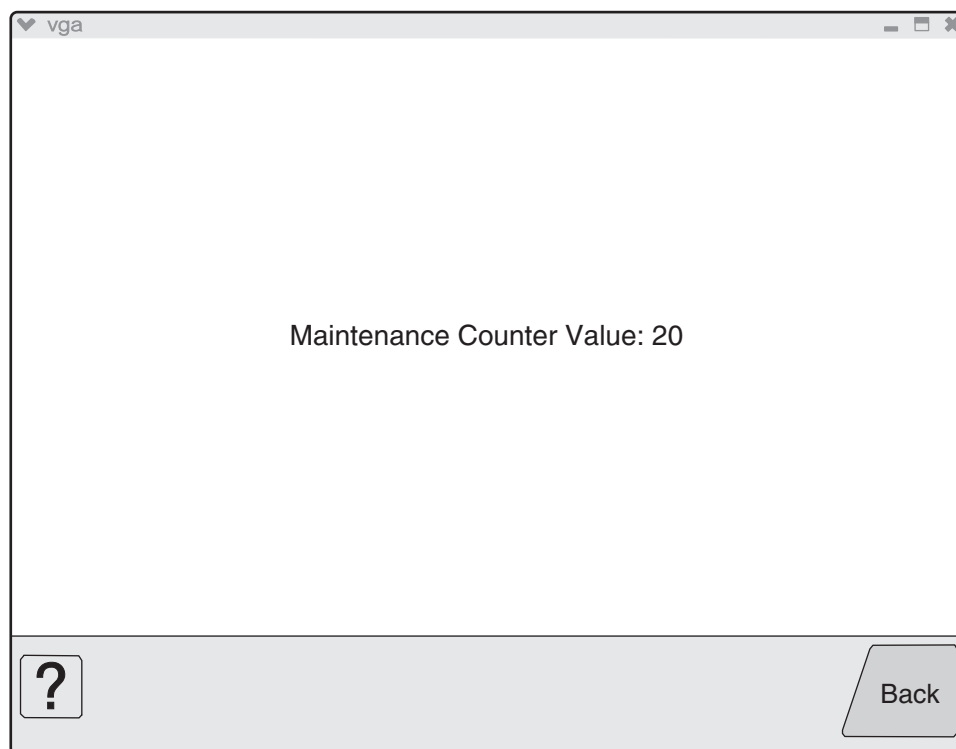
Wipe Disk	See <b>“Exiting Configuration Menu”</b> on page 3-50.
Font Sharpening	See <b>“Font Sharpening”</b> on page 3-48.
Require Standby	See <b>“Require Standby”</b> on page 3-49.
Short edge Printing	See <b>“Short Edge Printing”</b> on page 3-49.
Tray Low Message	See <b>“Tray Low Message”</b> on page 3-49.
LES Application	See <b>“LES Applications”</b> on page 3-49.
Key Repeat Initial Delay	See <b>“Key Repeat Initial Delay”</b> on page 3-50.
Key Repeat Rate	See <b>“Key Repeat Rate”</b> on page 3-50.
Exiting Configuration Menu	See <b>“Exiting Configuration Menu”</b> on page 3-50.

## Maintenance Counter Value

The Maintenance Page Count is used to track general printer usage. A print job containing a single printed side will increment the Maintenance Count by one while a print job containing two printed sides (a duplex print job) will increment it by two. Whenever this count reaches 300,000, the printer posts an intervention and a status indicator, 80 scheduled maintenance, that notifies the user that scheduled maintenance is recommended.

To view the Maintenance Counter Value, touch **Maintenance Counter Value** from the Configuration Menu.

The panel displays the current value of the maintenance counter as illustrated below:



Touch **Back** to return to the Configuration Menu.

After installing the required maintenance kit, reset this count to zero.

## Reset Maintenance Counter

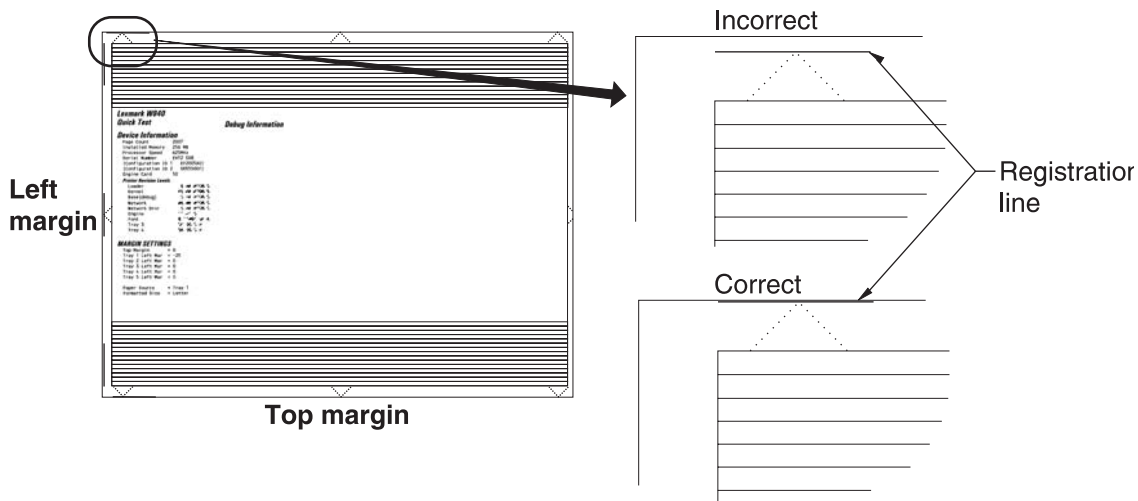
After scheduled maintenance, reset the Maintenance Counter.

To reset the maintenance page counter to zero:

1. Touch **Reset Maintenance Counter** from the Configuration Menu.
2. **Reset Maintenance Counter** appears in the header and **Yes** and **No** appears in a menu below the header.
3. To cancel the reset operation, touch **Back** or **No**. All other button presses are ignored.
4. To initiate the reset operation, touch **Yes**.

## REGISTRATION

Print registration makes sure the printing is properly aligned on the page. This setting allows separate Left Margin settings for each media tray. (The Top Margin setting is the same for all trays.)



The Registration menu item enables you to:

- Establish the Top Margin setting for all installed paper trays.
- Establish a unique Left Margin setting for each installed paper tray.

By adjusting the Top Margin setting, you move the top margin of all installed paper trays either up or down the page. By adjusting the Left Margin setting of a specific paper tray, you move that tray's left margin either to the right or to the left.

Enter Configuration Menu. See **“Entering Configuration Menu” on page 3-33.**

Touch **REGISTRATION** from the Configuration Menu. The current margin settings appear on the LCD.

Perform a Quick Test. See **“Quick Test” on page 3-10.**

Margin Setting	Range <sup>1</sup>	Units
Top Margin <sup>2</sup>	0..50	1/300 inch
Tray 1 Left Margin <sup>3</sup>	-50..50	1/300 inch
Tray 2 Left Margin	-50..50	1/300 inch
Tray 3 Left Margin	-50..50	1/300 inch
Tray 4 Left Margin	-50..50	1/300 inch
Tray 5 Left Margin	-50..50	1/300 inch
Quick Test	This cannot be adjusted, but is an option in the Registration Menu. It also happens when one of the Margins above is adjusted.	


<sup>1</sup>Each increment of adjustment corresponds to:

- 1 scan at 300 dpi for the Top Margin setting or
- 1 pel at 300 dpi for each Left Margin setting

<sup>2</sup>Increasing the registration value moves text up the page and widens the top margin; decreasing the registration value moves text down the page and narrows the top margin. The entire image moves up or down the page; therefore, no compression or expansion of the image occurs to preserve the bottom margin.

<sup>3</sup>Increasing the registration value moves the margin to the left; decreasing the registration value moves the margin to the right. The entire image moves left or right on the page; therefore, no compression or expansion of the image occurs to preserve the right margin.

To change the value of any of the margin settings:

1. Touch  to the right of the appropriate margin setting. The panel displays the setting's name in the header and ◀ [setting's current value] ▶ in a menu below the header row.
2. Touch ◀ to decrease the value and ▶ to increase the value.
3. Touch **Back** to cancel and return to the Configuration Menu.
4. Touch **Submit** to save the change, at this time an alignment page will print.

The device prints a Quick Test page from the appropriate paper tray. While the Quick Test page prints, **Printing Alignment Page** appears on the LCD.

## Quick Test

The Quick Test verifies that the Registration margin values of the device's default input source are set appropriately.

To print the Quick Test page:

1. Touch **REGISTRATION** from the Configuration Menu.
2. Touch **Quick Test**.
3. Touch **Back** to return to REGISTRATION.
4. Touch **Back** again to return to the Configuration Menu.

The printed Quick Test page consists of:

- Alignment diamonds
- Horizontal lines used for skew adjustment
- General printer information to include current page count and installed memory
- The printer's serial number, code levels, and print registration settings

The printer always uses media from its default input source to print this test, except when the default source only supports envelopes. In this case, the printer automatically uses media from Tray 1. To generate the most accurate and useful registration information, print the Quick Test on letter- or A4-size paper.

If the default input source is empty, the printer stops printing and Load [Input Source] with [Paper Type] [Paper Size] IR appears on the LCD.

While the Quick Test prints, Quick Test Printing... appears on the LCD. No buttons are active while the Quick Test page is printing. When printing finishes, the panel returns to REGISTRATION.

### ***Print Quality Pages (Configuration Menu)***

This entry enables you to print a report that contains a limited set of the information that appears in the Diagnostics version of the Print Quality Pages report. The limited (Configuration) and the full (Diagnostics) printed versions of this report display the same panel messages when they print and follow the same layout guidelines.

To print the Print Quality Pages:

1. Touch **Print Quality Pages** from the Configuration Menu. Printing Quality Test Pages... appears on the LCD.
2. Touch **Back** to return to the Configuration Menu.

**Note:** When this report is printed from the Configuration Menu, the device enforces the toner cartridge lockout mechanism, that is, the Machine Class ID of its cartridge must match the Machine Class ID stored in the printer's NVRAM.

## SIZE SENSING

This setting controls whether the printer automatically registers the size of paper installed in an input source equipped with size sensing hardware.

Input source	Size sensing	
	Length	Width
Multipurpose feeder (integrated MPF)		✓
Tray 1 (integrated 500-sheet drawer)	✓	✓
Tray 2 (integrated 500-sheet drawer)	✓	✓
Tray 3 (integrated TTM 850-sheet drawer)		✓
Tray 4 (integrated TTM 1150-sheet drawer)		✓
Tray 3 (optional 2TM 500-sheet drawer)	✓	✓
Tray 4 (optional 2TM 500-sheet drawer)	✓	✓
Tray 5 (optional HCF 2000-sheet drawer)		✓

To change the value of this setting:

1. Touch **SIZE SENSING** from the Configuration Menu. The screen displays each size sensing equipped input source and its current Size Sensing value.

SIZE SENSING

Tray 1 Sensing

◀

Auto

▶

Tray 2 Sensing

◀

Auto

▶

Tray 3 Sensing

◀

Auto

▶

Tray 4 Sensing

◀

Auto

▶

?

Submit

Back

2. Touch ◀ or ▶ to scroll through the setting's other possible values.
3. Touch **Back** to cancel and return to the Configuration Menu.
4. Touch **Submit** to save the change.

By turning this setting to **Auto**, every input option equipped with size sensing hardware automatically registers what size paper it contains. When this setting is turned **Off**, the printer ignores the size detected by the hardware and treats the input source as a non-sensing source. The media size can be set by the operator panel or the data stream.

## A5/Statement

Due to engine limitations, Trays 1 through 4 cannot simultaneously sense A5- and statement-size paper. The value of this setting determines which of the two paper sizes these trays will sense automatically. This setting will apply to all automatic trays, but not to the MP Feeder. The MP Feeder can support these paper sizes regardless of the value of this setting.

## B5/Executive

Due to engine limitations, Trays 1 through 4 in cannot simultaneously sense executive and JIS-B5-size paper. The value of this setting determines which of the two paper sizes these trays will sense automatically. This setting will apply to all automatic trays, but not to the MP Feeder. The MP Feeder can support these paper sizes regardless of the value of this setting.

## Panel Menus

Selections are to Disable or Enable (default) operator panel menus.

To change the value of this setting:

1. Touch **Panel Menus** from the Configuration Menu. ◀ **[setting's current value]** ▶ appears on the touch-screen.
2. Touch ◀ or ▶ to scroll through the setting's other possible values.
3. Touch **Back** to cancel and return to the Configuration Menu.
4. Touch **Submit** to save the change.

## PPDS Emulation

The value of the PPDS Emulation menu item determines if a device can recognize and use the PPDS datastream. The current value of this setting appears in parentheses to the right of the setting on the Configuration Menu screen.

The following table indicates how the value of this setting affects the user default value for the Smartswitch and Printer Language settings:

Value of PPDS Emulation setting	Resulting value of Smartswitch setting (all ports)	Resulting value for Printer Language settings
Activate	Off	PPDS Emulation Note: You can still switch languages on the operator panel or through the PJI ENTER LANGUAGE command.
Deactivate	On	Printer's factory default value

To change the value of this setting:

1. Touch **PPDS Emulation** from the Configuration Menu. ◀ **[setting's current value]** ▶ appears on the touch-screen.
2. Touch ◀ or ▶ to scroll through the setting's possible values.
3. Touch **Back** to cancel and return to the Configuration Menu.
4. Touch **Submit** to save the change.



## Factory Defaults

**Warning:** This operation cannot be undone.

This setting enables you to restore all of the printer's settings to the base printer settings, the network settings, or to remove all Lexmark Embedded Solutions applications (LES).

To restore the Factory Default settings:

1. Touch **Factory Defaults** from the Configuration Menu.
2. Touch **Restore Base** to restore all non-critical base printer NVRAM settings.
3. Touch **Restore Network** to restore all network NVRAM settings.

When you select either value, the LCD displays *Restoring Factory Defaults* and then *Resetting the Device*. The device immediately performs a POR and restores the appropriate settings to their factory default values.

The following settings are not changed:

- Display Language (general settings)
- Network/Ports Menu
- Standard USB, USB (x) Menus (if an ENA is installed)

## Energy Conserve

This menu controls what values appear on the Power Saver menu. If **Off** is selected in the Energy Conserve menu, then *Disabled* appears in the Power Saver menu, and Power Saver can be turned off. If **On** is set in the Energy Conserve menu, the Power Saver feature cannot be disabled.

To change this setting:

1. Touch **Energy Conserve** from the Configuration Menu. ◀ [setting's current value] ▶ appears on the touch-screen.
2. Touch ◀ or ▶ to scroll through the setting's possible values.
3. Touch **Back** to cancel and return to the Configuration Menu.
4. Touch **Submit** to save the change.

## Min Copy Memory

Values will only be displayed if the amount of installed DRAM is at least twice the amount of the value, that is, at least 200 MB of installed DRAM is required to display the 100 MB selection.

To change this setting:

1. Touch **Min Copy Memory** from the Configuration Menu. ◀ [setting's current value] ▶ appears on the touch-screen.
2. Touch ◀ to decrease the setting's value; touch ▶ to increase the setting's value.
3. Touch **Back** to cancel and return to the Configuration Menu.
4. Touch **Submit** to save the change.

## ***Format Fax Storage***

This setting enables you to format the non-volatile storage used for storing faxes.

To change this setting:

1. Touch **Format Fax Storage** from the Configuration Menu.

**Note:** If an advanced password has been established, you must enter this password in order to change the setting. If no advanced password exists, you can establish one by using the keyboard that appears on the LCD.

2. Touch **Submit** to save the change.
3. Touch **Back** to cancel and return to the Configuration Menu.

Formatting Fax Flash DO NOT POWER OFF appears on the LCD while the format operation is active.

## ***EVENT LOG (Configuration Menu)***

This entry enables you to print a report that contains a limited set of the information that appears in the Diagnostics version of the Event Log report. See “**EVENT LOG**” on page 3-22. The limited (Configuration) and the full (Diagnostics) printed versions of this report display the same panel messages when they print and follow the same layout guidelines.

To print the Event Log:

1. Touch **EVENT LOG** from the Configuration Menu.
2. Touch **Print Log**.

Touch **Back** to return to the Configuration Menu.

**Note:** An event log printed from the Configuration Menu will not contain debug information or secondary codes for 900 service errors. However, the event log printed from the Diagnostics Menu does include this information.

## ***ADF Edge Erase***

The ADF Edge Erase and FB Edge Erase settings specify, in millimeters, the size of a border around the scanned image that will be erased. For copies, the printed page will have a 2 mm no-print border. The larger of the 2 mm no-print border and the Edge Erase setting will be used in this situation.

To change this setting:

1. Touch **ADF Edge Erase** from the Configuration Menu. ◀ [setting's current value] ▶ appears on the touch-screen.
2. Touch ▶ to increase the value or ◀ to decrease the value.
3. Touch **Submit** to save the change.
4. Touch **Back** to cancel and return to the Configuration Menu.

## ***FB Edge Erase***

The ADF Edge Erase and FB Edge Erase settings specify, in millimeters, the size of a border around the scanned image that will be erased. For copies, the printed page will have a 2 mm no-print border. The larger of the 2 mm no-print border and the Edge Erase setting will be used in this situation.

To change this setting:

1. Touch **FB Edge Erase** from the Configuration Menu. ◀ [setting's current value] ▶ appears on the touch-screen.
2. Touch ▶ to increase the value or ◀ to decrease the value.
3. Touch **Submit** to save the change.
4. Touch **Back** to cancel and return to the Configuration Menu.

## Paper Prompts

When a tray is out of the indicated paper size, a prompt is sent to the user to load paper in a tray. This setting controls the tray the user is directed to fill. Selections are Auto (default), MP Feeder, and Manual Paper.

To change this setting:

1. Touch **Paper Prompts** from the Configuration Menu. ◀ [setting's current value] ▶ appears on the touch-screen.
2. Touch ◀ or ▶ to scroll through the setting's other possible values.
3. To exit this screen without changing the setting's value, touch **Back**.
4. To save the setting's new value, touch **Submit**.

## Envelope Prompts

This setting controls the tray the user is directed to refill when specific envelope size is out. The selections are Auto (default), MP Feeder, and Manual Env.

To change the value of this setting:

1. Touch **Env Prompts** from the Configuration Menu. ◀ [setting's current value] ▶ appears on the touch-screen.
2. Touch ◀ or ▶ to scroll through the setting's possible values.
3. To exit this screen without changing the setting's value, touch **Back**.
4. To save the setting's new value, touch **Submit**.

## Jobs On Disk

Jobs On Disk allows you to delete buffered jobs saved on the disk.

To delete jobs saved on the disk:

1. Touch **Jobs On Disk** from the Configuration Menu.
2. Touch **Delete** to decrease the setting's value; touch ▶ to increase the setting's value.
3. Touch **Back** to cancel and return to the Configuration Menu.

## Disk Encryption

This setting determines if the printer encrypts the information that it writes to the hard disk. The values are Disable and Enable.

**Warning:** If the value is changed from **Enable** to **Disable** or from **Disable** to **Enable**, then the printer completely formats the hard disk. All information on the disk will be unrecoverable.

To change this setting:

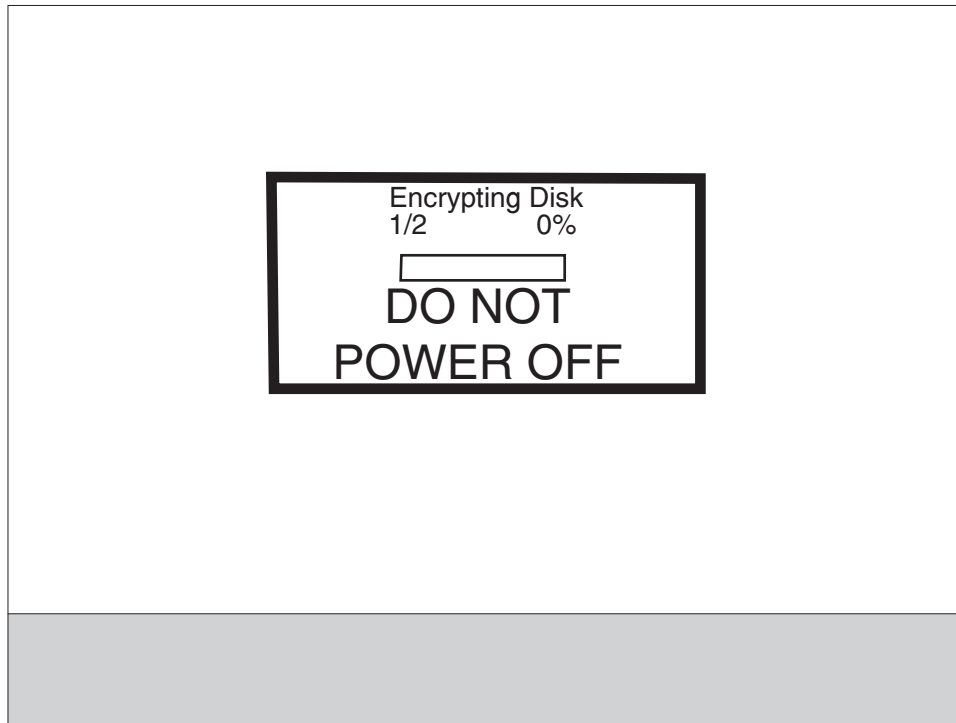
1. Touch **Disk Encryption** from the Configuration Menu.

**Note:** If an advanced password has been established, you must enter this password in order to change the setting. If no advanced password exists, you can establish one by using the keyboard that appears on the LCD.

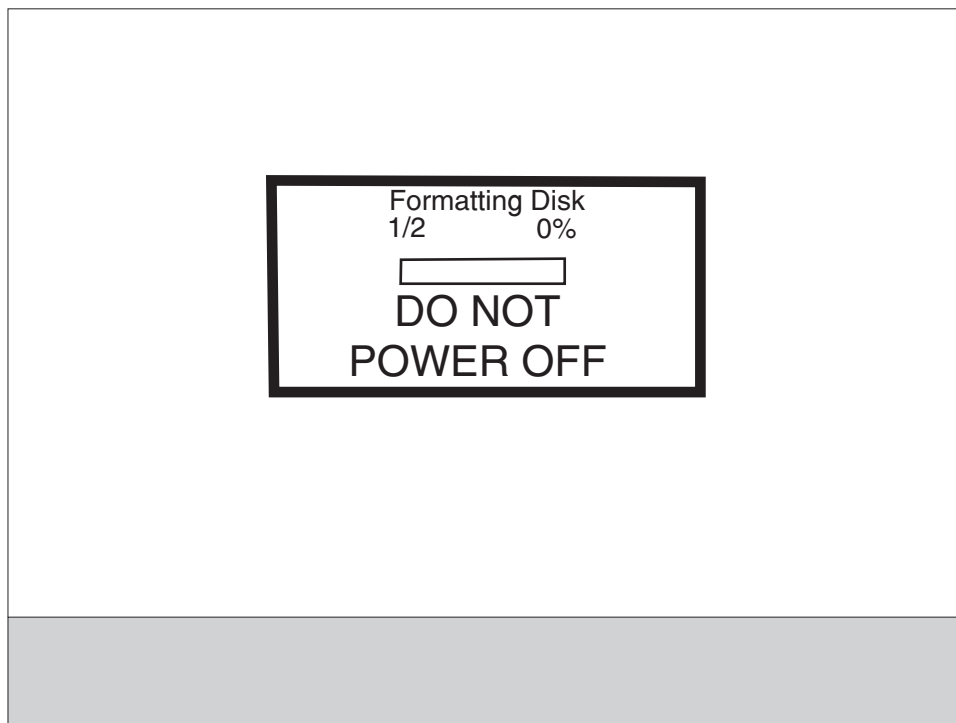
2. Touch **Submit** to save the change.
3. Touch **Back** to cancel and return to the Configuration Menu.

If you remove an encrypted disk from a device and then try to install another disk, **Disk Corrupted . Reformat?** appears on the LCD. You can format the newly installed disk or remove it from the device.

When you touch **Enable** (encryption) or **Disable** (formatting), Contents will be lost. Continue? appears on the LCD. Touch **No** to cancel or **Yes** to proceed. If you touch **Yes**, the printer performs the selected action on the hard disk. The following graphic appears when the encryption process is selected:



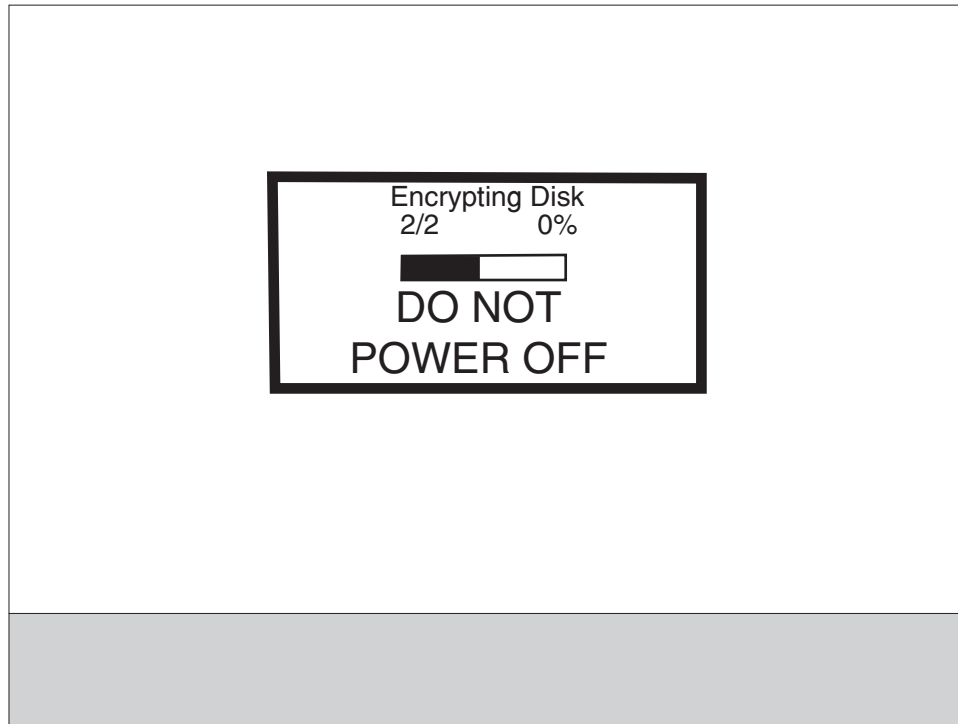
The following graphic appears when the formatting process is selected:

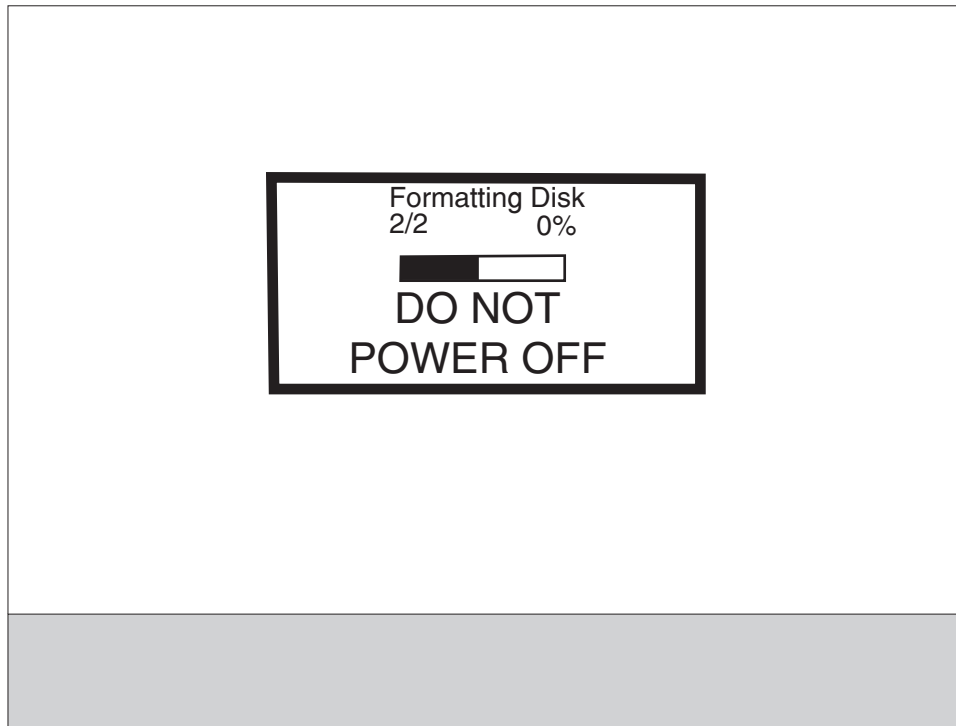


The panel provides many progress indicators during the two-stage process.

1. **1/2** indicates that the process is currently in the first stage.
2. **0%** indicates the progress of the current stage of the process.
3. The progress bar indicates the overall completion of the entire process by filling in throughout each separate stage.

When the first stage of either process completes, the printer displays either of the following graphics depending on the process selected and then begins the second stage of the process:





The entire process is complete when the progress bar appears completely shaded and the percentage indicator shows **100%**. After completion, the panel returns to Disk Encryption.

## ***Wipe Disk***

This setting provides you with a tool for erasing the contents of a disk.

**Warning:** Wipe Disk removes a disk's data in such a way that it cannot be recovered.

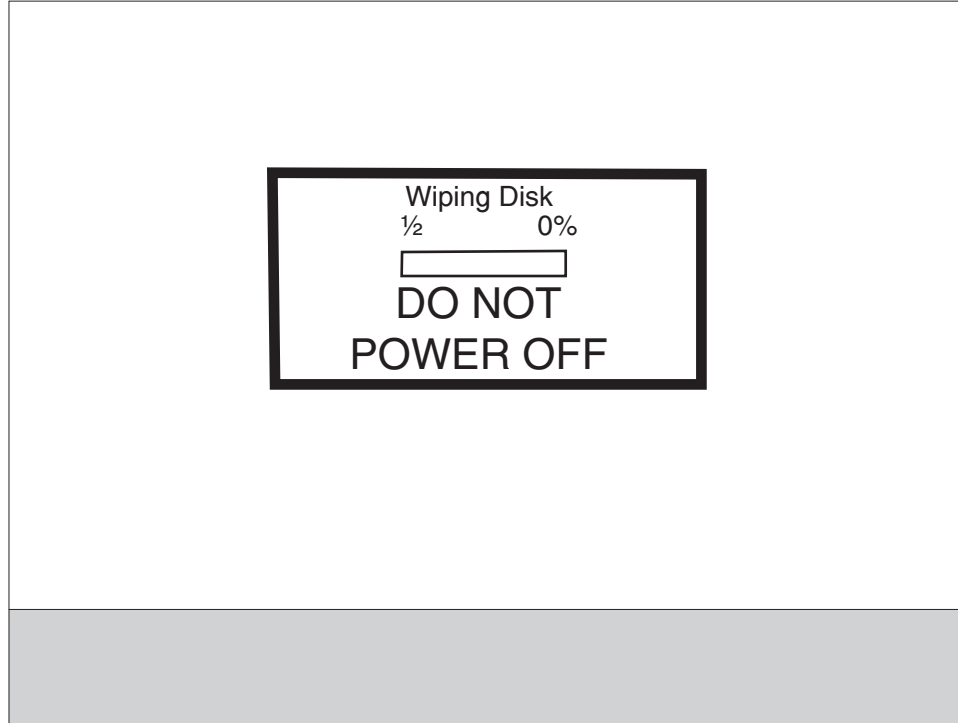
To change this setting:

1. Touch **Wipe Disk** from the Configuration Menu.

**Note:** If an advanced password has been established, you must enter this password in order to change the setting. If no advanced password exists, you can establish one by using the keyboard that appears on the LCD.

2. Touch **Wipe disk now**. Contents will be lost. Continue? appears on the LCD.
3. Touch **Back** to cancel and return to the Configuration Menu.

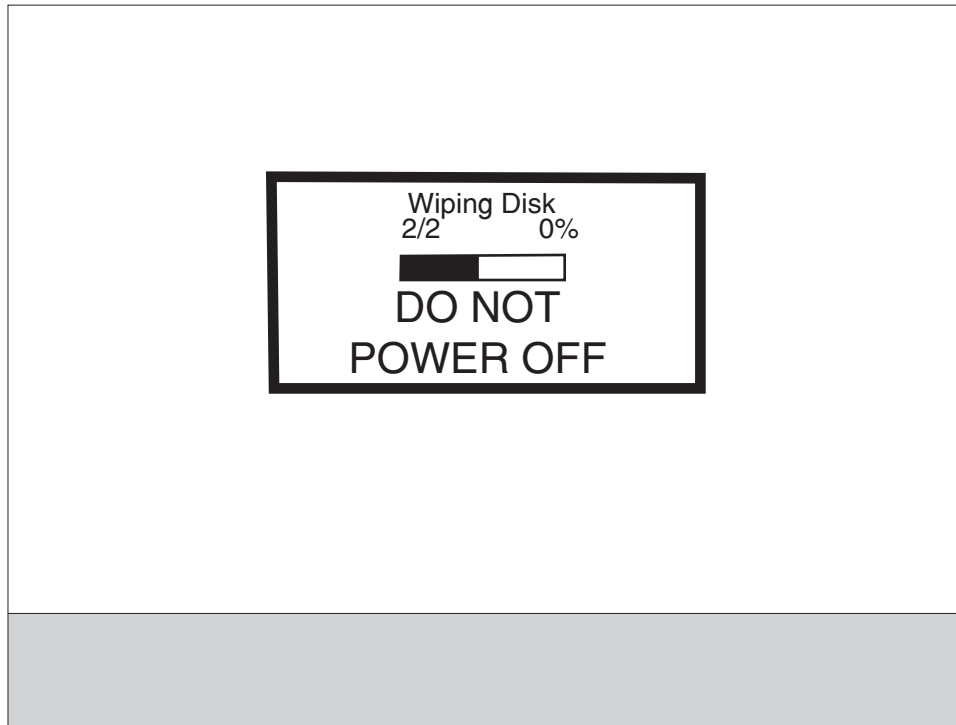
If you touch **No**, the device cancels the Wipe Disk process and returns to the Configuration Menu. If you touch **Yes**, the following screen appears:



The panel provides the following progress indicators during the execution of this process:

1. **1/2** indicates that the process is currently in the first stage.
2. **0%** indicates the progress of the current stage of the process.
3. The progress bar indicates the overall completion of the entire process by filling in throughout each separate stage.

When the first stage of the process completes, the printer displays the following graphic and then begins the second stage of the process:



The entire process is complete when the progress bar appears completely shaded and the percentage indicator shows **100%**. The panel returns to the screen that shows the values for the Wipe Disk setting.

## ***Font Sharpening***

This setting allows you to set a text point size below which the high frequency screens are used when printing font data. For example, at the default 24, all text in font sizes 24 and less will use the high frequency screens. The values for this setting range from 0 to 150.

To change this setting:

1. Touch **Font Sharpening** from the Configuration Menu.
2. Touch **►** to increase the value or **◄** to decrease the value.
3. Touch **Back** to cancel and return to the Configuration Menu.
4. Touch **Submit** to save the change.

This setting affects the PostScript, PCL, PDF, and XL emulators.

This function is not supported when the device generates output at 600 dpi resolution.



## ***Require Standby***

This setting determines if the Standby Mode is **On** or **Off**. The default is **On**.

To change this setting:

1. Touch **Require Standby** from the Configuration Menu.
2. Touch **Back** to cancel and return to the Configuration Menu.
3. Touch **Submit** to save the change.

If Standby Mode is on, the printer begins functioning in Standby Mode when it remains idle for an amount of time. The Standby Mode enables the printer:

- To consume less energy than when operating in normal mode but not as little as when operating in Power Saver
- To return to the Ready state more quickly than when operating in Power Saver

## ***Short Edge Printing***

The default printing orientation is long edge. This setting allows you to enable or prohibit short edge fed paper. If the setting **Disabled** (default) is selected, letter and A4 paper can only be fed long edge. If they are fed short edge, a prompt will ask you to use the correct paper size. When the setting is **Enabled**, you can feed paper either long edge or short edge.

To change this setting:

1. Touch **Short Edge Printing** from the Configuration Menu.
2. Touch **Back** to cancel and return to the Configuration Menu.
3. Touch **Submit** to save the change.

## ***Tray Low Message***

This setting allows you to disable any Tray Low warnings that the printer may register.

Touching **Disabled** turns off the tray low prompts. The default is **Enabled**.

To change this setting:

1. Touch **Require Standby** from the Configuration Menu.
2. Touch **Back** to cancel and return to the Configuration Menu.
3. Touch **Submit** to save the change.

## ***LES Applications***

This disables all installed Lexmark Embedded Solution applications. The default is **Enabled**.

To change this setting:

1. Touch **LES Applications** from the Configuration Menu.

**Note:** If an advanced password has been established, you must enter this password in order to change the setting. If no advanced password exists, you can establish one by using the keyboard that appears on the LCD.

2. Touch **Back** to cancel and return to the Configuration Menu.
3. Touch **Submit** to save the change.

## Key Repeat Initial Delay

When a key is touched repeatedly, this is the delay before the key begins repeating. The delay ranges from .25 seconds to 5 seconds. The default is 1 second. Values are given in increments of .25 seconds.

To change this setting:

1. Touch **Key Repeat Initial Delay** from the Configuration Menu.
2. Touch **►** to increase the value or **◄** to decrease the value.
3. Touch **Submit** to save the change.
4. Touch **Back** to cancel and return to the Configuration Menu.

## Key Repeat Rate

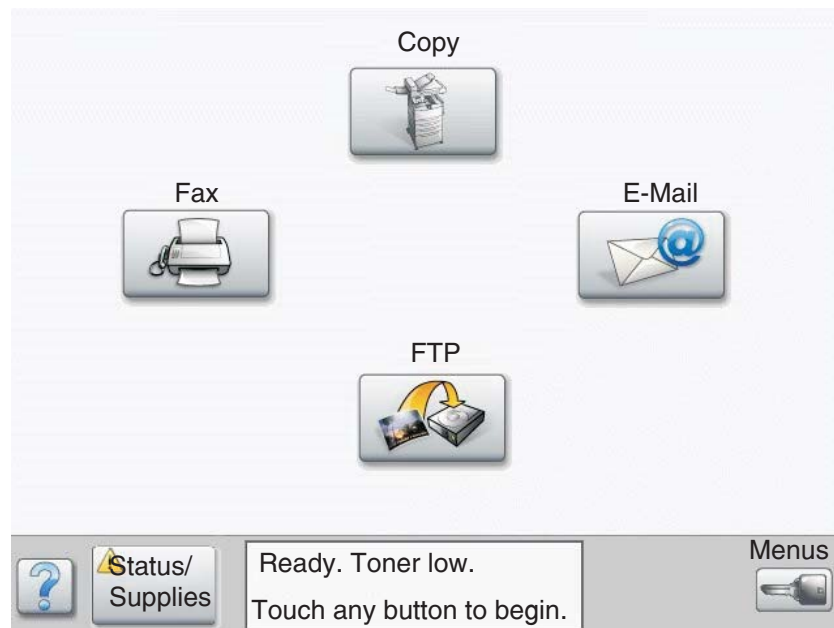
This is the number of times per second that a repeating key will repeat. The range is 1–400, with a default of 15 times per second.

To change this setting:

1. Touch **Key Repeat Initial Delay** from the Configuration Menu.
2. Touch **►** to increase the value or **◄** to decrease the value.
3. Touch **Submit** to save the change.
4. Touch **Back** to cancel and return to the Configuration Menu.

## Exiting Configuration Menu

From the Configuration Menu, touch **Back** until a graphic appears with **Exit Config Menu** in the lower right corner. Touch **Exit Config Menu** to exit the Configuration Menu. Resetting the Printer appears on the LCD. The printer performs a POR, and the following graphic appears on the LCD:



## 4. Repair information

**Warning:** Read the following before handling electronic parts.

---

### Handling ESD-sensitive parts

Many electronic products use parts that are known to be sensitive to electrostatic discharge (ESD). To prevent damage to ESD-sensitive parts, use the following instructions in addition to all the usual precautions, such as turning off power before removing logic boards:

- Keep the ESD-sensitive part in its original shipping container (a special “ESD bag”) until you are ready to install the part into the machine.
- Make as few movements as possible with your body to prevent an increase of static electricity from clothing fibers, carpets, and furniture.
- Put the ESD wrist strap on your wrist. Connect the wrist band to the system ground point. This discharges any static electricity in your body to the machine.
- Hold the ESD-sensitive part by its edge connector shroud (cover); do not touch its pins. If you are removing a pluggable module, use the correct tool.
- Do not place the ESD-sensitive part on the machine cover or on a metal table; if you need to put down the ESD-sensitive part for any reason, first put it into its special bag.
- Machine covers and metal tables are electrical grounds. They increase the risk of damage because they make a discharge path from your body through the ESD-sensitive part. (Large metal objects can be discharge paths without being grounded.)
- Prevent ESD-sensitive parts from being accidentally touched by other personnel. Install machine covers when you are not working on the machine, and do not put unprotected ESD-sensitive parts on a table.
- If possible, keep all ESD-sensitive parts in a grounded metal cabinet (case).
- Be extra careful in working with ESD-sensitive parts when cold-weather heating is used, because low humidity increases static electricity.

---

## Removal procedures



**CAUTION:** Remove the power cord from the printer or electrical outlet before you connect or disconnect any cable or electronic board or assembly for personal safety and to prevent damage to the printer. Disconnect any connections between the printer and PCs/peripherals.

**CAUTION:** The printer weighs approximately 47.7 kg (105 lb) and requires at least two people to lift it safely. Make sure your fingers are not under the printer when you lift or set the printer down.

**Note:** Some removal procedures require removing cable ties. You must replace cable ties during reassembly to avoid pinching wires, obstructing the media path, or restricting mechanical movement.

Optional parts removal and replacement procedures are described in the following order:

- 2 Tray– See **“2X 500-sheet drawer (2TM) removals” on page 4-3.**
- High capacity feeder– See **“High capacity feeder (HCF) removals” on page 4-46.**

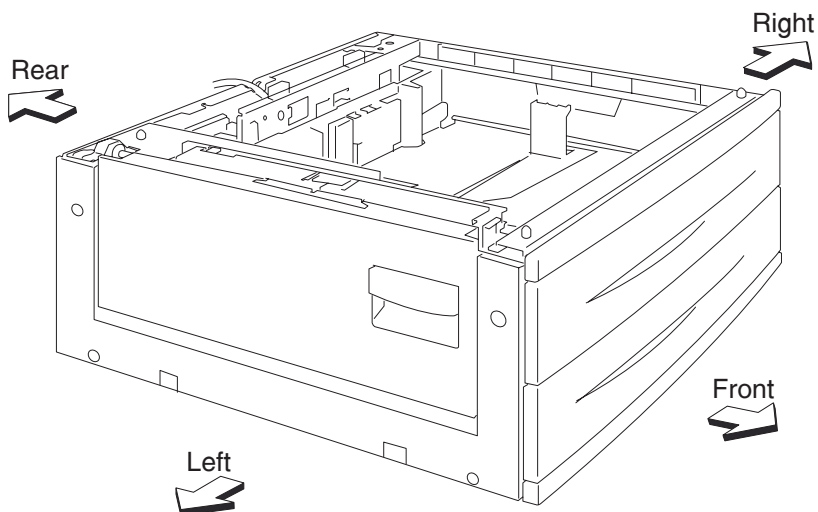
**Note:** Parts are controlled as spare parts. When servicing parts for which no procedure is described, observe the assembly before starting the service.

**Note:** Though the optional parts are assumed to be removed, they may not be removed if not required for the purpose of service.

### ***Before starting service work***

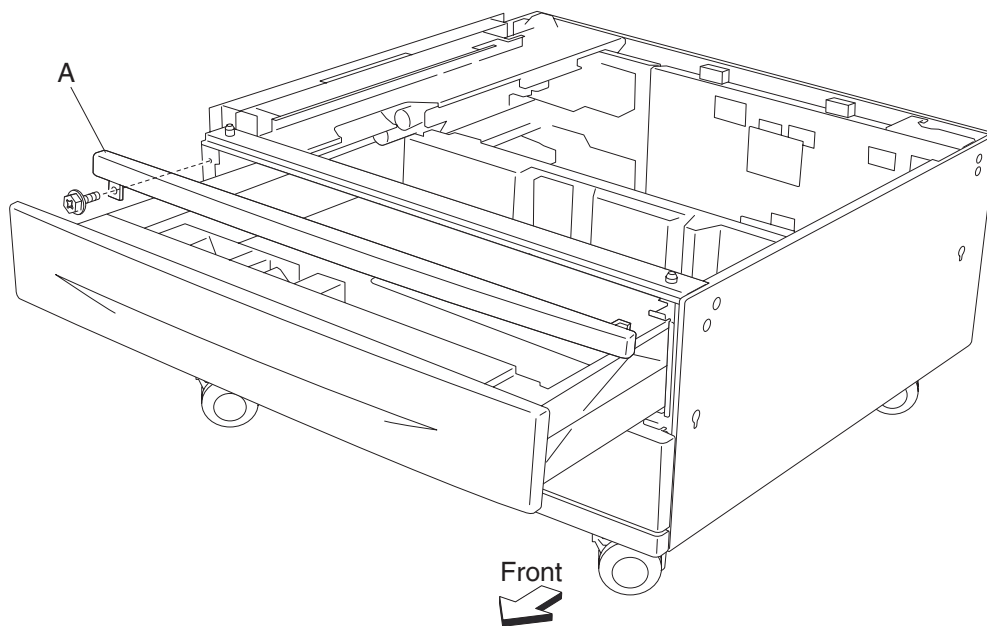
- Turn the power off and remove the power cord from the outlet.
- While performing service around the fuser assembly, ensure the fuser area has cooled down.
- Do not use excessive force to remove parts. Damage to the parts or function of the machine may occur.
- A wide variety of screws are used, make note of their positions during service.
- Wear a wrist band to remove the risk of static electricity.

## 2X 500-sheet drawer (2TM) removals



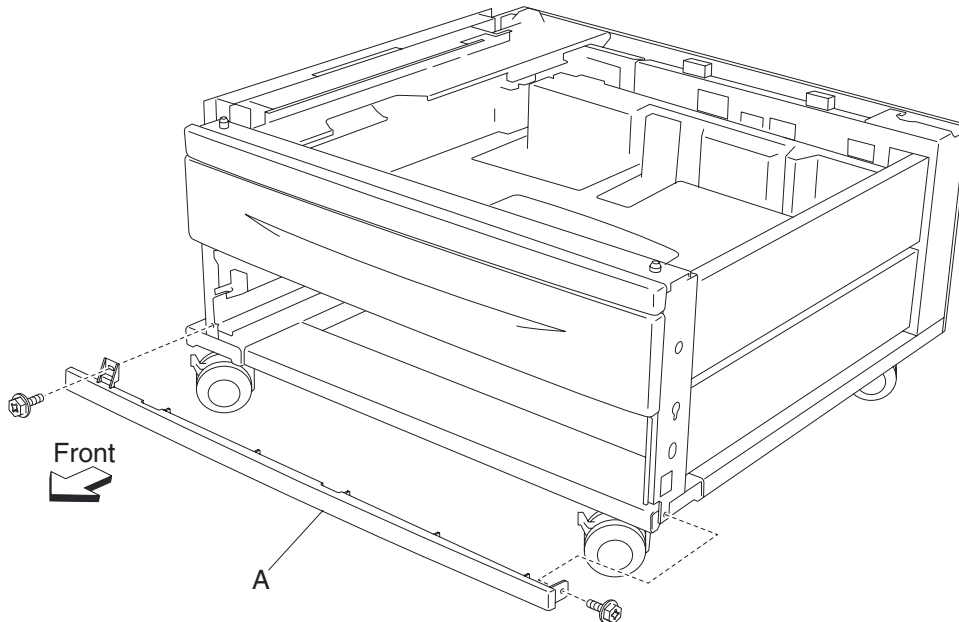
### 2X 500-sheet drawer (2TM)—top cover removal

1. Remove tray 3.
2. Remove one screw securing the top cover (A).
3. Remove the top cover (A).



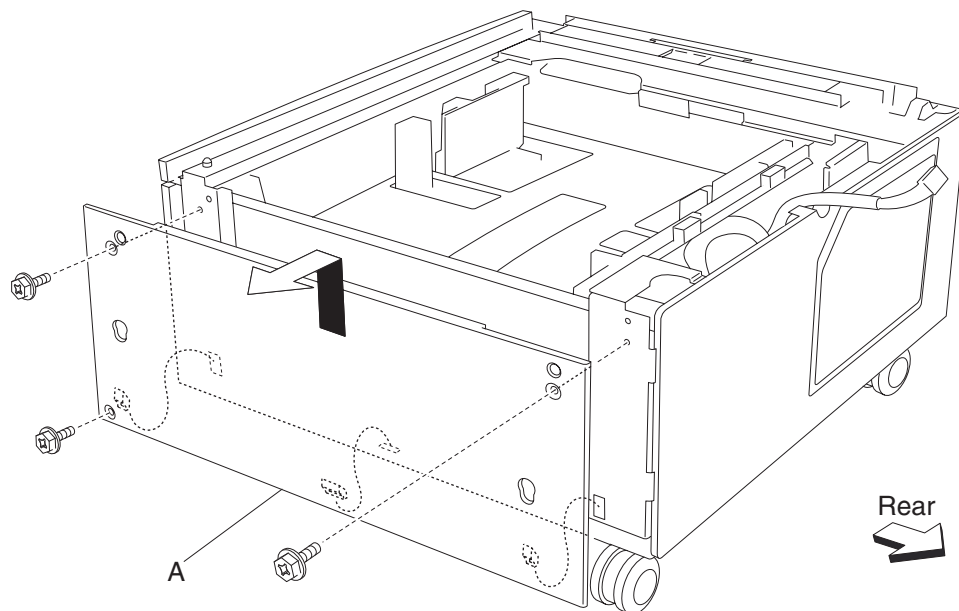
### **2X 500-sheet drawer (2TM)—foot cover removal**

1. Remove tray 4.
2. Remove the right cover. See **"2X 500-sheet drawer (2TM)—right cover removal"** on page 4-4.
3. Remove the two screws securing the foot cover (A).
4. Remove the foot cover (A).



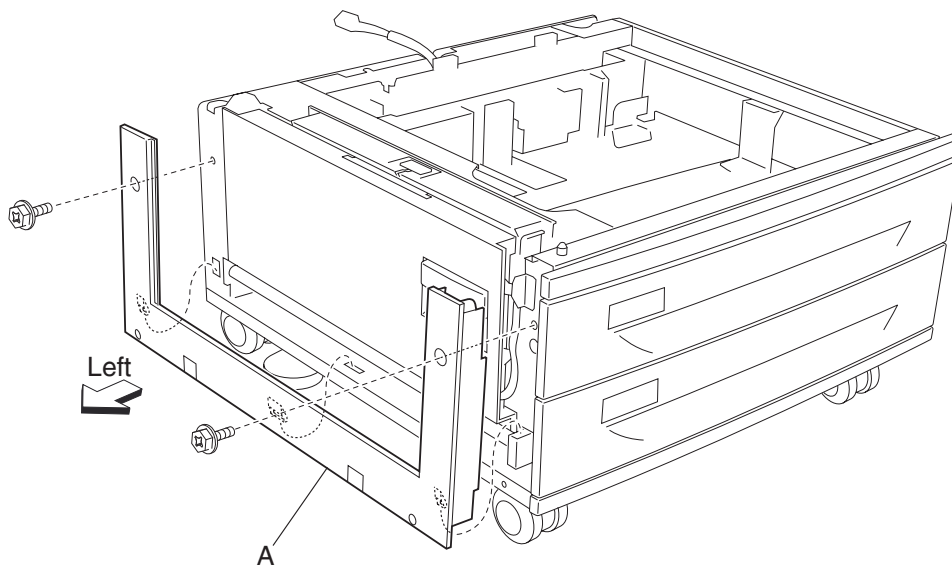
### **2X 500-sheet drawer (2TM)—right cover removal**

1. Remove the three screws securing the right cover (A).
2. Remove the right cover (A) by lifting upward and outward in the direction of the arrow.

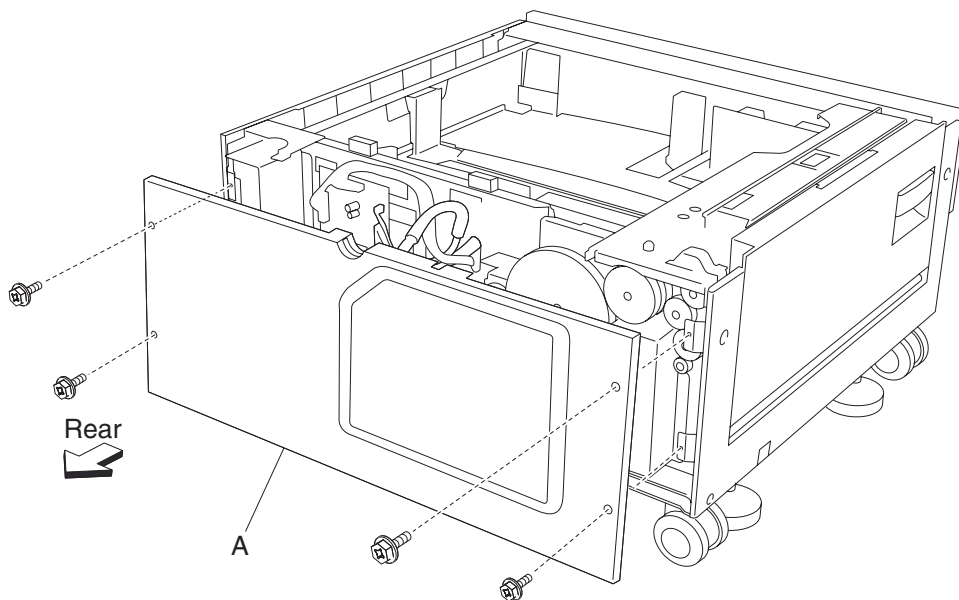


**2X 500-sheet drawer (2TM)—left cover removal**

1. Remove the two screws securing the left cover (A).
2. Remove the left cover (A).

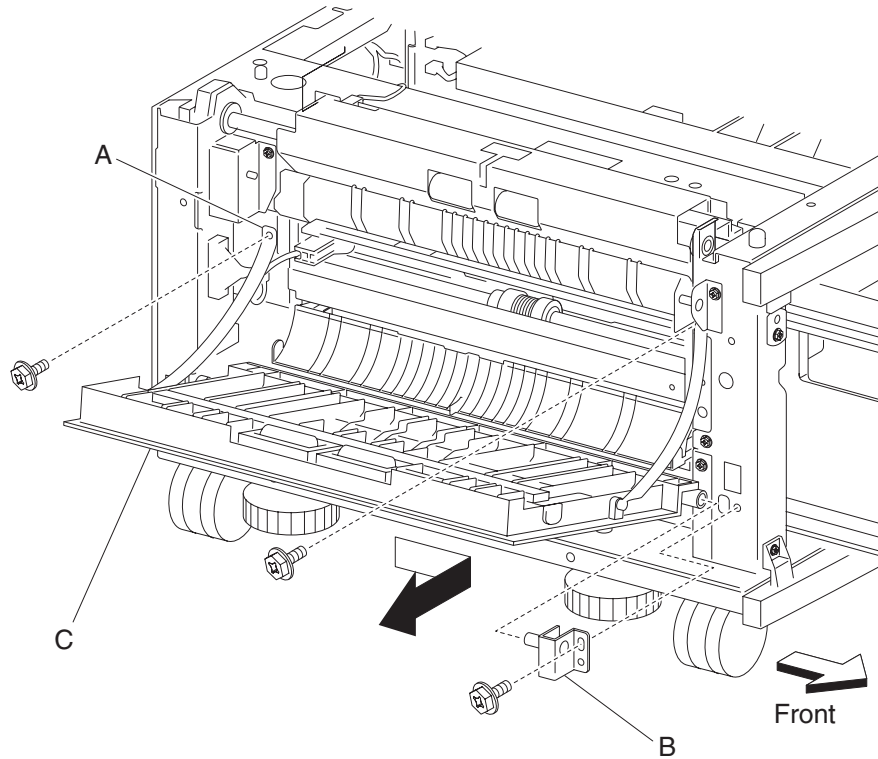
**2X 500-sheet drawer (2TM)—rear cover removal**

1. Remove the four screws securing the rear cover (A).
2. Remove the rear cover (A).



**2X 500-sheet drawer (2TM)—2TM/TTM left door assembly removal**

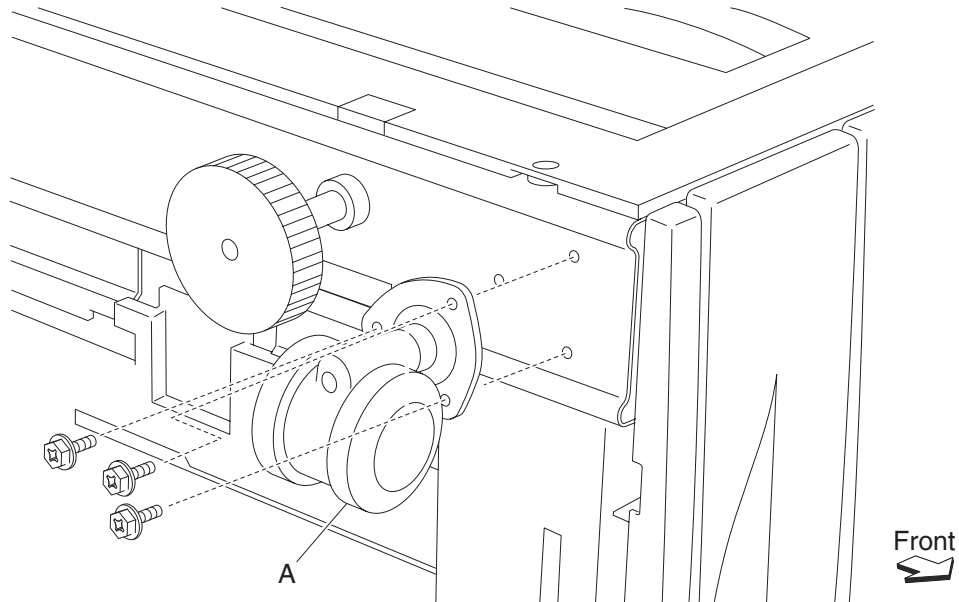
1. Remove the 2TM/TTM left cover. See **“2X 500-sheet drawer (2TM)— left cover removal” on page 4-5.**
2. Open the 2TM/TTM left door assembly.
3. Remove the one screw securing the 2TM/TTM left door support strap (A) to the unit.
4. Remove the screw securing the bracket (B) to the unit.
5. Remove the bracket (B).
6. Remove the 2TM/TTM left door assembly.





**2X 500-sheet drawer (2TM)—caster removal**

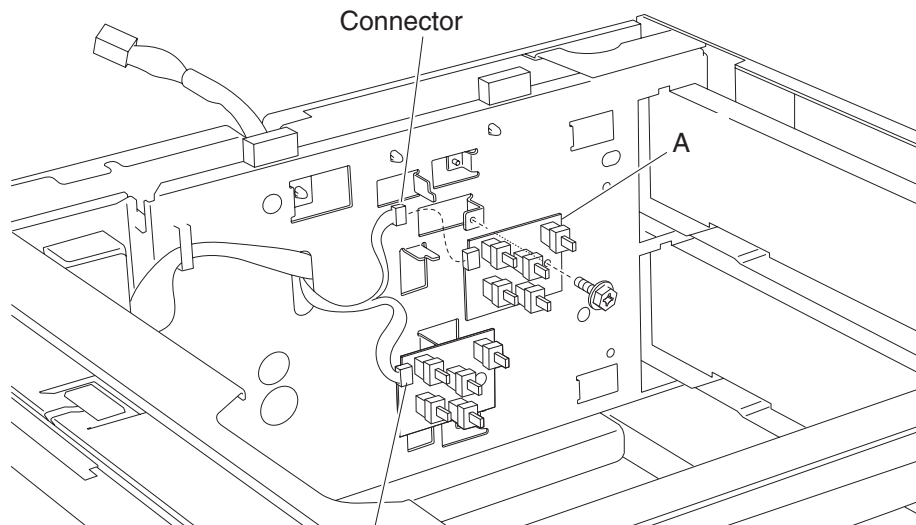
1. Remove tray 3.
2. Remove tray 4.
3. Place the right side down.
4. Remove the three screws securing the caster (A).
5. Remove the caster (A).



## **2X 500-sheet drawer (2TM)—switch (media size) assembly removal**

**Note:** This removal procedure applies to both tray 3 and tray 4.

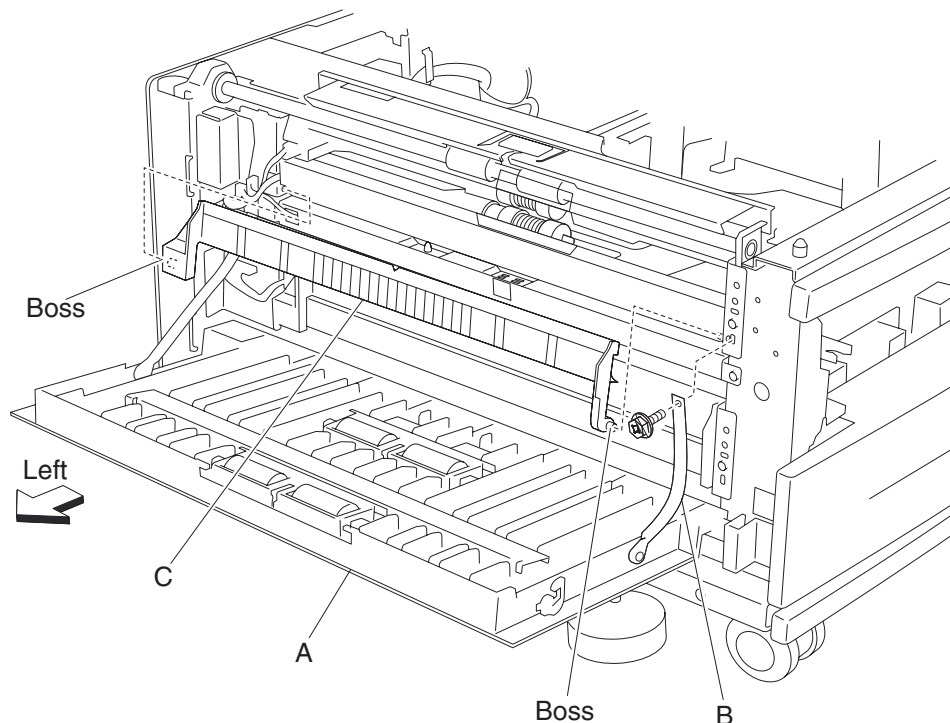
1. Remove tray 3.
2. Remove tray 4.
3. Disconnect the switch (media size) selector (A).
4. Remove one screw securing the switch (media size) selector (A).
5. Remove the switch (media size) selector (A).



**Note:** Before re-installing, ensure the boss is placed into the hole on the switch (media size) selector (A).

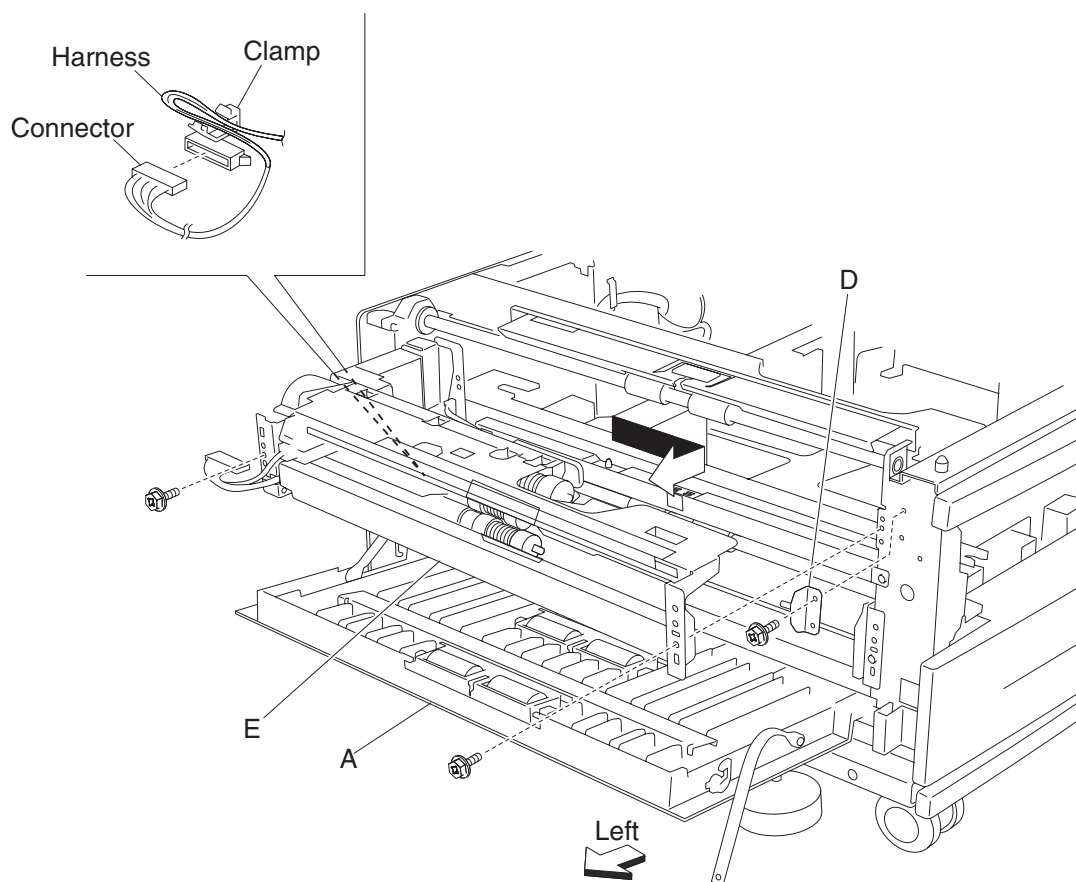
## 2X 500-sheet drawer (2TM)—media feed unit assembly removal (tray 3)

1. Remove tray 3.
2. Remove the 2TM/TTM left cover. See **"2X 500-sheet drawer (2TM)— left cover removal"** on page 4-5.
3. Open the 2TM/TTM left door assembly (A).
4. Remove one screw securing the 2TM/TTM left door support strap (B).
5. Release the plastic bosses on both ends of the vertical turn guide (C).
6. Remove the vertical turn guide (C).



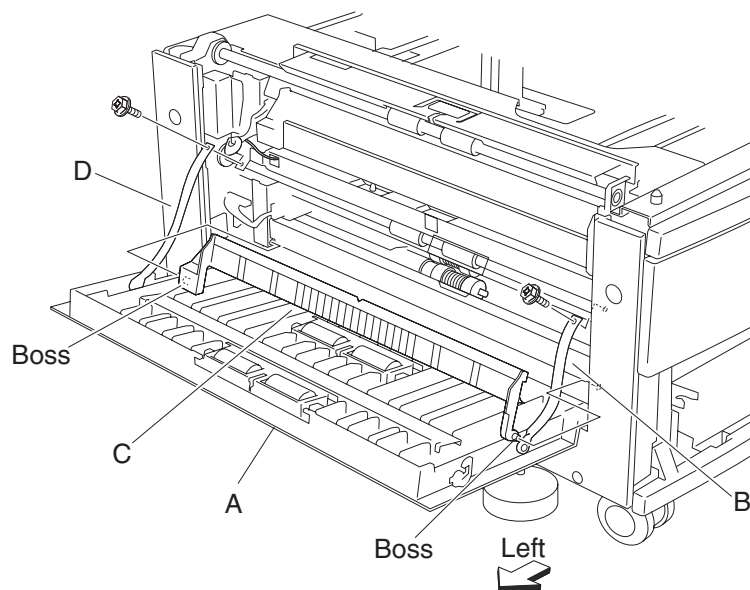
7. Remove one screw securing the bracket (D).
8. Remove the bracket (D).
9. Release the harness from the clamp.
10. Disconnect the connector from the machine.
11. Remove the two screws securing the media feed unit assembly (E).

12. Remove the media feed unit assembly (E) in the direction of the arrow.

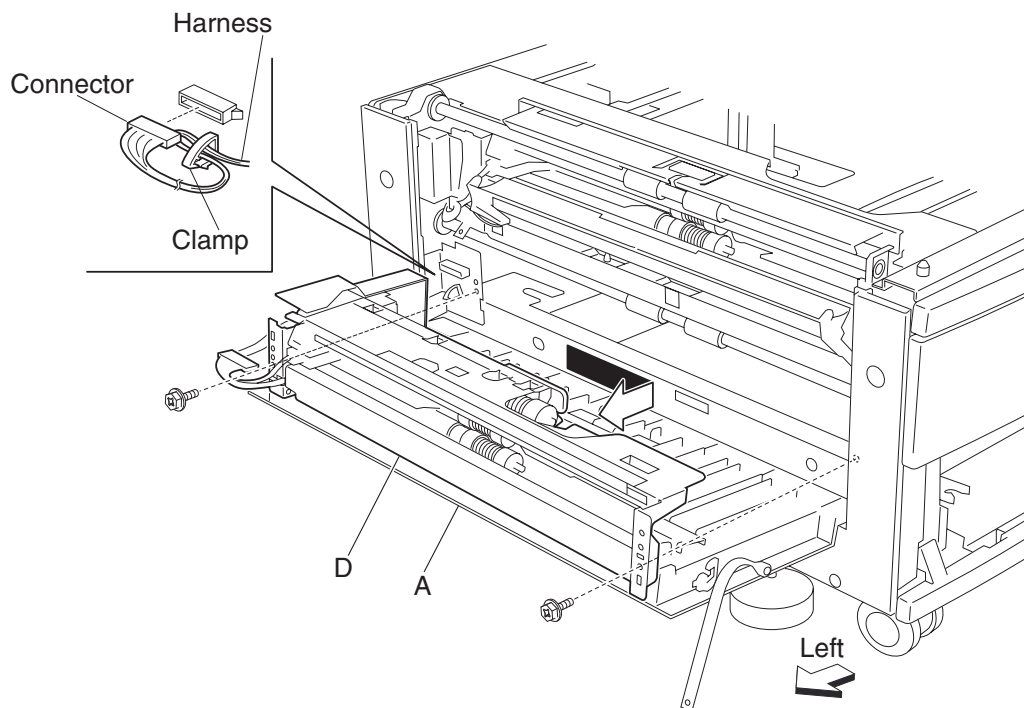


## 2X 500-sheet drawer (2TM)—media feed unit assembly removal (tray 4)

1. Remove tray 4.
2. Open the 2TM/TTM left door assembly (A).
3. Remove one screw securing the 2TM/TTM left door support strap (B).
4. Remove the plastic bosses on both ends of the vertical turn guide (C).
5. Remove the vertical turn guide (C).

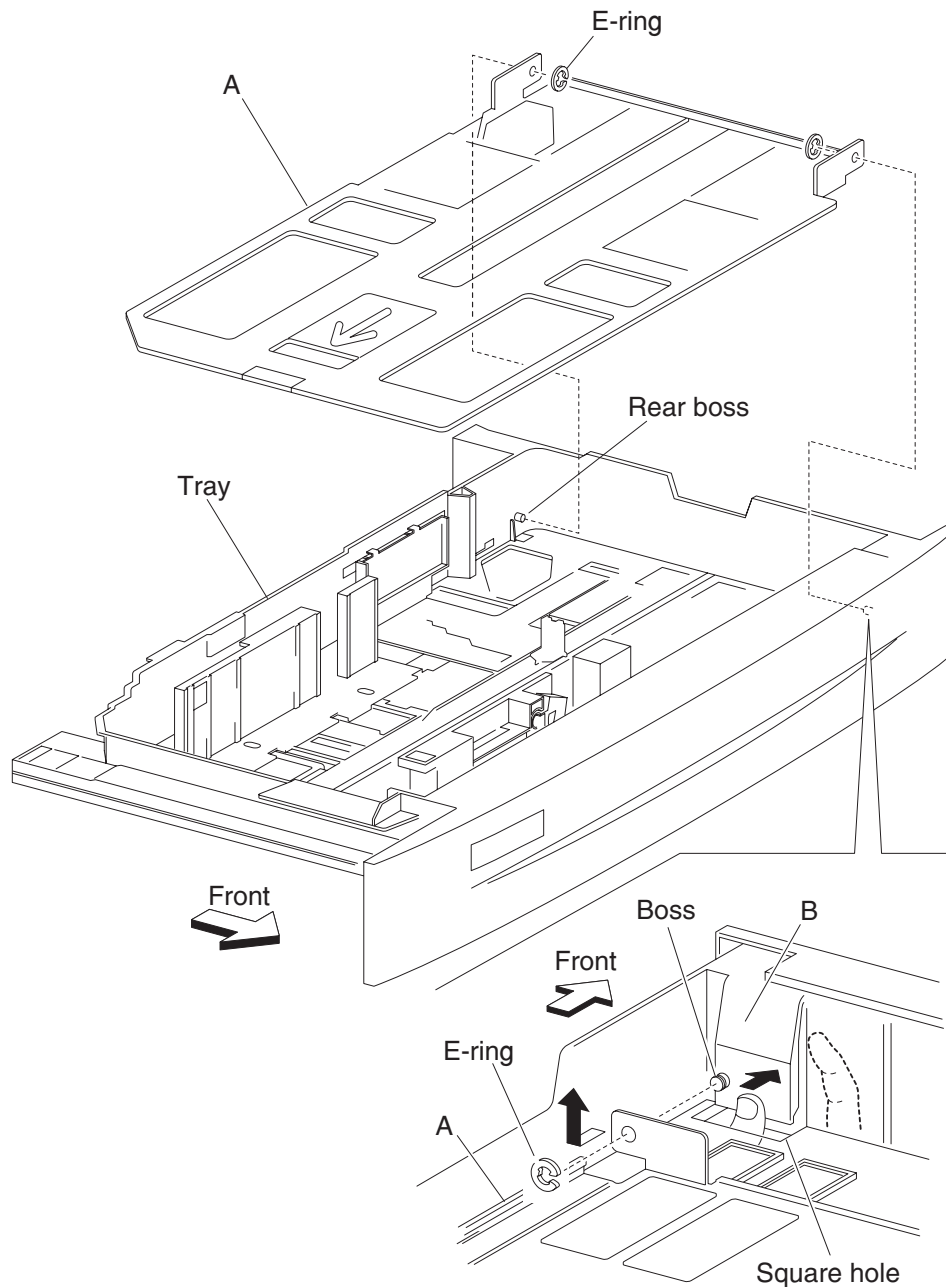


6. Release the harness from the clamp.
7. Disconnect the connector from the machine.
8. Remove the two screws securing the media feed unit assembly (D).
9. Remove the media feed unit assembly (D) in the direction of the arrow.

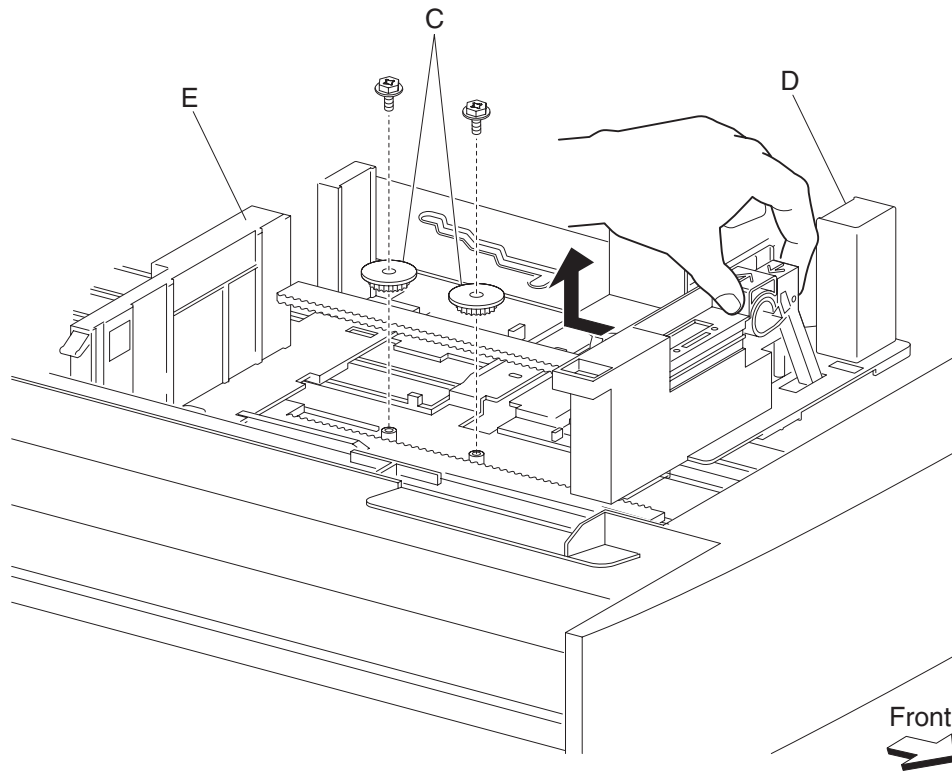


**2X 500-sheet drawer (2TM)—media tray guides removal**

1. Remove the media tray.
2. Remove the two e-rings securing the metal bottom plate (A) to the media tray using a small prying tool.
3. Push the front hinge point (B) in the direction of the arrow to release the front boss from the metal bottom plate (A).
4. Remove the metal bottom plate (A) by sliding it off the rear boss.



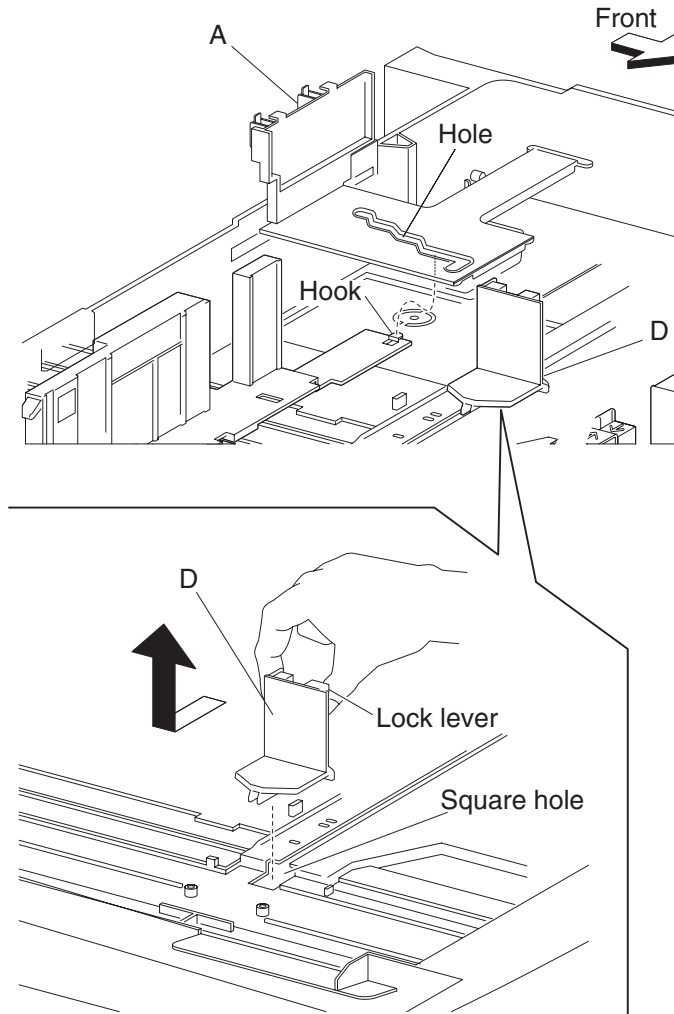
5. Remove the two screws securing the two pinion gears (C) to the media tray.
6. Remove the pinion gears (C).
7. Remove the front media guide assembly (D) and the rear media guide (E).



**Note:** Before re-installing the pinion gears (C), slide the front media tray guide (D) and the rear media tray guide (E) to their outward most positions. Ensure the media side guides slide smoothly.

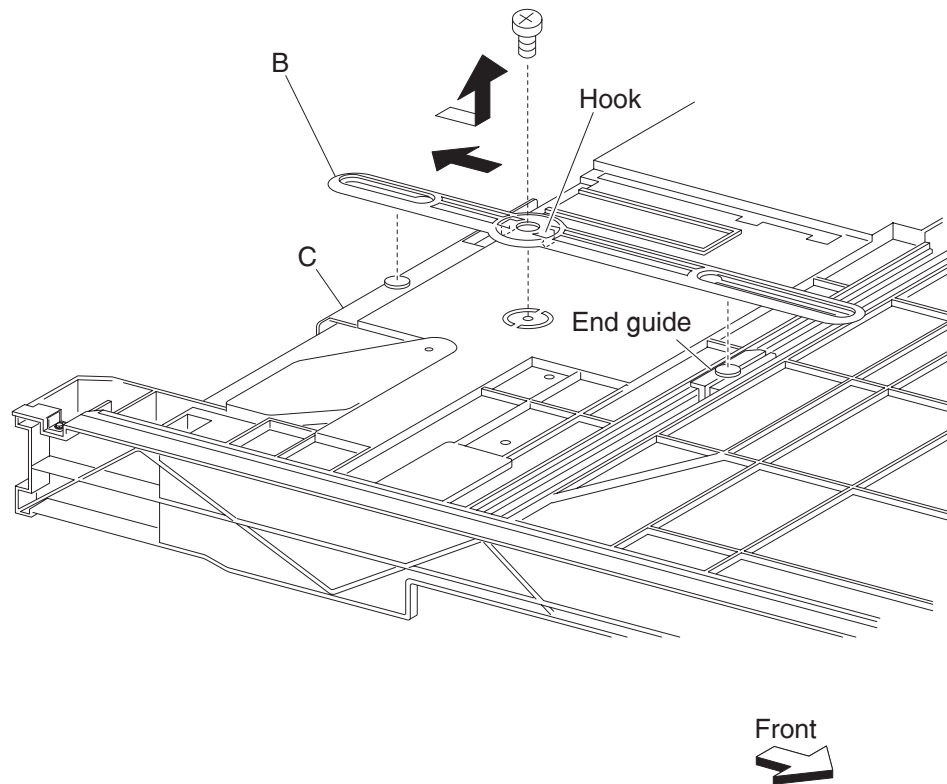
**2X 500-sheet drawer (2TM)—media tray end guide removal**

1. Remove the media tray.
2. Remove the media tray guides. See **“2X 500-sheet drawer (2TM)— media tray guides removal” on page 4-12.**
3. Remove the media side guide actuator (A).
4. Turn the media tray upside down, and remove the two hooks securing the actuator link (B) to the media tray.
5. Release the screw and hook on the media end size actuator (C) from the hole in the actuator link (B) by moving the link in the direction of the arrow.
6. Remove the media end guide actuator (C).



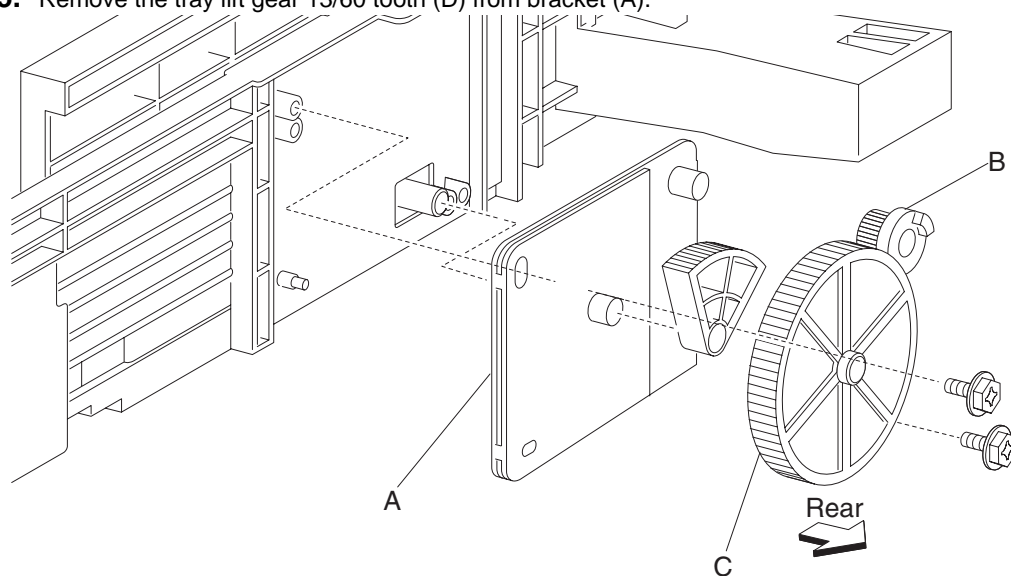


7. Turn the media tray right side up, and slide the media end guides (D) toward the center of the media tray and remove them.



**2X 500-sheet drawer (2TM)—tray lift gear group removal**

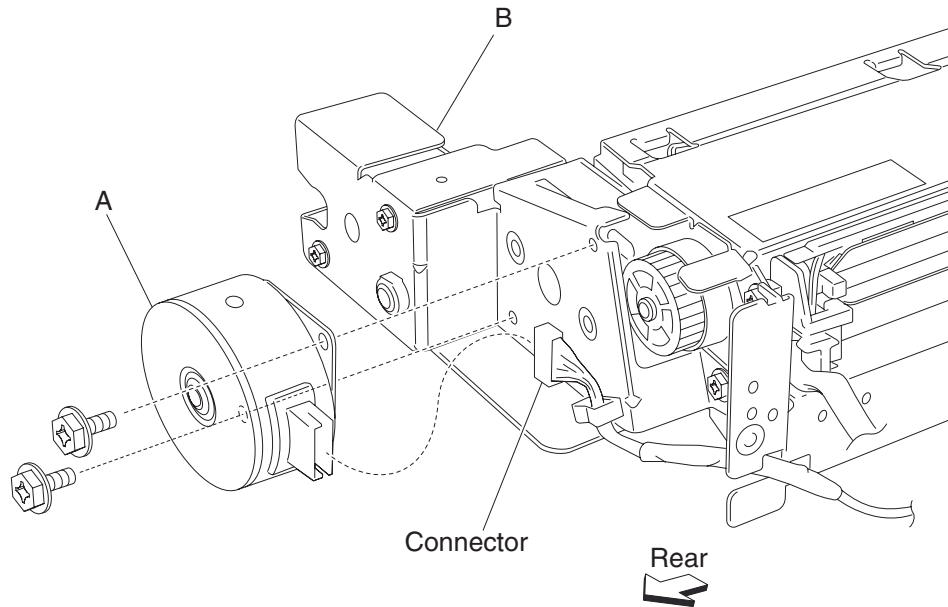
1. Remove the media tray from the machine.
2. Remove the two screws securing bracket (A).
3. Remove the tray lift sector gear 12 tooth (B).
4. Remove the tray lift gear 13 tooth (C) from bracket (A).
5. Remove the tray lift gear 13/60 tooth (D) from bracket (A).



**Note:** Extra force is required to pull the tray lift gear 13 tooth (C) and the tray lift gear 13/60 tooth (D) from bracket (A).

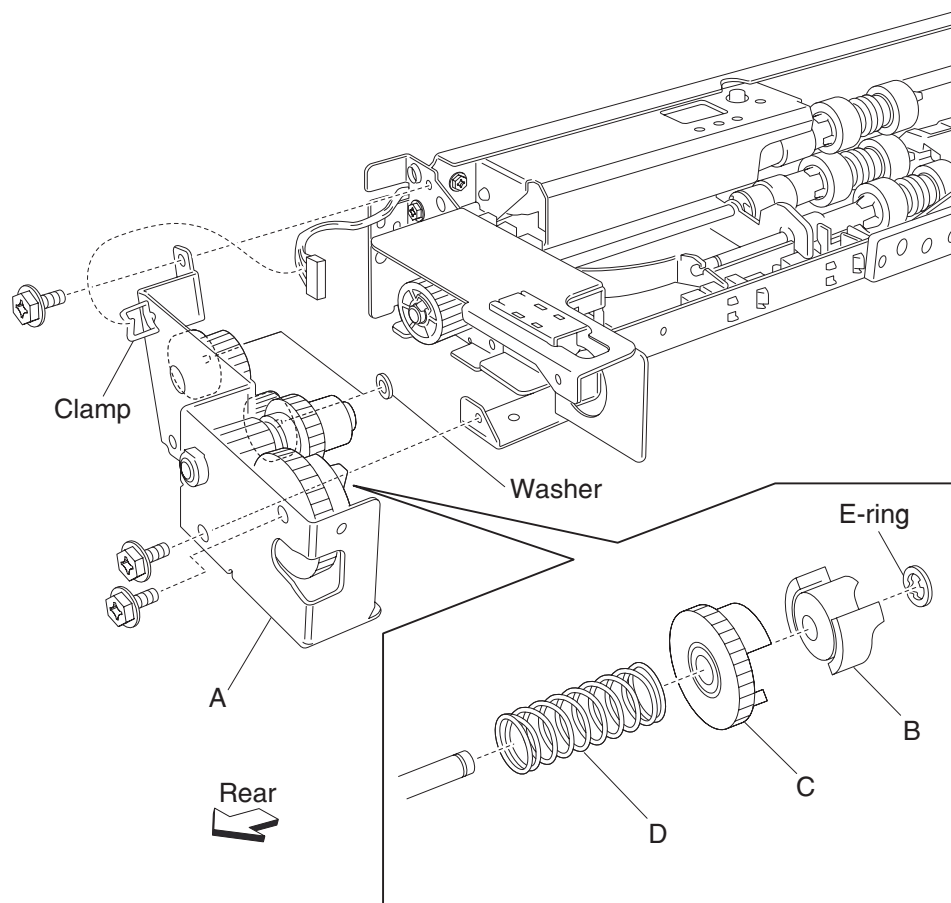
**2X 500-sheet drawer (2TM)—media feed lift motor removal**

1. Remove the media feed unit assembly. See **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9** or **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11**.
2. Disconnect the harness from the media feed lift motor (A).
3. Remove the two screws securing the media feed lift motor to the media feed unit assembly (B).
4. Remove the media feed lift motor (B).



## 2X 500-sheet drawer (2TM)—lift coupling assembly removal

1. Remove the media feed unit assembly. See “2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9 or “2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11.
  2. Remove the harness from bracket (A).
  3. Remove three screws securing bracket (A) to the media feed unit assembly.
  4. Remove bracket (A).
- Note:** The gears may become detached from bracket (A).

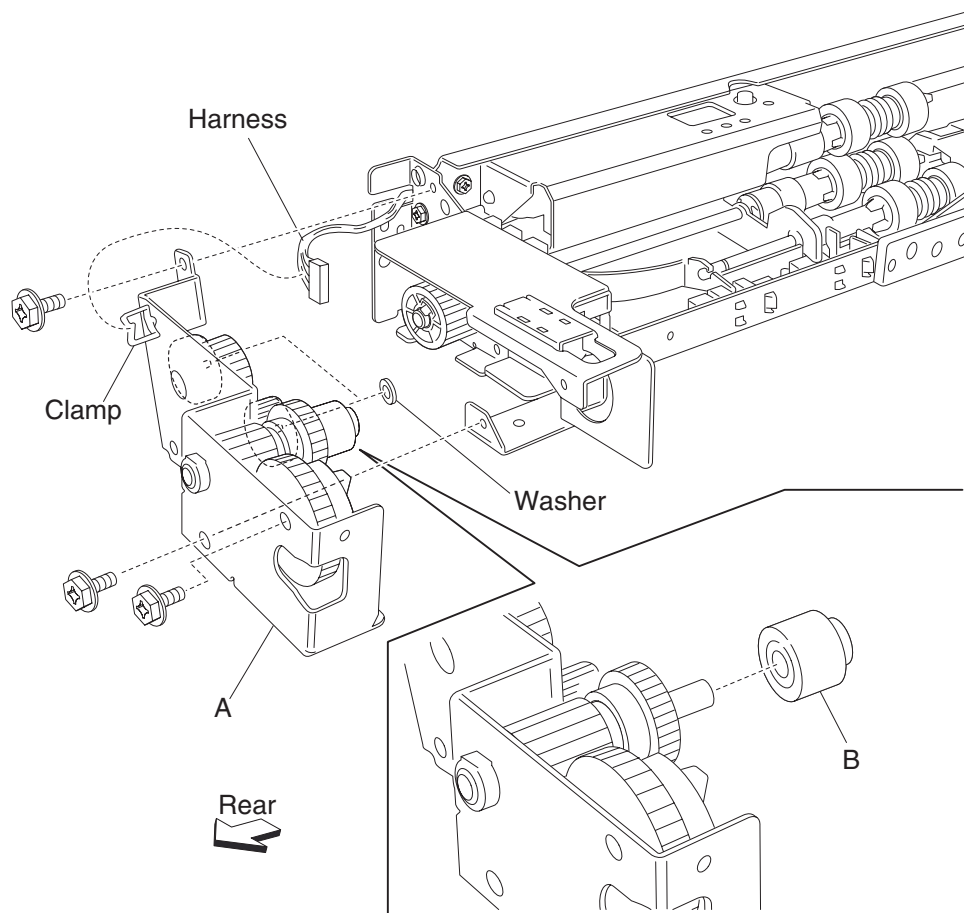


5. Remove the e-ring with a prying tool securing the tray lift coupling (B) to bracket (A).
6. Remove the tray lift coupling gear 31 tooth (C).
7. Remove the spring (D).

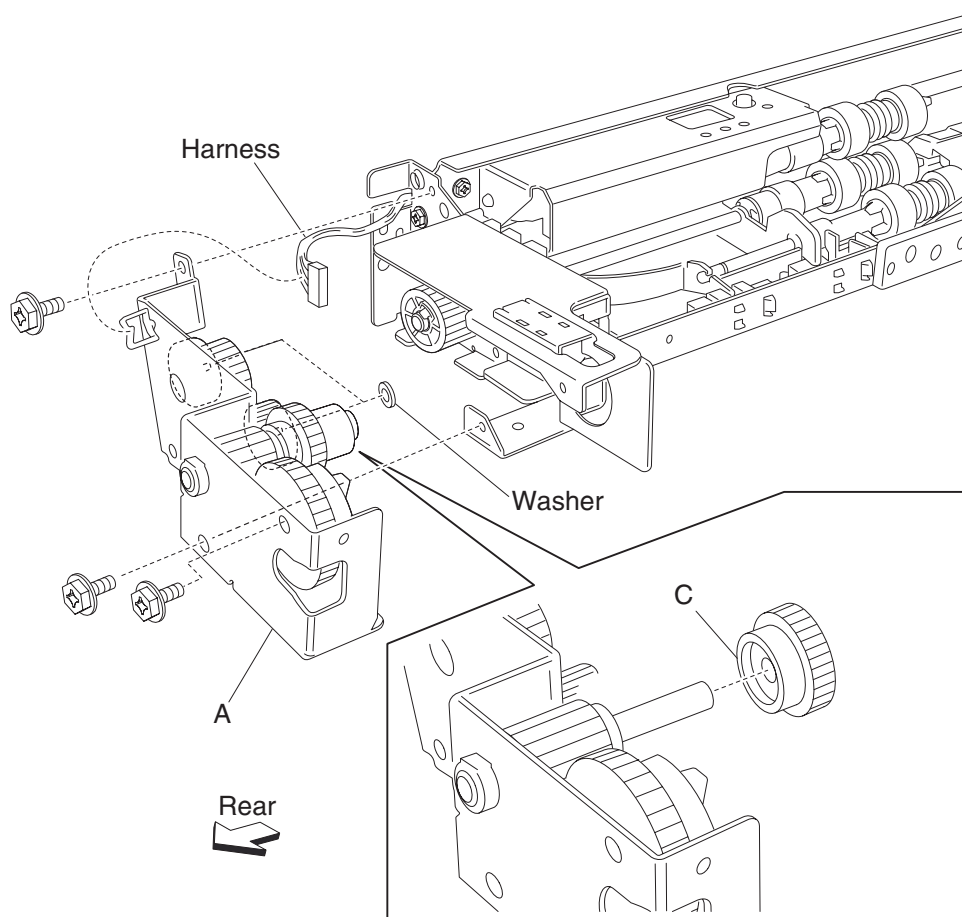
**Note:** Before re-installing, ensure all gears and washers attached to bracket (A) are securely installed.

**2X 500-sheet drawer (2TM)—tray lift one-way gear clutch assembly removal**

1. Remove the media feed unit assembly. See **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9** or **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11**.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).  
**Note:** The gears may become detached from the bracket (A).
5. Remove the tray lift one-way clutch (B).



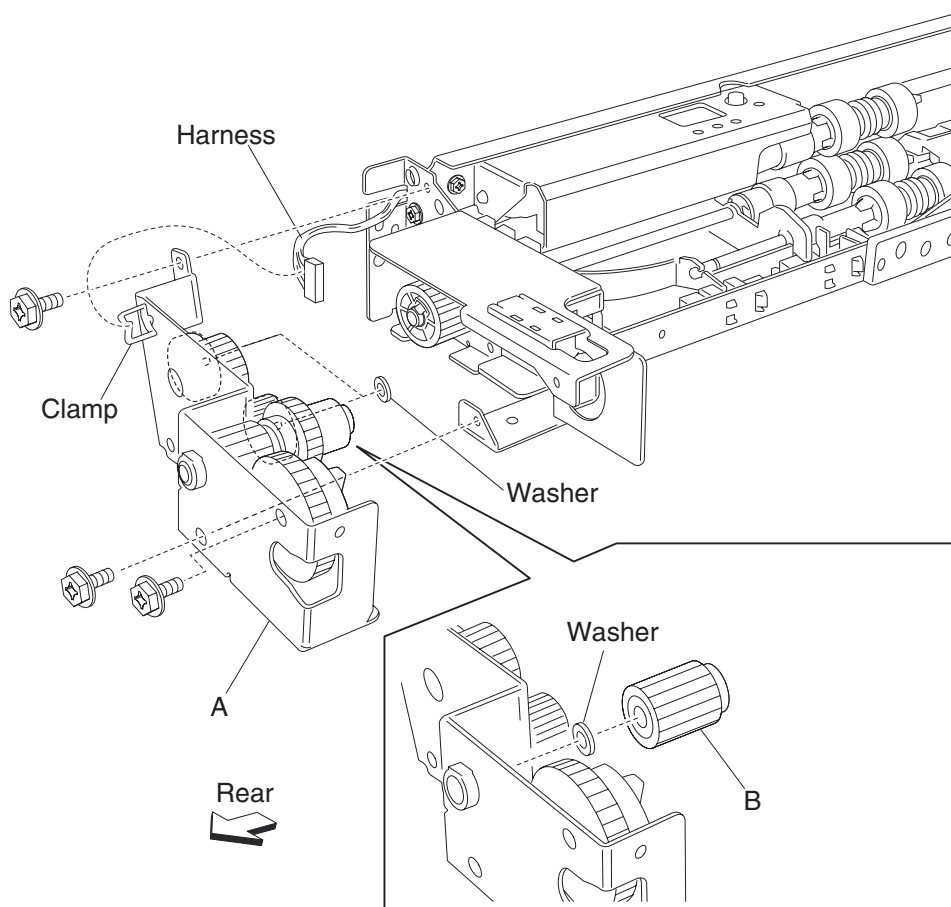
6. Remove the tray lift one-way gear 24 tooth (C).



**Note:** Before re-installing, ensure all gears and washers are securely attached to the bracket (A).

## 2X 500-sheet drawer (2TM)—media feed unit drive gear - 13 tooth removal

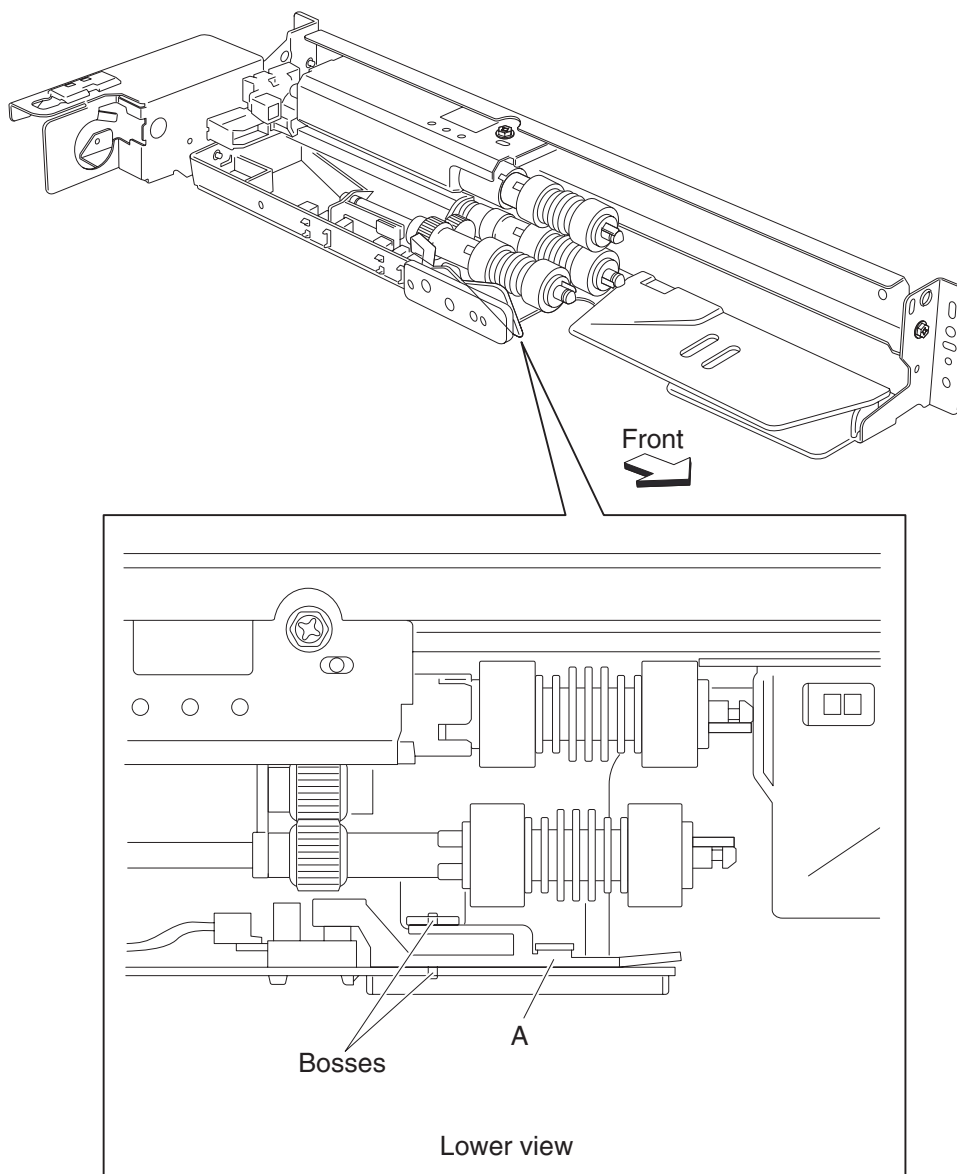
1. Remove the media feed unit assembly. See **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9** or **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11**.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).  
**Note:** Gears may become detached from the bracket (A).
5. Remove the tray lift one-way clutch assembly. See **“2X 500-sheet drawer (2TM)— tray lift one-way gear clutch assembly removal” on page 4-19**.
6. Remove the media feed unit drive gear - 13 tooth (B).



**Note:** Before re-installing, ensure all gears and washers are securely attached to the bracket (A).

**2X 500-sheet drawer (2TM)—media out actuator removal**

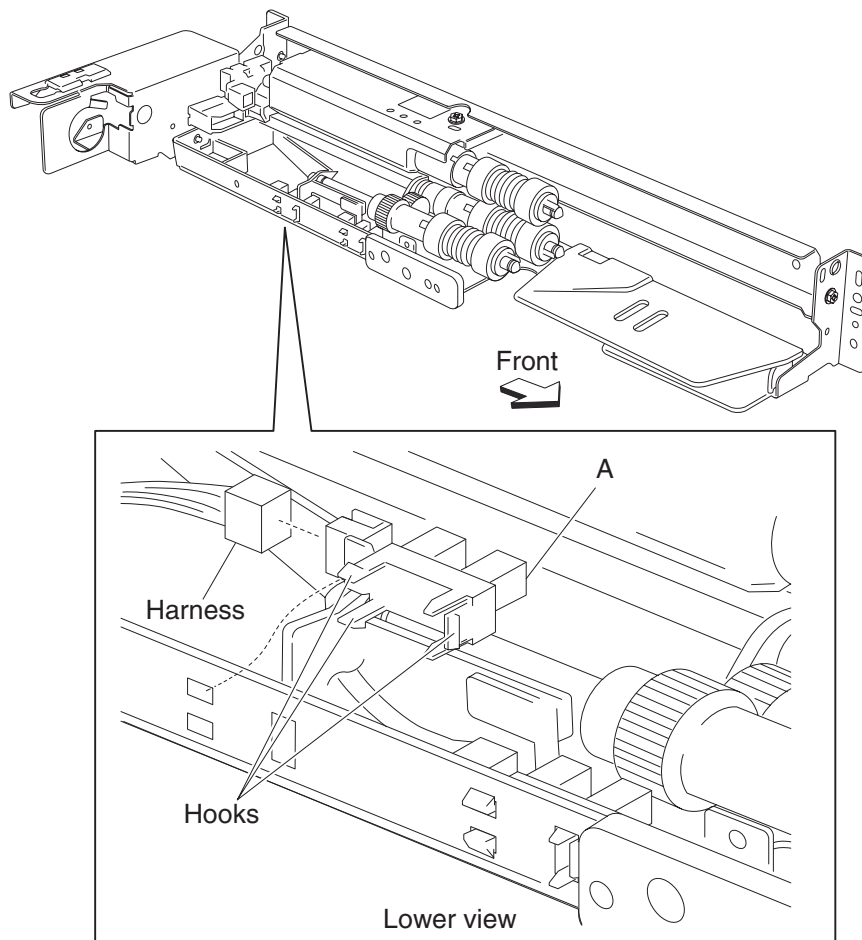
1. Remove the media feed unit assembly. See “**2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)**” on page 4-9 or “**2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)**” on page 4-11.
2. Remove the two bosses on the media out actuator (A) to the media feed unit assembly.
3. Remove the media out actuator (A).





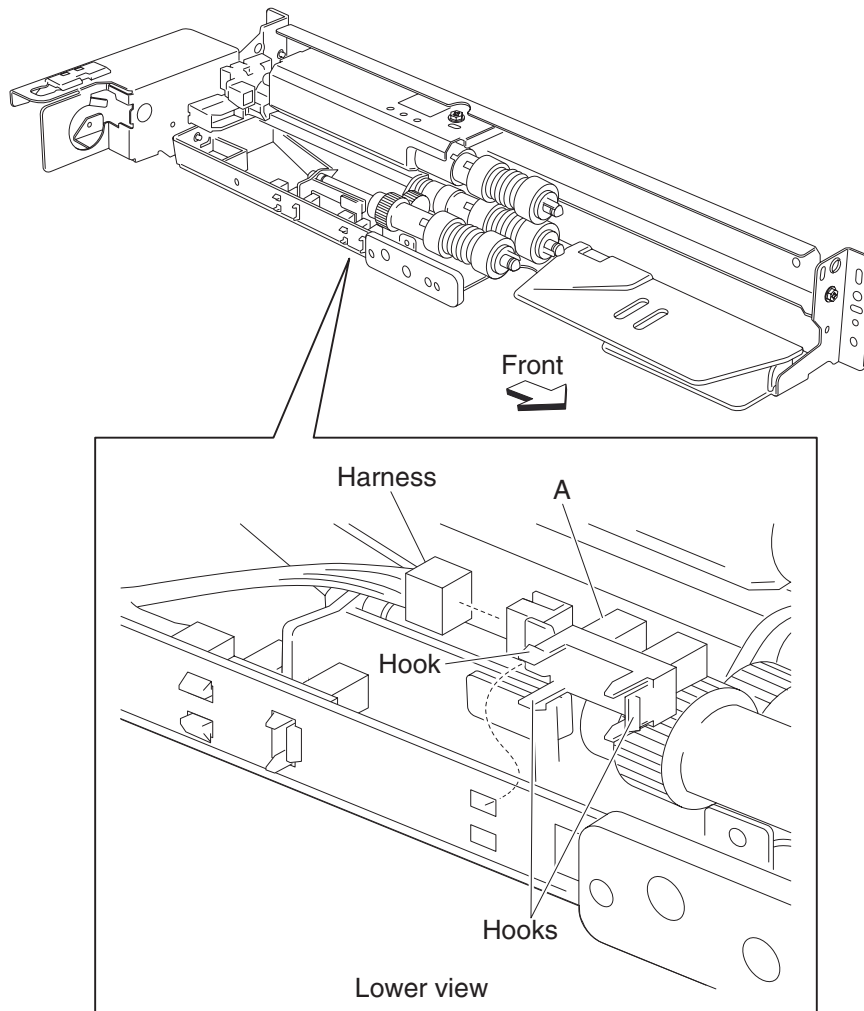
## 2X 500-sheet drawer (2TM)—sensor (media level) removal

1. Remove the media feed unit assembly. See “2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9 or “2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11.
2. Disconnect the connector from the sensor (media level) (A).
3. Release the hooks securing the sensor (media level) (A) to the media feed unit assembly.
4. Remove the sensor (media level) (A).



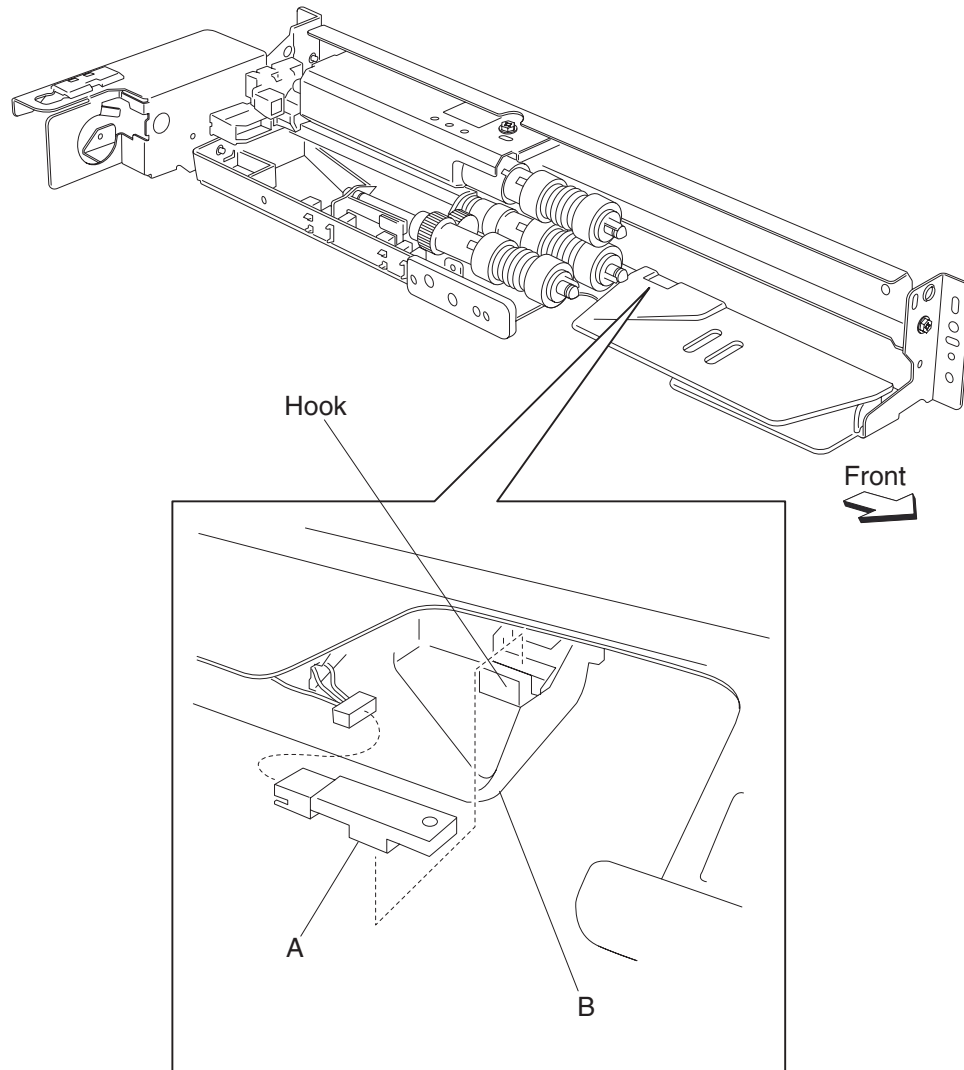
**2X 500-sheet drawer (2TM)—sensor (media out) removal**

1. Remove the media feed unit assembly. See “**2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)**” on page 4-9 or “**2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)**” on page 4-11.
2. Remove the media out actuator. See “**2X 500-sheet drawer (2TM)— media out actuator removal**” on page 4-22.
3. Disconnect the connector from the sensor (media out) (A).
4. Release the hooks securing the sensor (media out) (A) to the media feed unit assembly.
5. Remove the sensor (media out) (A).



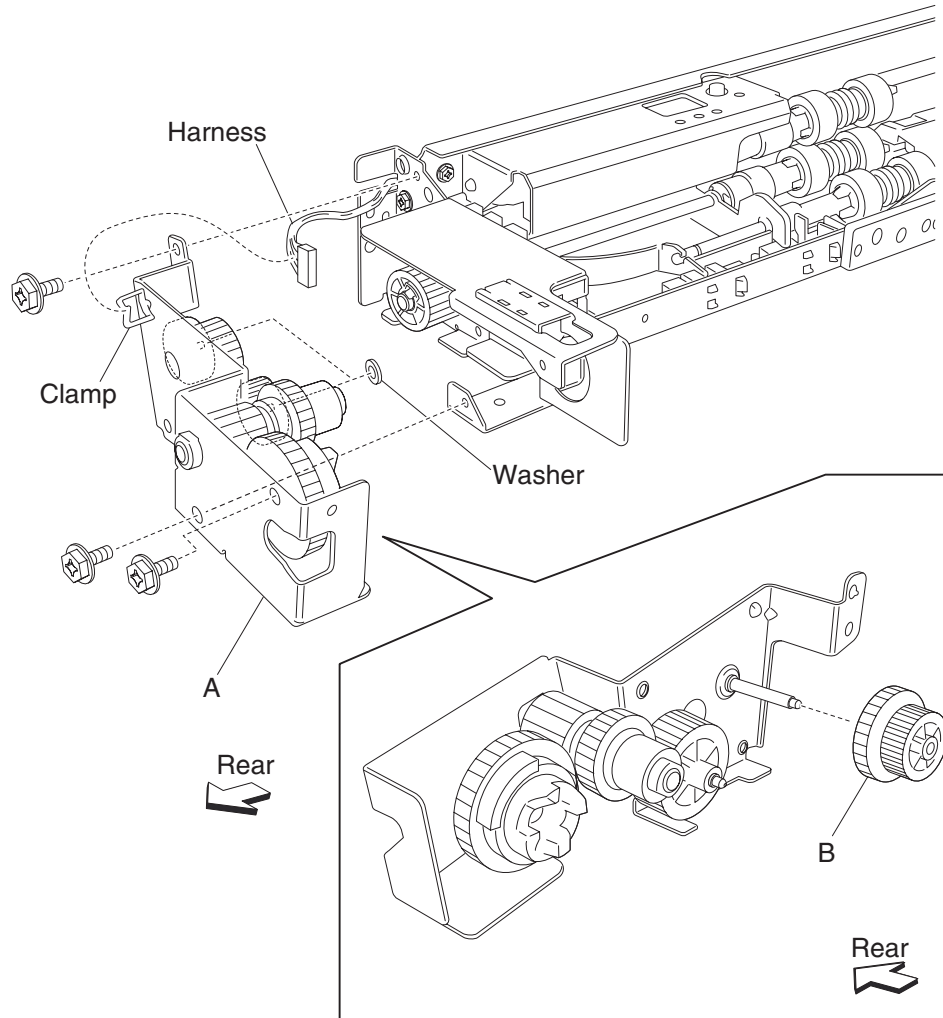
**2X 500-sheet drawer (2TM)—sensor (pre-feed) removal**

1. Remove the media feed unit assembly. See **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9** or **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11**.
2. Remove the sensor (pre-feed) (A) from the feed unit front guide (B).
3. Disconnect the connector from the sensor (pre-feed) (A).



## 2X 500-sheet drawer (2TM)—media feed unit drive gear - 28 / 21 tooth removal

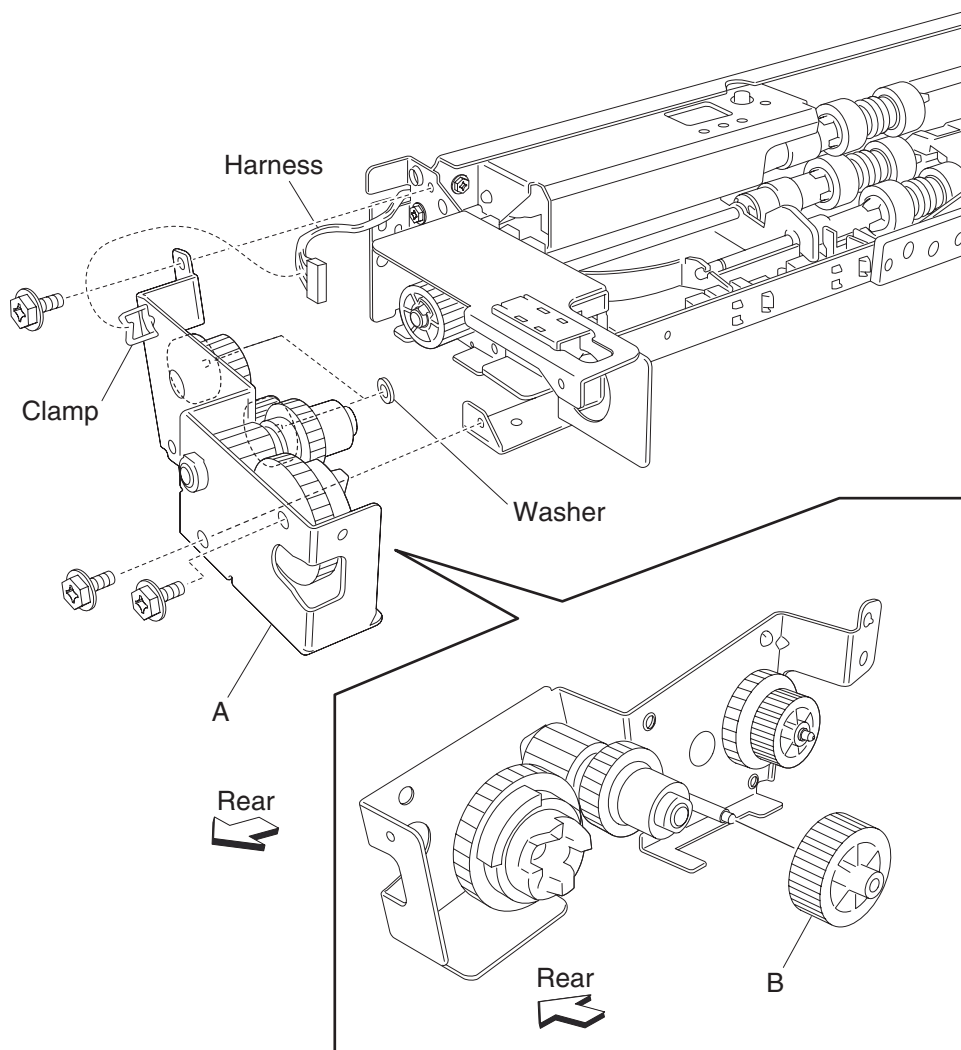
1. Remove the media feed unit assembly. See “2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9 or “2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).  
**Note:** The gears may become detached from the bracket (A).
5. Remove the feed unit drive gear - 28 tooth / 21 tooth (B).



**Note:** Before re-installing, ensure all gears and washers are securely attached to the bracket (A).

**2X 500-sheet drawer (2TM)—media feed unit drive gear - 29 tooth removal**

1. Remove the media feed unit assembly. See **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9** or **“2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11**.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).  
**Note:** The gears may become detached from the bracket (A).
5. Remove the feed unit drive gear - 29 tooth (B).

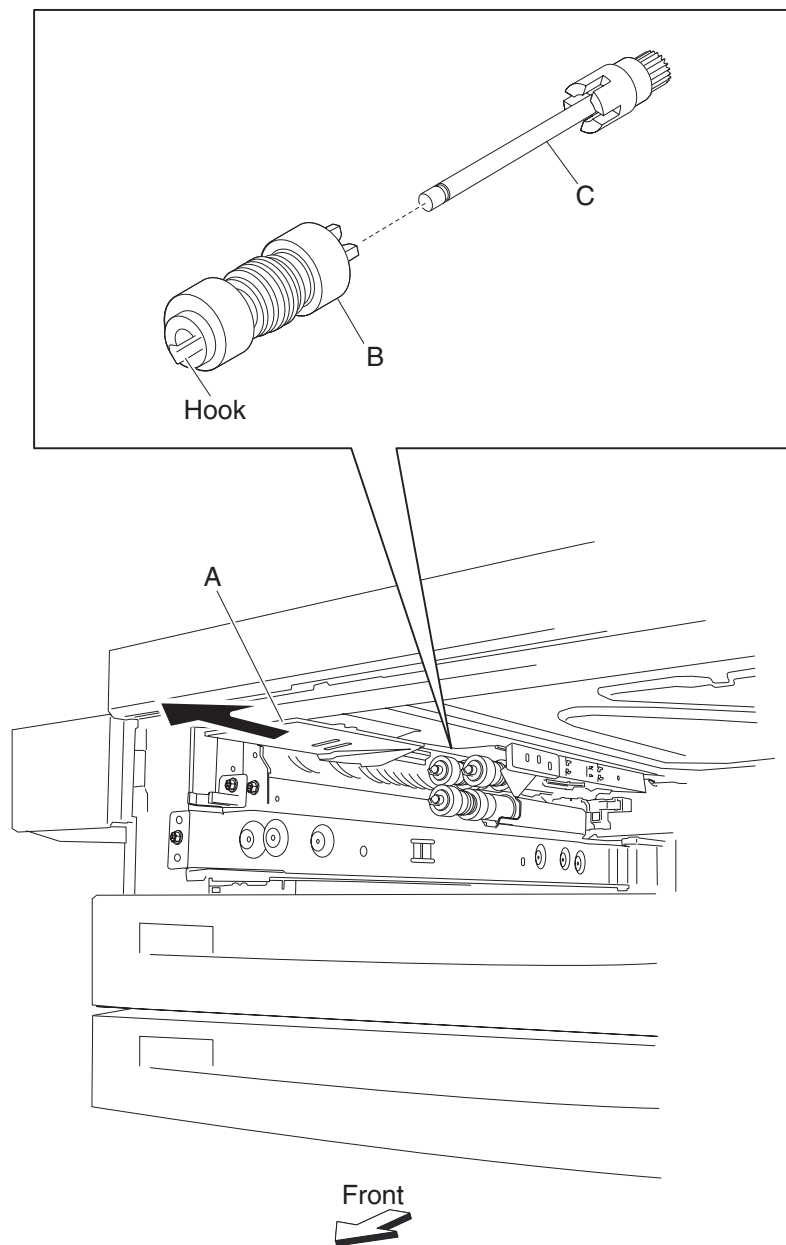


**Note:** Before re-installing, ensure all gears and washers are securely attached to the bracket (A).

**2X 500-sheet drawer (2TM)—feed roll removal**

1. Remove the media tray assembly.
2. Move the feed unit front guide (A) in the direction of the arrow.
3. Release the hook securing the feed roll (B) to the shaft (C).
4. Remove the feed roll (B).

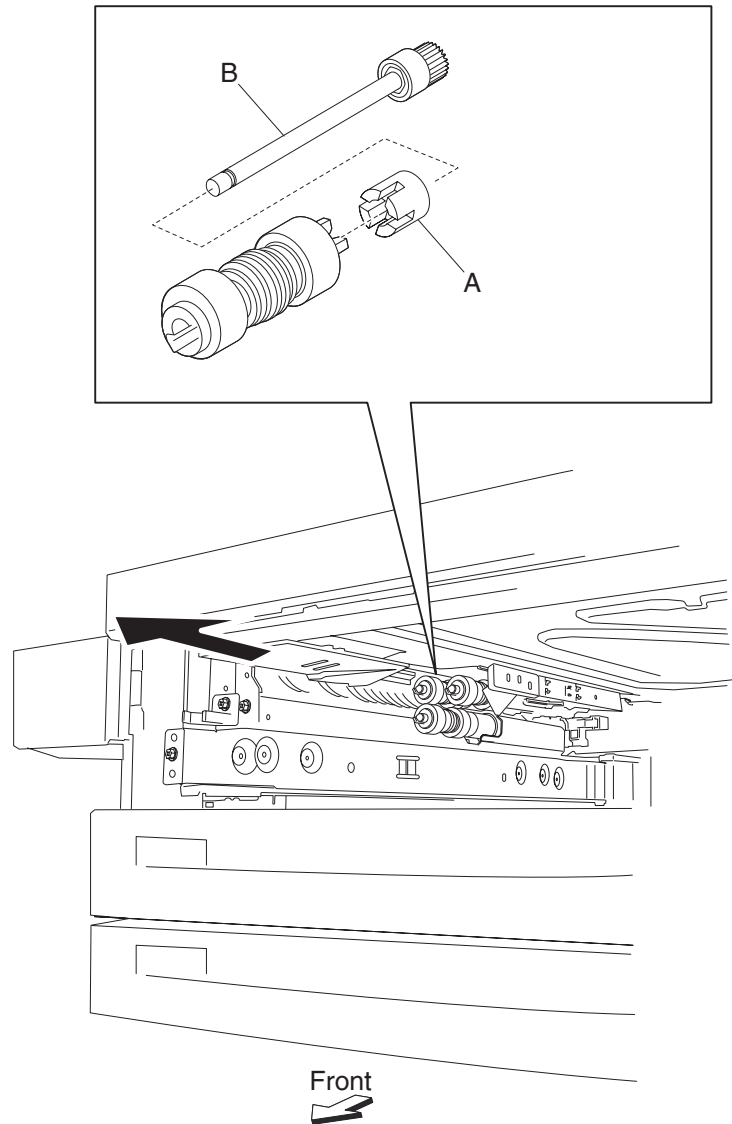
**Note:** Do not touch the rubber surface of the feed roll (B).



**Note:** Before re-installing, do not touch the rubber surface of the feed roll (B).

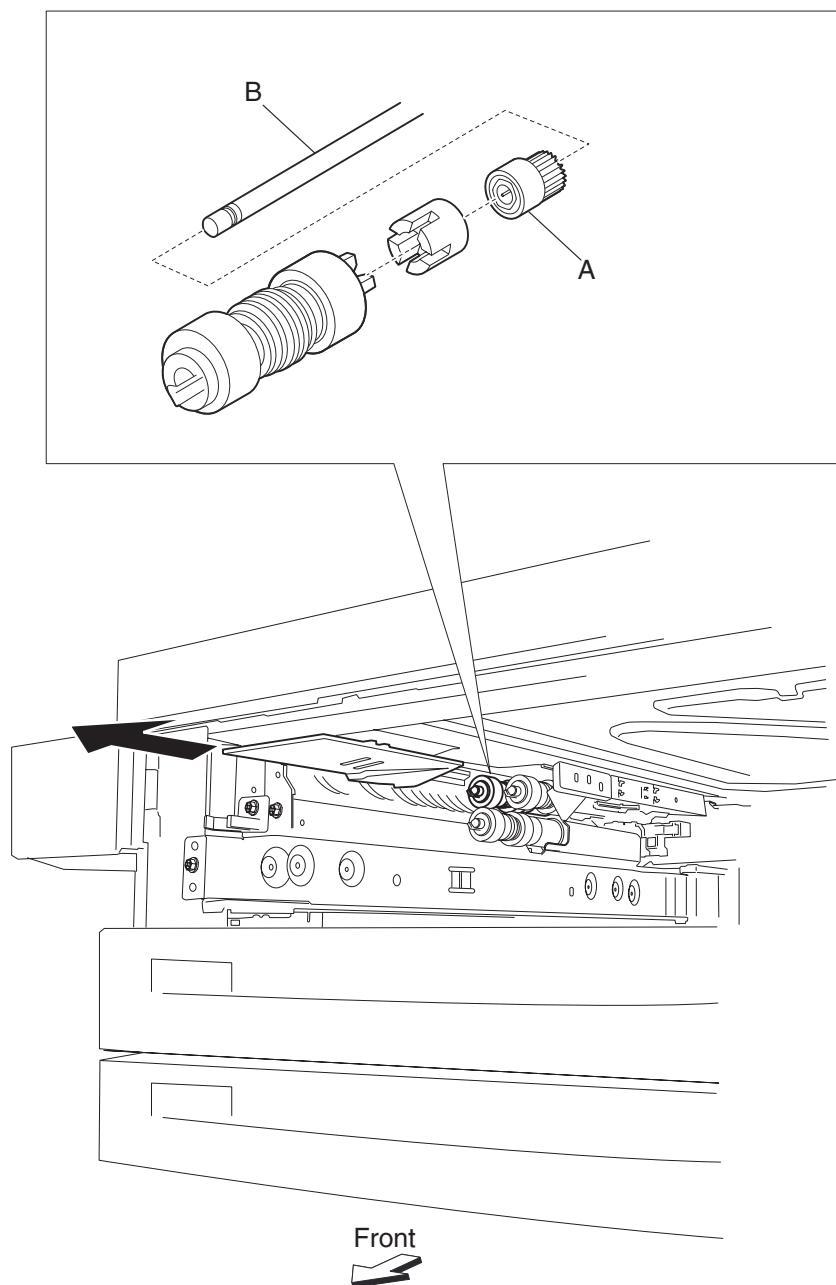
**2X 500-sheet drawer (2TM)—feed roll one-way clutch removal**

1. Remove the media tray assembly.
2. Remove the feed roll. See **"2X 500-sheet drawer (2TM)— feed roll removal"** on page 4-28.
3. Remove the feed roll one-way clutch (A) from the shaft (B).



**2X 500-sheet drawer (2TM)—feed roll one-way gear 22 tooth removal**

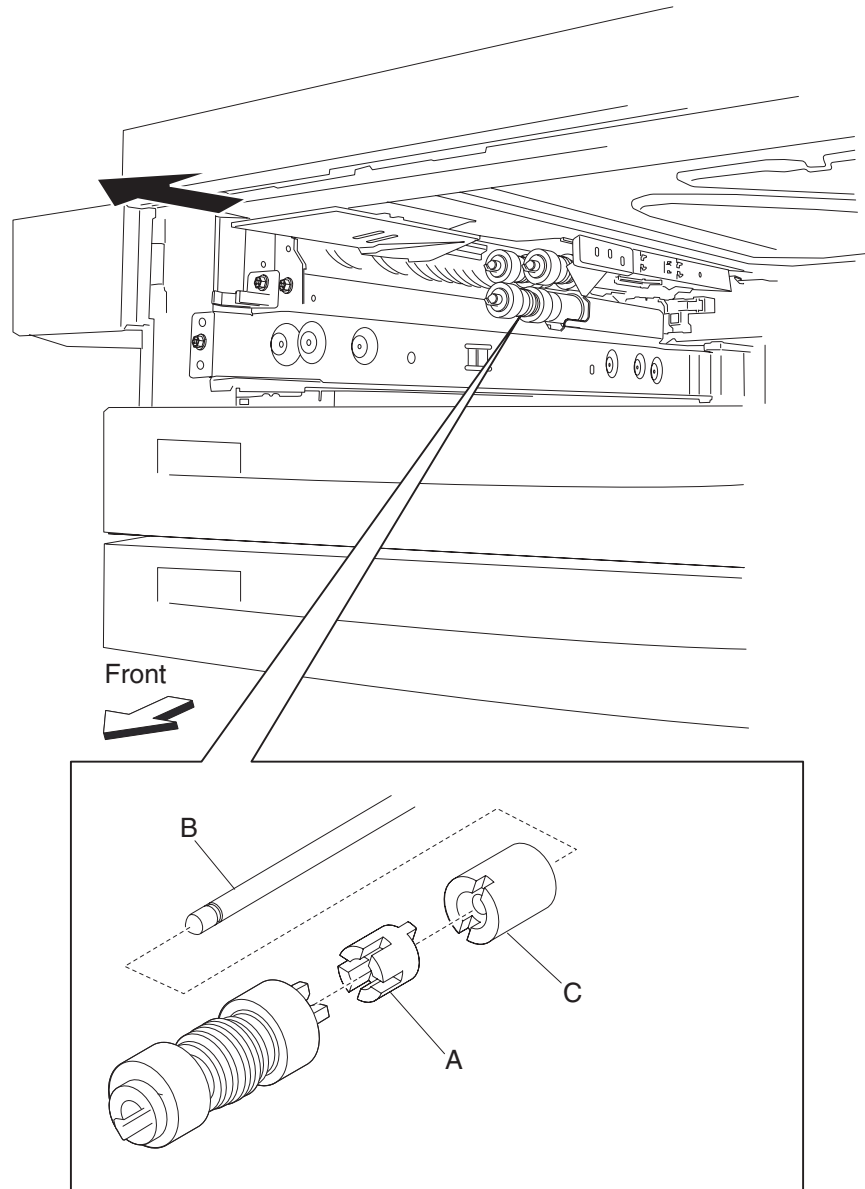
1. Remove the media tray assembly.
2. Remove the feed roll. See **“2X 500-sheet drawer (2TM)— feed roll removal” on page 4-28.**
3. Remove the feed roll one-way clutch. See **“2X 500-sheet drawer (2TM)— feed roll one-way clutch removal” on page 4-29.**
4. Remove the feed roll one-way gear 22 tooth (A) from the shaft (B).





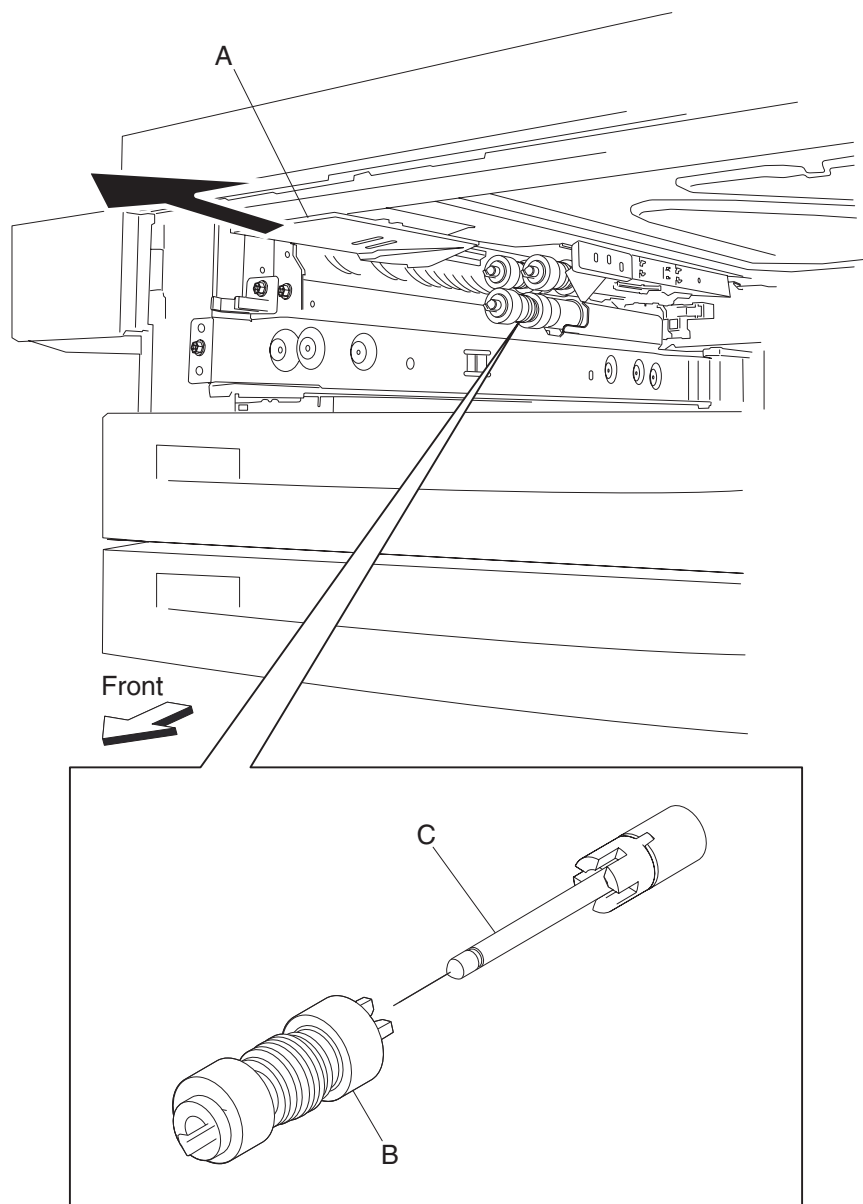
**2X 500-sheet drawer (2TM)—separation roll one-way friction clutch removal**

1. Remove the media tray assembly.
2. Remove the separation roll. See **"2X 500-sheet drawer (2TM)— separation roll removal"** on page 4-32.
3. Remove the separation roll spacer (A) from the shaft (B).
4. Remove the separation roll one-way friction clutch (C).



**2X 500-sheet drawer (2TM)—separation roll removal**

1. Remove the media tray assembly.
2. Move the feed unit front guide (A) in the direction of the arrow.
3. Release the hook securing the separation roll (B) to the shaft (C).

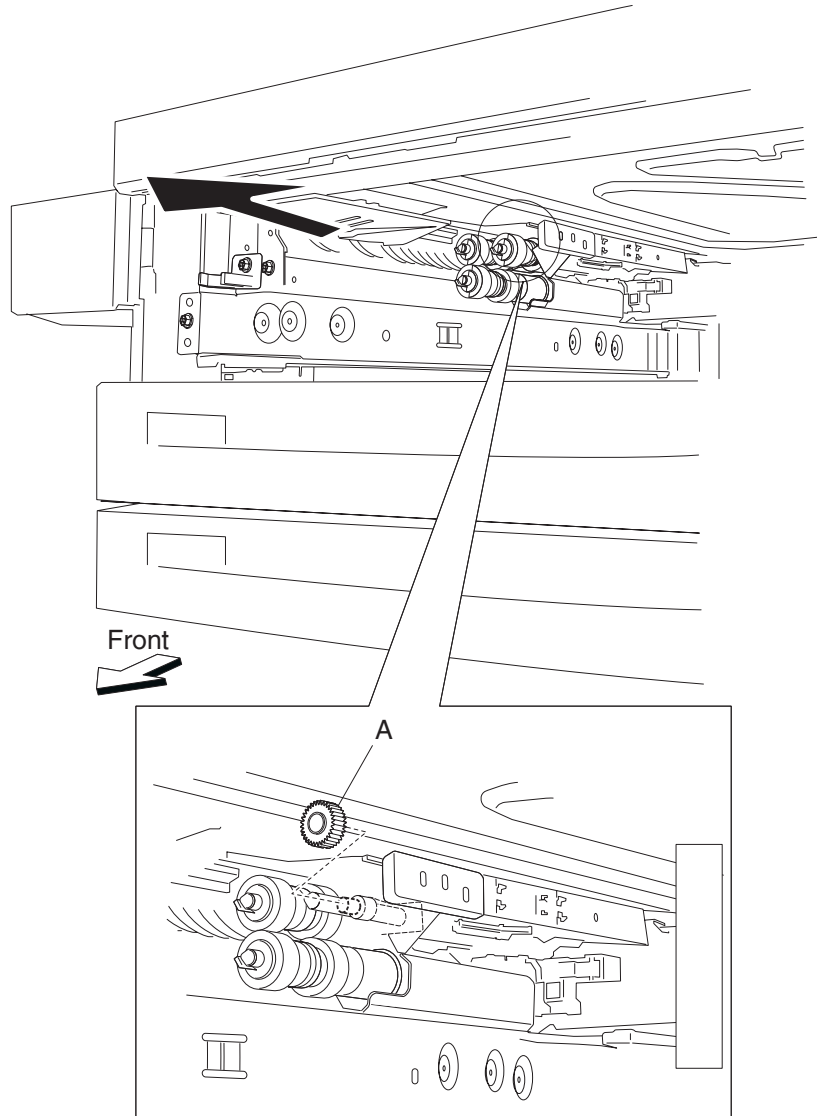


4. Remove the separation roll (B).  
**Note:** Do not touch the rubber surface of the feed roll (B).

**Note:** Before re-installing, do not touch the rubber surface of the separation roll (B).

**2X 500-sheet drawer (2TM)—pick roll idler gear - 33 tooth removal**

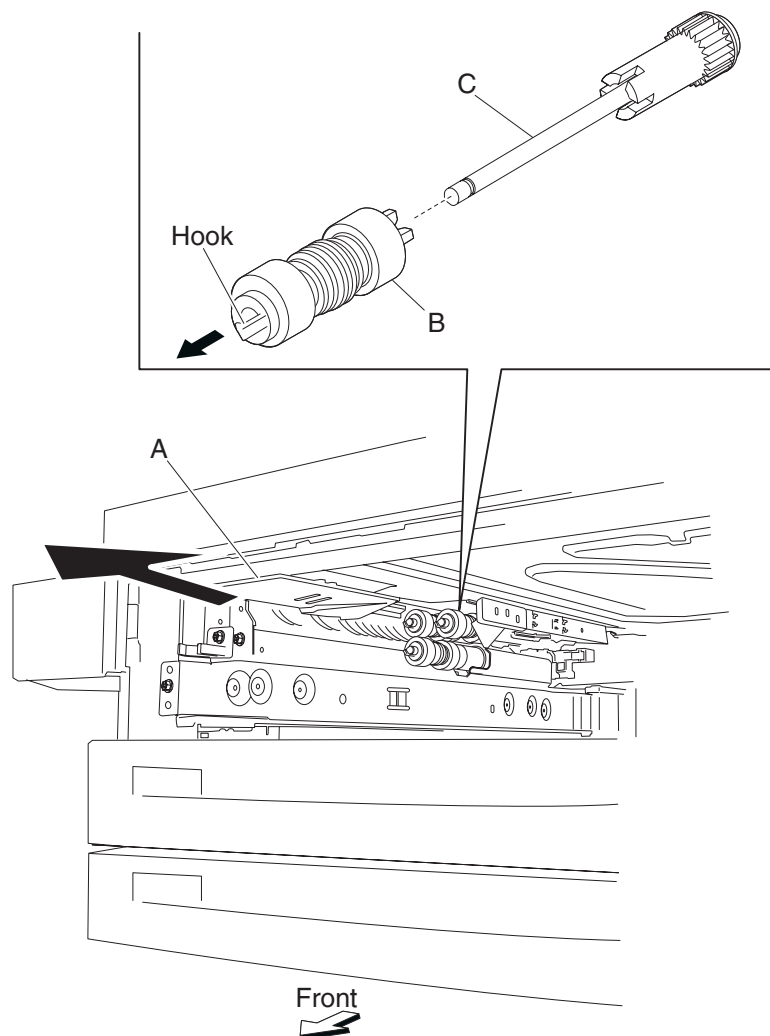
1. Remove the media tray assembly.
2. Remove the pick roll. See **"2X 500-sheet drawer (2TM)— pick roll removal"** on page 4-34.
3. Remove the pick roll drive gear - 25 tooth. See **"2X 500-sheet drawer (2TM)— pick roll drive gear 25 tooth removal"** on page 4-35.
4. Remove the pick roll idler gear - 33 tooth (A).



**2X 500-sheet drawer (2TM)—pick roll removal**

1. Remove the media tray assembly.
2. Move the front guide (A) in the direction of the arrow.
3. Release the hook securing the pick roll (B) to the shaft (C).
4. Remove the pick roll (B).

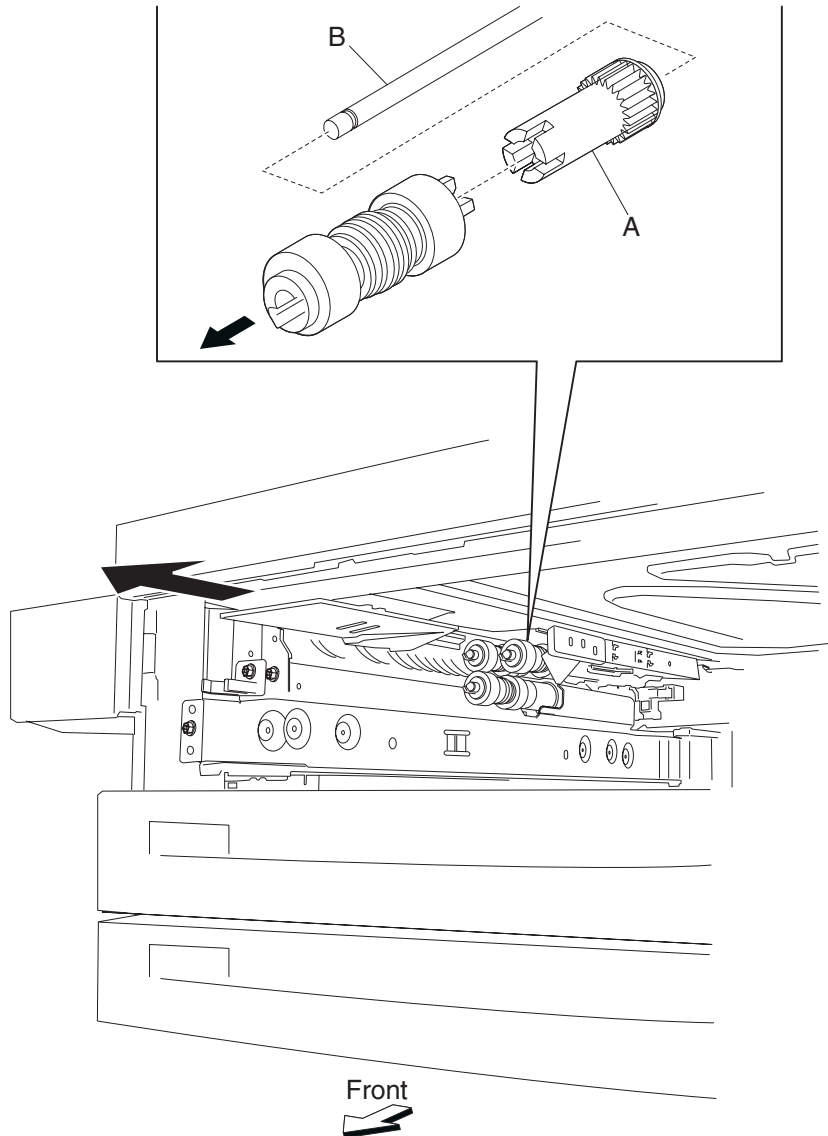
**Note:** Do not touch the rubber surface of the feed roll (B).



**Note:** Before re-installing, do not touch the rubber surface of the pick roll (B).

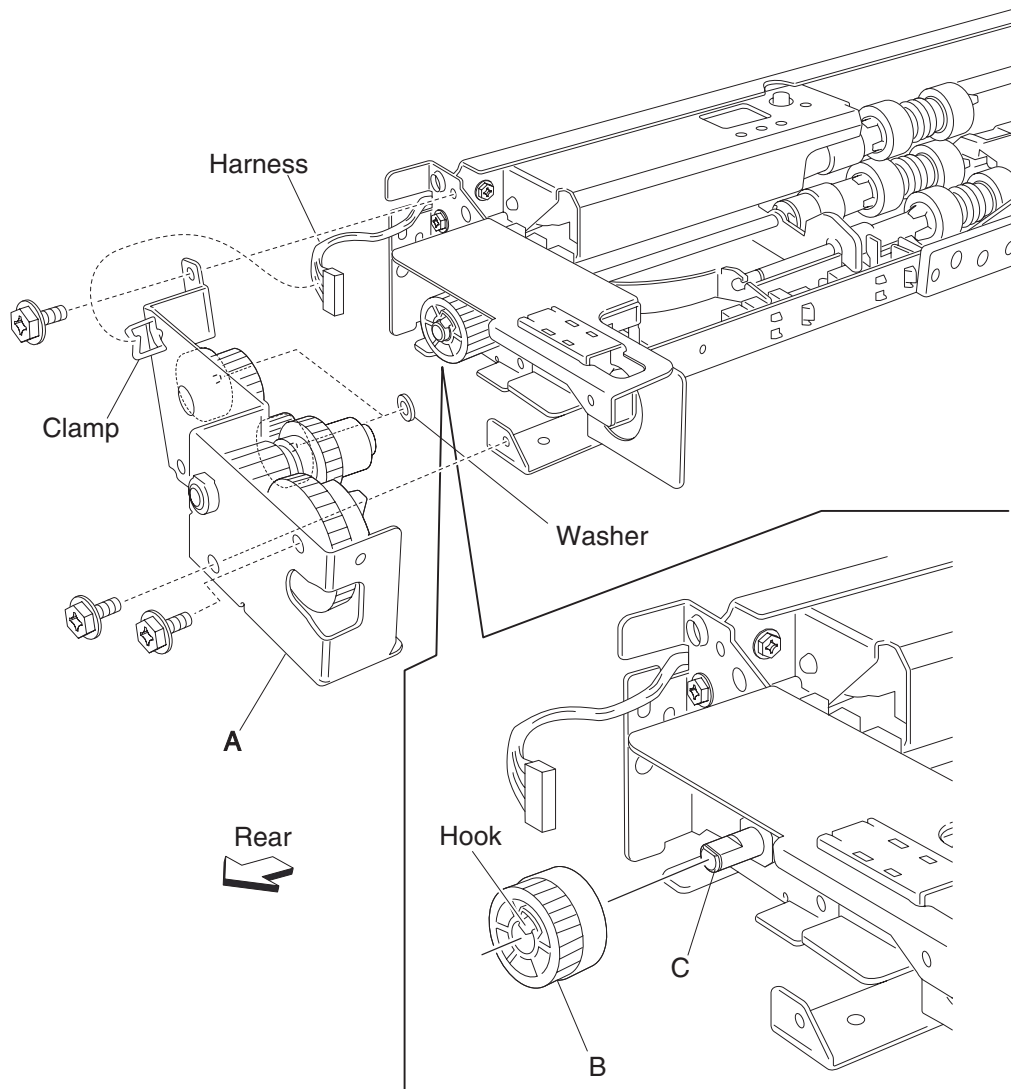
**2X 500-sheet drawer (2TM)—pick roll drive gear 25 tooth removal**

1. Remove the media tray assembly.
2. Remove the pick roll. See **“2X 500-sheet drawer (2TM)— pick roll removal” on page 4-34.**
3. Remove the pick roll drive gear 25 tooth (A) from shaft (B).



## 2X 500-sheet drawer (2TM)—feed unit drive gear - 27 tooth removal

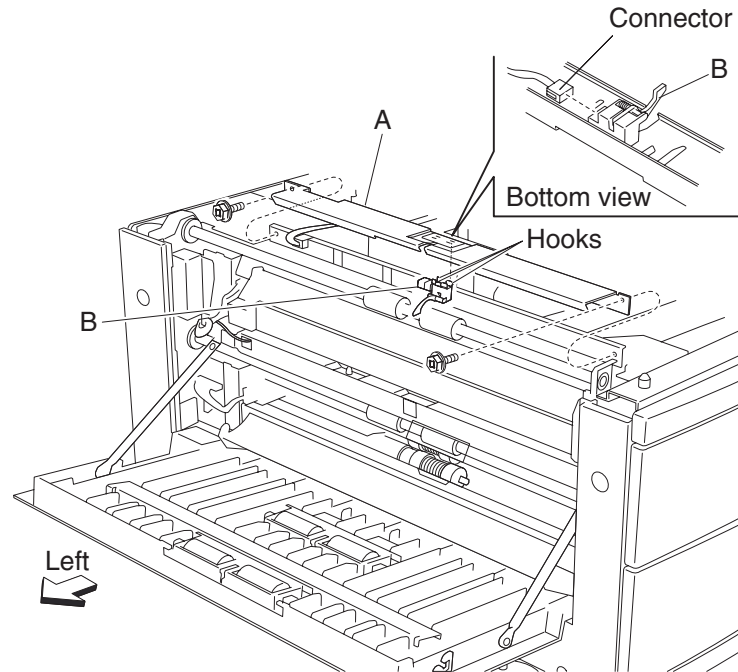
1. Remove the media feed unit assembly. See “2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 3)” on page 4-9 or “2X 500-sheet drawer (2TM)— media feed unit assembly removal (tray 4)” on page 4-11.
2. Remove the harness from the bracket (A).
3. Remove the three screws securing the bracket (A) to the media feed unit assembly.
4. Remove the bracket (A).  
**Note:** The gears may become detached from the bracket (A).
5. Remove the hook securing the feed unit drive gear - 27 tooth (B) to the shaft (C).
6. Remove the feed unit drive gear - 27 tooth (B).



**Note:** Before re-installing, ensure all gears and washers are securely attached to the bracket (A).

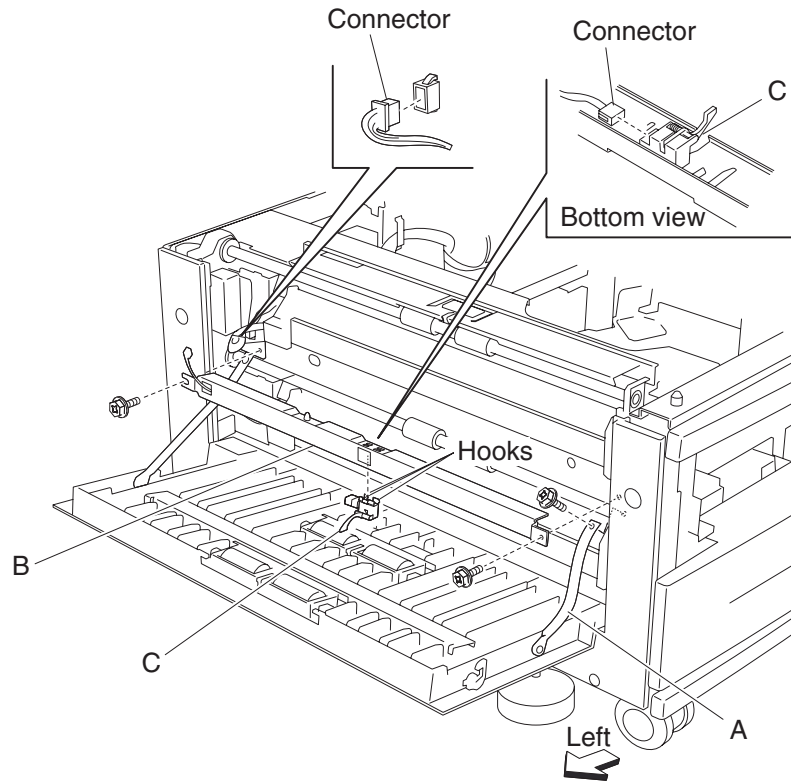
**2X 500-sheet drawer (2TM)—sensor (tray 3 feed-out) removal**

1. Open the 2TM/TTM left door assembly.
2. Remove the two screws securing the upper bracket (A).
3. Disconnect the connector from the sensor (tray 3 feed-out) (B).
4. Release the hooks securing the sensor (tray 3 feed-out) (B) to the upper bracket (A).
5. Remove the sensor (tray 3 feed-out) (B).



**2X 500-sheet drawer (2TM)—sensor (tray 4 feed-out) removal**

1. Open the 2TM/TTM left door assembly.
2. Remove the screw securing the 2TM/TTM left door support strap (A).
3. Remove the two screws securing the lower bracket (B).
4. Disconnect the connector from the sensor (tray 4 feed-out) (C).
5. Release the hooks securing the sensor (tray 3 feed-out) (C) to the lower bracket (B).
6. Remove the sensor (tray 3 feed-out) (C).





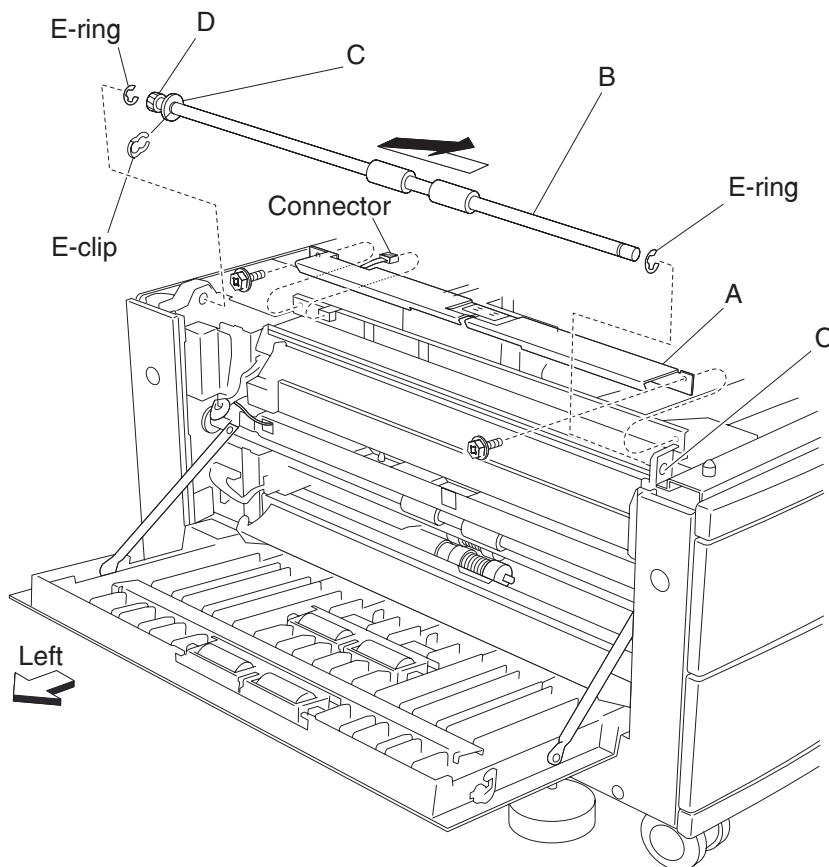
## 2X 500-sheet drawer (2TM)—upper media transport roll removal

1. Open the 2TM/TTM left door assembly.
2. Remove the two screws securing the upper bracket (A).
3. Disconnect the connector from the upper bracket (A).
4. Remove the large e-clip securing the 2TM/TTM media transport roll assembly (B).
5. Remove the bearing (C).
6. Move the 2TM/TTM media transport roll assembly (B) to the right and outward in the direction of the arrow.
7. Remove the 2TM/TTM media transport roll assembly (B).

**Note:** One of the bearings may become detached.

8. Remove the two e-clips with a prying tool on the 2TM/TTM media transport roll assembly (B), the gear (D), and the bearing (C).

**Note:** When removing the 2TM/TTM media transport roll assembly (B), do not touch the rubber surface.



**Note:** Before reinstalling the 2TM/TTM media transport roll assembly (B), do not touch the rubber surface.

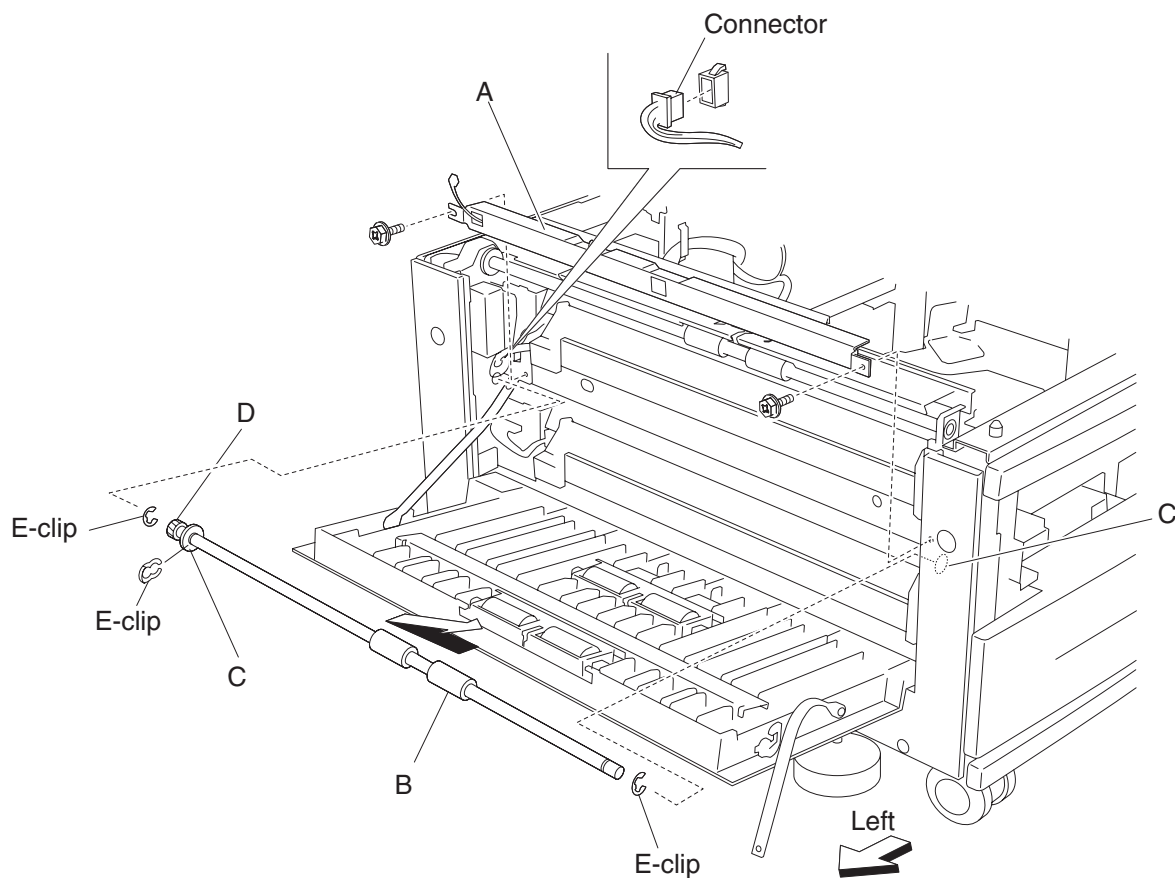
## 2X 500-sheet drawer (2TM)—lower media transport roll assembly removal

1. Open the 2TM/TTM left door assembly.
2. Remove the two screws securing the lower bracket (A).
3. Disconnect the connector from the lower bracket (A).
4. Remove the large e-clip securing the 2TM/TTM media transport roll assembly (B).
5. Remove the bearing (C).
6. Move the 2TM/TTM media transport roll assembly (B) to the right and outward in the direction of the arrow.
7. Remove the 2TM/TTM media transport roll assembly (B).

**Note:** One of the bearings may become detached.

8. Remove the two e-clips with a prying tool on the 2TM/TTM media transport roll assembly (B), the gear (D), and the bearing (C).

**Note:** When removing the 2TM/TTM media transport roll assembly (B), do not touch the rubber surface.

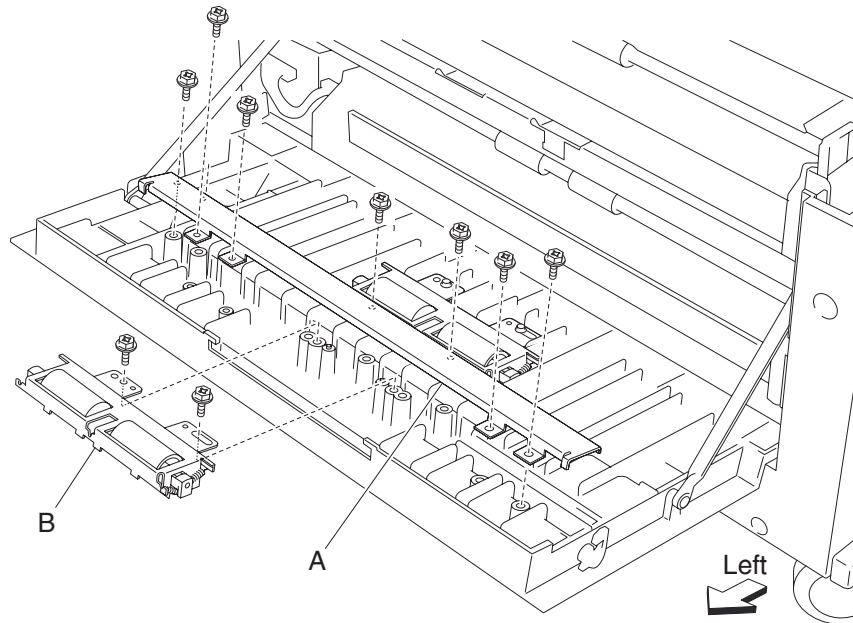


**Note:** Before re-installing the 2TM/TTM media transport roll assembly (B), do not touch the rubber surface.

**2X 500-sheet drawer (2TM)—left door pinch roll assembly removal**

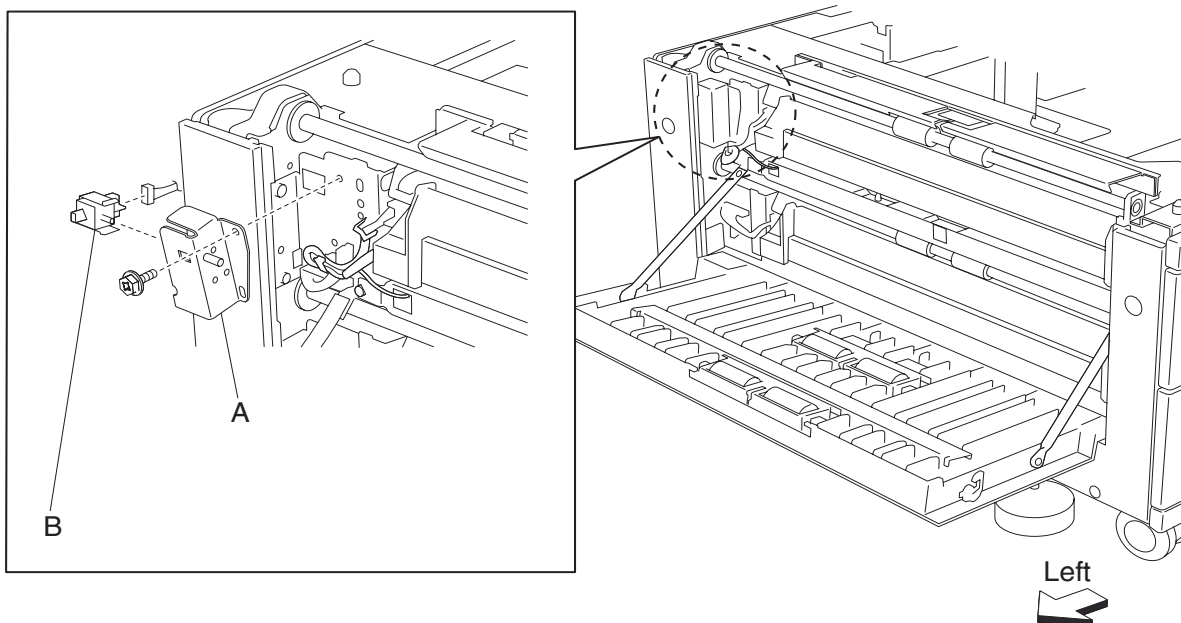
**Note:** This procedure can be used for both the upper and left lower door pinch roll assembly.

1. Open the 2TM/TTM left door assembly.
2. Remove the four screws securing the bracket (A) to the left door assembly (A).
3. Remove the bracket (A).
4. Remove the two screws securing the left door pinch roll assembly (B).
5. Remove the left door pinch roll assembly (B).



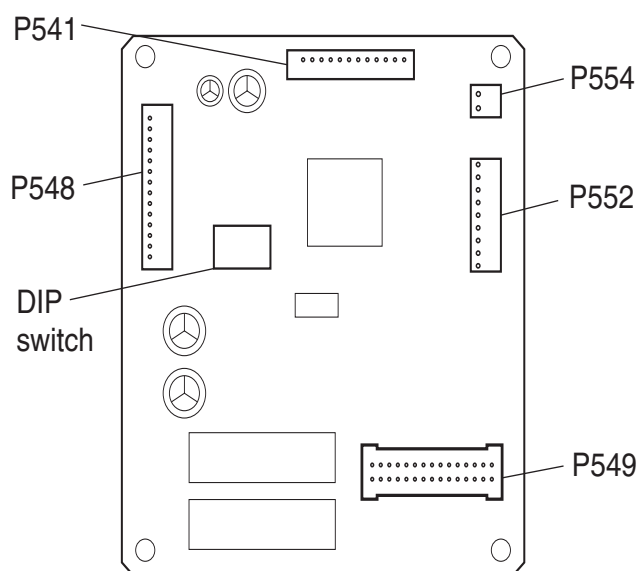
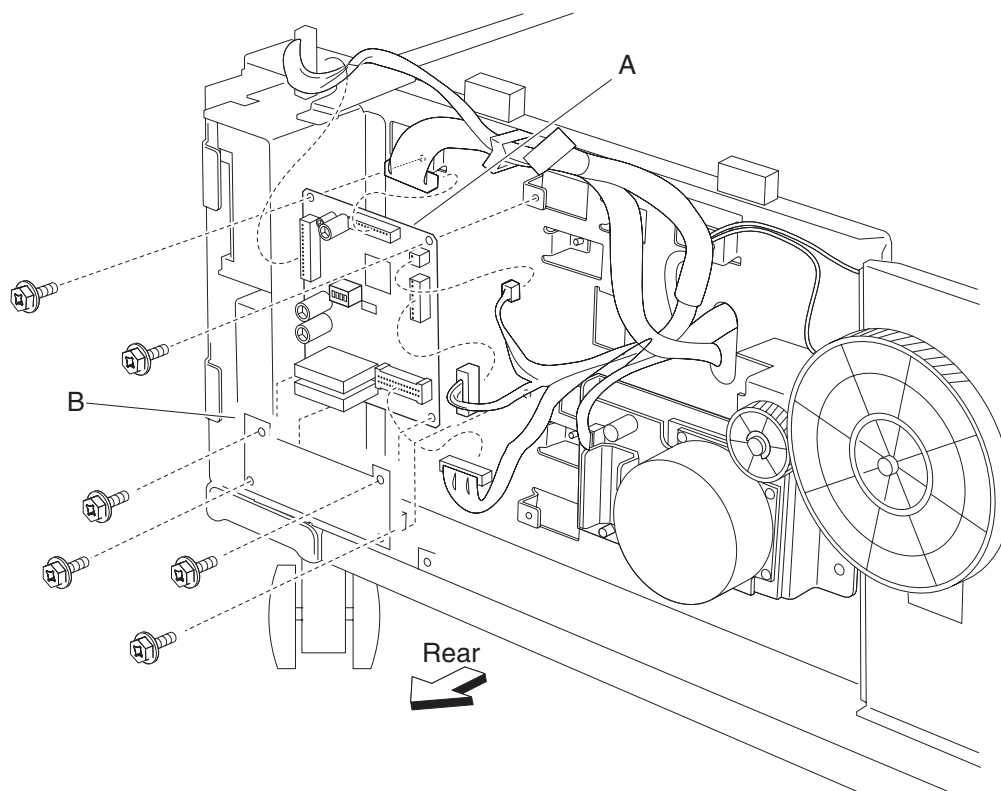
**2X 500-sheet drawer (2TM)—switch (2TM/TTM left door interlock) removal**

1. Open the 2TM/TTM left door assembly.
2. Remove the one screw securing the bracket (A).
3. Disconnect the connector from the switch (2TM/TTM left door interlock) (B).
4. Release the hooks securing the switch (2TM/TTM left door interlock) (B) to the bracket (A).
5. Remove the switch (2TM/TTM left door interlock) (B).

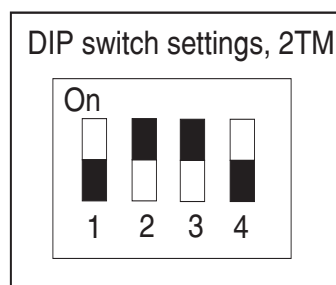


## 2X 500-sheet drawer (2TM)—2TM/TTM controller card assembly removal

1. Remove the rear cover. See **"2X 500-sheet drawer (2TM)—rear cover removal"** on page 4-5.
2. Disconnect all the connectors from the 2TM/TTM controller card assembly (A).
3. Remove the four screws securing the 2TM/TTM controller card assembly (A).
4. Remove the 2TM/TTM controller card assembly (A).
5. Remove the bracket (B) from the 2TM/TTM controller card assembly.

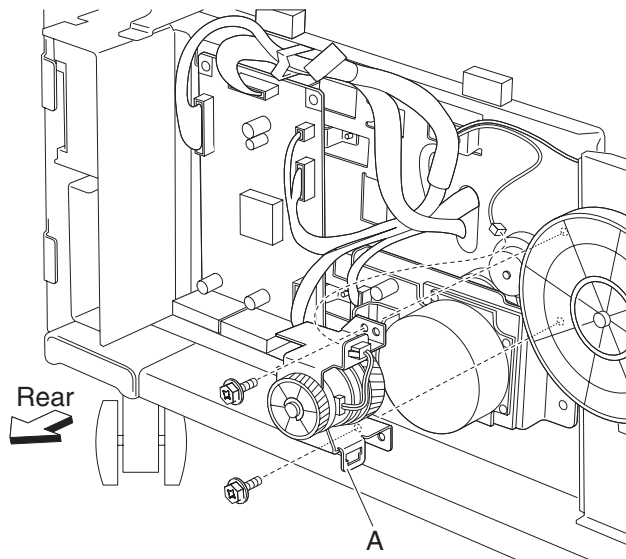


2TM /TTM controller card

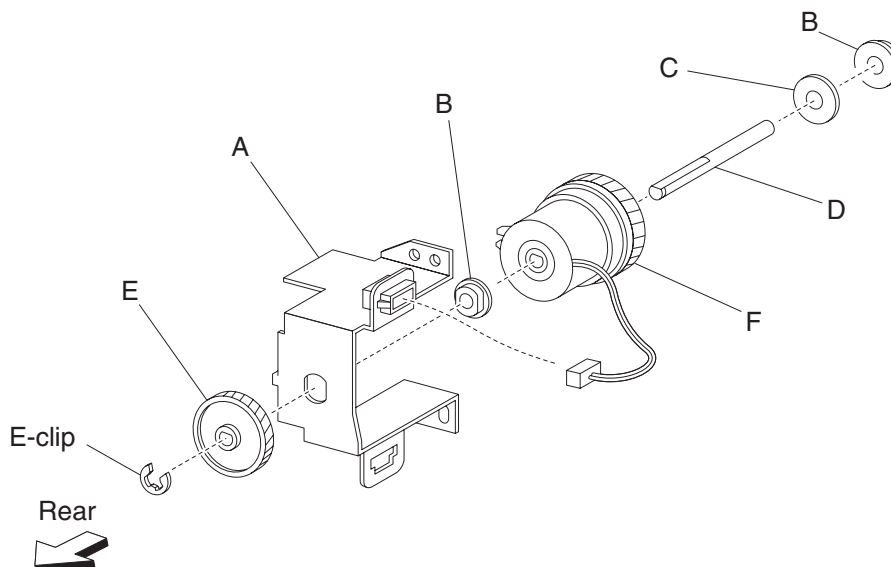


## 2X 500-sheet drawer (2TM)—transport clutch removal

1. Remove the rear cover. See **"2X 500-sheet drawer (2TM)— rear cover removal"** on page 4-5.
2. Disconnect the connector from the machine to the bracket (A).
3. Remove the two screws securing the bracket (A) to the frame assembly.



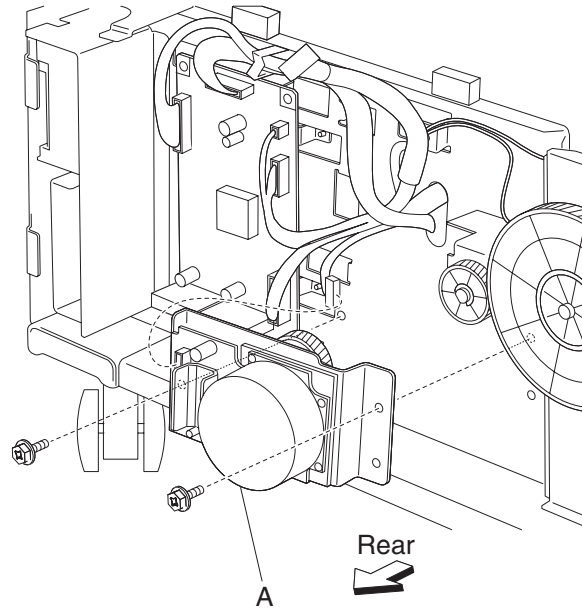
4. Remove the bracket (A).  
**Note:** The bushing (B) and washer (C) may become detached from the shaft (D).
5. Use a prying tool to remove the e-clip securing the clutch gear 38 tooth (E) to the shaft (D), and remove the clutch gear - 38 tooth (E).
6. Disconnect the connector of the transport clutch (F) from the bracket (A).
7. Remove the transport clutch (F).



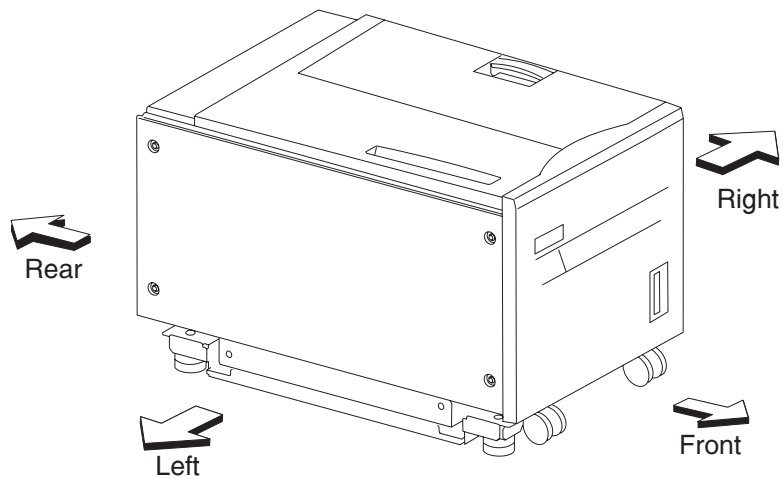
**Note:** Before re-installing, ensure the notch on the transport clutch (F) is placed over the boss of the bracket (A). Ensure the harness does not contact the gears.

## **2X 500-sheet drawer (2TM)—drive motor assembly removal**

1. Remove the rear cover. See **"2X 500-sheet drawer (2TM)— rear cover removal"** on page 4-5.
2. Disconnect the connector harness from the 2TM/TTM drive motor assembly (A).
3. Remove two screws securing the 2TM/TTM drive motor assembly (A) to the machine.
4. Remove the 2TM/TTM drive motor assembly (A).

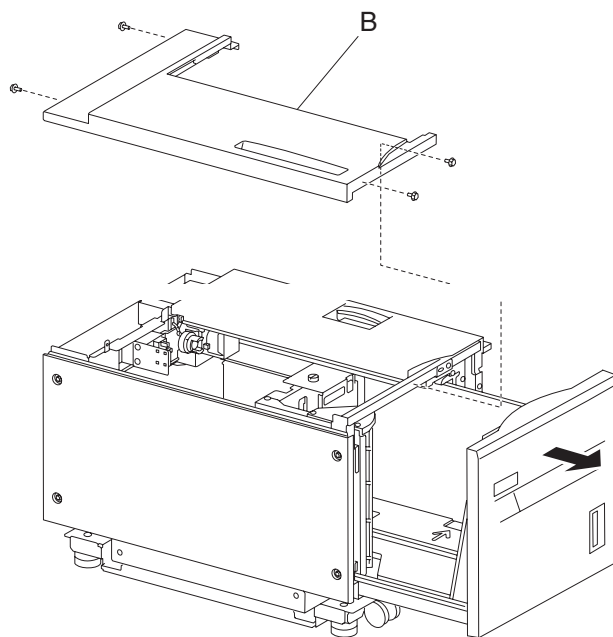


## High capacity feeder (HCF) removals



### *HCF top cover removal*

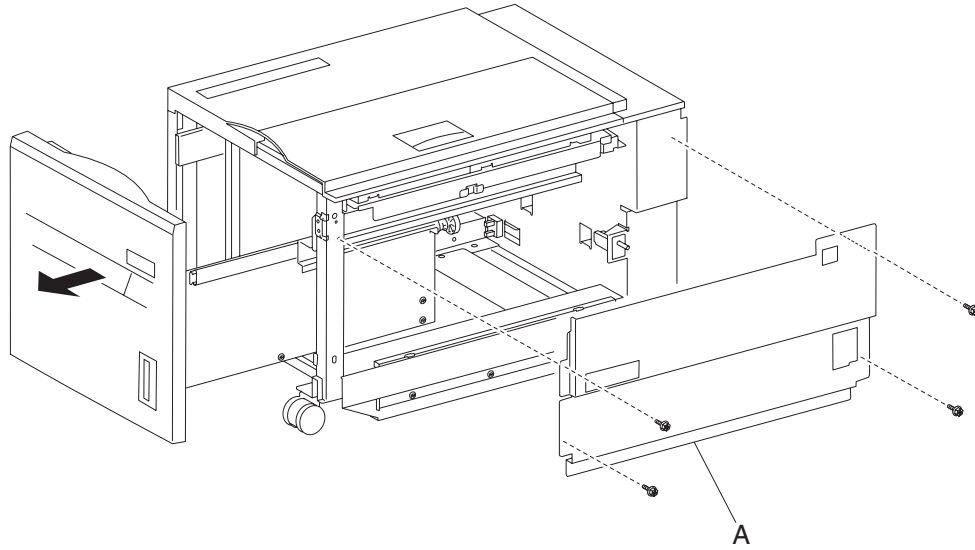
1. Pull out the HCF media tray.
2. Remove the four screws securing the HCF top cover (B).
3. Remove the HCF top cover (B).





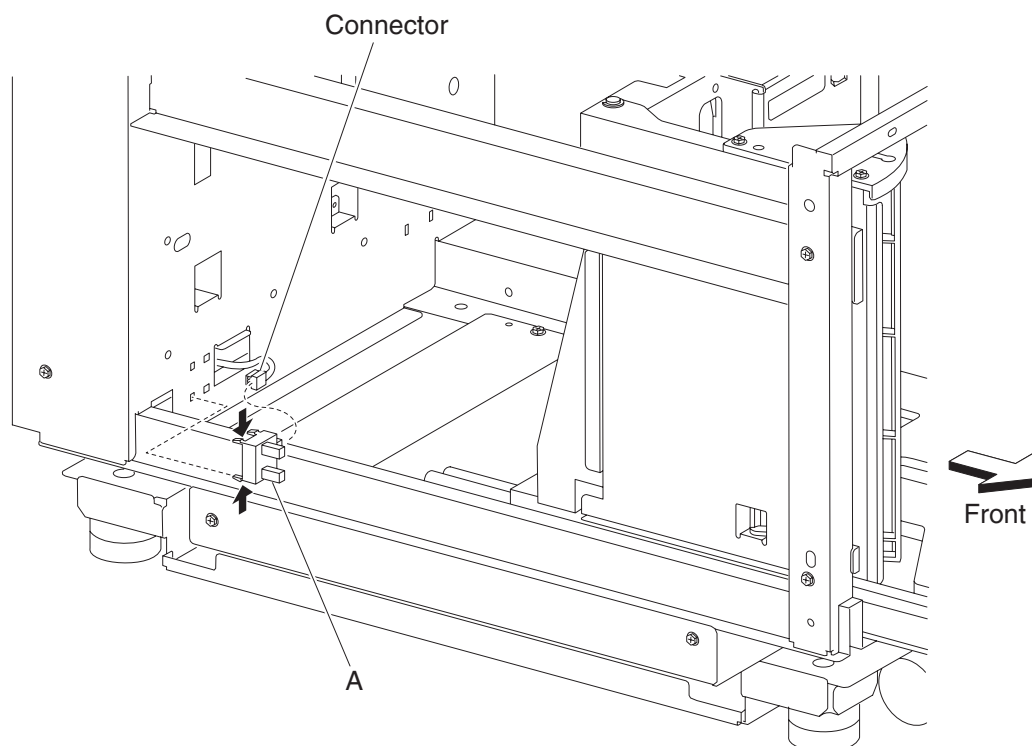
### ***HCF right cover removal***

1. Pull out the HCF media tray.
2. Remove the four screws securing the HCF right cover (A).
3. Remove the HCF right cover (A).



### ***HCF sensor (HCF media tray set) removal***

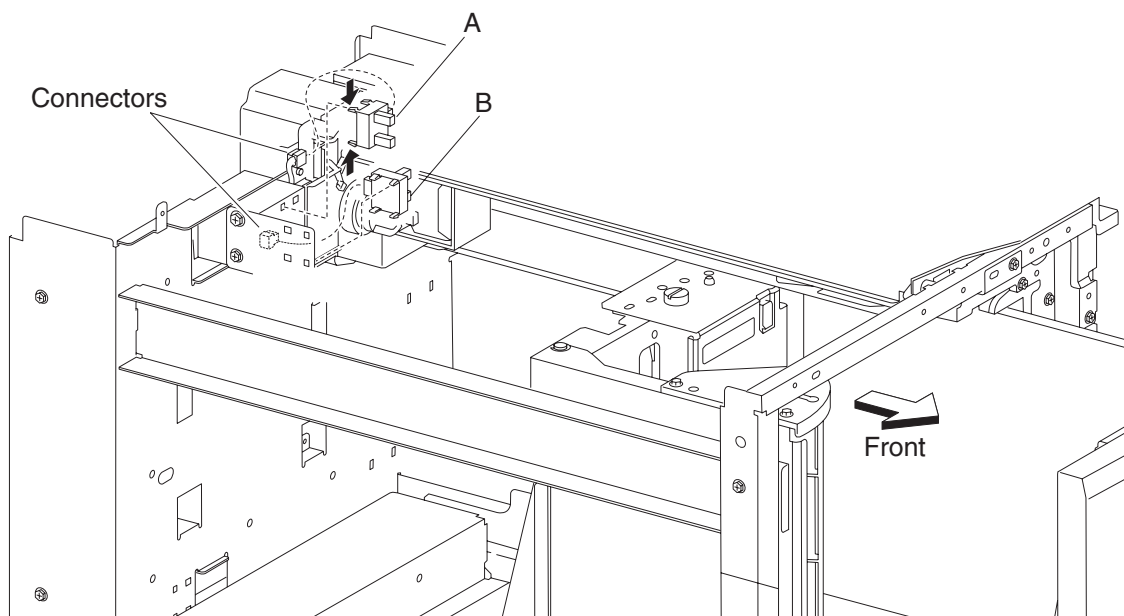
1. Pull out the HCF media tray.
2. Remove the HCF left cover. See **“HCF left cover removal” on page 4-51.**
3. Remove the HCF rear cover. See **“HCF rear cover removal” on page 4-51.**
4. Disconnect the connector from the sensor (HCF media tray set) (A).
5. Release the hooks securing the sensor (HCF media tray set) (A) to the unit.
6. Remove the sensor (HCF media tray set) (A).



## HCF sensor (HCF media size) removal

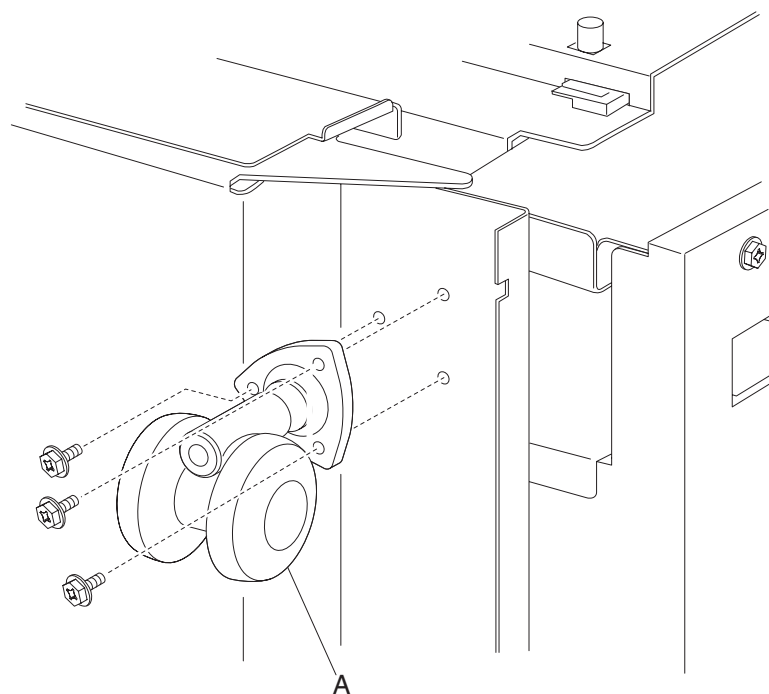
**Note:** This procedure can be applied to HCF sensor (media size L) and the HCF sensor (media size R).

1. Remove the HCF media tray. See **"HCF media tray assembly removal"** on page 4-54.
2. Remove the HCF top cover. See **"HCF top cover removal"** on page 4-46.
3. Remove the HCF rear cover. See **"HCF rear cover removal"** on page 4-51.
4. Disconnect the connector from the sensor (HCF media size R) (A) or the sensor (HCF media size L) (B).
5. Release the hooks securing the sensor (HCF media size R) (A) or the sensor (HCF media size L) (B) to the unit.
6. Remove the sensor (HCF media size R) (A) or the sensor (HCF media size L) (B).



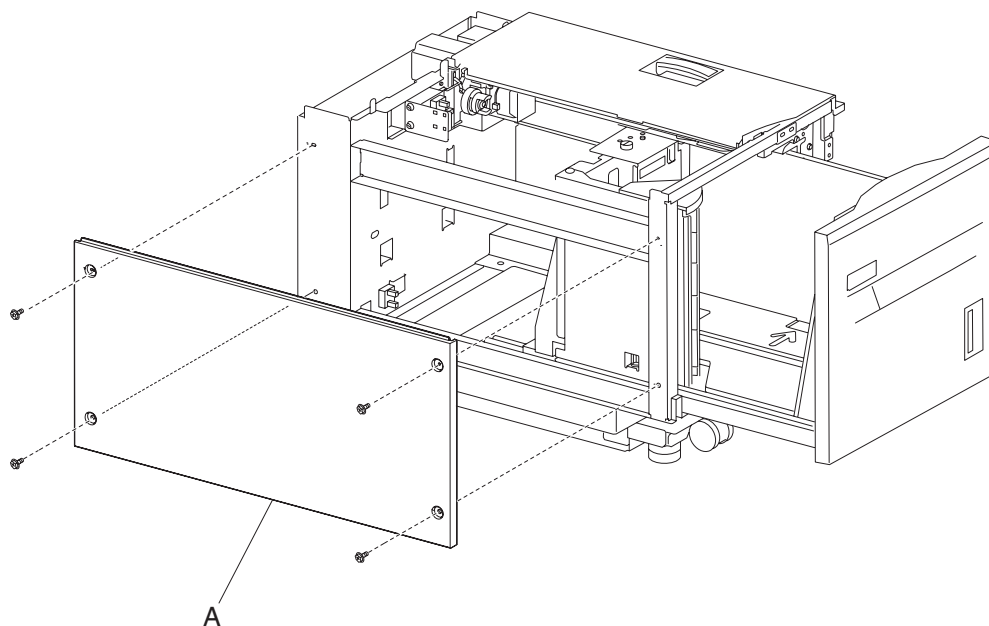
## ***HCF caster removal***

1. Remove the HCF unit from the printer.
2. Place the machine so the HCF left cover faces down.
3. Remove the three screws securing the HCF caster (A) to the unit.
4. Remove the HCF caster (A).



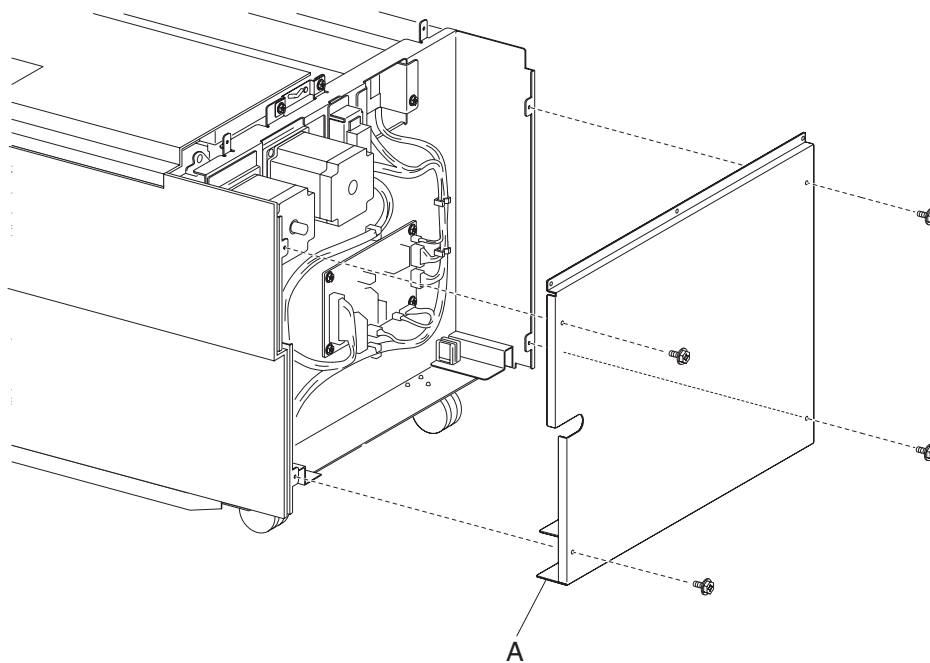
### ***HCF left cover removal***

1. Remove the five screws securing the HCF left cover (A) to the unit.
2. Remove the HCF left cover (A).



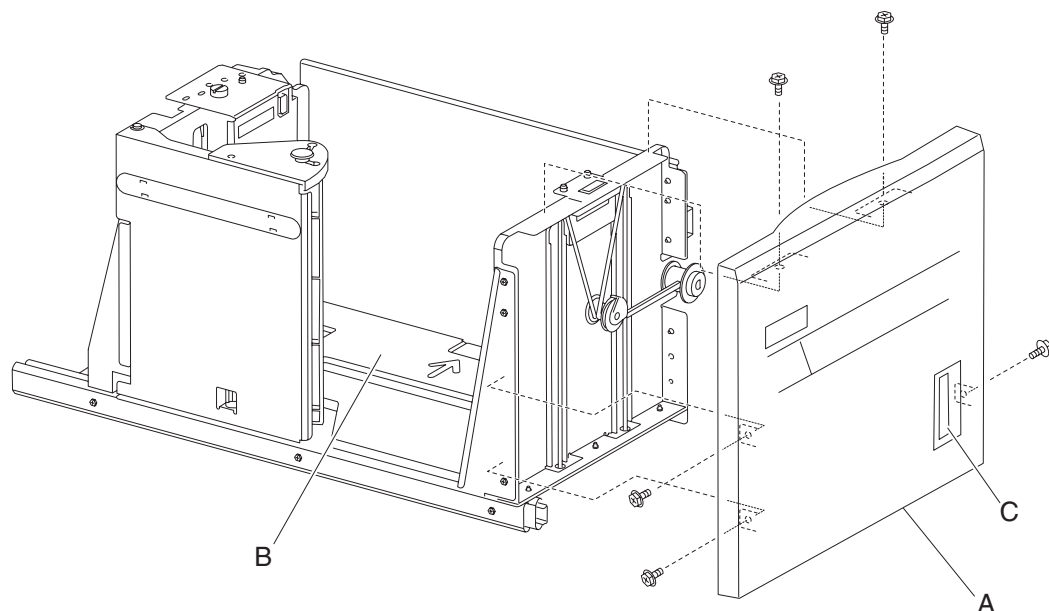
### ***HCF rear cover removal***

1. Remove the four screws securing the HCF rear cover (A) to the unit.
2. Remove the HCF rear cover (A).



### ***HCF media tray front cover removal***

1. Pull out the HCF media tray.
2. Remove the five screws securing the HCF media tray front cover (A) to the HCF media tray.
3. Remove the HCF media tray front cover (A).

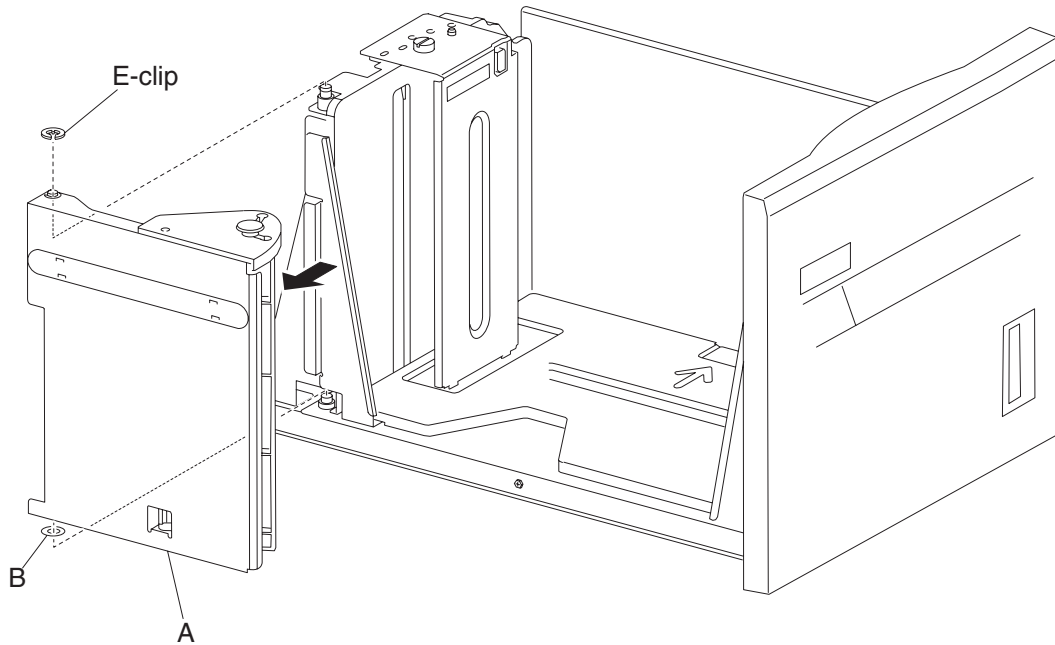


**Note:** Ensure that the HCF media tray assembly contains no media when the bottom plate (B) is raised after replacing the HCF media tray front cover (A). A series of clicking sounds will be produced during the calibrating process of the media level indicator (C).

### ***HCF media long edge guide assembly removal***

1. Pull out the HCF media tray.
2. Remove the e-clip securing the media long edge guide assembly (A) to the HCF media tray.
3. Lift the media long edge guide assembly (A) upward to release it from the hinges on the HCF media tray.
4. Remove the media long edge guide assembly (A).

**Note:** With the media long edge guide assembly (A) removed, the wave washer (B) becomes detached.



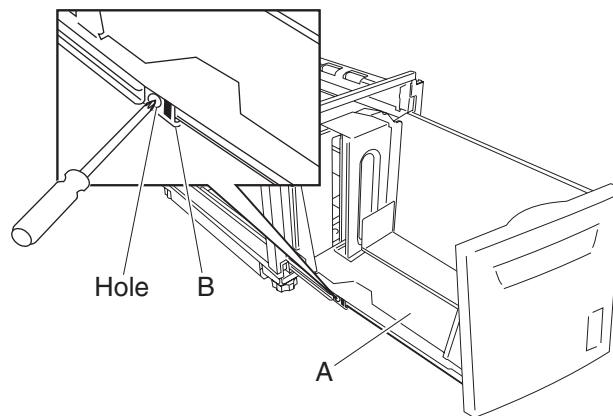
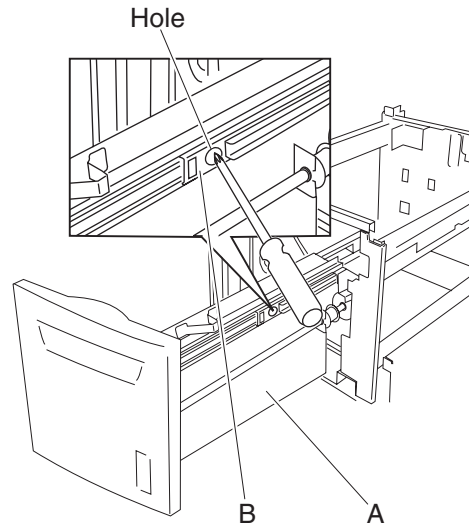
### ***HCF media tray assembly removal***

1. Pull out the HCF media tray assembly (A) from the unit.
2. Release the two bearing slides (B) by inserting a prying tool into the two holes while pulling the HCF media tray (A) from the frame assembly (B).
3. Remove the HCF media tray (A) from the frame assembly.

**Note:** A little force is required to remove the HCF media tray (A) from the unit.

**Note:** Before re-installing the HCF media tray (A), ensure the two bearing slides (B) are properly installed into the frame assembly.

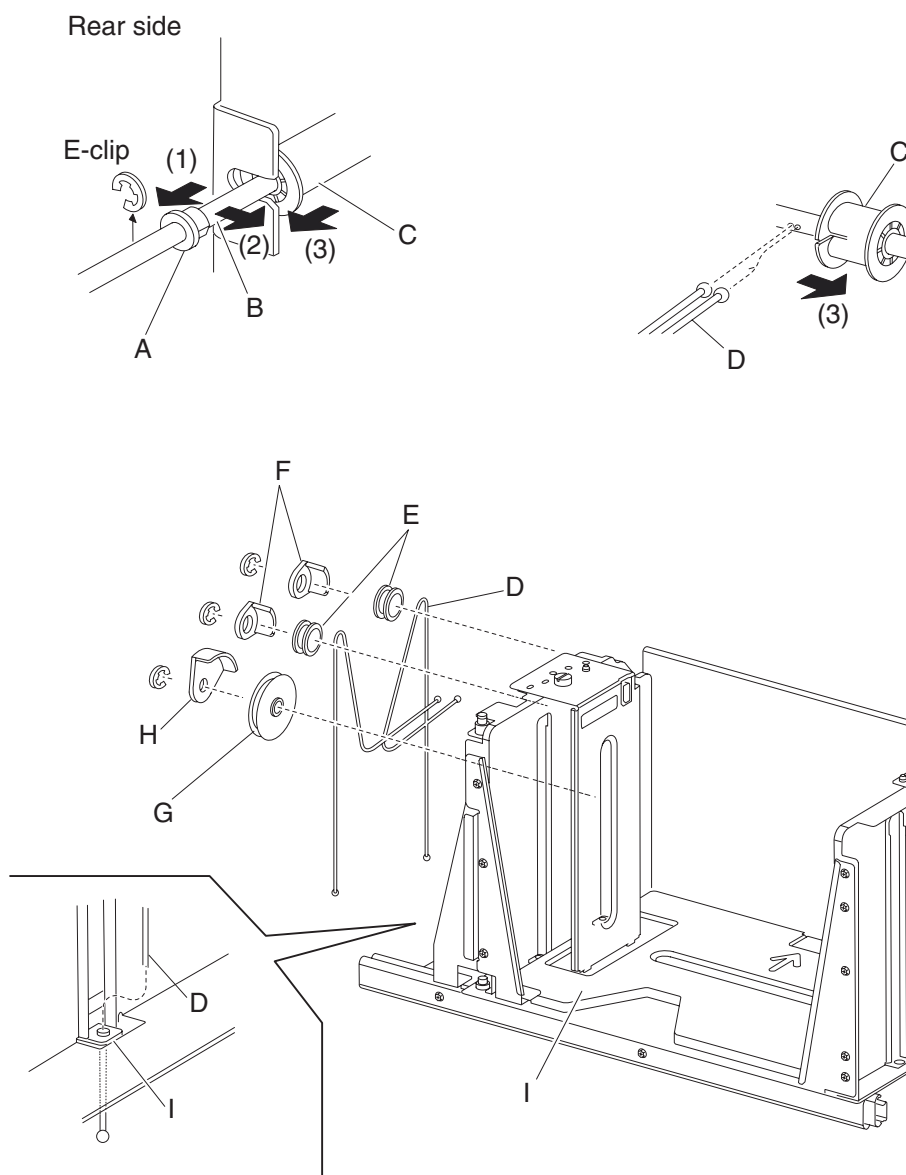
**Note:** Extra force is required to re-install the HCF media tray (A) to the unit.





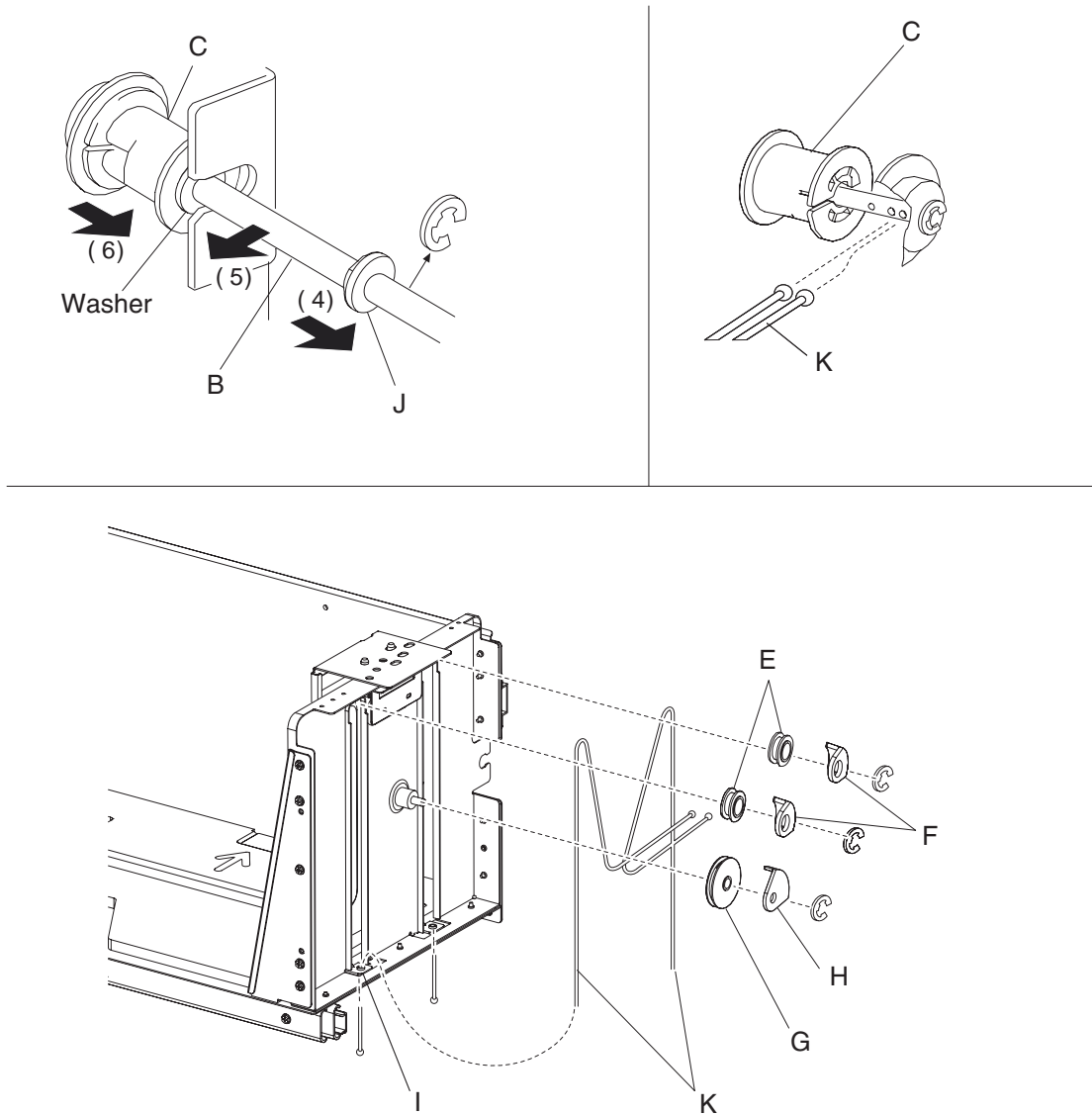
## HCF lift cables removal

1. Remove the HCF media tray assembly. See **"HCF media tray assembly removal"** on page 4-54.
2. Remove the tray lift gear bracket. See **"HCF tray lift gear bracket removal"** on page 4-57.
3. Remove the HCF media tray front cover. See **"HCF media tray front cover removal"** on page 4-52.
4. Remove the e-clip securing the bushing (A) to the tray lift shaft assembly (B) at the rear on the right side of the HCF media tray.
5. Move the bushing (A) inward in the direction of the arrow (1) to remove it from the tray.
6. Move the tray lift shaft assembly (B) outward in the direction of the arrow (2) to remove it from the tray.
7. Move the tray lift shaft pulley (C) inward in the direction of the arrow (3) to detach the rear cables (D).
8. Detach the rear cables (D) from the tray lift shaft assembly (B).
9. Remove the two e-clips securing the small cable pulleys (E) on the top rear of the HCF media tray.
10. Remove the two small guides (F) and the two small pulleys (E).
11. Remove the e-clip securing the large pulley (G) to the tray.
12. Remove the large guide (H) and the large pulley (G).
13. Remove the two rear cables (D) from the bottom plate (I).



14. Remove the e-clip securing the bushing (J) to the tray lift shaft assembly (B).

15. Move the bushing (J) inward in the direction of the arrow (4) to remove it from the tray.
16. Move the tray lift shaft assembly (B) outward in the direction of the arrow (5) to remove it from the tray.
17. Move the tray lift shaft pulley (C) inward in the direction of arrow (6) to detach the front cables (K).
18. Remove the two e-clips securing the small cable pulleys (E) on the top front of the HCF media tray.
19. Remove the two small guides (F) and the two small pulleys (H).



20. Remove the e-clip securing the large pulley (G) to the frame assembly.
21. Remove the large guide (H) and the large pulley (G).
22. Remove the two front cables (K) from the bottom plate (I).

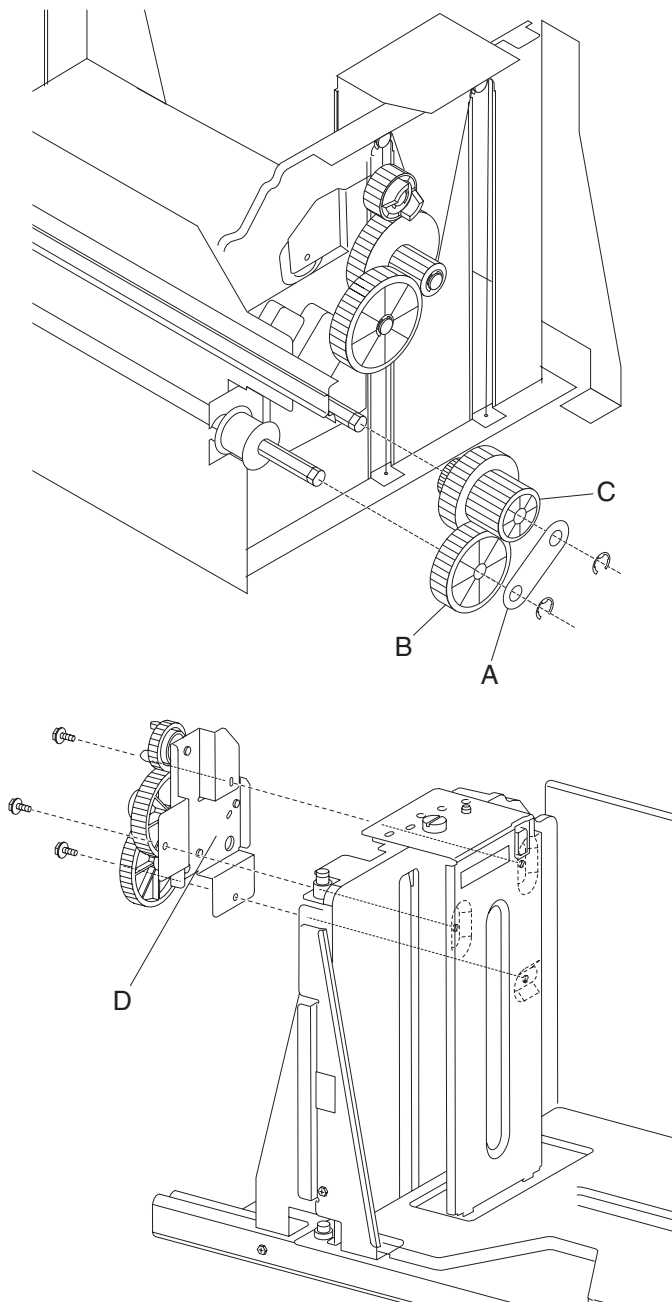
**Note:** Before re-installing:

- It is recommended that all four cables be replaced together.
- When fitting the cables (D) and (K), ensure they are not twisted or kinked.
- Route the cables properly, as shown.
- Be sure to replace the washer on the front of the tray lift shaft assembly.

## HCF tray lift gear bracket removal

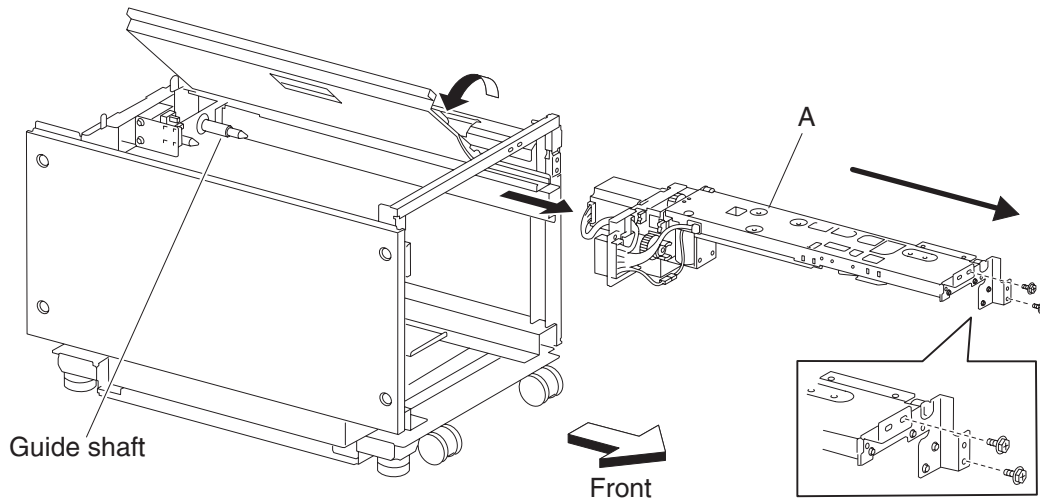
1. Remove the HCF media tray assembly. See **"HCF media tray assembly removal"** on page 4-54.
2. Remove the two e-clips with a prying tool securing the plastic retainer (A).
3. Remove the plastic retainer (A).
4. Remove the media tray lift shaft gear 51T (B).
5. Remove the media tray lift gear 25/40/14T (C).
6. Remove the three screws securing the HCF tray lift gear bracket (D) from the media tray.
7. Remove the HCF tray lift gear bracket (D).

**Note:** Ensure that all gears rotate smoothly without binding. If necessary, loosen the three screws and adjust the HCF tray lift gear bracket (D).



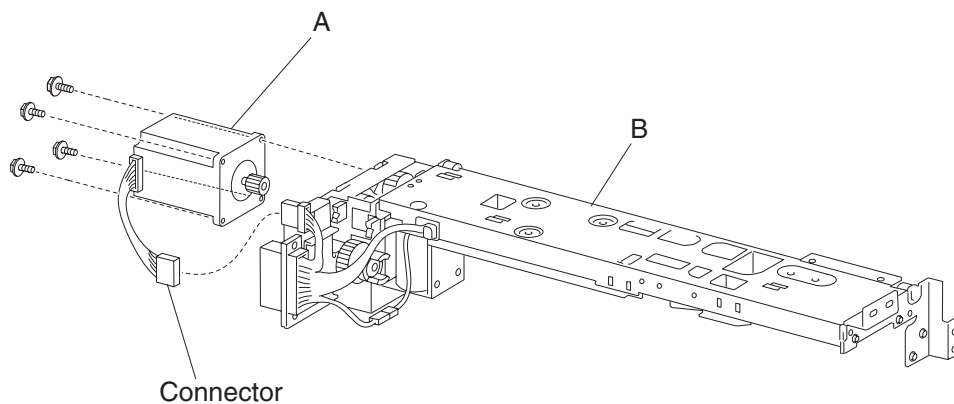
## HCF media feed unit assembly removal

1. Remove the HCF media tray assembly from the printer. See **“HCF media tray assembly removal” on page 4-54.**
2. Remove the two screws securing the media feed unit assembly (A) on the front side.
3. Pull the media feed unit assembly (A) out of the machine in the direction of the arrow.  
**Note:** More force to remove the media feed unit (A) may be required due to the electrical connector inside the machine.



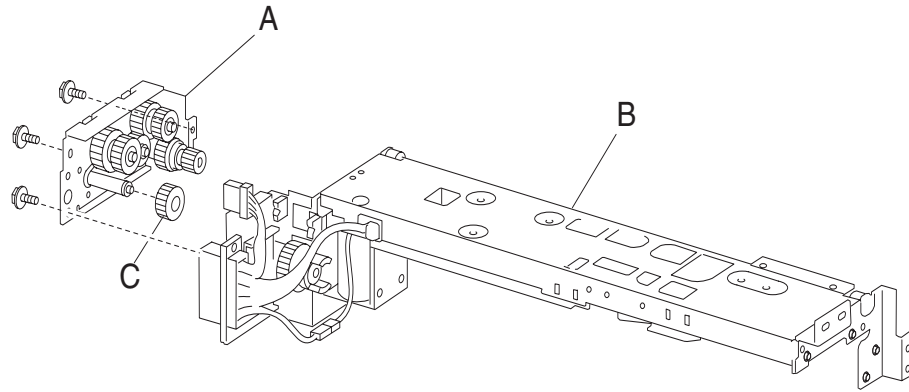
## HCF feed lift motor removal

1. Remove the HCF media tray assembly. See **“HCF media tray assembly removal” on page 4-54.**
2. Remove the HCF media feed unit assembly. See **“HCF media feed unit assembly removal” on page 4-58.**
3. Disconnect the connector from the HCF feed lift motor assembly (A).
4. Remove the four screws securing the HCF feed lift motor (A) to the HCF media feed unit assembly (B).
5. Remove the HCF media feed lift motor (A).



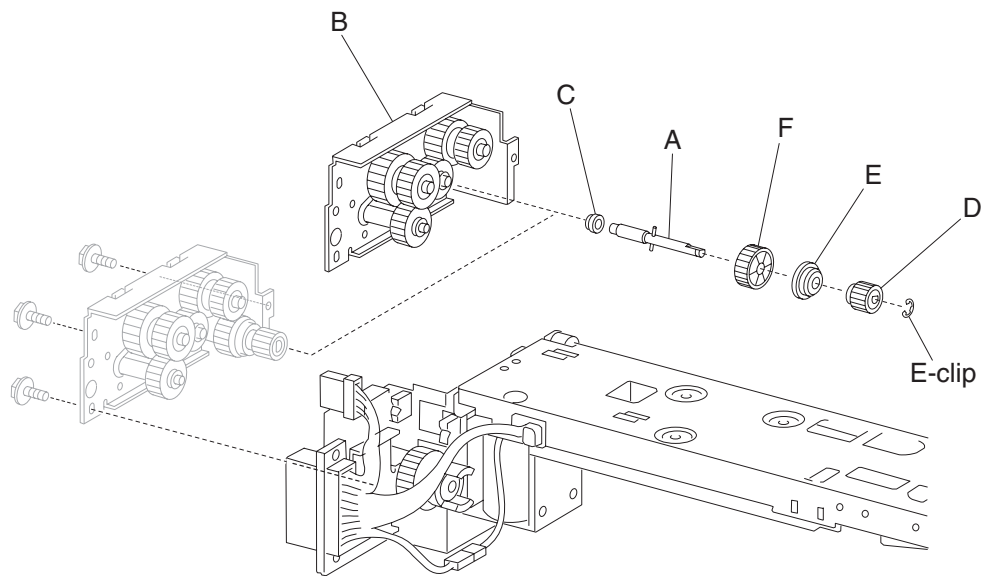
### ***HCF feed lift gear bracket removal***

1. Remove the HCF media tray assembly from the printer. See **“HCF media tray assembly removal” on page 4-54.**
2. Remove the HCF media feed unit assembly. See **“HCF media feed unit assembly removal” on page 4-58.**
3. Remove the HCF feed lift motor. See **“HCF feed lift motor removal” on page 4-58.**
4. Remove the three screws securing the HCF feed lift gear bracket (A) to the media feed unit assembly (B).
5. Remove the HCF feed lift gear bracket (A).
6. Remove the gear lift gear 24T (C) from the HCF media feed unit assembly.



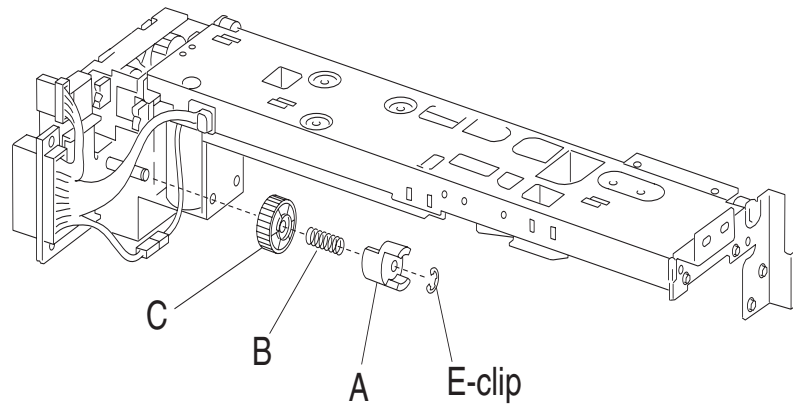
## HCF separation gear group removal

1. Remove the HCF media tray assembly from the printer. See **“HCF media tray assembly removal” on page 4-54.**
2. Remove the HCF media feed unit assembly. See **“HCF media feed unit assembly removal” on page 4-58.**
3. Remove the HCF feed lift motor. See **“HCF feed lift motor removal” on page 4-58.**
4. Remove the HCF lift feed gear bracket. See **“HCF feed lift gear bracket removal” on page 4-59.**
5. Remove the shaft (A) from the HCF lift feed gear bracket (B).  
**Note:** Bearing (C) may become detached.
6. Use a prying tool to remove the e-clip securing the separation gear -19 tooth (D) to shaft (A).
7. Remove the separation gear - 19 tooth (D).
8. Remove the bushing (E).
9. Remove the separation gear - 25 tooth (F).



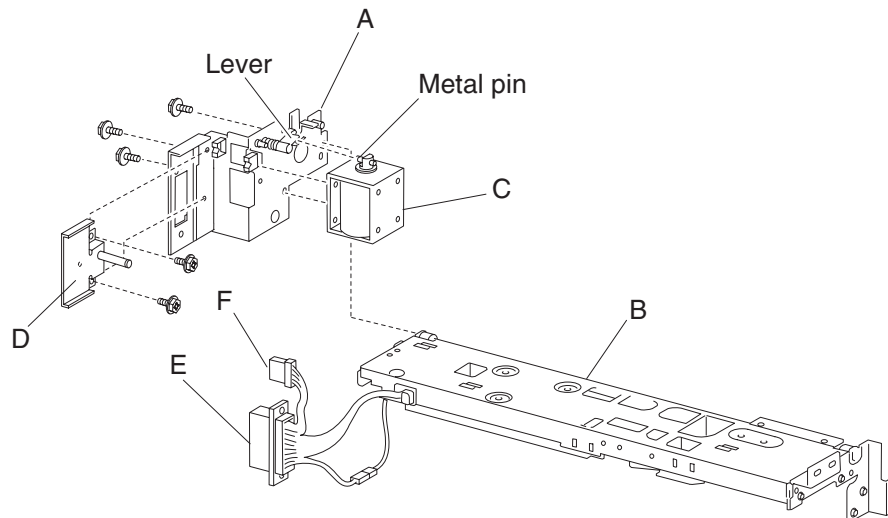
## ***HCF media tray lift coupling assembly removal***

1. Remove the HCF media tray assembly from the printer. See **“HCF media tray assembly removal” on page 4-54.**
2. Remove the HCF media feed unit assembly. See **“HCF media feed unit assembly removal” on page 4-58.**
3. Remove the HCF feed lift motor. See **“HCF feed lift motor removal” on page 4-58.**
4. Use a prying tool to remove the e-clip securing the HCF tray lift coupling (D) to the HCF media feed unit assembly.
5. Remove the HCF tray lift coupling (A).
6. Remove the spring (B).
7. Remove the HCF tray lift gear - 40 tooth (C).



## HCF pick solenoid assembly removal

1. Remove the HCF media tray assembly from the printer. See **“HCF media tray assembly removal” on page 4-54.**
2. Remove the HCF media feed unit assembly. See **“HCF media feed unit assembly removal” on page 4-58.**
3. Remove the HCF feed lift motor. See **“HCF feed lift motor removal” on page 4-58.**
4. Remove the HCF feed lift gear bracket. See **“HCF feed lift gear bracket removal” on page 4-59.**
5. Remove the two screws securing the HCF solenoid bracket (A) to the HCF media feed unit assembly (B).
6. Remove the HCF solenoid bracket (A).
7. Disconnect the connector of the harness from the HCF solenoid (C) to the HCF media feed unit assembly (B).
8. Release the harness from the clamp.
9. Remove the HCF media tray lift coupling assembly. See **“HCF media tray lift coupling assembly removal” on page 4-61.**
10. Remove the two screws securing the bracket (D).
11. Remove the bracket (D).
12. Remove the two screws securing the main HCF connector (E) to the HCF solenoid bracket (A).
13. Remove the HCF main connector (E).
14. Remove the two connectors from the HCF main connector (E).
15. Release the hooks securing the connector (F) to the HCF solenoid bracket (A).
16. Remove the connector (F).
17. Remove the two screws securing the HCF solenoid (C) to the HCF solenoid bracket (A).
18. Remove the HCF solenoid (C).

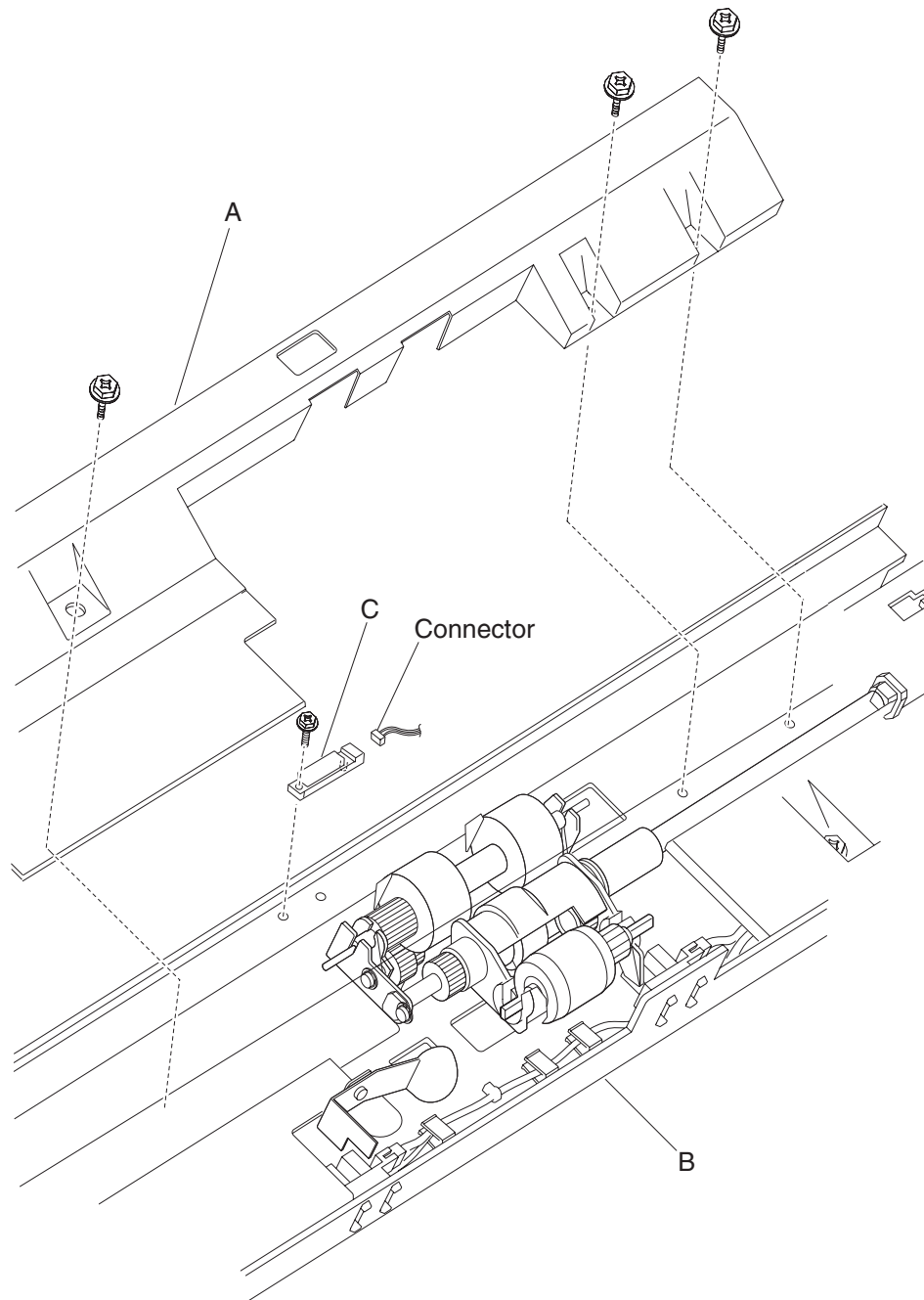


**Note:** When replacing the solenoid, make sure to insert the metal pin of the HCF solenoid (C) into the lever.



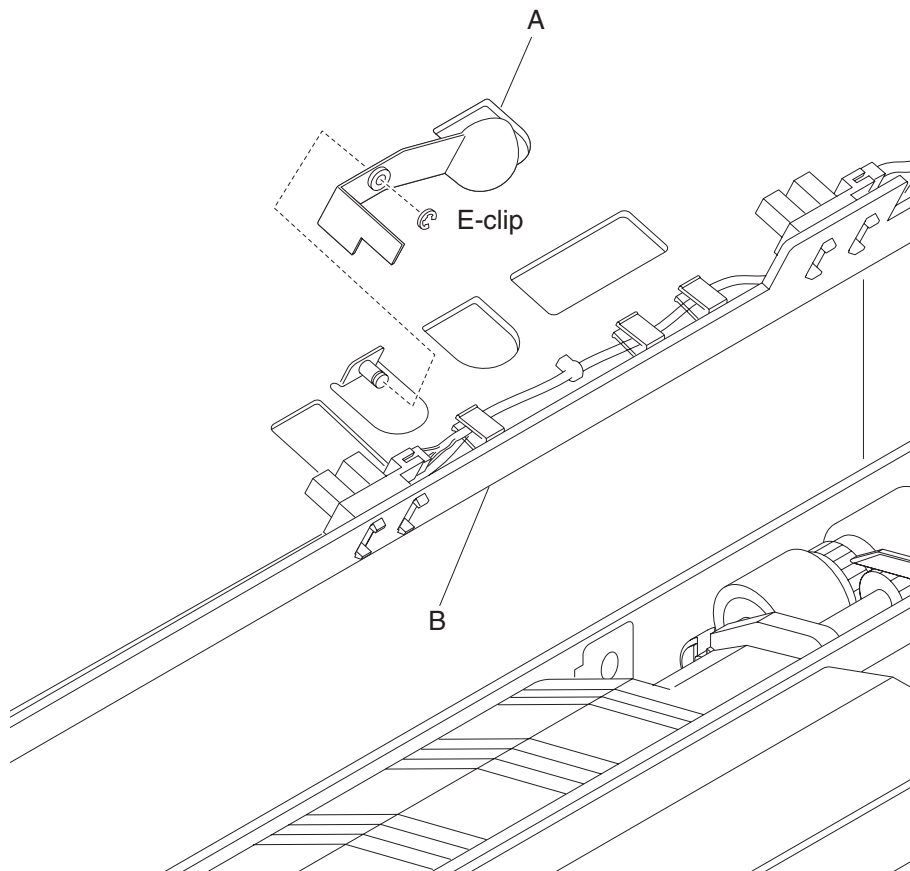
### ***HCF sensor (pre-feed) removal***

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Remove the three screws securing the upper guide (A) to the HCF feed unit assembly (B).
4. Remove the upper guide (A).
5. Remove the connector from the sensor (pre-feed) (C).
6. Remove the one screw securing the sensor (pre-feed) (C) to the HCF feed unit assembly (B).
7. Remove sensor (pre-feed) (C).



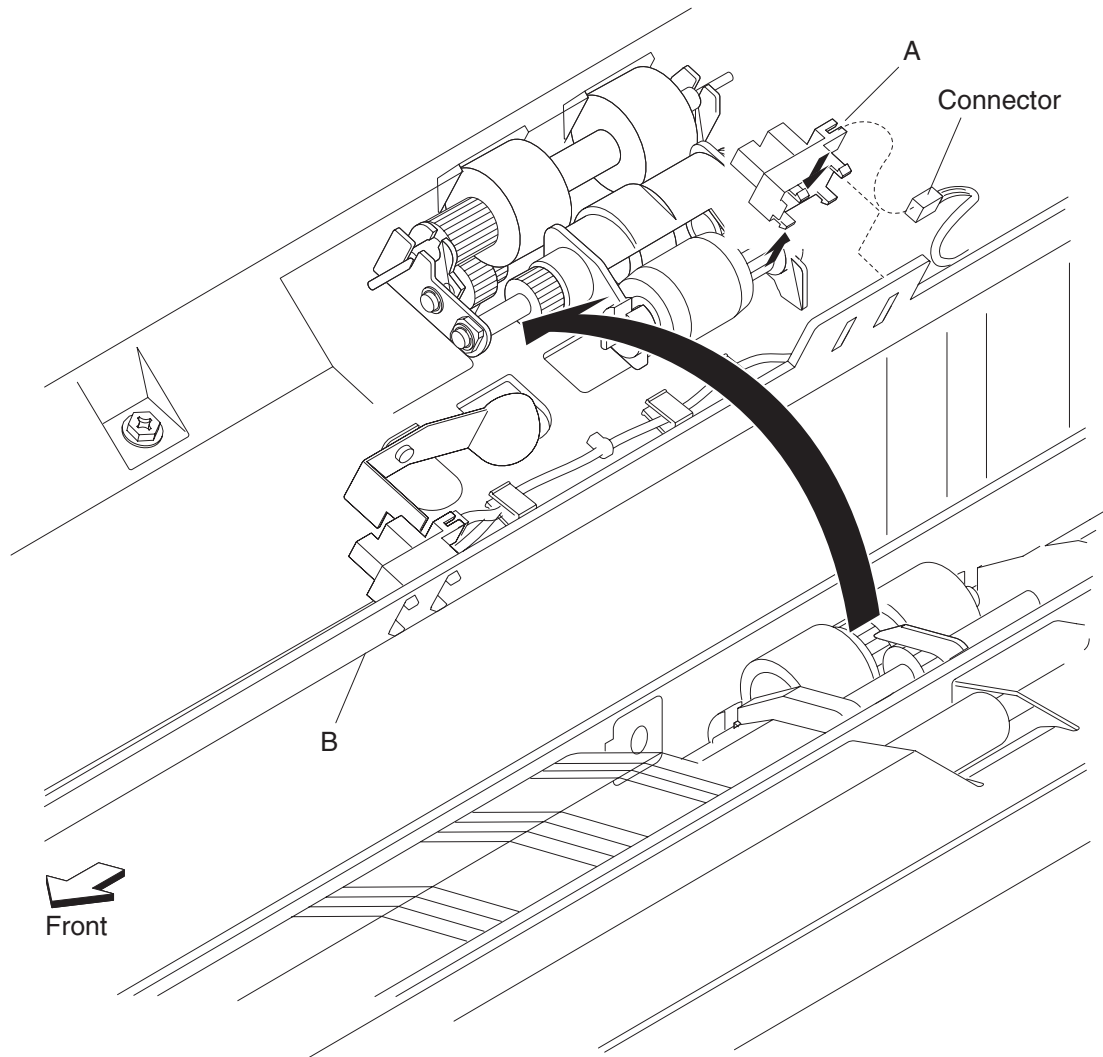
***HCF media out actuator removal***

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Remove the e-clip securing the media out actuator (A) to the HCF media feed unit assembly (B).
4. Remove the media out actuator (A).



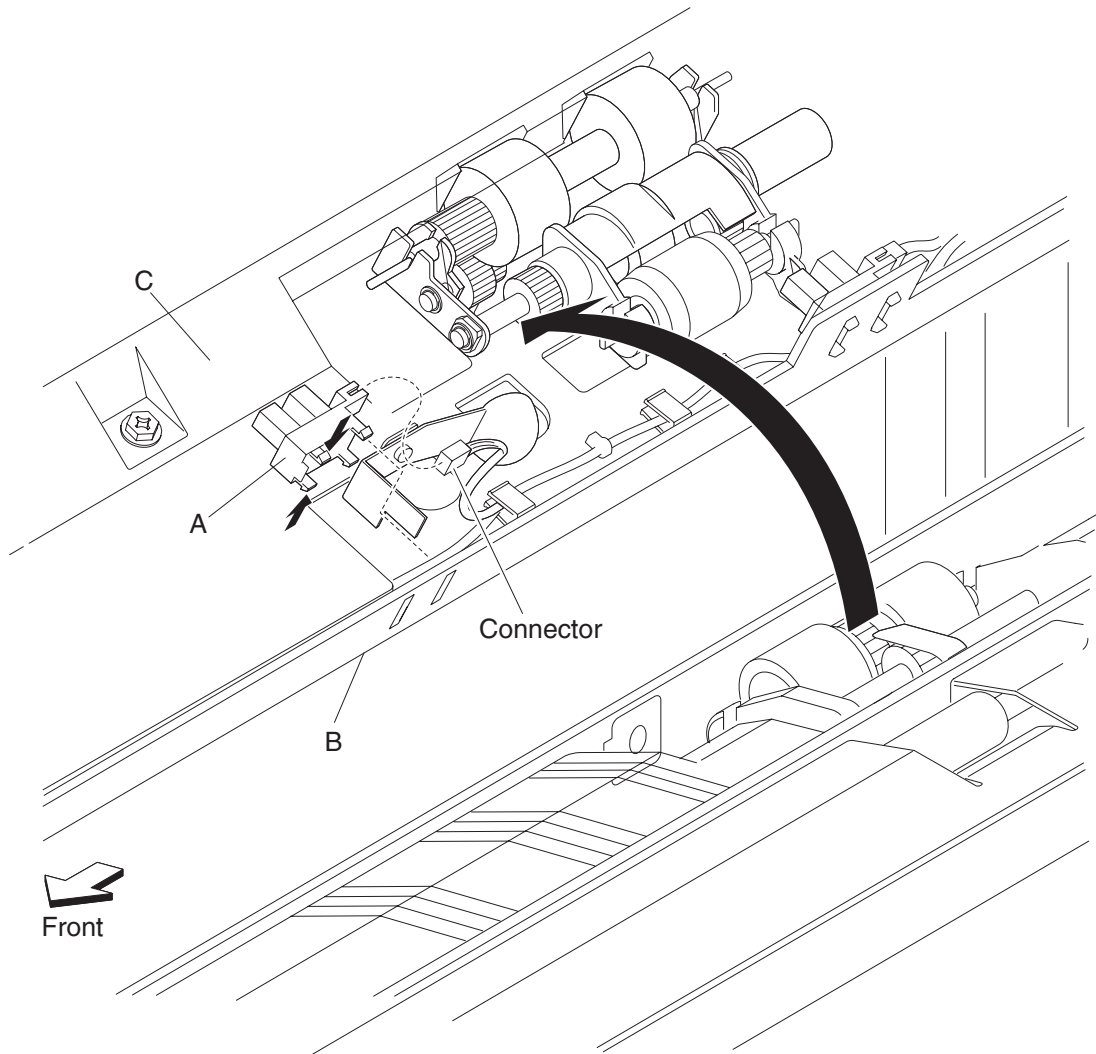
### ***HCF sensor (media level) removal***

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Disconnect the connector from the sensor (HCF media level) (A).
4. Release the hooks securing the sensor (HCF media level) (A) from the HCF feed unit assembly (B).
5. Remove the sensor (HCF media level) (A).



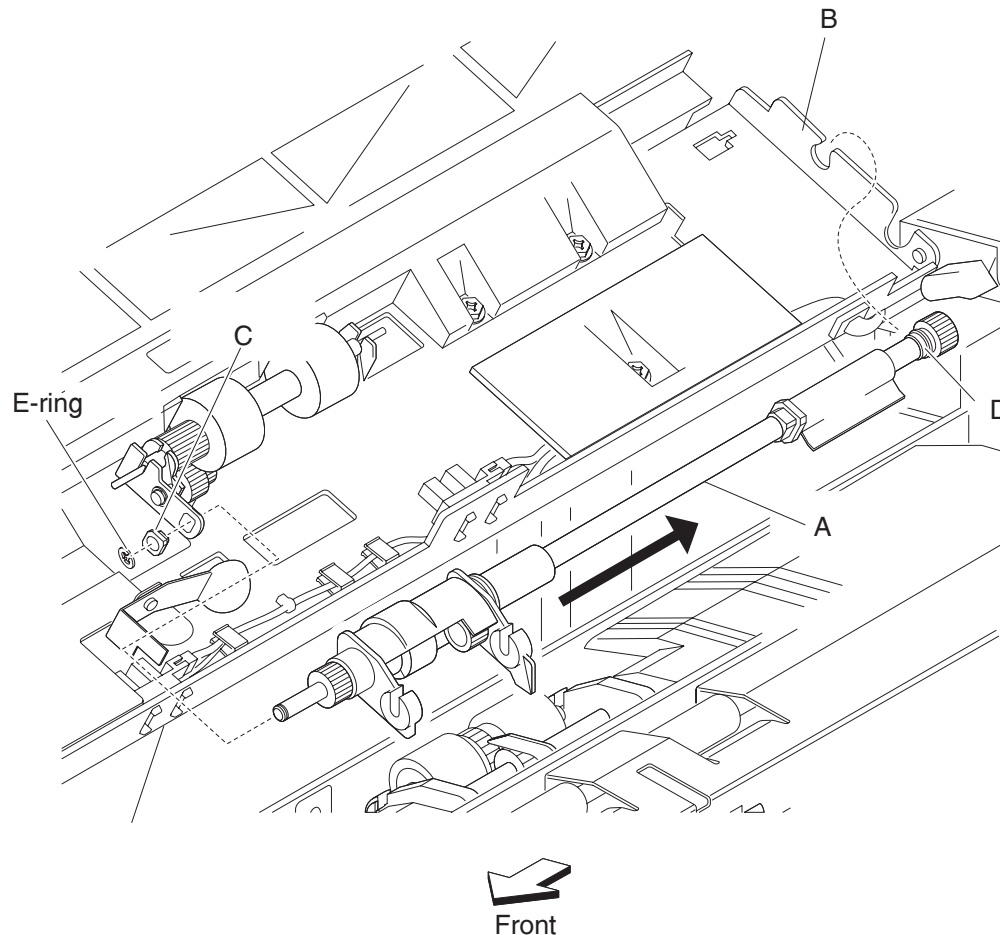
***HCF sensor (media out) removal***

1. Open the HCF top door.
  2. Open the HCF feed unit assembly.
  3. Remove the connector from the sensor (HCF media out) (A).
  4. Release the hooks securing the sensor (HCF media out) (A) to the HCF feed unit assembly (B).
  5. Remove the sensor (HCF media out) (A).
- Note:** The sensor (HCF media out) (A) may be easier to replace if the upper guide (C) is removed to provide access.



### ***HCF pick roll shaft assembly removal***

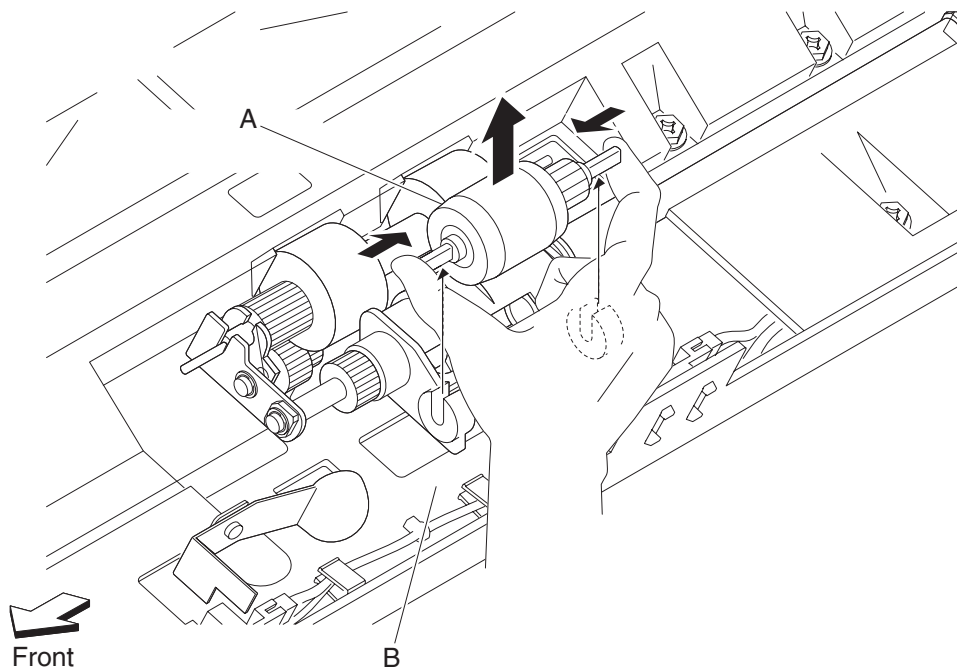
1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Remove the HCF pick roll assembly. See **“HCF pick roll assembly removal” on page 4-68.**
4. Use a prying tool to remove the e-clip securing the HCF pick roll shaft assembly (A) to the HCF media feed unit assembly (B).
5. Remove the bushing (C) from the HCF media feed unit assembly (B).
6. Remove the bearing (D) from the HCF media feed unit assembly (B).
7. Remove the HCF pick roll shaft assembly (A).



### ***HCF pick roll assembly removal***

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Push the two ends of the HCF pick roll assembly (A) inward, and move it upward in the direction of the arrow to release it from the HCF media feed unit assembly (B).
4. Remove the HCF pick roll assembly (A).

**Note:** When removing the HCF pick roll assembly (A), do not touch the rubber surface.

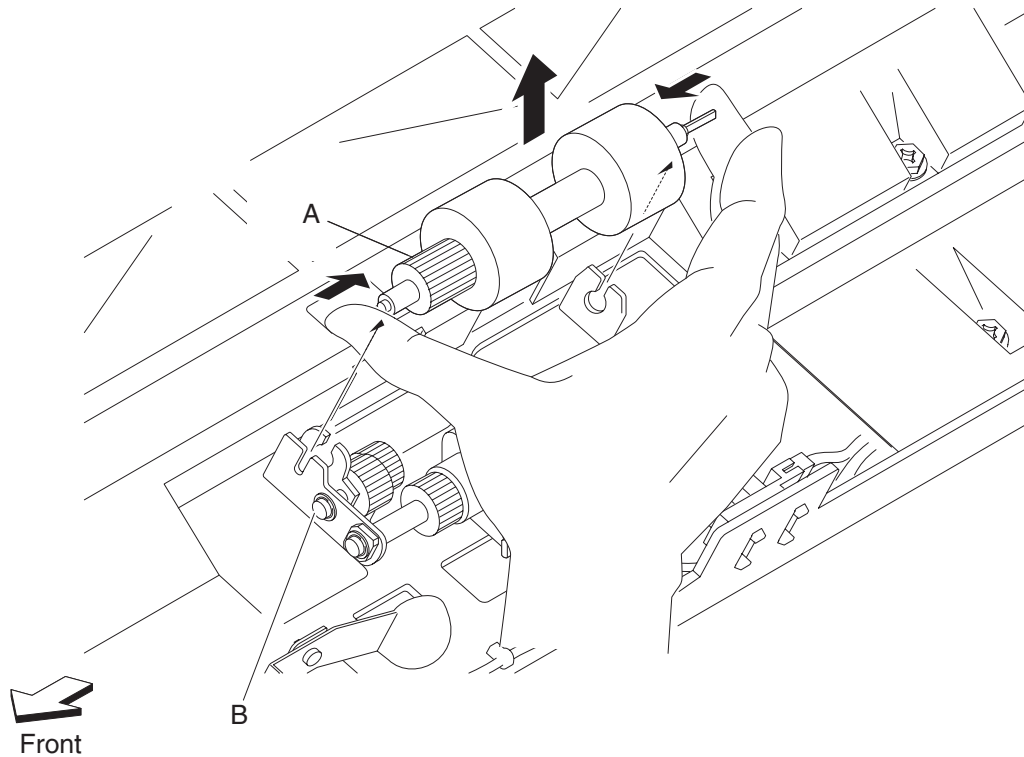


**Note:** Before re-installing the HCF pick roll assembly (A), do not touch the rubber surface.

### ***HCF feed roll assembly removal***

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Push the two ends of the HCF feed roll assembly (A) inward, and move it upward in the direction of the arrow to release it from the HCF media feed unit assembly (B).
4. Remove the HCF feed roll assembly (A).

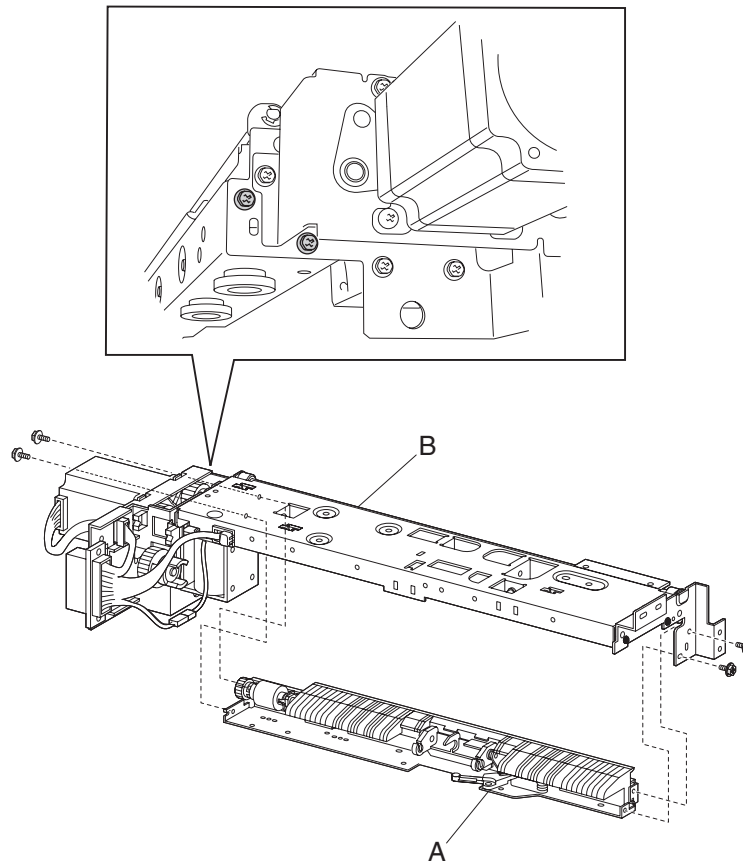
**Note:** When removing the HCF feed roll assembly (A), do not touch the rubber surface.



**Note:** Before re-installing the HCF feed roll assembly (A), do not touch the rubber surface.

## HCF separation roll shaft assembly removal

1. Remove the HCF media tray assembly. See “**HCF media tray assembly removal**” on page 4-54.
2. Remove the HCF media feed unit assembly. See “**HCF media feed unit assembly removal**” on page 4-58.
3. Remove the HCF feed lift motor. See “**HCF feed lift motor removal**” on page 4-58.
4. Remove the HCF feed lift gear bracket. See “**HCF feed lift gear bracket removal**” on page 4-59.
5. Remove the HCF separation roll assembly. See “**HCF separation roll assembly removal**” on page 4-71.
6. Remove the four screws securing the separation roll shaft assembly (A) to the media feed unit assembly (B).
7. Remove the separation roll shaft assembly (A).  
**Note:** The HCF media feed unit assembly (B) becomes detached from the separation roll shaft assembly (A) at the hinge point.



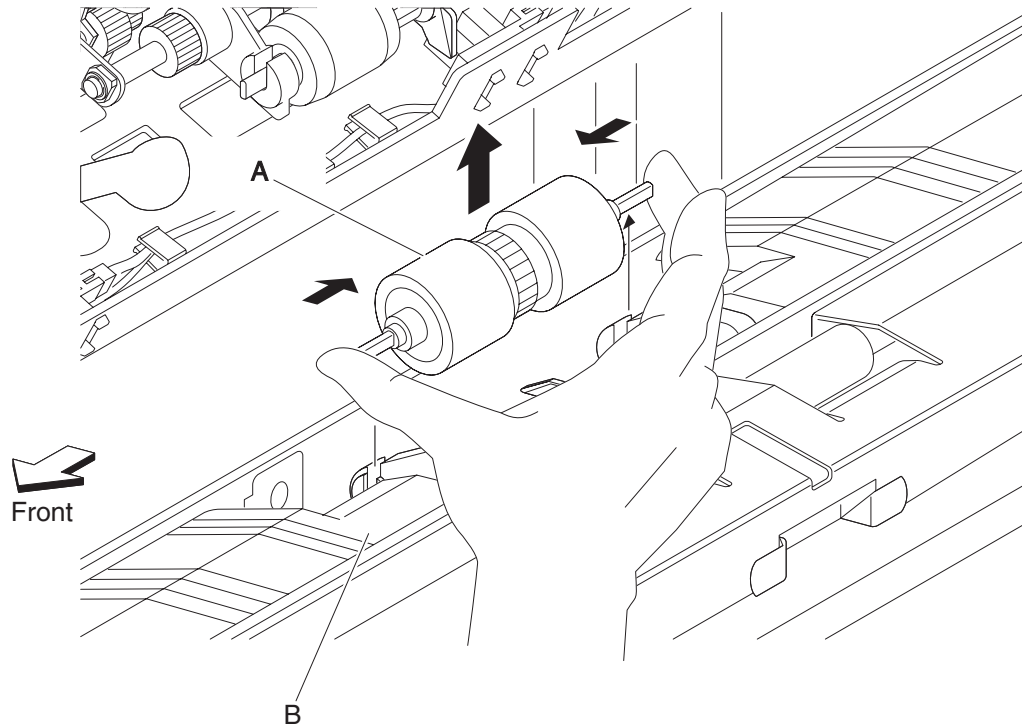
**Note:** Before re-installing the separation roll shaft assembly (A), ensure the HCF media feed unit assembly (B) is re-attached at the two hinge points.



### ***HCF separation roll assembly removal***

1. Open the HCF top door.
2. Open the HCF feed unit assembly.
3. Push the two ends of the HCF separation roll assembly (A) inward, and move it upward in the direction of the arrow to release it from the HCF media feed unit assembly (B).
4. Remove the HCF separation roll assembly (A).

**Note:** When removing the HCF separation roll assembly (A), do not touch the rubber surface.

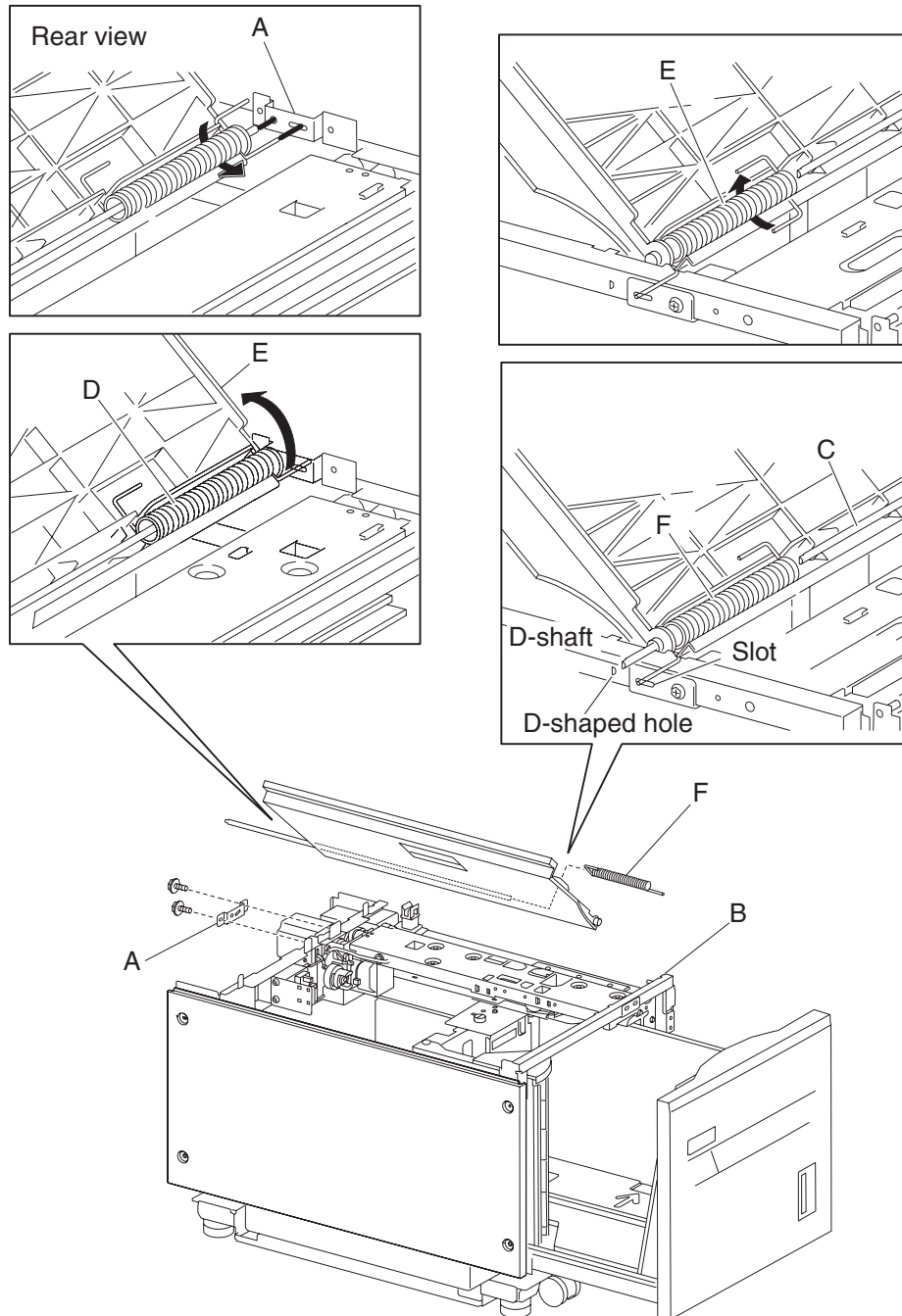


**Note:** Before re-installing the HCF separation roll assembly (A), do not touch the rubber surface.

## HCF top door assembly removal

1. Remove the HCF unit from the printer.
2. Remove the HCF top cover. See **"HCF top cover removal"** on page 4-46.
3. Remove the HCF rear cover. See **"HCF rear cover removal"** on page 4-51.
4. Open the HCF top door assembly.
5. Remove the two screws securing the bracket (A) to the frame assembly (B).
6. Remove the bracket (A).

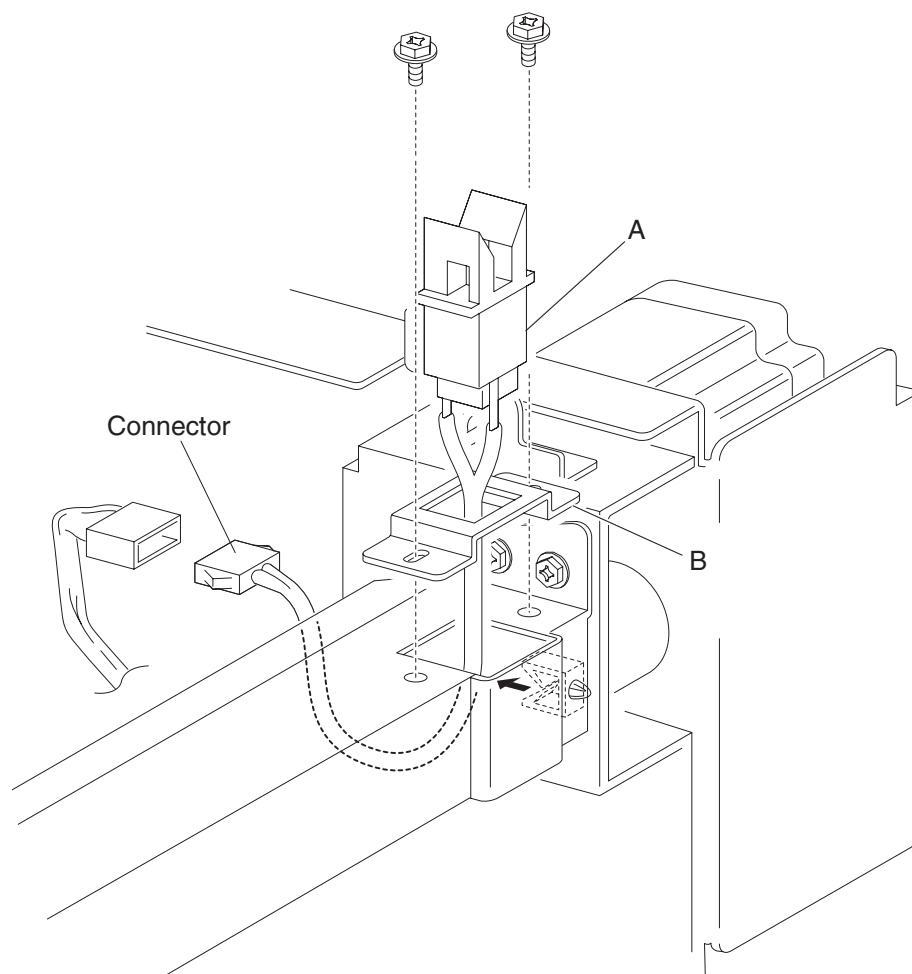
**Note:** When removing the bracket (A), leave the shaft (C) and the HCF top door spring R (D) attached to the top door assembly.



7. Lift the HCF top door (E) and remove the shaft (C) from the hole in the frame assembly (B).
8. Remove the HCF top door spring L (F) from the slot in the frame assembly (B).
9. Remove the HCF top door assembly.
10. Remove the shaft (C).
11. Remove the top door spring R (D).
12. Remove the top door spring L (F).

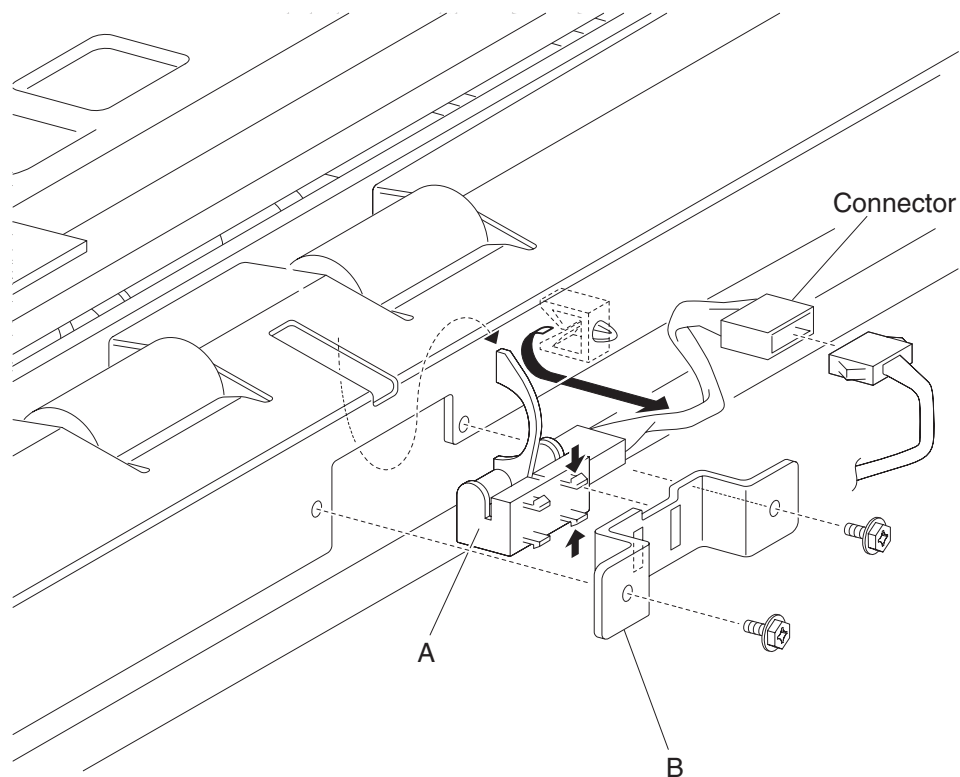
### ***HCF switch (top door interlock) removal***

1. Remove the HCF unit to the printer.
2. Remove the HCF right cover. See **“HCF right cover removal” on page 4-47.**
3. Open the HCF top door assembly.
4. Disconnect the connector from the switch (top door interlock) (A).
5. Remove the two screws securing the bracket (B) to the unit.
6. Remove the bracket (B).
7. Release the hooks securing the switch (top door interlock) (A) to the bracket (B).
8. Remove the switch (top door interlock) (A).



### ***HCF sensor (tray 5 feed-out) removal***

1. Remove the HCF unit from the printer.
2. Remove the HCF right cover. See **“HCF right cover removal” on page 4-47.**
3. Open the HCF top door assembly.
4. Remove the two screws securing the bracket (B) to the unit.
5. Remove the bracket (B).
6. Disconnect the connector from the sensor (tray 5 feed-out) (A).
7. Release the hooks securing the sensor (tray 5 feed-out) (A) to the bracket (B).
8. Remove the sensor (tray 5 feed-out) (A).

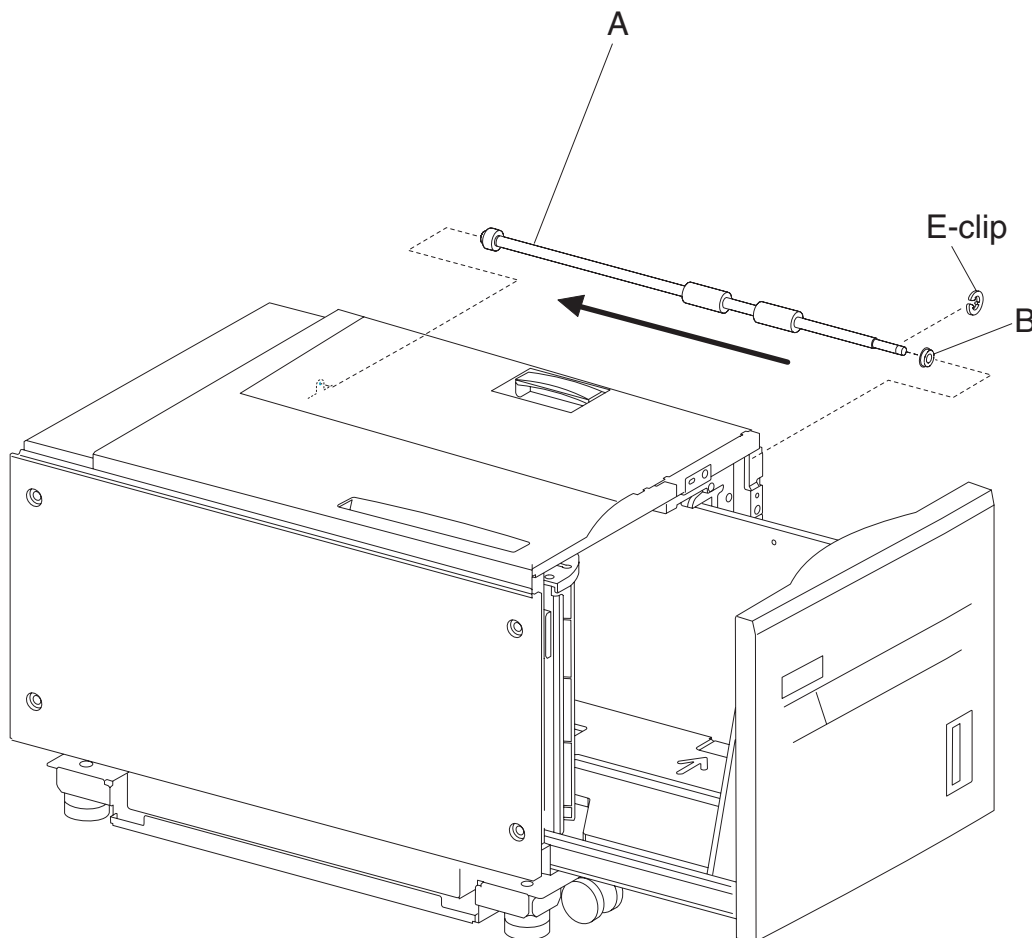


### ***HCF media transport roll assembly removal***

1. Remove the HCF unit from the printer.
2. Remove the HCF right cover. See **“HCF right cover removal” on page 4-47.**
3. Use needle nose pliers to remove the e-clip on the front side securing the HCF media transport roll assembly (A) to the unit.
4. Move the HCF transport shaft assembly (A) toward the rear in the direction of the arrow to remove it from the bearing (B).

**Note:** The bearing (B) may become detached.

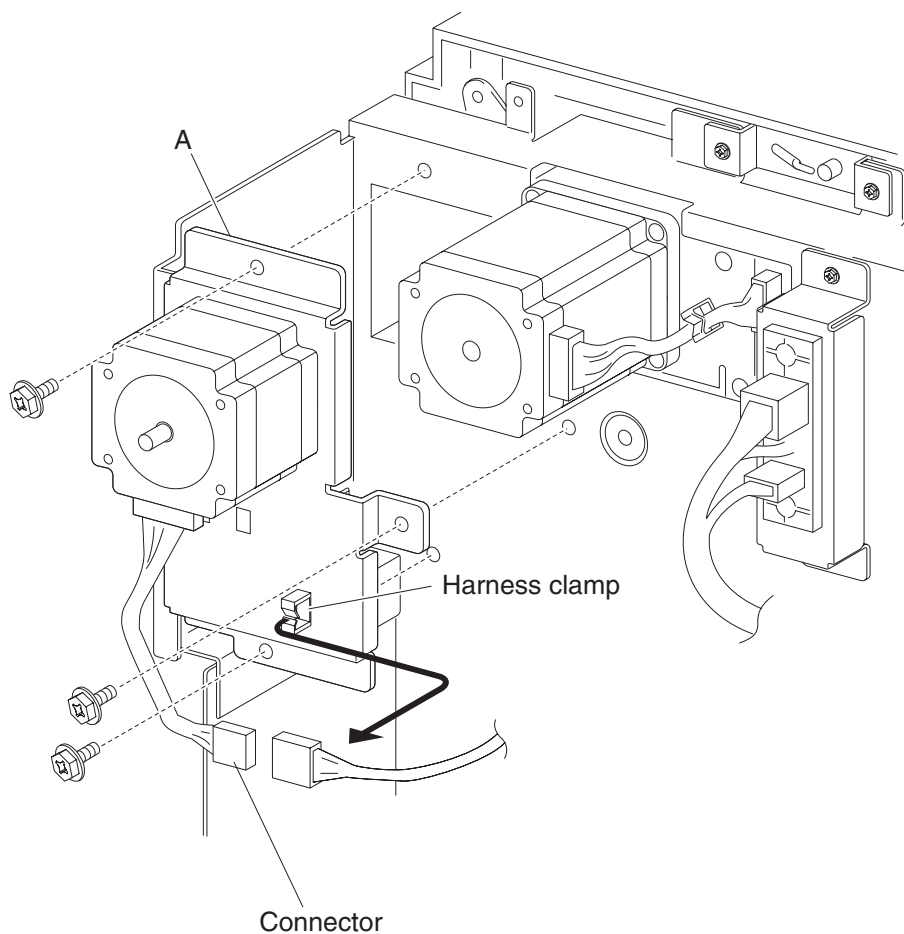
**Note:** When removing the HCF media transport roll assembly (A), do not touch the rubber surface.



**Note:** Before re-installing the HCF media transport roll assembly (A), do not touch the rubber surface.

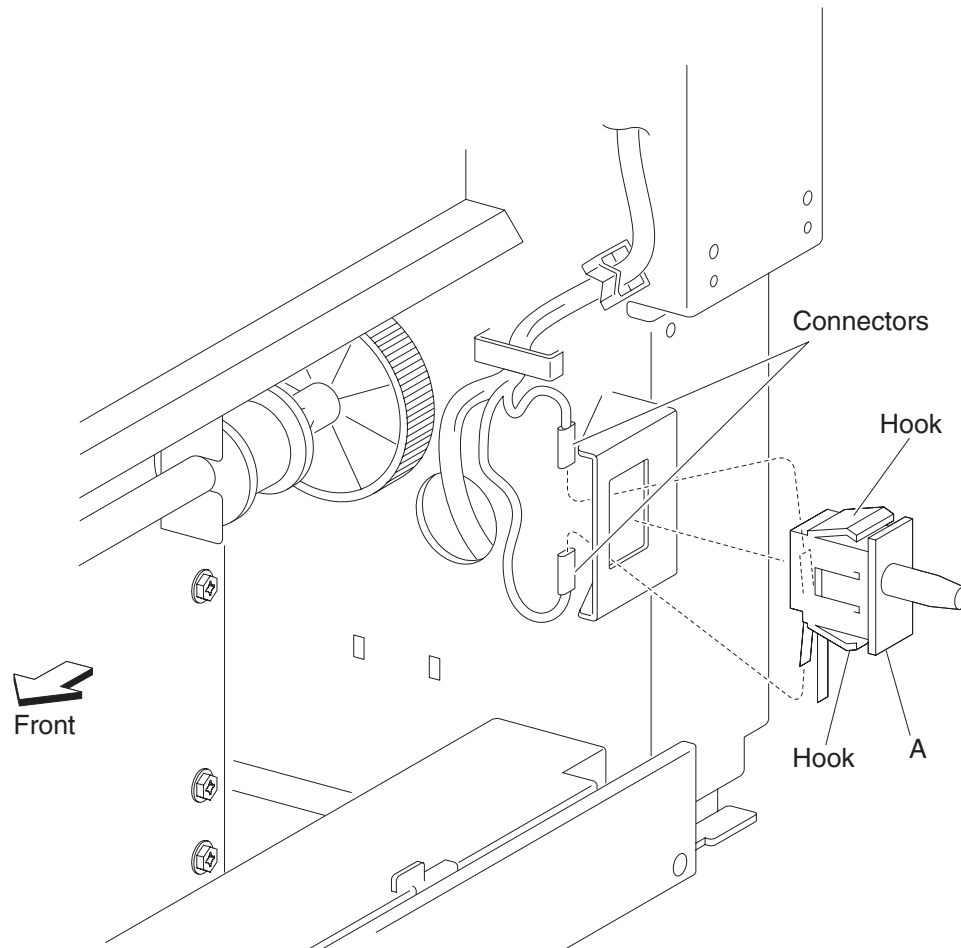
### ***HCF media transport motor assembly removal***

1. Remove the HCF unit from the printer.
2. Remove the HCF rear cover. See **“HCF rear cover removal” on page 4-51.**
3. Disconnect the connector from the HCF transport motor (A).
4. Release the harness from the clamp.
5. Remove the three screws securing the HCF transport motor (A) to the unit.
6. Remove the HCF transport motor (A).



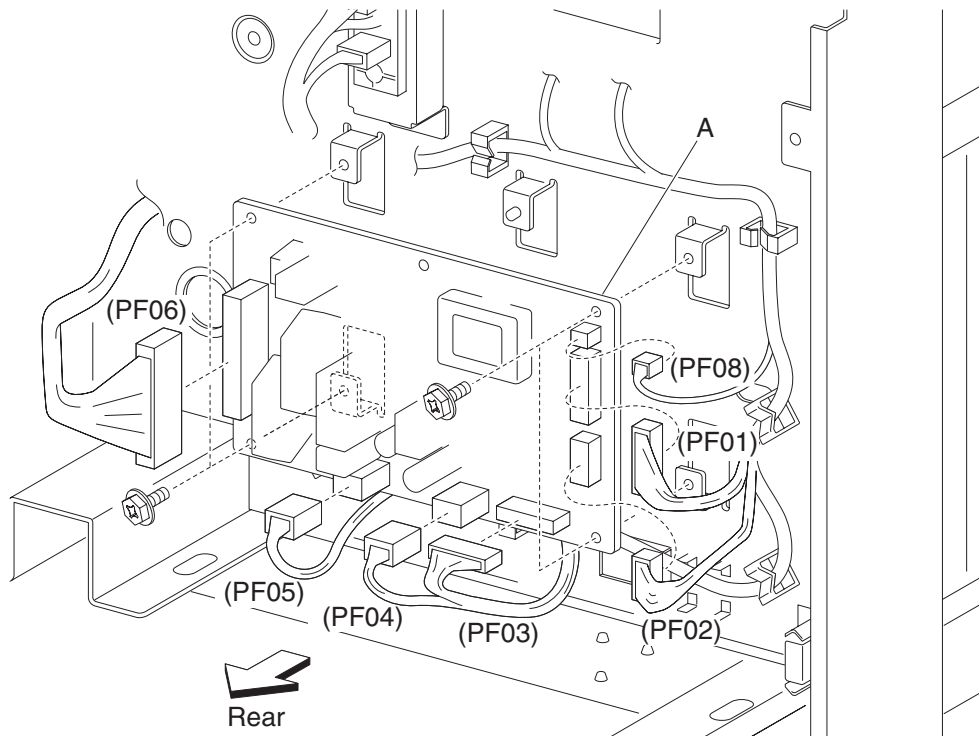
### ***HCF switch (unit docking interlock) removal***

1. Remove the HCF right cover. See **"HCF right cover removal"** on page 4-47.
2. Remove the HCF media tray.
3. Disconnect the connector from the HCF switch (HCF unit docking interlock) (A).
4. Release the hooks securing the HCF switch (HCF unit docking interlock) (A) to the unit.
5. Remove the HCF switch (HCF unit docking interlock) (A).



### ***HCF controller card assembly removal***

1. Remove the HCF rear cover. See **“HCF rear cover removal” on page 4-51.**
2. Disconnect all connectors from the HCF controller card assembly (A).
3. Remove the four screws securing the HCF controller card assembly (A) to the unit.
4. Remove the HCF controller card assembly (A).



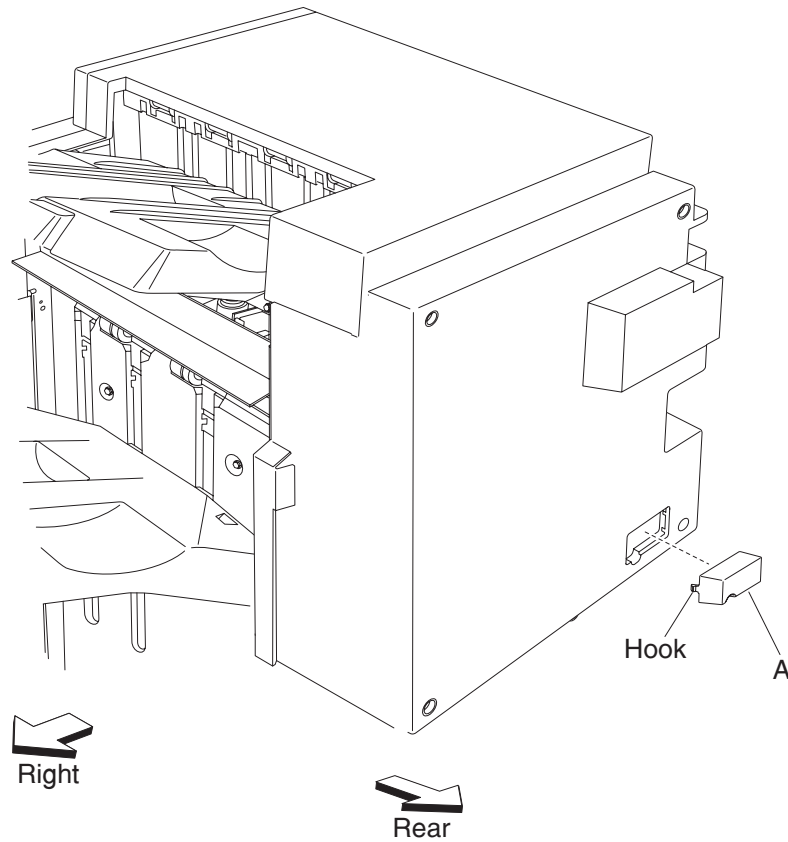


---

## Finisher removals

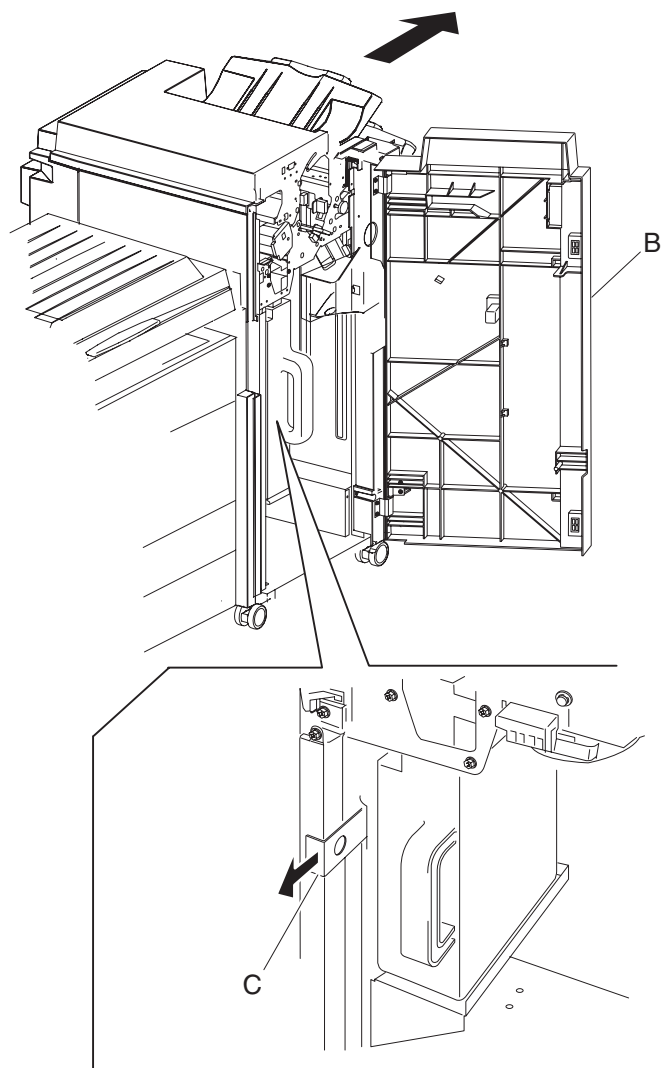
### *Finisher removal*

1. Disconnect the finisher power cord and the finisher connection cable from the rear of the printer.
2. Release the hook securing the bridge unit hookup cover (A) to the finisher.



3. Remove the bridge unit hookup cover (A).
4. Disconnect the bridge unit connection from the finisher.

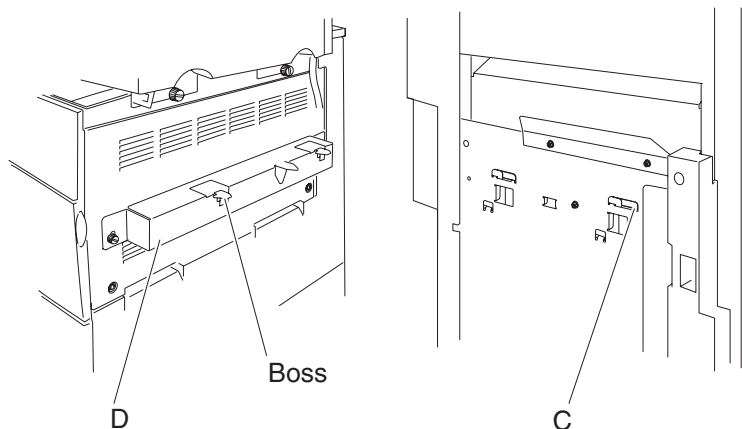
5. Open the finisher front door assembly (B) on the front of the finisher.
6. Pull the finisher docking latch assembly (C) outward in the direction of the arrow, and pull the finisher away from the printer.



7. Close the finisher front door assembly.

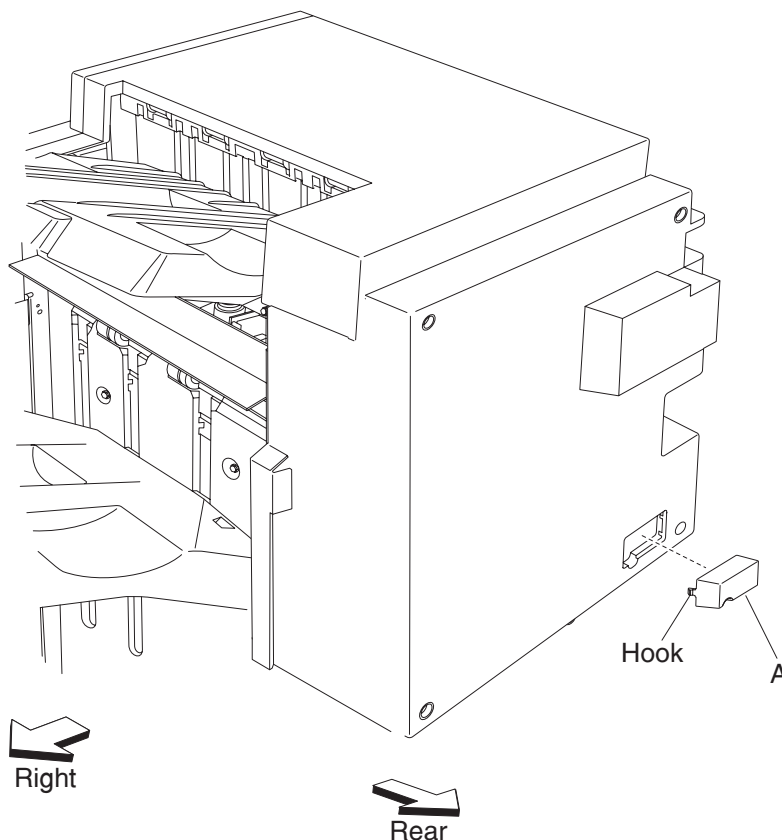
8. Remove the two screws securing the finisher docking bracket (D) to the printer.
9. Remove the finisher docking bracket (D).

**Replacement note:** When docking the finisher to the printer, make sure the boss on the finisher docking bracket (D) is inserted into the hole on the finisher docking latch assembly (C). The finisher should be firmly locked into position.



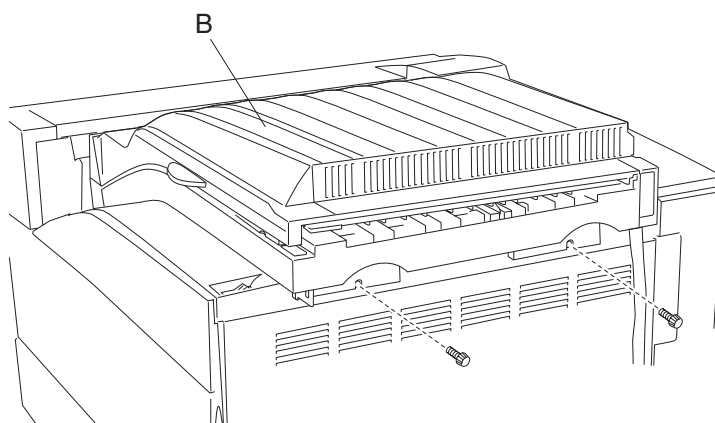
### **Bridge unit assembly removal**

1. Release the hook securing the bridge unit hookup cover (A) to the finisher.
2. Remove the bridge unit hookup cover (A).



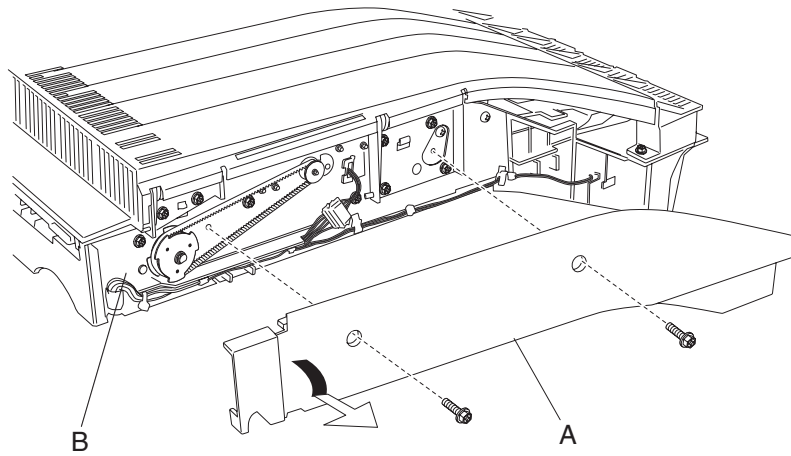
3. Remove the finisher from the printer. See **“Bridge unit rear cover removal” on page 4-83.**
4. Remove the two screws securing the bridge unit assembly (B) to the printer.

5. Remove the bridge unit assembly (B) from the printer.



### ***Bridge unit rear cover removal***

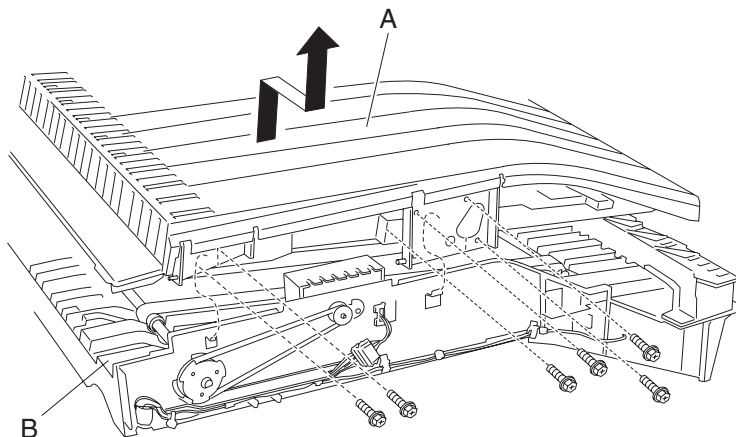
1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-81.**
2. Remove the two screws securing the bridge unit rear cover (A) to the bridge unit assembly (B).



3. Remove the bridge unit rear cover (A).

### ***Bridge unit top cover assembly removal***

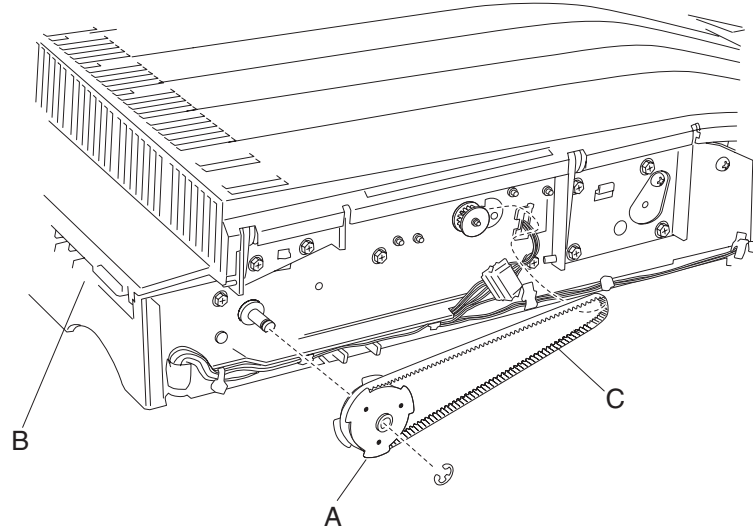
1. Remove the bridge unit rear cover. See **“Bridge unit rear cover removal”** on page 4-83.
2. Open the bridge unit top cover assembly (A).
3. Remove the six screws securing the bridge unit top cover assembly (A) to the bridge unit assembly (B).



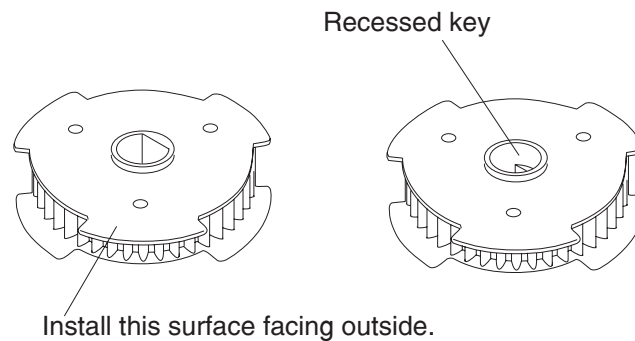
4. Lift the bridge unit top cover assembly (A) upward in the direction of the arrow.
5. Remove the bridge unit top cover assembly (A).

### **Bridge unit drive belt and bridge unit drive pulley removal**

1. Remove the bridge unit rear cover. See **“Bridge unit rear cover removal”** on page 4-83.
2. Use a prying tool to remove the e-clip securing the bridge unit drive pulley (A) to the bridge unit assembly (B).
3. Remove the bridge unit drive pulley (A) and the bridge unit drive belt (C) from the bridge unit assembly (B).

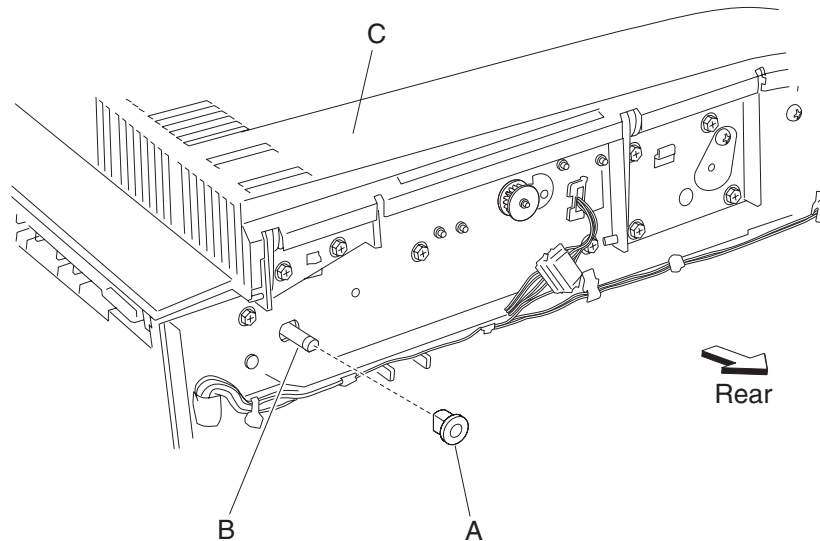


**Replacement note:** Make sure to install the bridge unit drive pulley (A) to the bridge unit assembly in the direction shown.

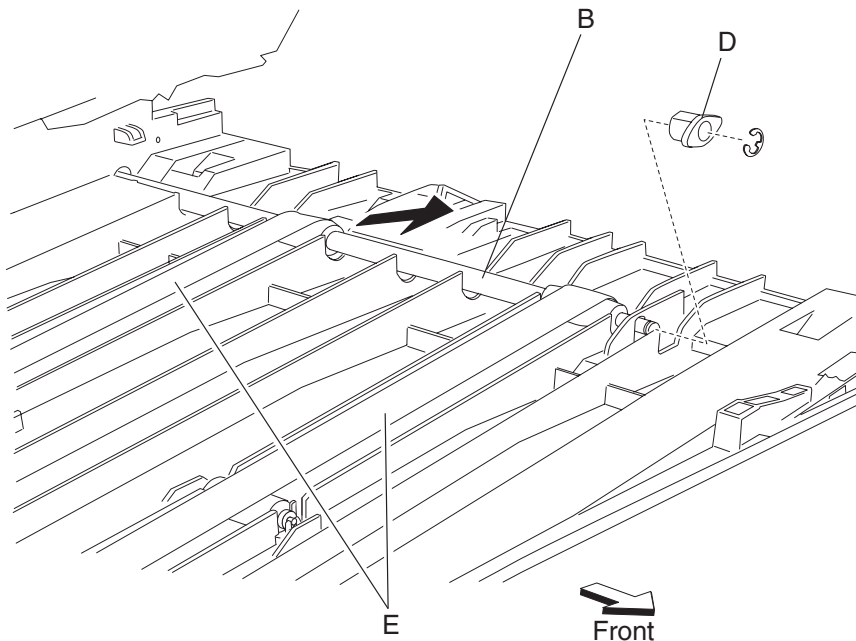


## Bridge unit right shaft assembly removal

1. Remove the bridge unit rear cover. See **“Bridge unit rear cover removal” on page 4-83.**
2. Remove the bridge unit transport belt and bridge unit drive pulley. See **“Bridge unit drive belt and bridge unit drive pulley removal” on page 4-85.**
3. Remove the 6 mm bushing (A) from the bridge unit right shaft assembly (B).
4. Open the bridge unit top cover assembly (C).



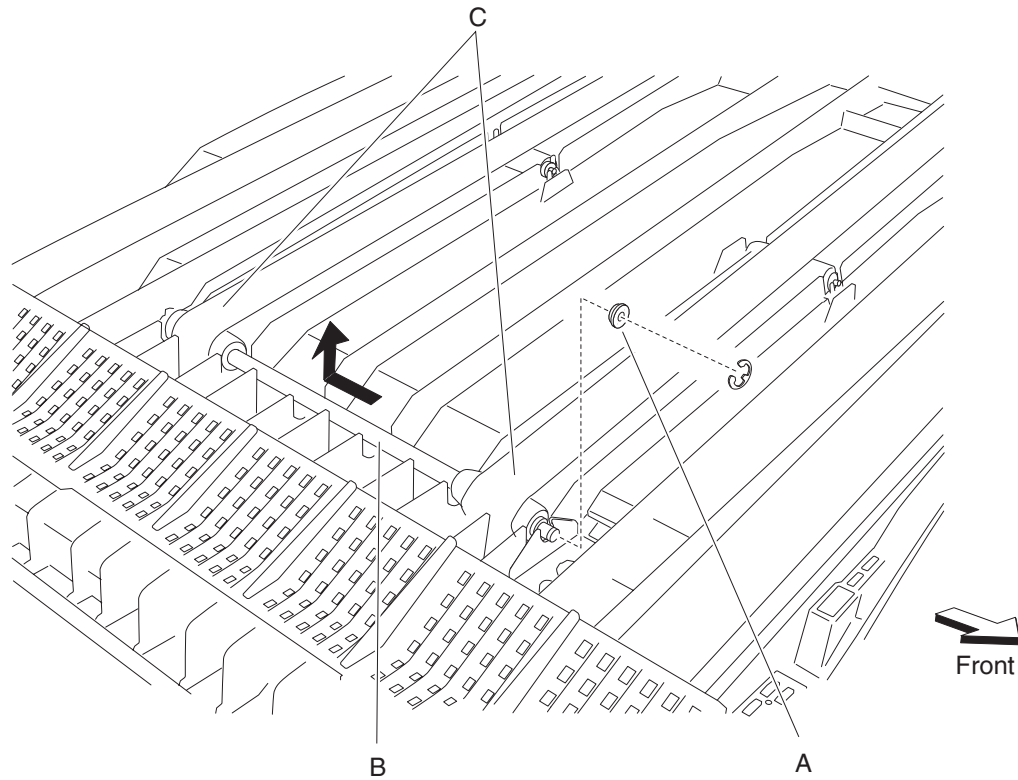
5. Use a prying tool to remove the e-clip securing the 6 mm bushing (D) to the bridge unit assembly.
6. Remove the 6 mm bushing (D).
7. Move the bridge unit right shaft assembly (B) toward the right as shown.
8. Remove the bridge unit right shaft assembly (B) from the two transport belts (E).
9. Remove the bridge unit right shaft assembly (B).





### ***Bridge unit left shaft assembly removal***

1. Open the bridge unit top cover assembly.
2. Use a prying tool to remove the front e-clip securing the 4 mm ball bearing (A) to the bridge unit left shaft (B).

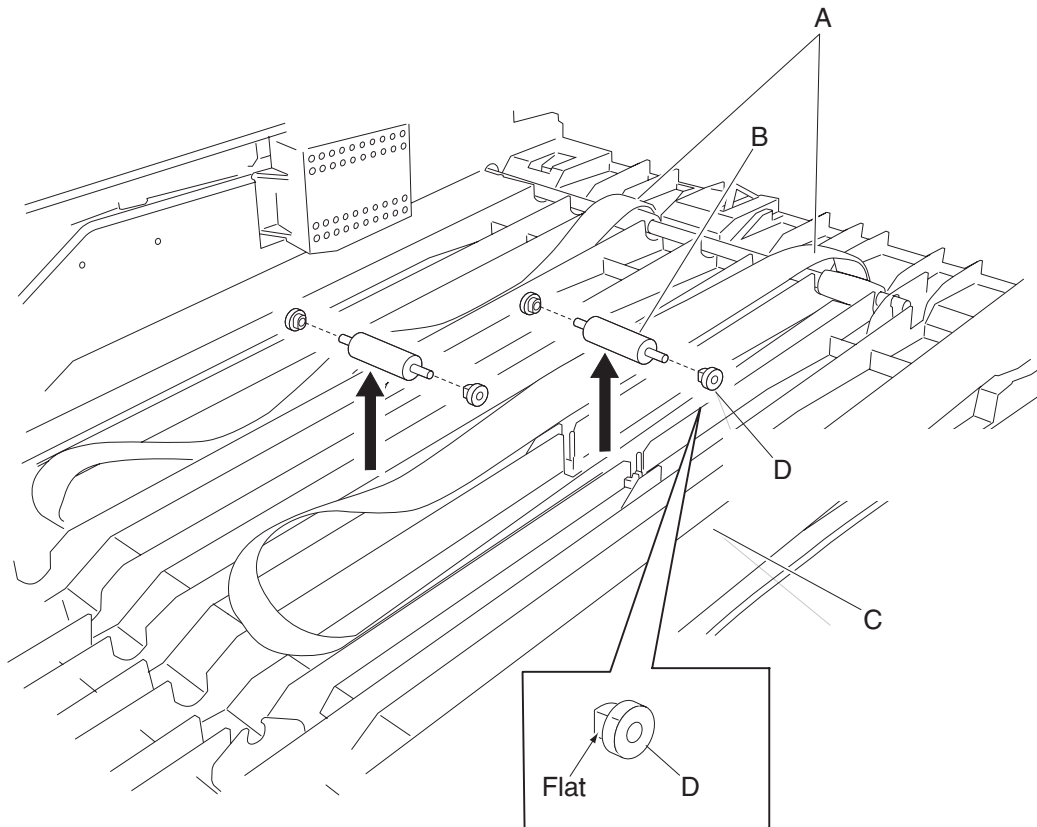


3. Move the bridge unit left shaft (B) rearward as shown.
4. Remove the bridge unit left shaft (B) from the two transport belts (C).
5. Remove the bridge unit left shaft (B).
6. Remove the other e-clip securing the 4 mm ball bearing (A) on the other end of the shaft.
7. Remove the second 4 mm ball bearing (A) from the bridge unit left shaft.

### ***Bridge unit idler rolls removal***

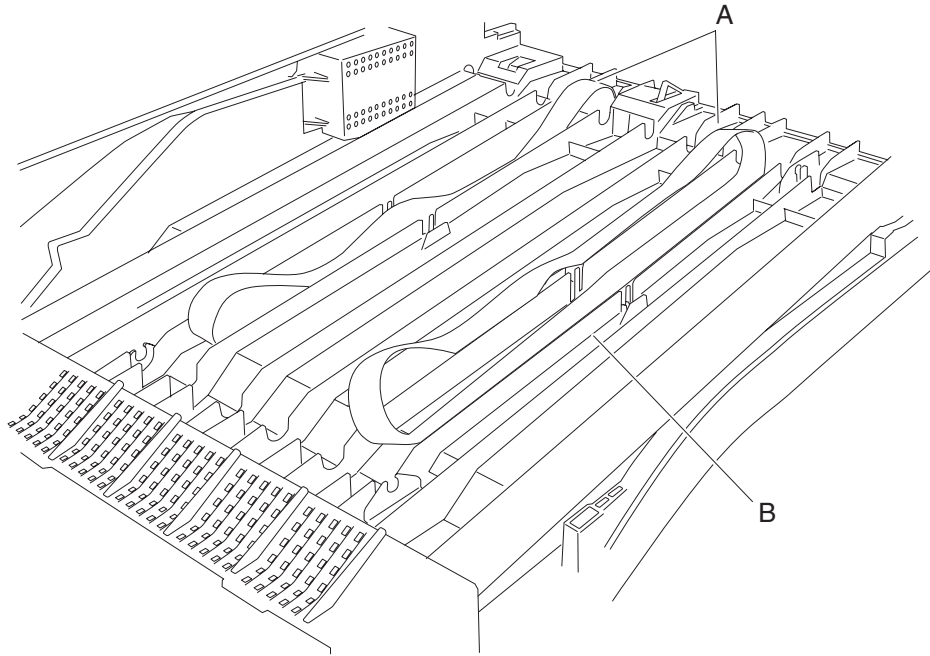
1. Open the bridge unit top cover assembly.
2. Remove the bridge unit left shaft assembly. See **“Bridge unit left shaft assembly removal” on page 4-87.**
3. Move the two transport belts (A) away from the two bridge unit idler rolls (B).
4. Lift the two bridge unit idler rolls upward to release them from the bridge unit assembly (C).
5. Remove the bushings (D) from the bridge unit idler rolls.

**Replacement note:** When replacing the bridge unit idler rolls, make sure the bushings are installed as shown.



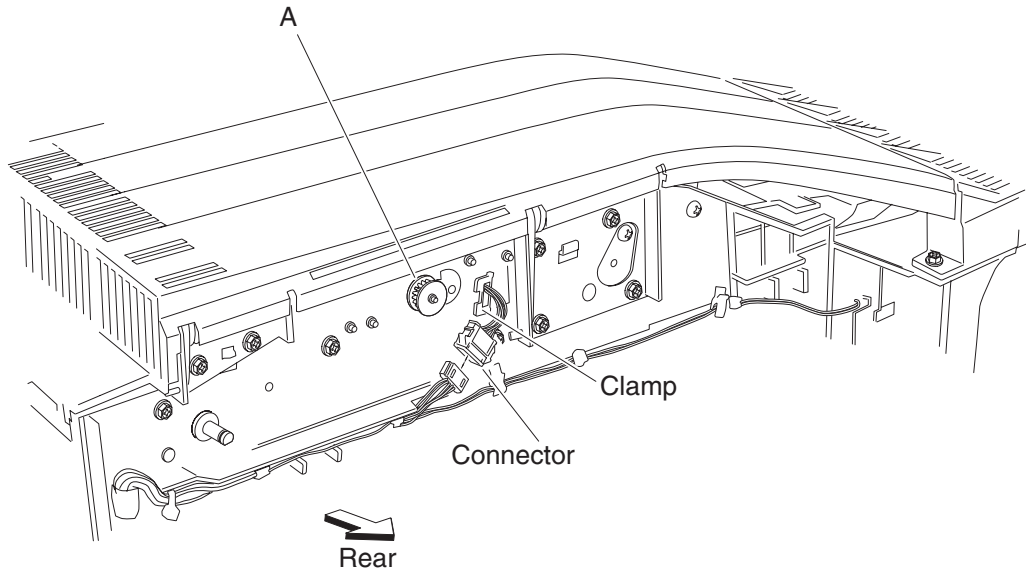
## ***Bridge unit transport belt removals***

1. Remove the bridge unit rear cover. See **“Bridge unit rear cover removal”** on page 4-83.
2. Open the bridge unit top cover assembly.
3. Remove the bridge unit right shaft assembly. See **“Bridge unit right shaft assembly removal”** on page 4-86.
4. Remove the bridge unit left shaft assembly. See **“Bridge unit left shaft assembly removal”** on page 4-87.
5. Remove the bridge unit idler rolls. See **“Bridge unit idler rolls removal”** on page 4-88.
6. Remove the transport belts (A) from the bridge unit assembly (B).

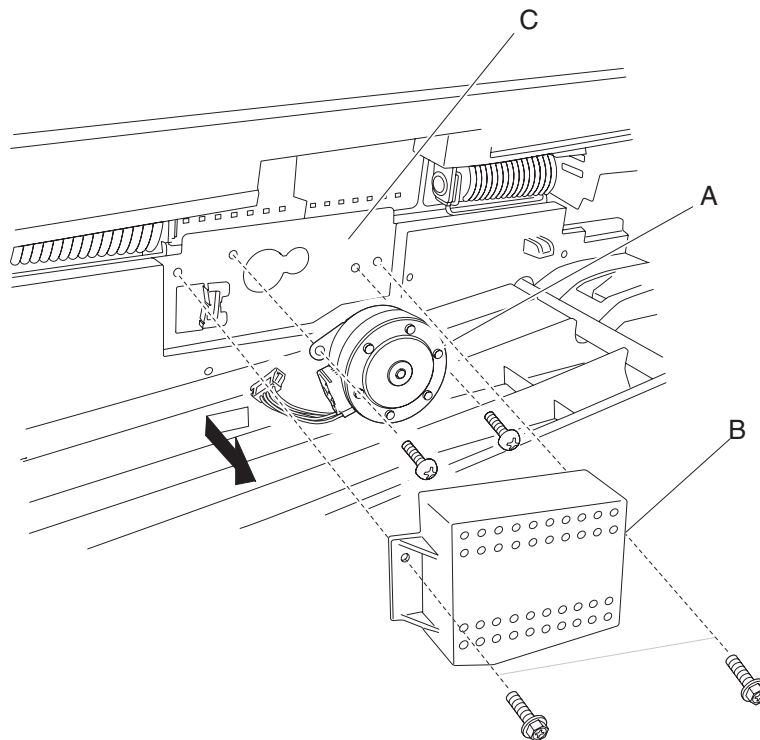


## Bridge unit drive motor assembly removal

1. Remove the bridge unit rear cover. See **“Bridge unit rear cover removal”** on page 4-83.
2. Remove the bridge unit drive belt. See **“Bridge unit drive belt and bridge unit drive pulley removal”** on page 4-85.
3. Disconnect the connector from the bridge unit drive motor (A).



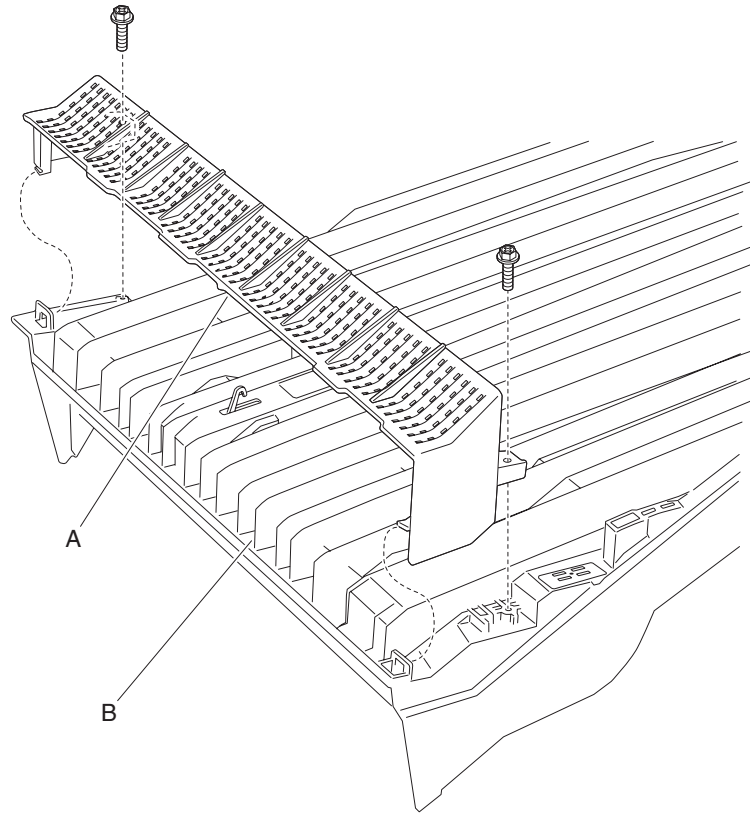
4. Release the harness from the clamp.
5. Open the bridge unit top cover assembly.
6. Remove the two screws securing the cover (B) from the bridge unit assembly (C).
7. Remove the cover (B).
8. Remove the two screws securing the bridge unit drive motor (A) to the bridge unit assembly (C).



9. Remove the bridge unit drive motor (A).

### ***Bridge unit entrance guide removal***

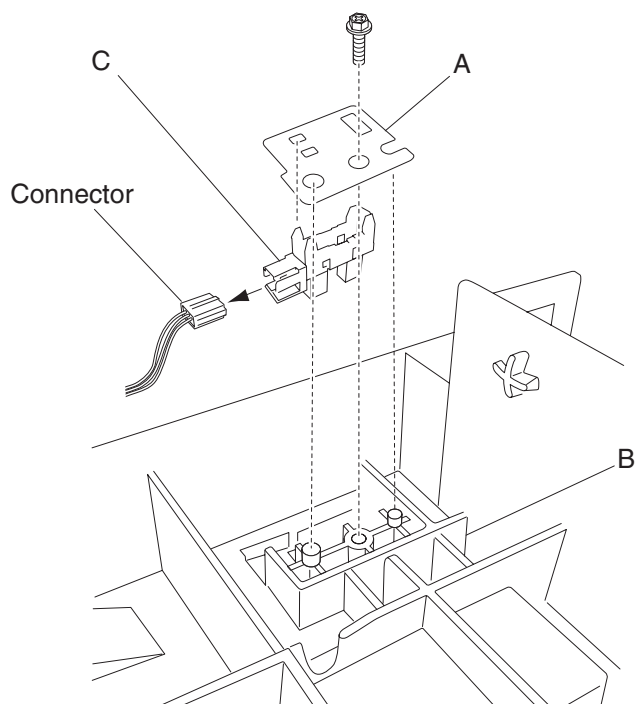
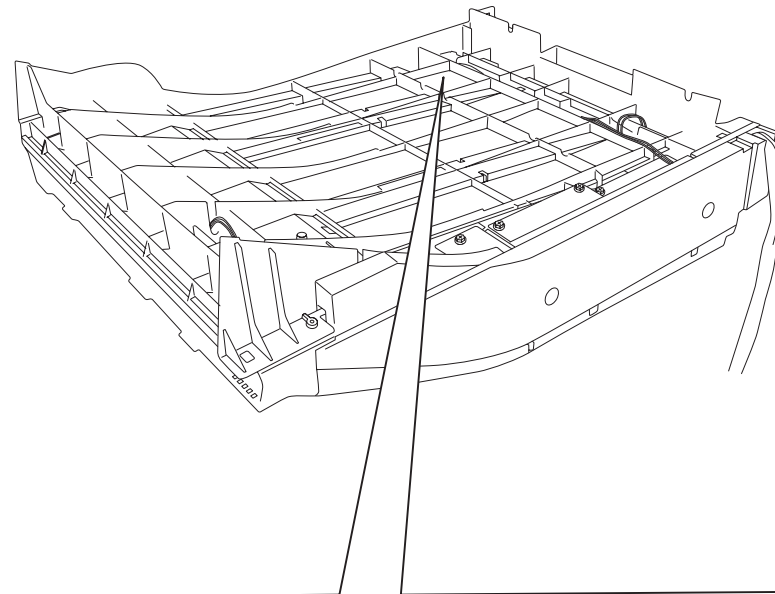
1. Remove the bridge unit rear cover. See **“Bridge unit rear cover removal”** on page 4-83.
2. Open the bridge unit top cover assembly.
3. Remove the two screws securing the bridge unit entrance guide (A) to the bridge unit assembly (B).



4. Remove the bridge unit entrance guide (A).

### **Sensor (bridge unit top cover interlock) removal**

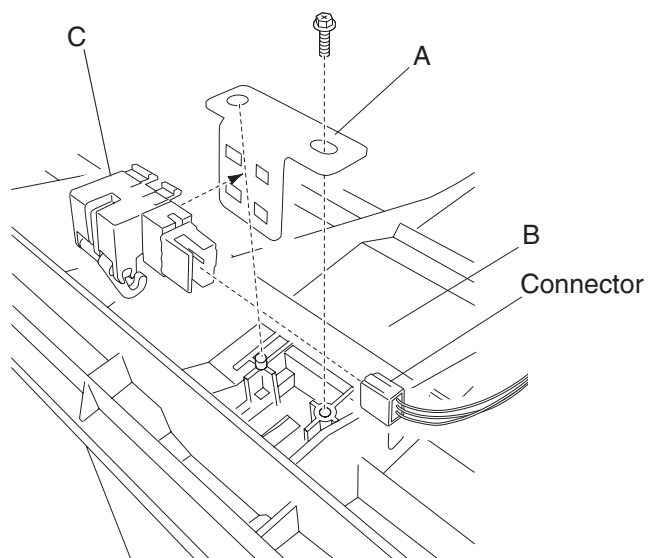
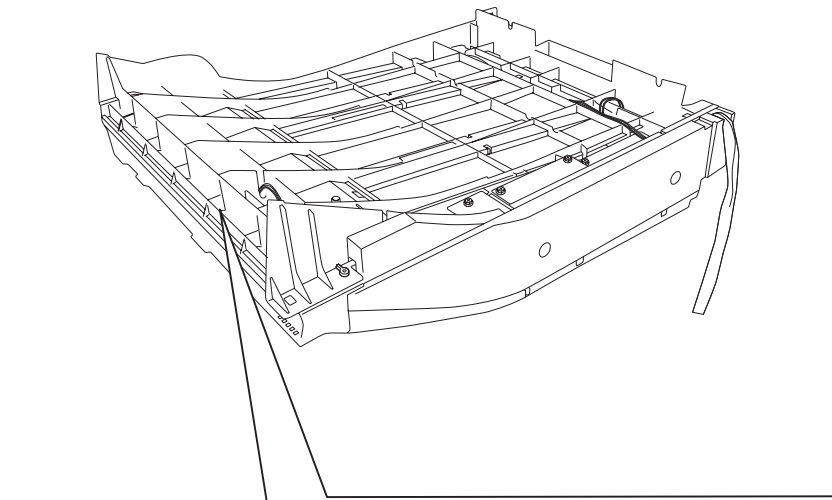
1. Remove the bridge unit assembly. See **“Bridge unit assembly removal”** on page 4-81.
2. Place the bridge unit assembly upside down.
3. Remove the screw securing the bracket (A) to the bridge unit assembly (B).
4. Disconnect the cable from the sensor (bridge unit top cover interlock) (C).



5. Release the hooks securing the sensor (bridge unit top cover interlock) (C) to the bracket (A).
6. Remove the sensor (bridge unit top cover interlock) (C).

### **Sensor (bridge unit media entrance) removal**

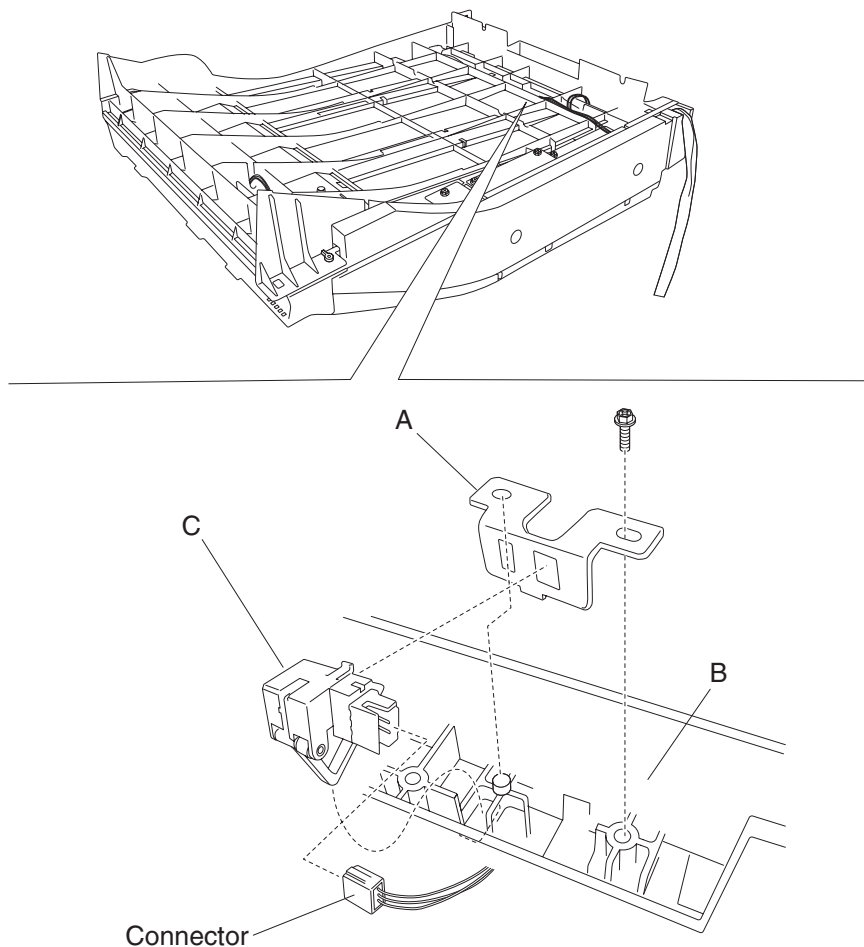
1. Remove the bridge unit assembly. See **“Bridge unit assembly removal”** on page 4-81.
2. Place the bridge unit assembly upside down.
3. Remove the screw securing the bracket (A) to the bridge unit assembly (B).
4. Disconnect the connector from the sensor (bridge unit media entrance) (C).



5. Release the hooks securing the sensor (bridge unit media entrance) (C) to the bracket (A).
6. Remove the sensor (bridge unit media entrance) (C).

### **Sensor (bridge unit media exit) removal**

1. Remove the bridge unit assembly. See **“Bridge unit assembly removal” on page 4-81.**
2. Place the bridge unit upside down.
3. Remove the screw securing the bracket (A) to the bridge unit (B).

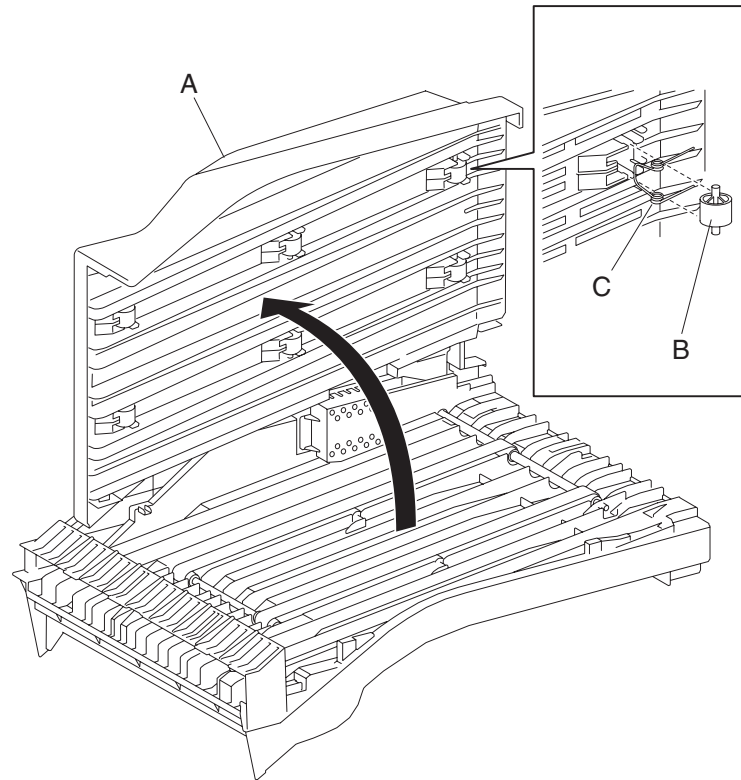


4. Disconnect the connector from the sensor (bridge unit media exit) (C).
5. Release the hooks securing the sensor (bridge unit media exit) (C) to the bracket (A).
6. Remove the sensor (bridge unit media exit) (C).



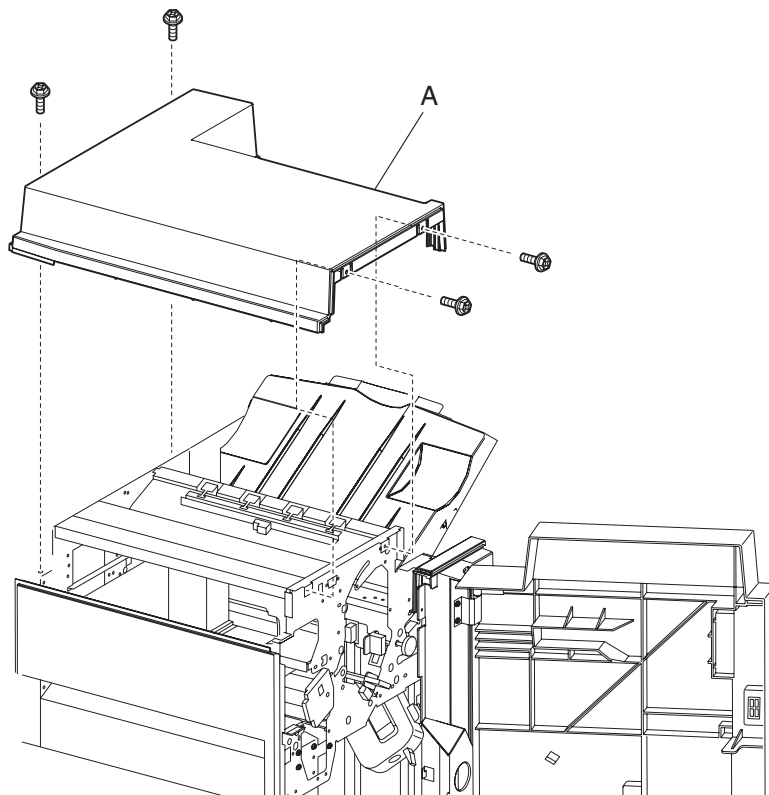
### ***Bridge unit pinch roller removal***

1. Open the bridge unit top cover assembly (A).
2. Remove the six bridge unit pinch rollers (B) by gently pulling them out of the bridge unit top cover assembly.
3. Remove the six springs (C).



## Top cover removal

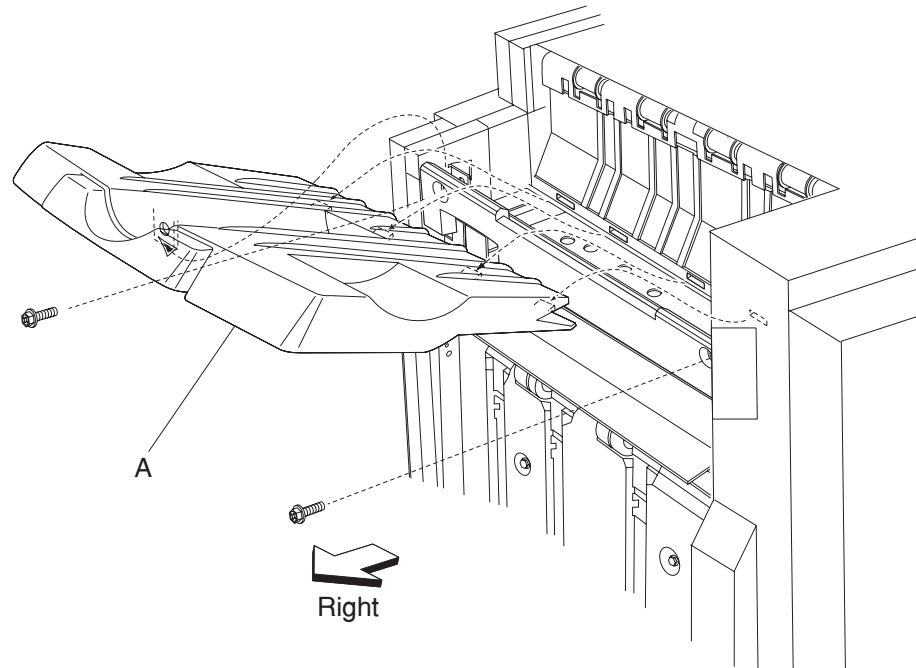
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-97.**
4. Remove the four screws securing the top cover (A) to the finisher.



5. Remove the top cover (A).

### ***Upper media bin assembly removal***

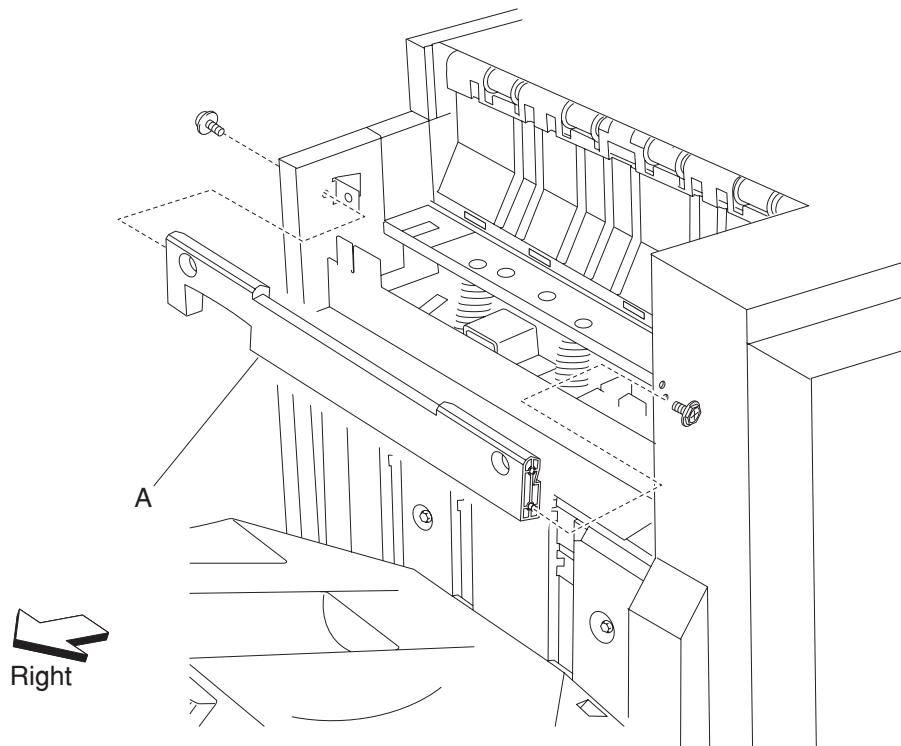
1. Loosen the two screws securing the upper media bin assembly (A) to the finisher.



2. Lift the upper media bin assembly (A) upward in the direction of the arrow.
3. Remove the upper media bin assembly (A).

### ***Right eject cover removal***

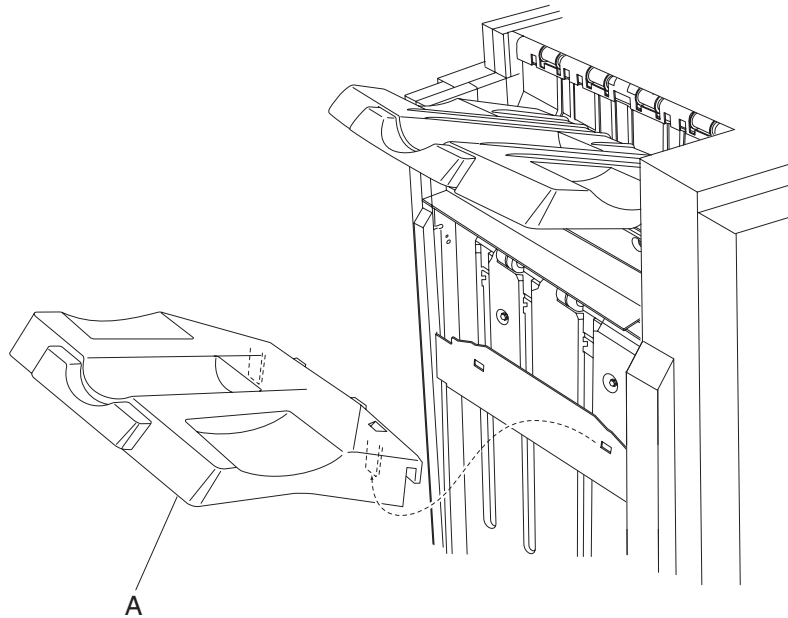
1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the two screws securing the right eject cover (A) to the finisher.



4. Remove the right eject cover (A).

### ***Stacker media bin assembly removal***

1. Release the two hooks securing the stacker media bin assembly (A) to the finisher.

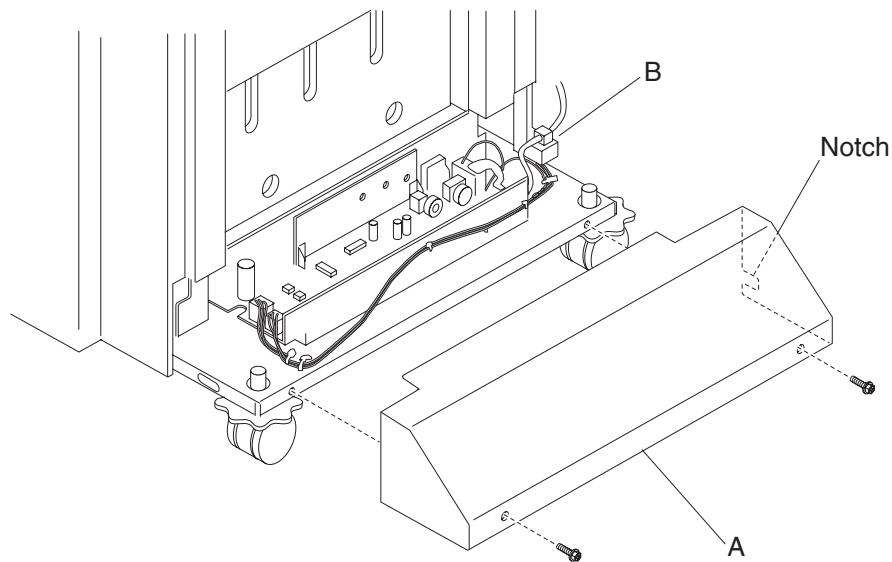


2. Lift the stacker media bin assembly (A) upward.
3. Remove the stacker media bin assembly. (A).

### ***Right lower low voltage power supply (LVPS) cover removal***

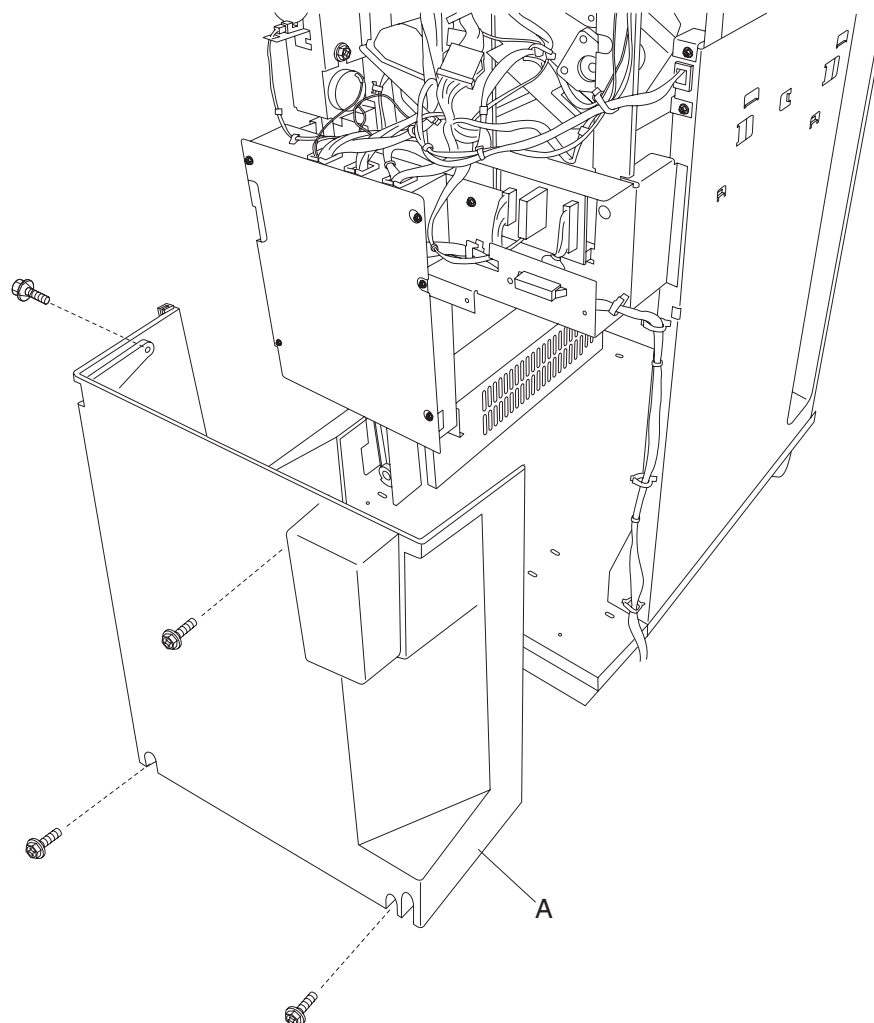
1. Remove the two screws securing the right lower LVPS cover (A) to the finisher.
2. Remove the right lower LVPS cover (A).

**Replacement note:** Make sure to put the power cord (B) into the notch on the right lower LVPS cover (A).



## ***Rear lower cover removal***

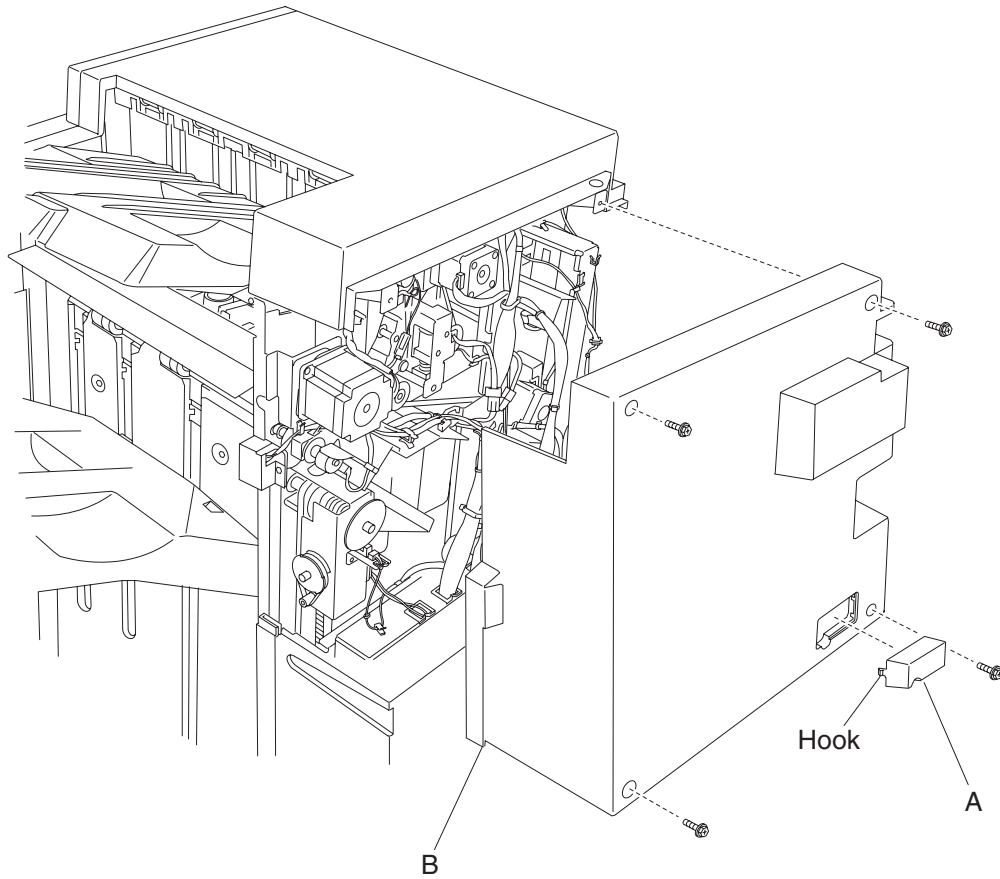
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101**
2. Remove the four screws securing the rear lower cover (A) to the finisher.



3. Remove the rear lower cover (A).

### ***Rear upper cover removal***

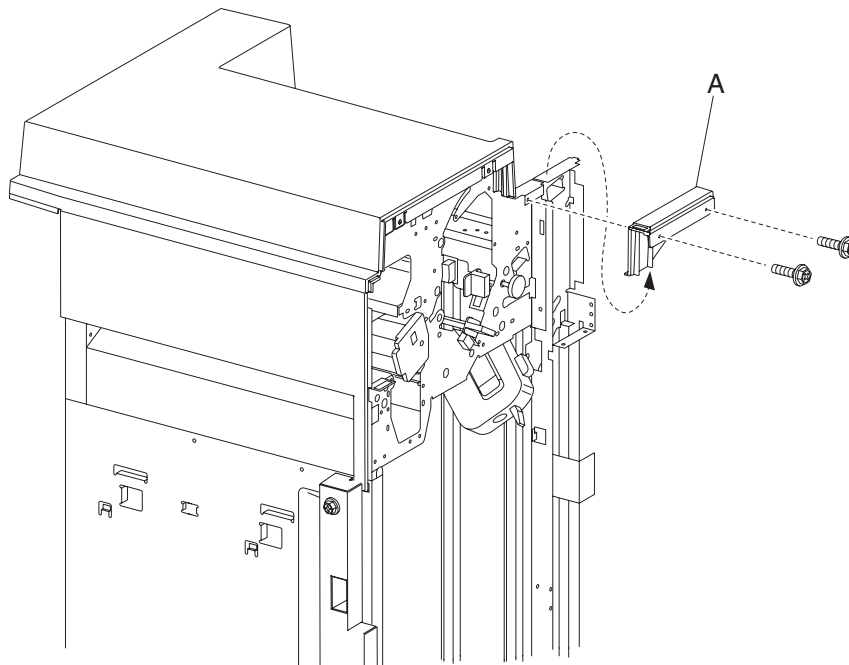
1. Release the hook of the bridge unit hookup cover (A) to the finisher.
2. Disconnect the bridge unit harness from the finisher.
3. Remove the four screws securing the rear upper cover (B) to the finisher.



4. Remove the rear upper cover (B).

### ***Upper media bin front cover removal***

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-97.**
3. Remove the two screws securing the upper media bin front cover (A).

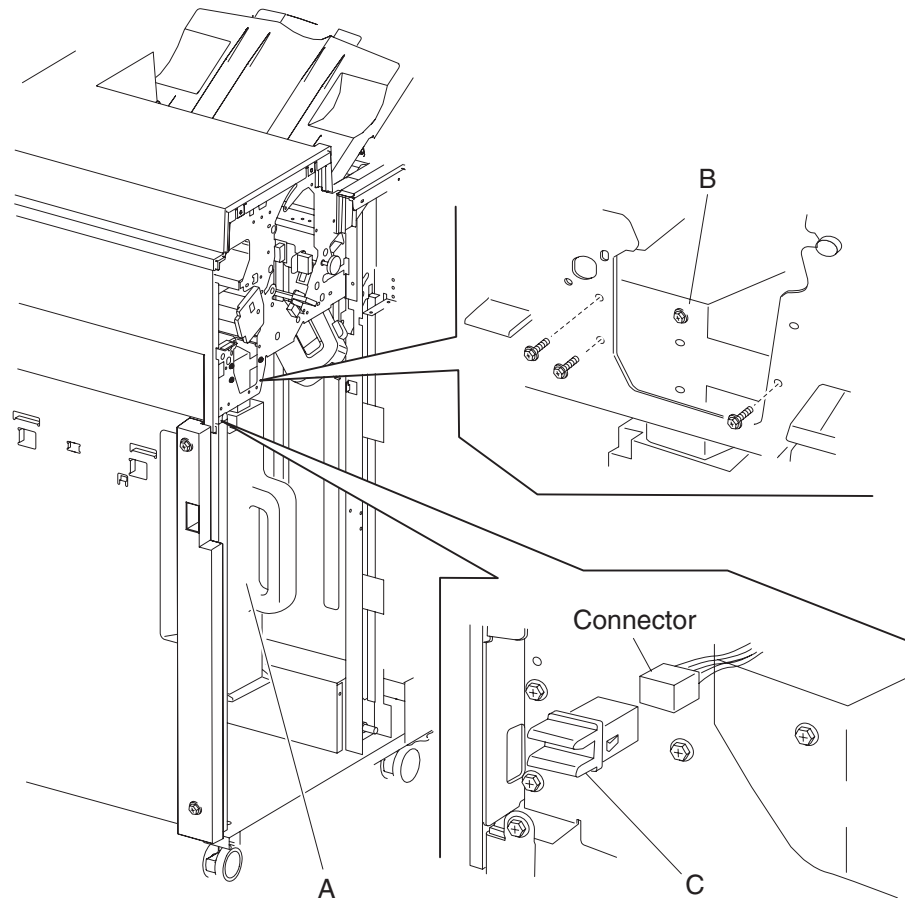


4. Remove the upper media bin front cover (A).



### Switch (finisher front door interlock) removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
3. Remove the punch waste box (A).
4. Remove the three screws in the front securing the punch waste chute (B).
5. Gently pull down the punch waste chute (B) to gain better access to the switch (finisher front door interlock) (C).
6. Disconnect the connector from the switch (finisher front door interlock) (C).

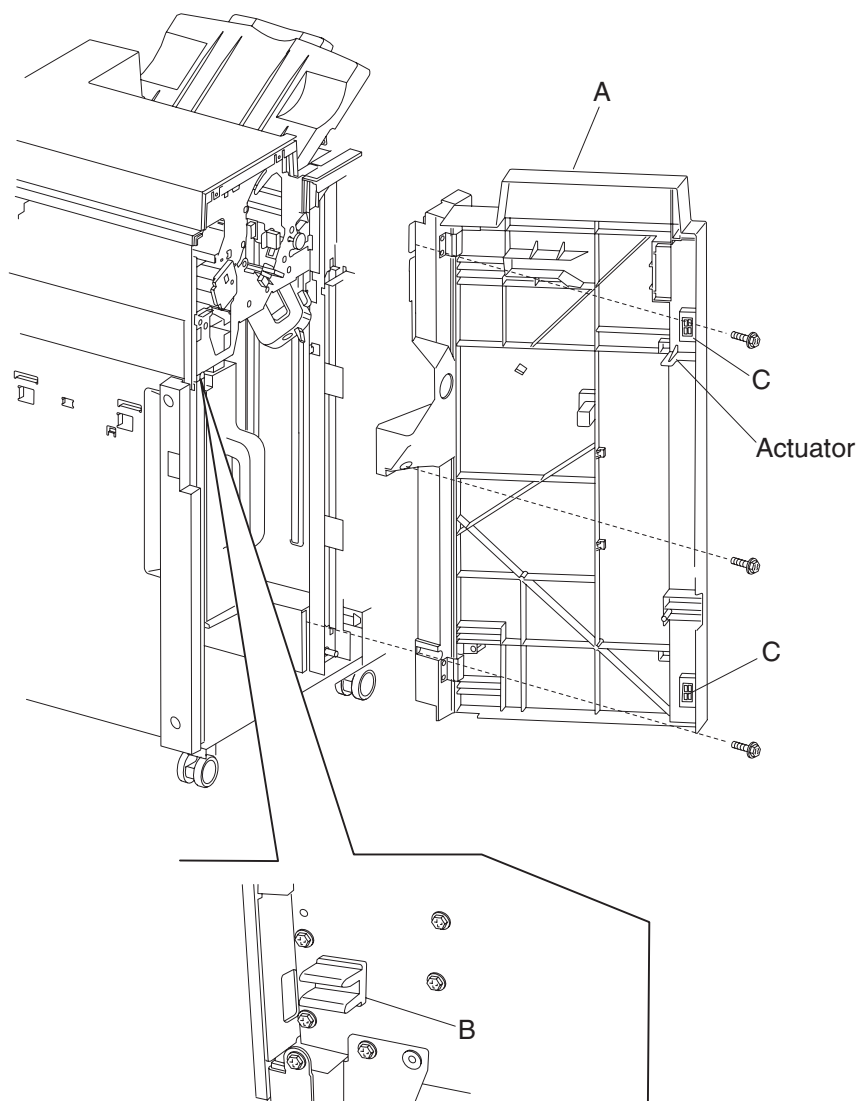


7. Release the hooks securing the switch (finisher front door interlock) (C) to the finisher.
8. Remove the switch (finisher front door interlock) (C).

### ***Finisher front door assembly removal***

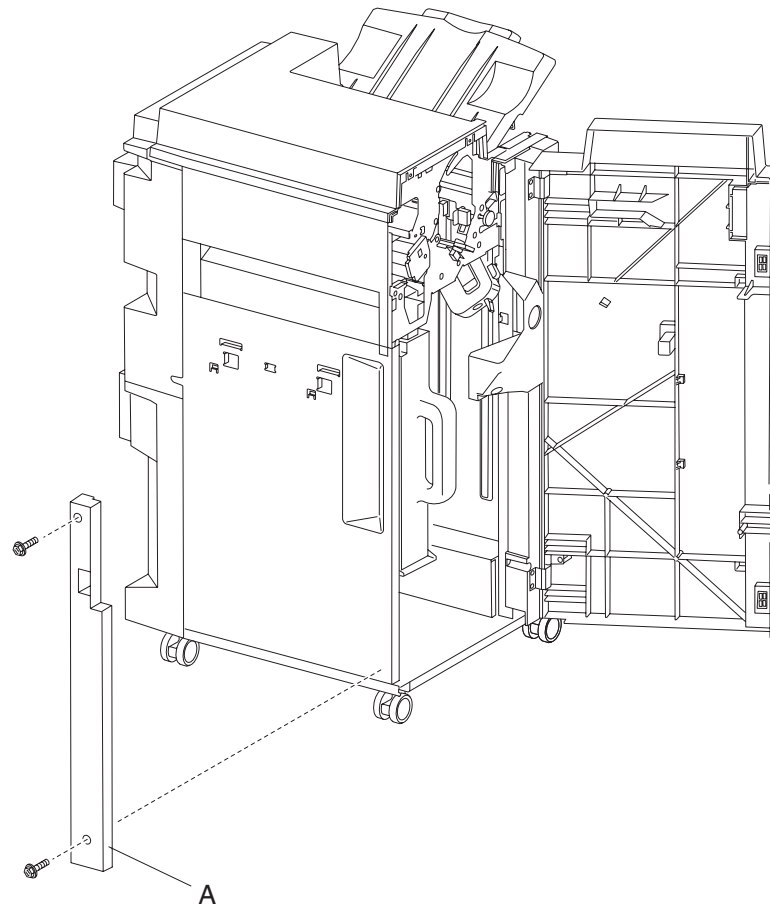
1. Open the finisher front door assembly (A).
2. Remove the three screws securing the finisher front door assembly.
3. Remove the finisher front door assembly.

**Replacement note:** Make sure the actuator molded in the finisher front door assembly properly engages the switch (finisher front door interlock) (B). The two magnetic catches (C) should properly engage the finisher.



***Left lower cover removal***

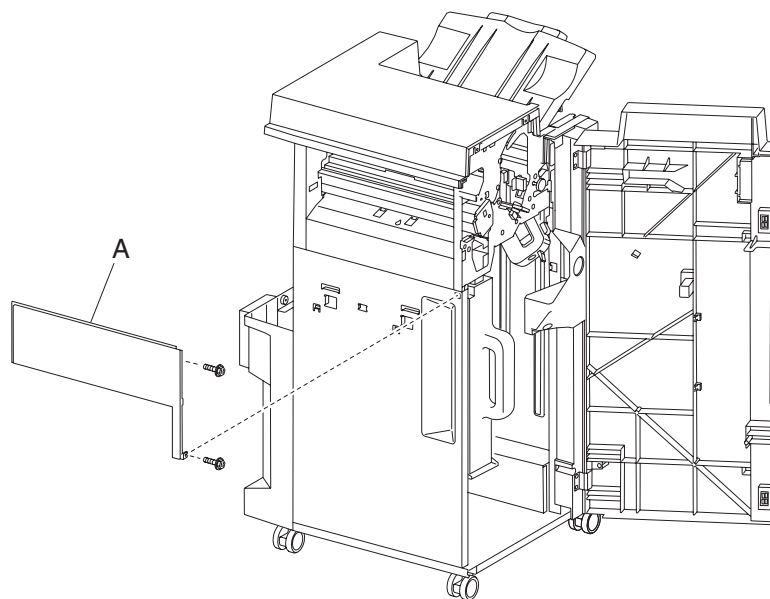
1. Open the finisher front door assembly.
2. Remove the two screws securing the left lower cover (A).



3. Remove the left lower cover (A).

### ***Left upper cover removal***

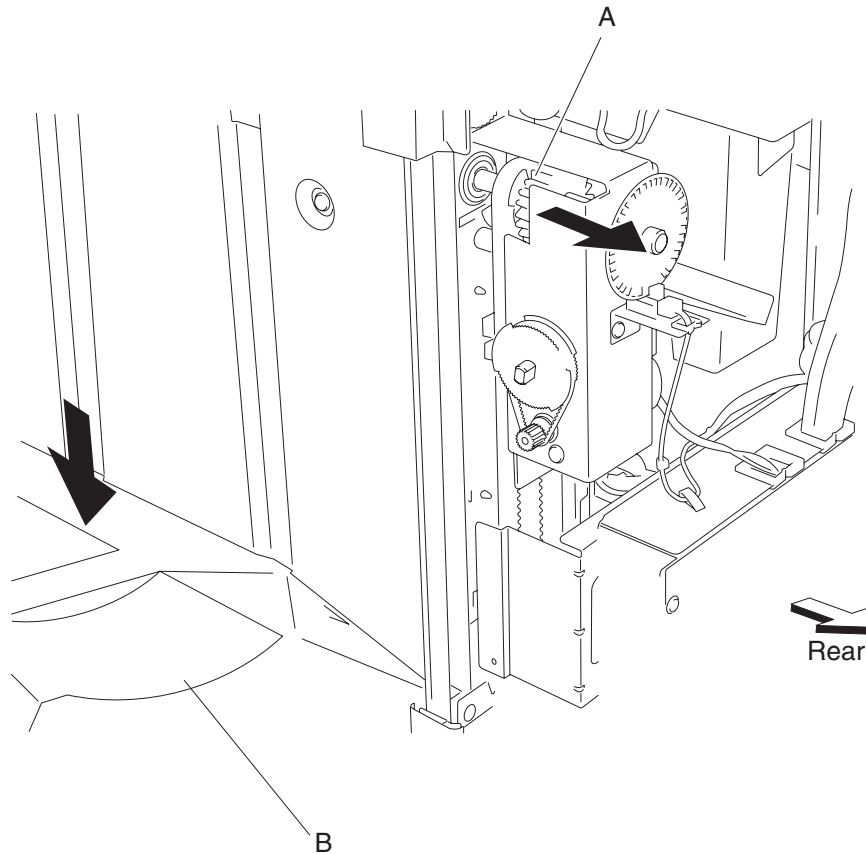
1. Open the finisher front door assembly.
2. Remove the two screws securing the left upper cover (A).



3. Remove the left upper cover (A).

### Carriage lift belt left removal

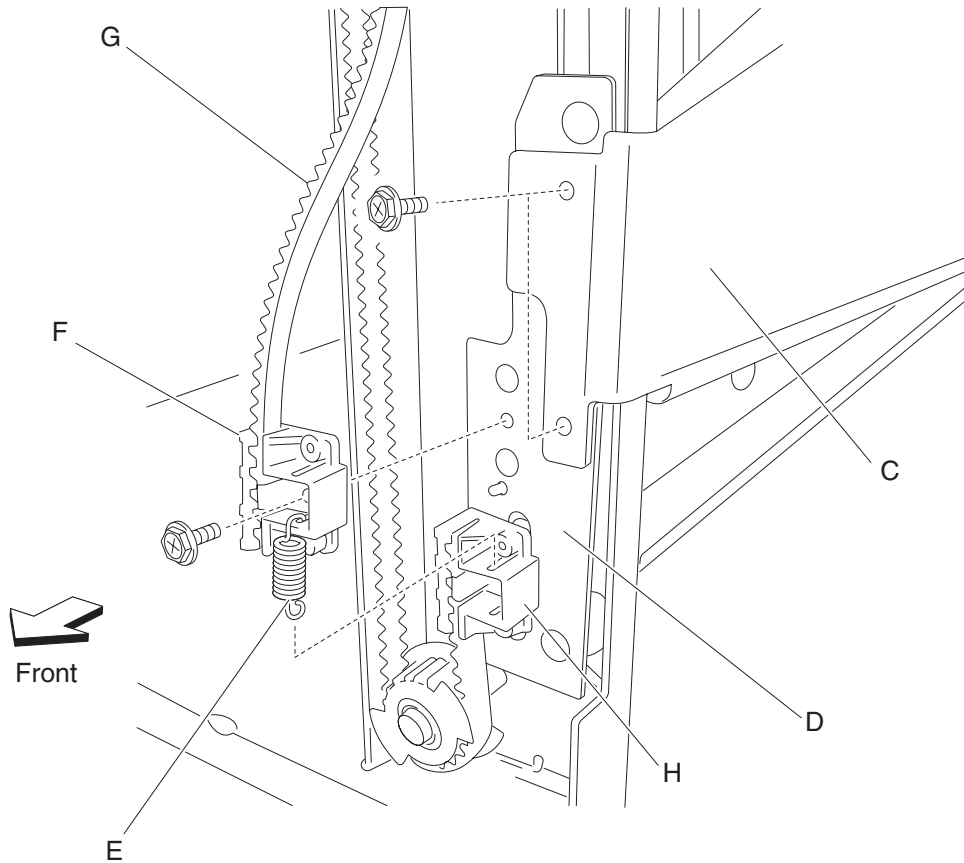
1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
  2. Remove the finisher front door assembly. See **“Finisher front door assembly removal”** on page 4-104.
  3. Move the slip clutch gear 24T (A) toward the rear to disengage the stacker bin (B).
  4. Move the stacker bin (B) down to its lowest position after being disengaged.
- Note:** Make sure the stacker bin is at its lowest position before continuing.



5. Remove the two screws securing the bin bracket (C) to the left carriage bracket (D).
6. Remove the spring (E) from the left carriage lift assembly.
7. Remove the screw securing the upper belt clamp (F) to the left carriage bracket (D).
8. Remove the upper belt clamp (F).
9. Remove the left carriage bracket with the carriage lift belt (G) from the finisher.
10. Release the hook securing the carriage lift belt (G) to the lower belt clamp (H).
11. Remove the carriage lift belt (G).

**Replacement notes:**

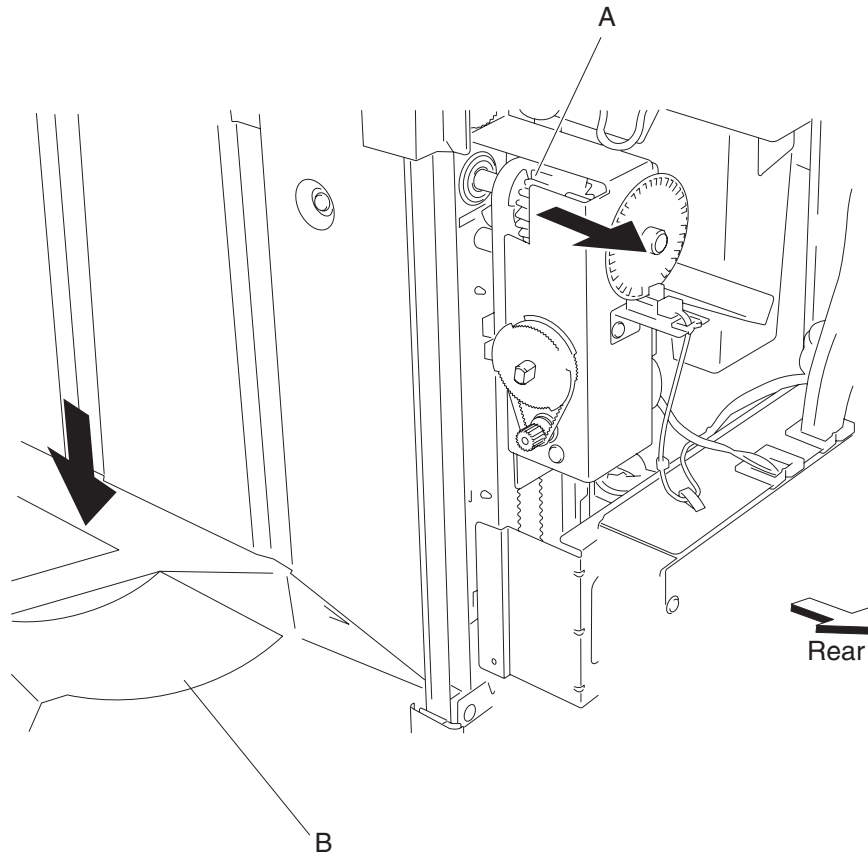
- Make sure the carriage lift belt (G) is inserted into the upper belt clamp (F) as shown.
- Make sure the bin bracket (C) is level to prevent binding.



### Carriage lift belt right removal

1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
2. Remove the finisher front door assembly. See **“Finisher front door assembly removal”** on page 4-104.
3. Move the slip clutch gear 24T (A) toward the rear to disengage the stacker bin (B).
4. Move the stacker bin (B) to its lowest position.

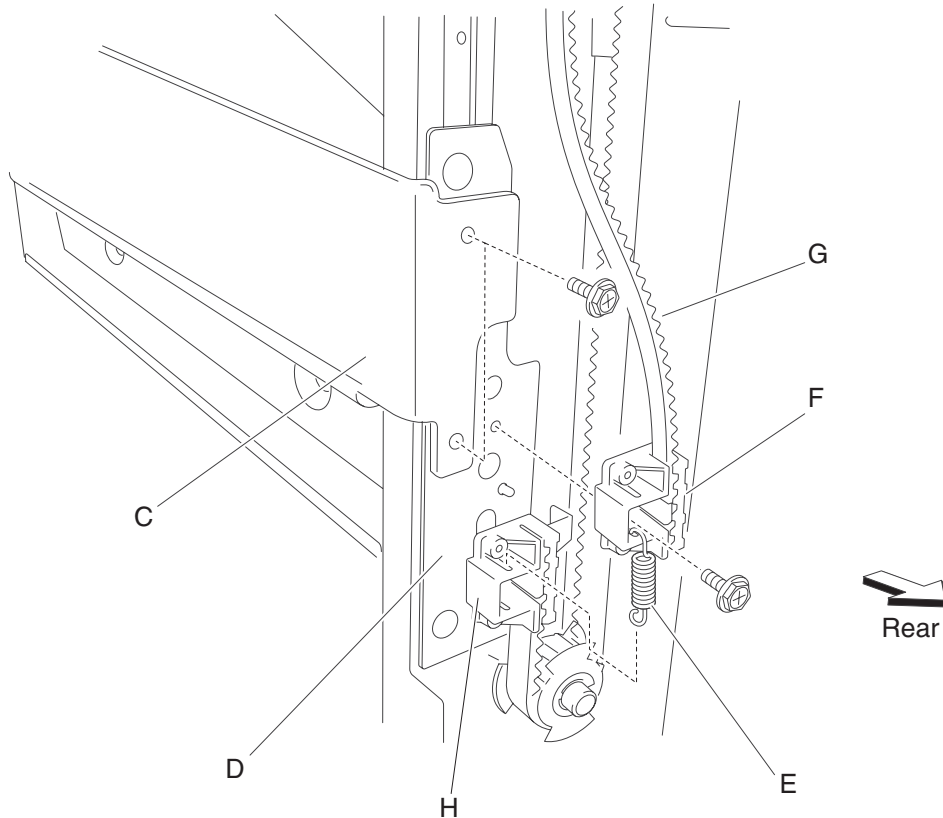
**Note:** Make sure the stacker bin is at the lowest position before continuing.



5. Remove the two screws securing the bin bracket (C) to the right carriage bracket (D).
6. Remove the spring (E) from the right carriage bracket (D).
7. Remove the screw securing the upper belt clamp (F) to the right carriage bracket (D).
8. Remove the upper belt clamp (F).
9. Remove the right carriage bracket (D) with the carriage lift belt (G) from the finisher.
10. Release the hook securing the carriage lift belt (G) to the lower belt clamp (H).
11. Remove the carriage lift belt (G).

**Replacement notes:**

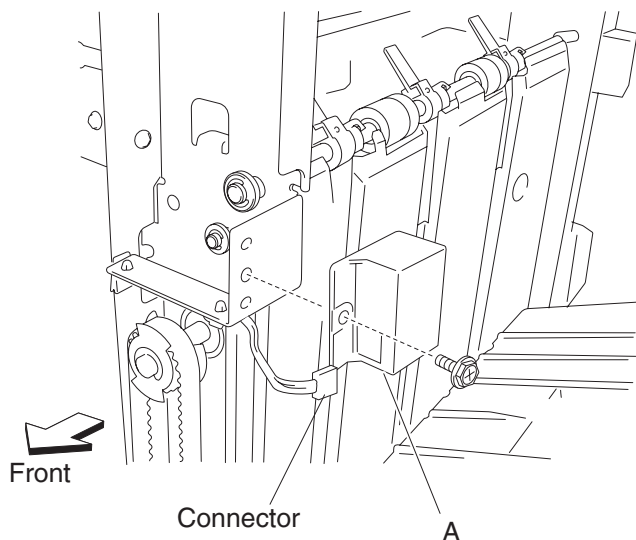
- Make sure the carriage lift belt (G) is inserted into the upper belt clamp (F) as shown.
- Make sure the bin bracket (C) is level to prevent binding.





### Sensor (stacker bin level 1) removal

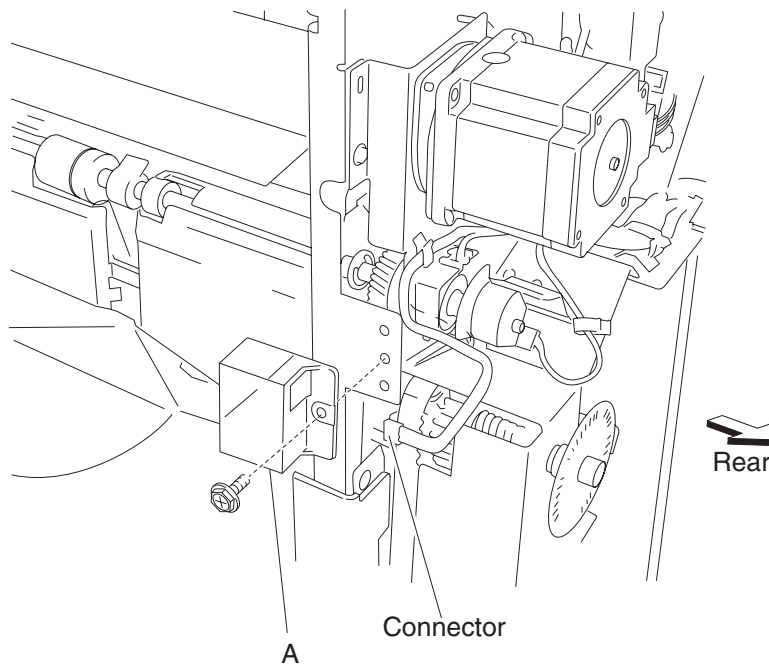
1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Disconnect the connector from the sensor (stacker bin level 1) (A).



4. Remove the screw securing the sensor (stacker bin level 1) (A) to the finisher.
5. Remove the sensor (stacker bin level 1) (A).

### Sensor (stacker bin level 2) removal

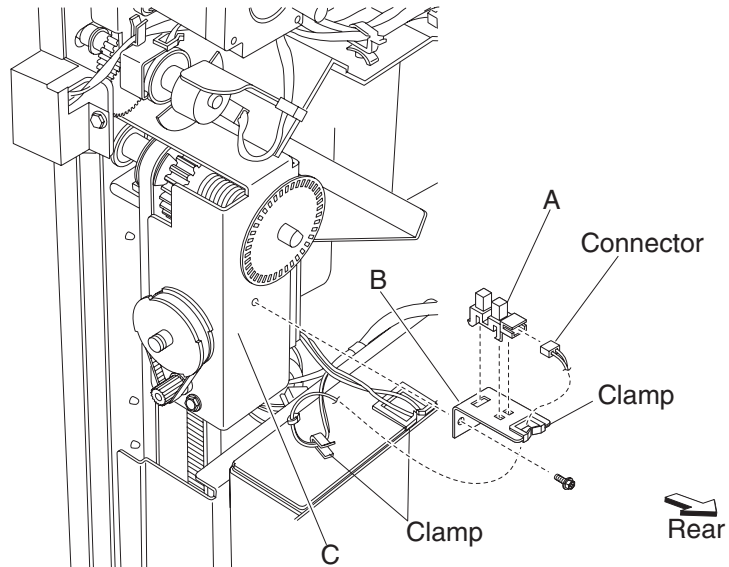
1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Disconnect the connector from the lift tray height sensor (stacker bin level 2) (A).



4. Remove the screw securing the sensor (stacker bin level 2) (A).
5. Remove the sensor (stacker bin level 2) (A).

**Sensor (stacker bin level encoder) removal**

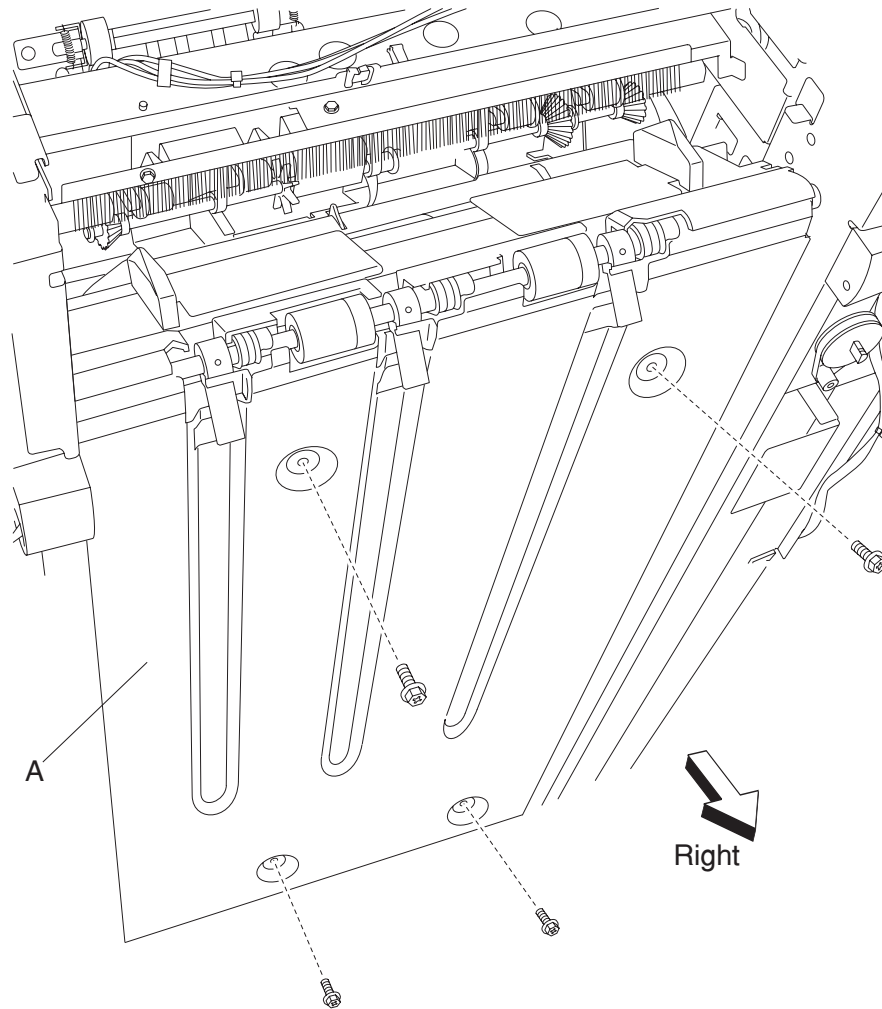
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
2. Disconnect the connector from the sensor (stacker bin level encoder) (A).
3. Release the harness from the clamp.
4. Remove the screw securing the bracket (B) from the stacker bin lift motor assembly (C).



5. Release the hooks securing the sensor to the bracket (B).
6. Remove the sensor (stacker bin level encoder) (A).

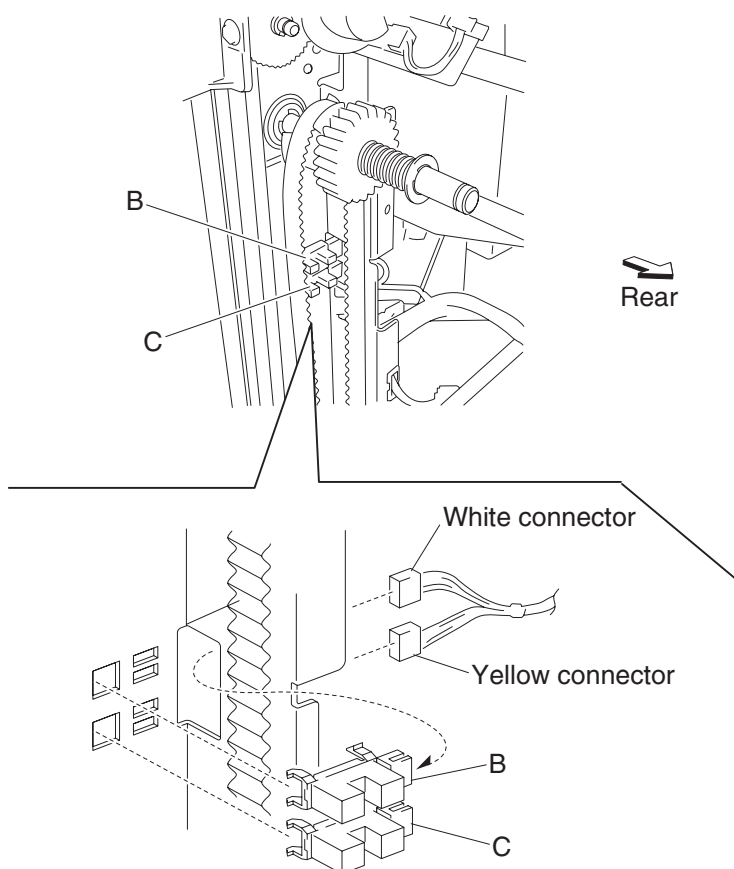
### **Sensor (stacker bin upper limit) or sensor (stacker bin no media) removal**

1. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
2. Remove the stacker media bin assembly. See **"Stacker media bin assembly removal"** on page 4-99.
3. Remove the stacker bin lift motor assembly. See **"Stacker bin lift motor assembly removal"** on page 4-115.
4. Remove the four screws securing the metal cover (A) to the finisher.
5. Remove the metal cover (A).



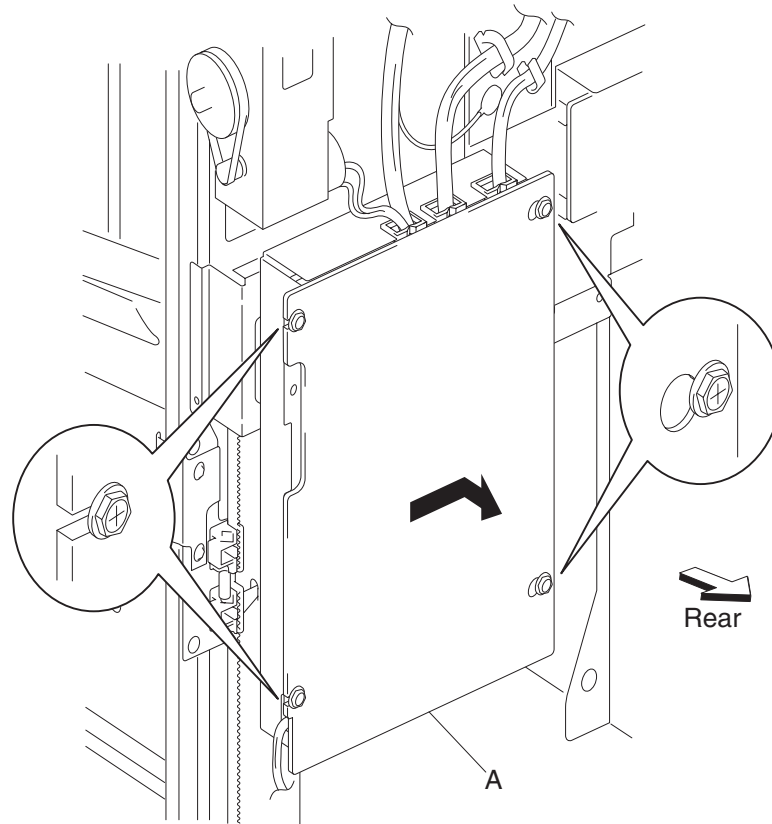
6. Disconnect the connector from the sensor (stacker bin upper limit) (B) or the sensor (stacker bin no media) (C).
7. Release the hooks of the selected sensor.
8. Remove the sensor.

**Replacement note:** Make sure that the yellow connector is plugged into the sensor (stacker bin no media) (C).



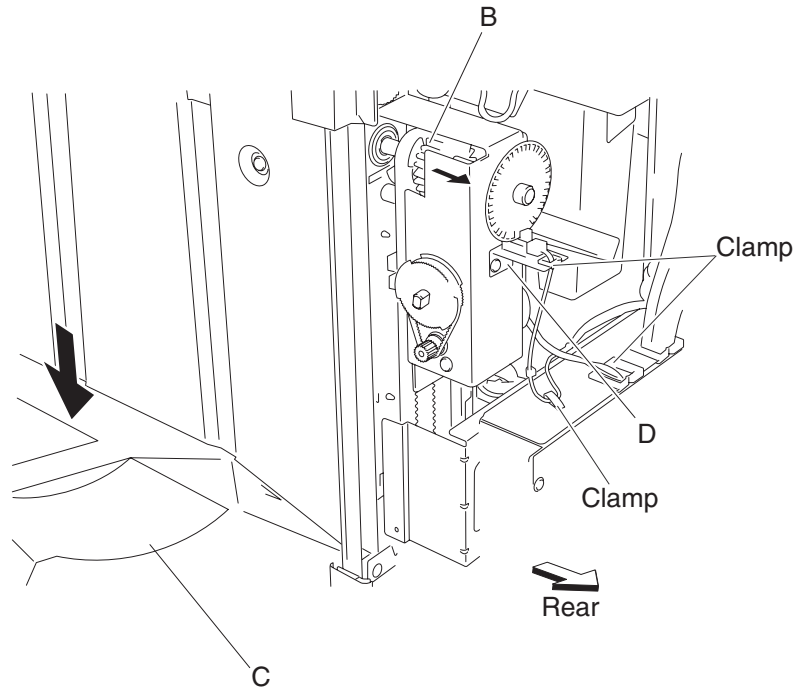
### ***Stacker bin lift motor assembly removal***

1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
2. Remove the rear lower cover. See **“Rear lower cover removal”** on page 4-100.
3. Loosen the four screws securing the plate (A).
4. Move the plate (A) toward the right as shown.

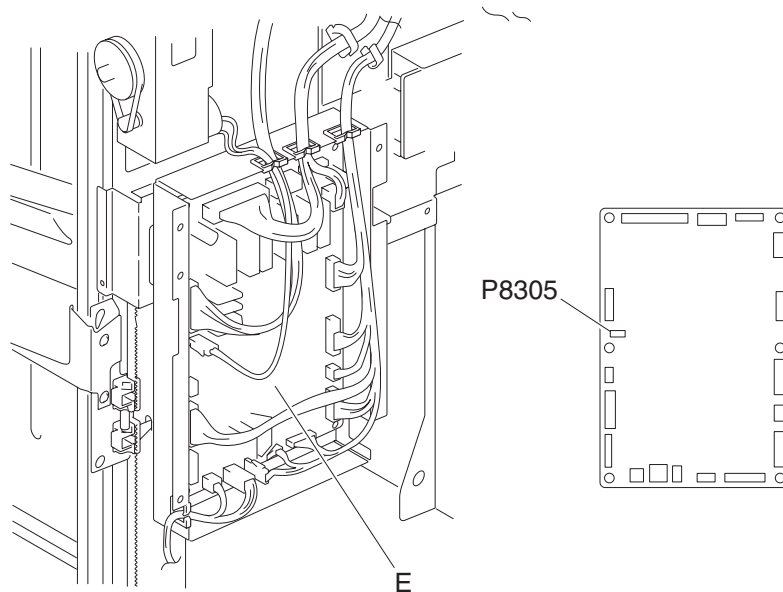


5. Remove the plate (A).

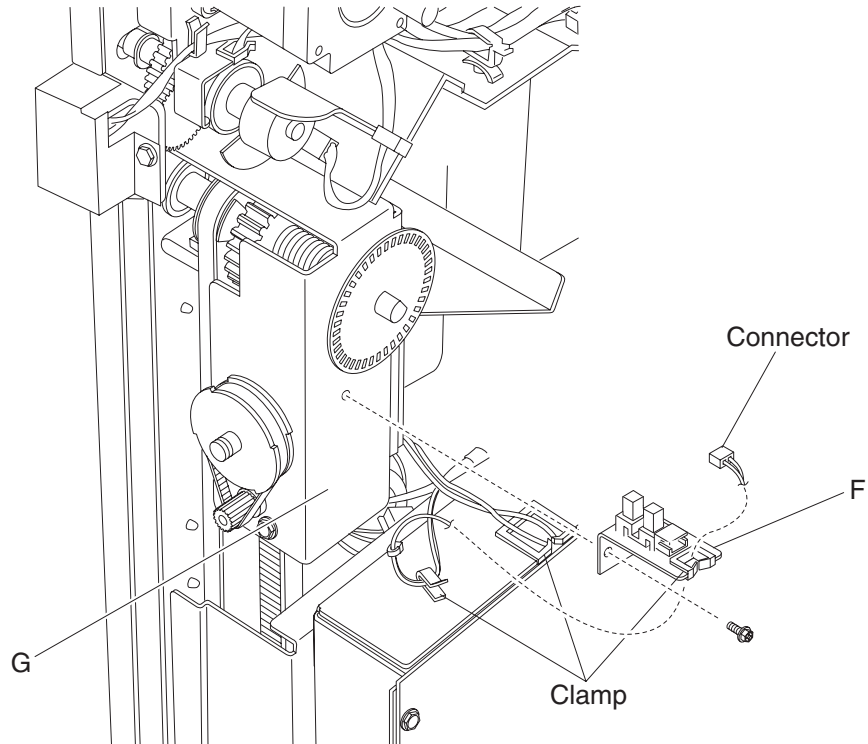
6. Move the slip clutch gear 24T (B) toward the rear to disengage the stacker bin (C).
7. Move the stacker bin (C) to the lowest position.  
**Note:** Make sure the stacker bin (C) is at the lowest position before continuing.
8. Disconnect the connector from the sensor (stacker bin level encoder) (D).
9. Release the harness from the clamps.



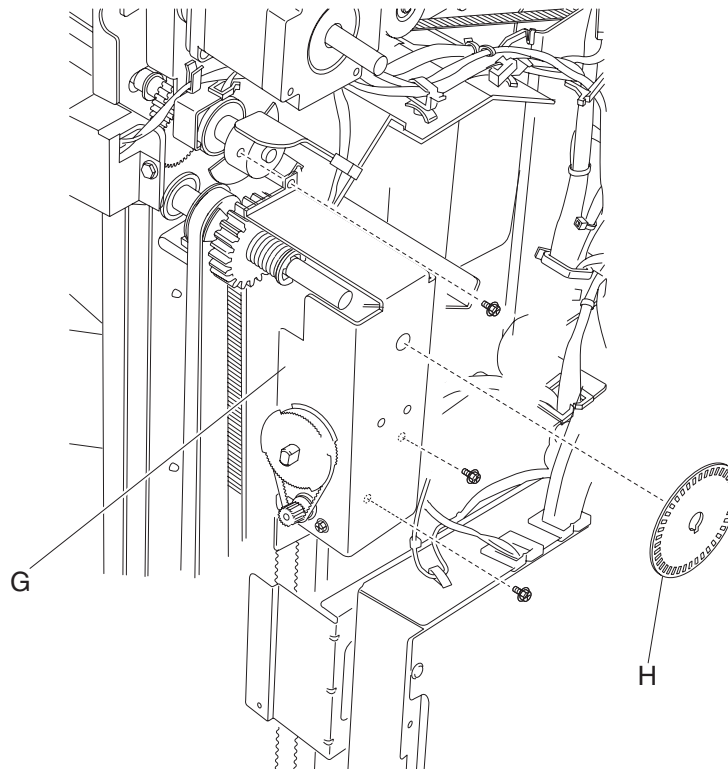
10. Disconnect the connector (P8305) from the finisher controller card assembly (E).



11. Remove the screw securing the bracket (F) to the stacker bin lift motor assembly (G).
12. Remove the bracket (F).



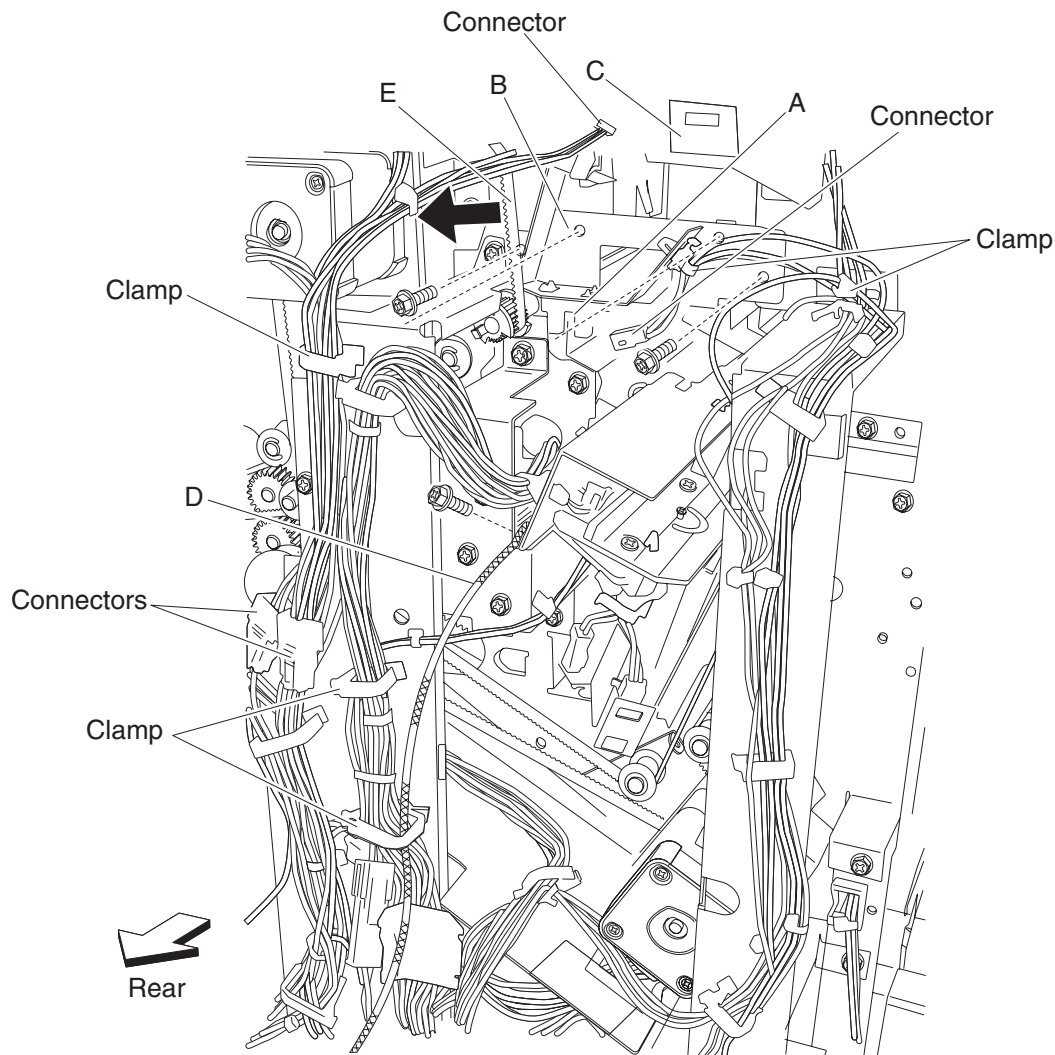
13. Release the hook securing the encoder (H) to the stacker bin lift motor assembly (G).
14. Remove the encoder.
15. Remove the three screws securing the stacker bin lift motor assembly (G) to the finisher.



16. Remove the stacker bin lift motor assembly (G).

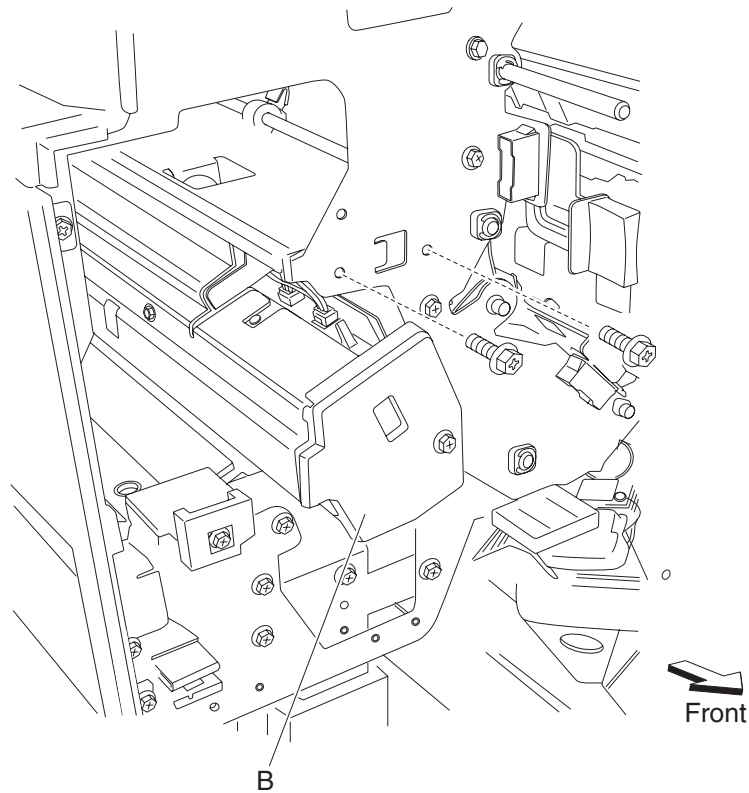
## Punch carriage assembly removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-101.**
3. Remove the connector from the sensor (punch carriage shift HP) (A).
4. Remove the top cover. See **"Top cover removal" on page 4-96.**
5. Release the harness from the punch carriage assembly (B).
6. Remove the connector from the punch carriage shift motor assembly (C).
7. Release the two punch unit assembly harnesses from the three clamps on the rear of the finisher.
8. Disconnect the two punch unit assembly harnesses from the main harness.
9. Remove the screw securing the grounding wire (D) to the punch unit carriage assembly (B).
10. Remove the two screws on the rear securing the punch carriage assembly (B) to the finisher.





11. Remove the two screws on the front securing the punch carriage assembly (B) to the finisher.



12. While moving the belt (buffer/transport) (E) to the left as shown, pull the punch carriage assembly (B) gently out of the rear of the finisher.

**Warning:** Do not force the punch carriage assembly (B) out of the finisher. Be sure to hold the unit firmly to avoid dropping it.

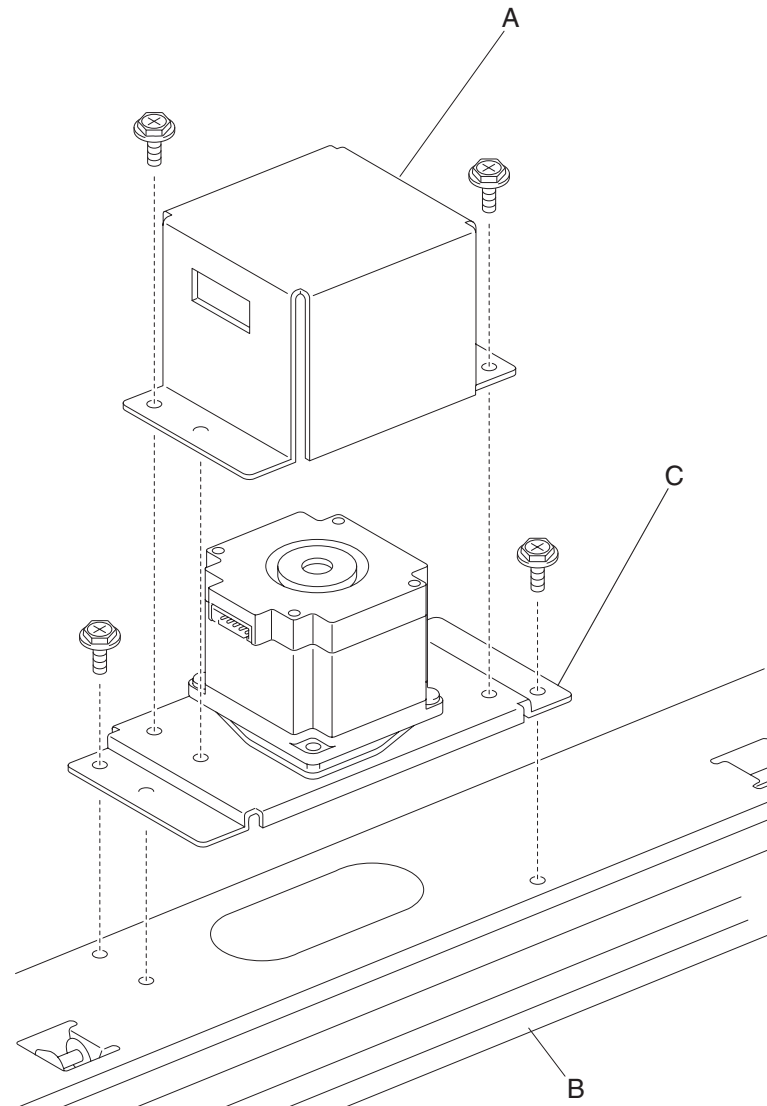
**Replacement notes:**

**Warning:** Make sure the punch carriage assembly is able to shift back and forth completely without binding the harnesses or damage will occur.

- Do not force the punch unit into the finisher.
- Be sure to hold the punch carriage assembly firmly to avoid dropping it.
- Make sure all harnesses are properly clamped.
- Make sure the harnesses do not come into contact with any rotating mechanisms.

### ***Punch carriage shift motor assembly removal***

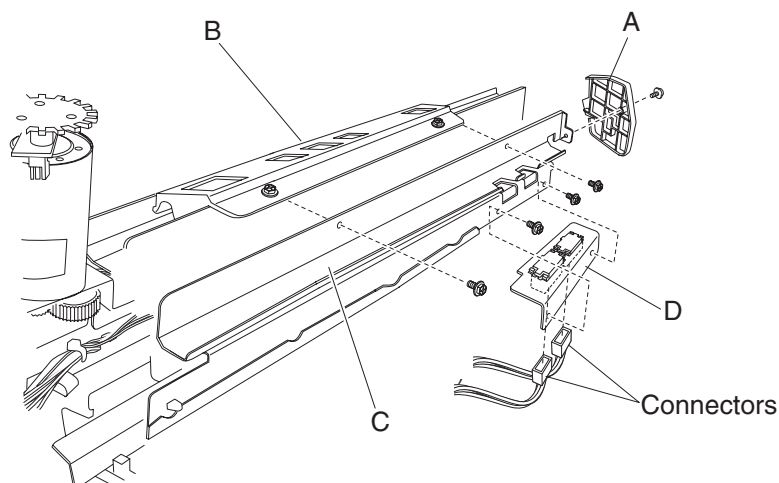
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-118.**
4. Remove the two screws securing the cover (A) to the punch carriage assembly (B).
5. Remove the cover (A).
6. Remove the two screws securing the punch carriage shift motor assembly (C) to the punch unit assembly (B).



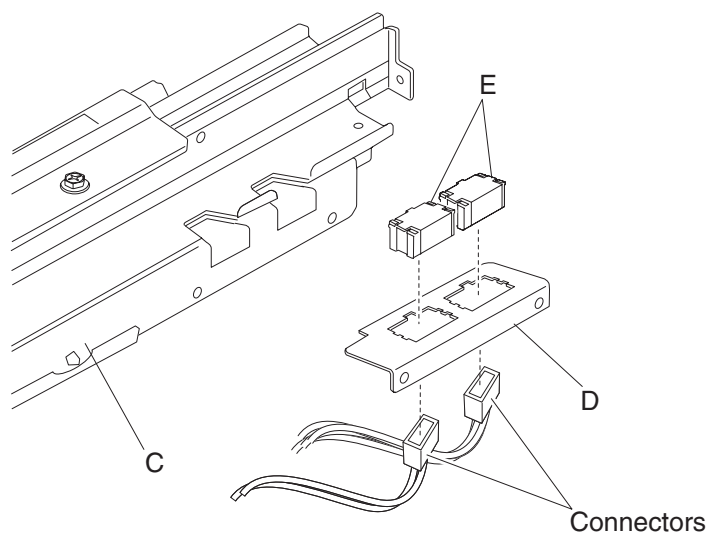
7. Remove the punch carriage shift motor assembly (C).

### **Sensor (punch unit side registration pair) with bracket removal**

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the punch carriage assembly. See **"Punch carriage assembly removal"** on page 4-118.
4. Remove the screw securing the cover (A) to the punch unit assembly (B).
5. Remove the cover.
6. Remove the two screws securing the paper guide (C) to the punch unit assembly (B).  
**Note:** Do not remove the harness attached to the paper guide (C).



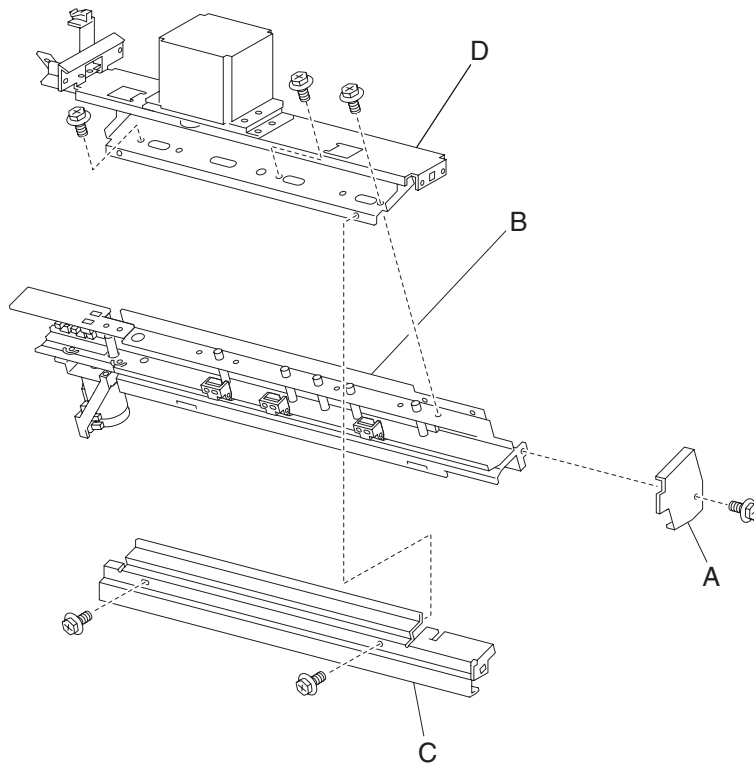
7. Turn the paper guide (C) upside down.
8. Remove the two screws securing the bracket (D) to the paper guide (C).
9. Remove the bracket (D).
10. Remove the two connectors from the sensor (punch unit side registration pair) (E).
11. Release the hooks securing the sensors (punch unit side registration pair) (E) to the bracket (D).



12. Remove the sensor (punch unit side registration pair) (E).  
**Note:** The two sensors are identical.

## ***Punch unit assembly removal***

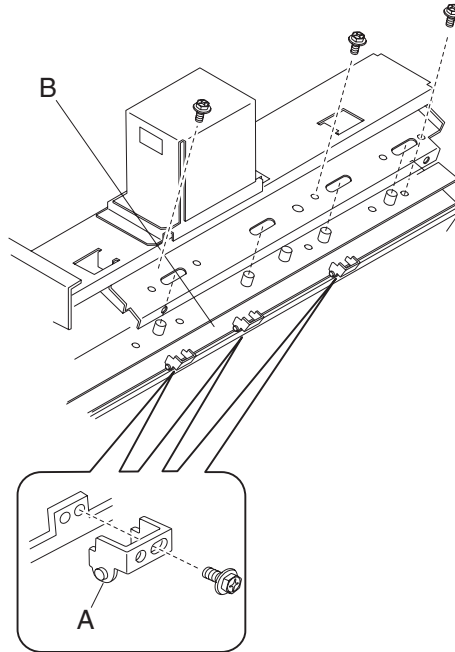
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-118.**
4. Remove the screw securing the cover (A) to the punch unit assembly (B).
5. Remove the cover (A).
6. Remove the two screws securing the bracket (C) to the punch carriage assembly (D).
7. Remove the bracket (C).
8. Remove the three screws securing the punch carriage assembly (D) to the punch unit assembly (B).



9. Remove the punch unit assembly (B)

### ***Punch media stop assembly removal***

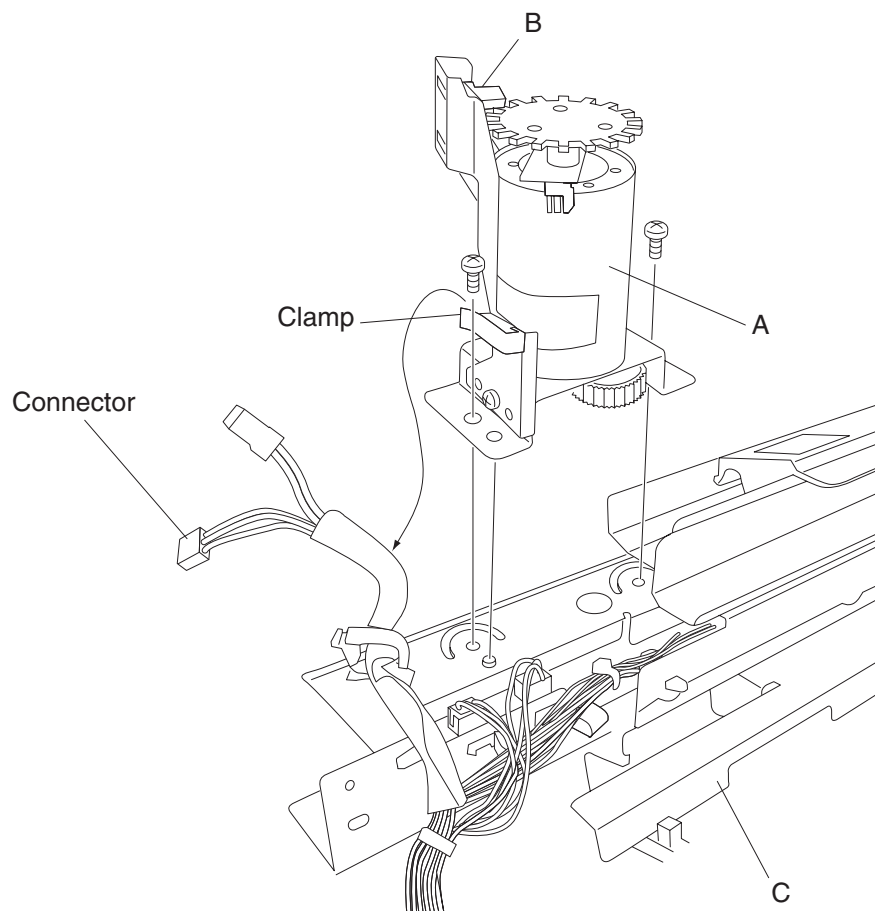
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-118.**
4. Remove the punch unit assembly. See **“Punch unit assembly removal” on page 4-122.**
5. Remove the three screws securing the three punch media stop assemblies (A) to the punch unit assembly (B).



6. Remove the three punch media stop assemblies (A).

### ***Punch unit motor assembly removal***

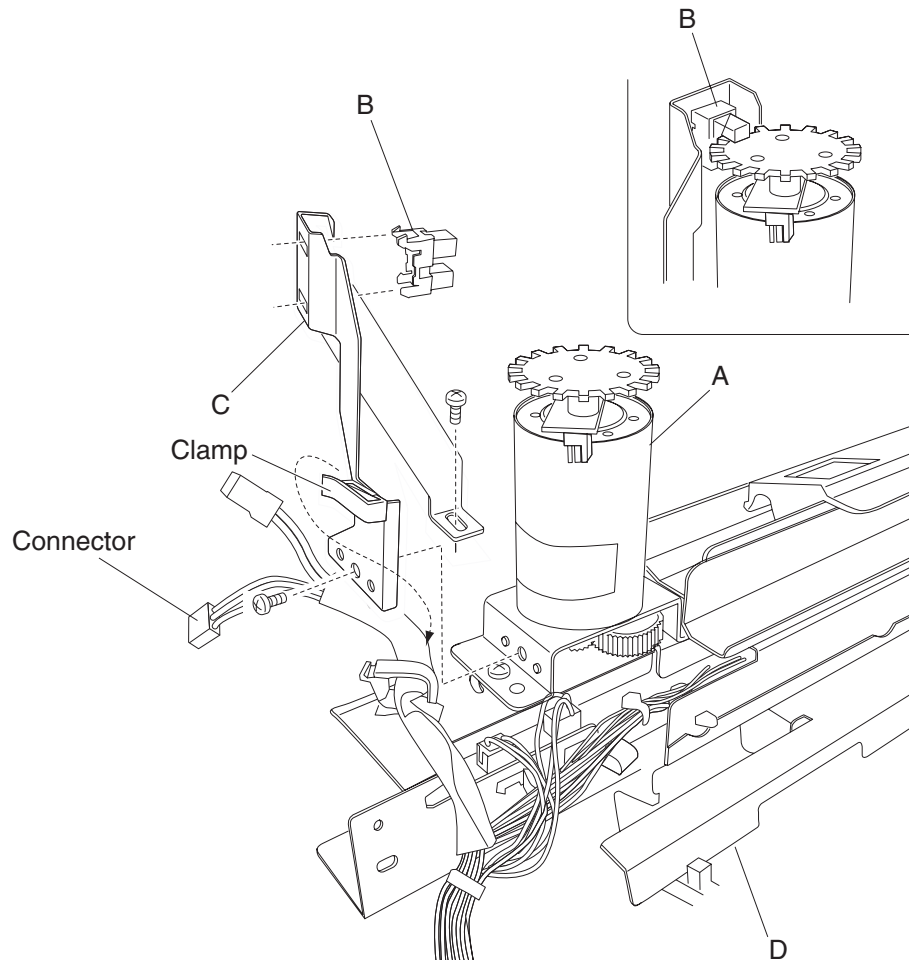
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-118.**
4. Disconnect the connector from the punch unit motor assembly (A).
5. Disconnect the connector from the sensor (punch unit motor encoder) (B).
6. Remove the harness from the clamp.
7. Remove the two screws securing the punch unit motor assembly (A) to the punch unit assembly (C).



8. Remove the punch unit motor assembly.

### **Sensor (punch unit motor encoder) removal**

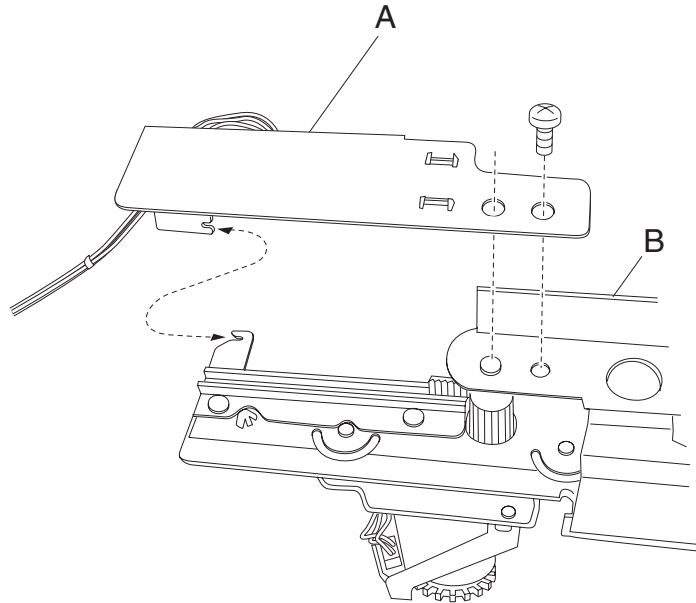
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the punch carriage assembly. See **"Punch carriage assembly removal"** on page 4-118.
4. Disconnect the connector from the punch unit motor assembly (A).
5. Disconnect the connector from the sensor (punch unit motor encoder) (B).
6. Remove the harness from the clamp.
7. Remove the two screws securing the bracket (C) to the punch unit assembly (D).



8. Release the hooks securing the sensor (punch unit motor encoder) (B) to the bracket (C).
9. Remove the sensor (punch unit motor encoder) (B).

## ***Sensor (punch hole select), sensor (punch cam front), and sensor (punch unit HP) removal***

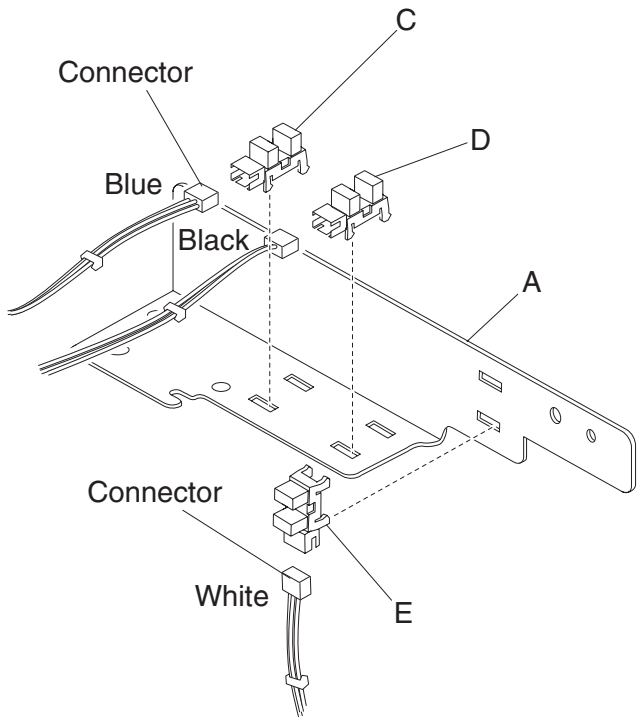
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-118.**
4. Remove the screw securing the bracket (A) to the punch unit assembly (B).



5. Disconnect the connector from the sensor (punch hole select) (C), the sensor (punch cam front) (D), or the sensor (punch unit HP) (E).
6. Release the hooks securing the sensor(s) to the bracket.
7. Remove the sensor(s).

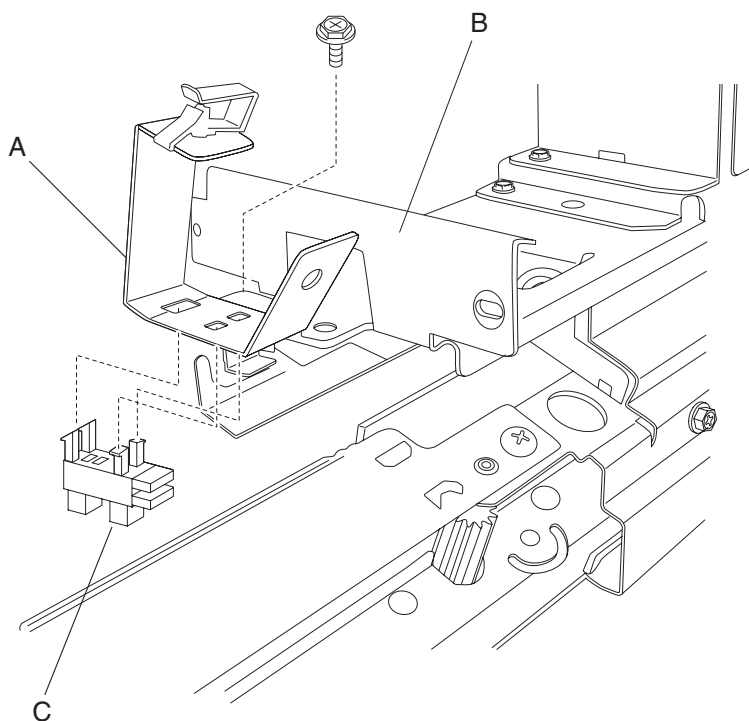


**Replacement note:** Make sure the color coded connectors are connected to the proper sensors, as shown.



**Sensor (punch carriage shift HP) removal**

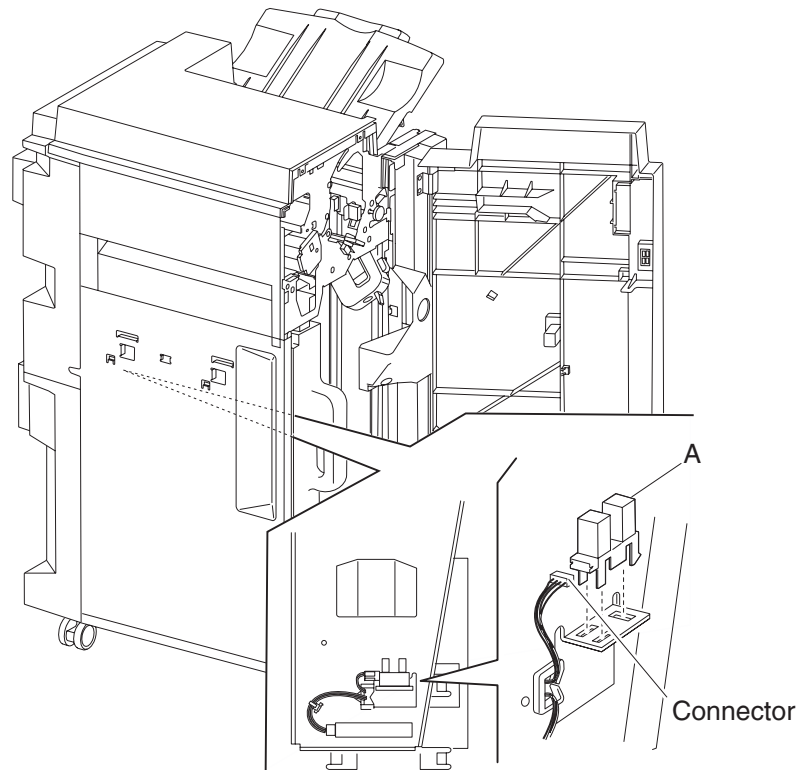
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-118.**
4. Remove the one screw securing the bracket (A) to the punch carriage unit (B).
5. Release the hooks securing the sensor (punch carriage shift HP) (C) to the bracket (A).



6. Remove the sensor (punch carriage shift HP) (C).

### ***Sensor (punch waste box set) removal***

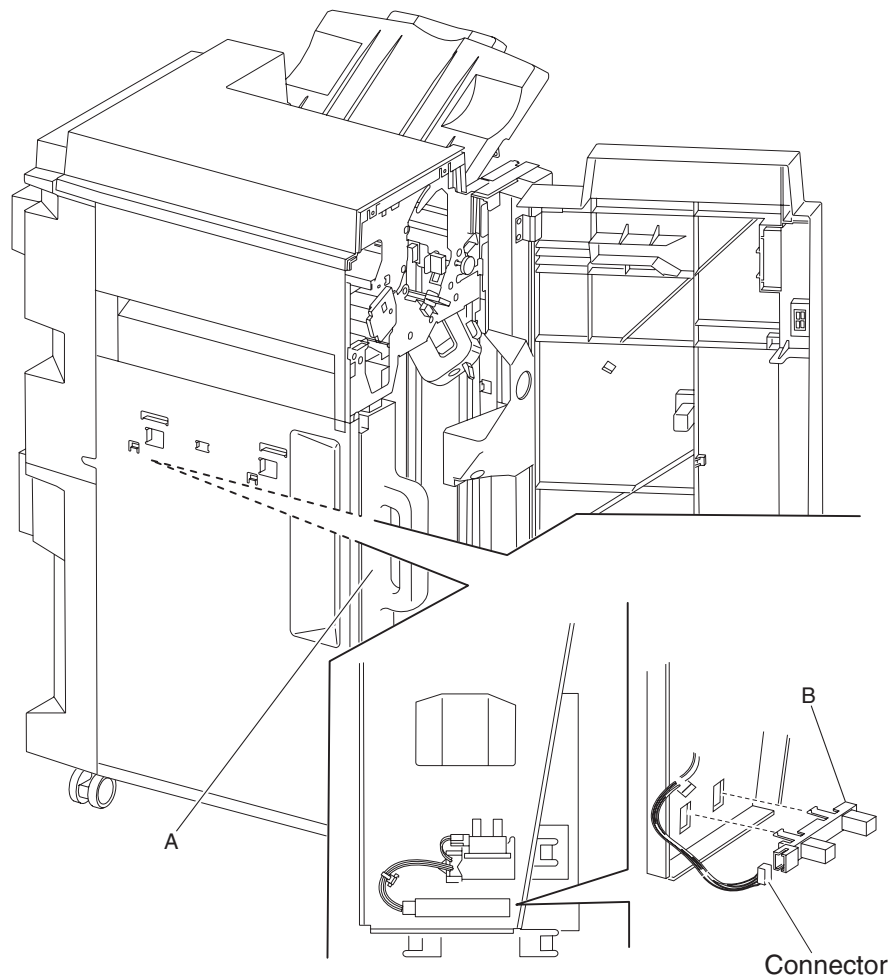
1. Open the finisher front door assembly.
2. Pull the punch waste box.
3. Disconnect the connector from the sensor (punch waste box set) (A).
4. Release the hooks securing the sensor (punch waste box set) (A) to the finisher.



5. Remove the sensor (punch waste box set) (A).

**Sensor (punch waste box full) removal**

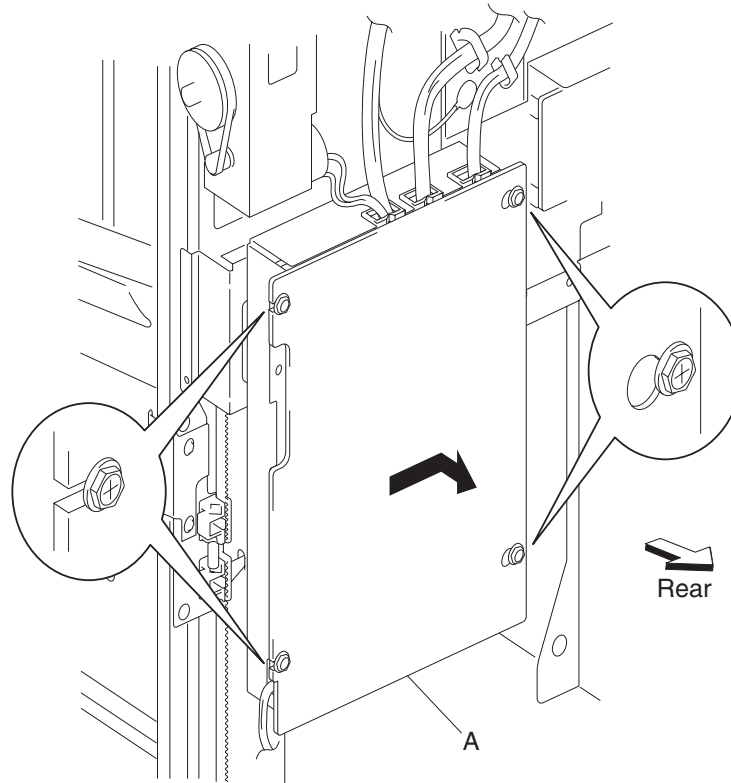
1. Open the finisher front door assembly.
2. Remove the punch waste box (A) from the finisher.
3. Disconnect the connector from the sensor (punch waste box full) (B).
4. Release the hooks securing the sensor (punch waste box full) (B) to the finisher.



5. Remove the sensor (punch waste box full) (B).

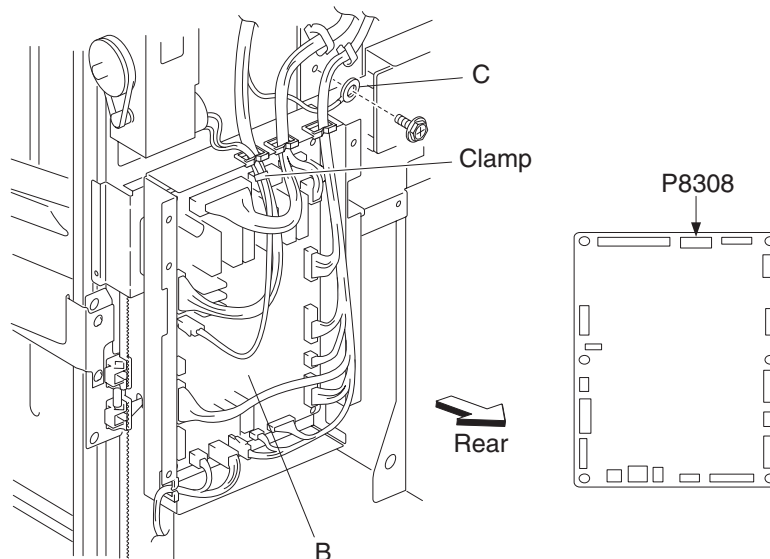
## Stapler unit frame removal

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal”** on page 4-104.
2. Remove the staple cartridge.
3. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
4. Remove the rear lower cover. See **“Rear lower cover removal”** on page 4-100.
5. Loosen the four screws securing the plate (A) to the finisher.
6. Move the plate (A) toward the right and out in the direction shown.

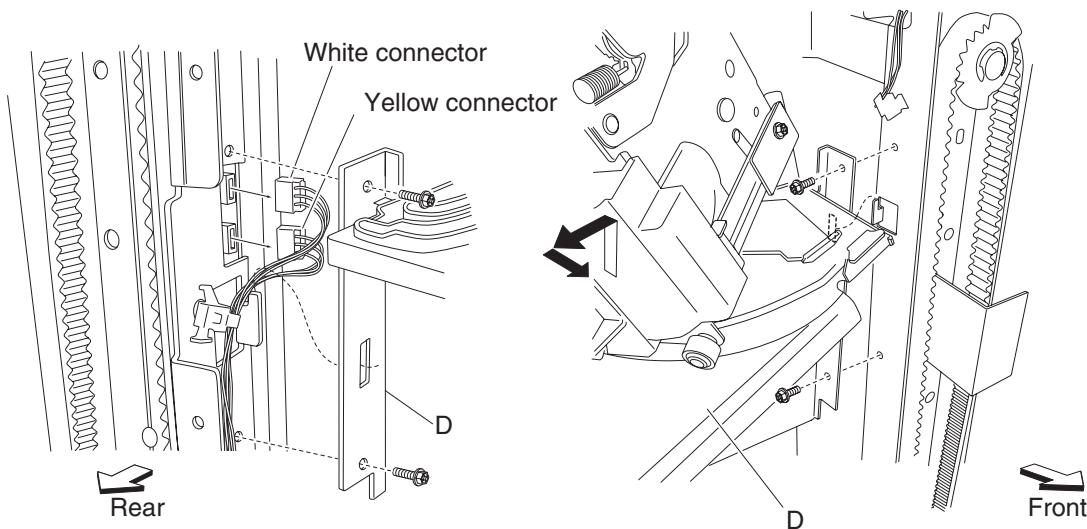


7. Remove the plate.

8. Disconnect the connector P8308 from the finisher controller card assembly (B).
9. Remove the screw securing the ground wire (C) to the finisher.
10. Release the harness from the clamp.



11. Remove the media stacker bin lift motor assembly. See **“Stacker media bin assembly removal”** on **page 4-99**.
12. Disconnect the white connector and the yellow connector from the sensor (stacker bin upper limit) and the sensor (stacker bin no media).
13. Remove the four screws securing the stapler unit frame (D) to the finisher.
14. Move the stapler unit frame upward and outward in the direction of the arrow, as shown.



15. Remove the stapler unit frame.

**Warning:** Do not force the stapler unit frame out of the finisher.

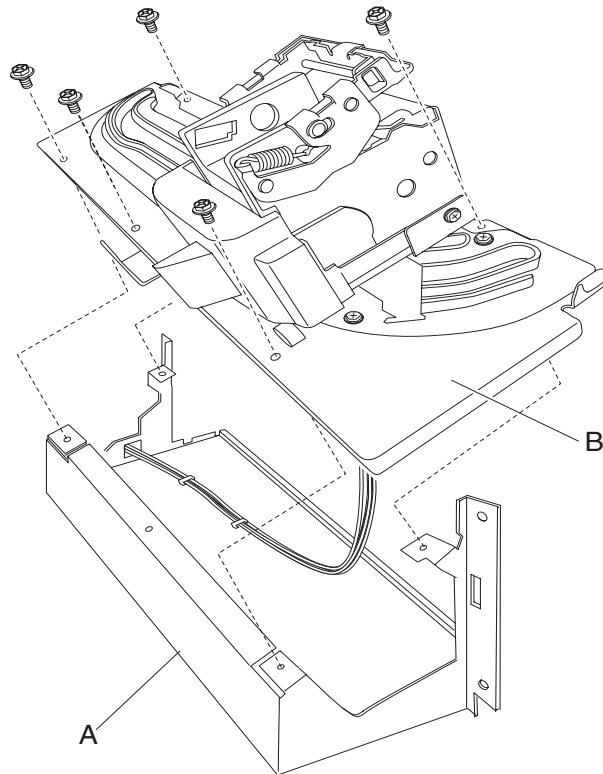
**Warning:** Be sure to hold the stapler unit frame firmly to avoid dropping it.

**Replacement notes:**

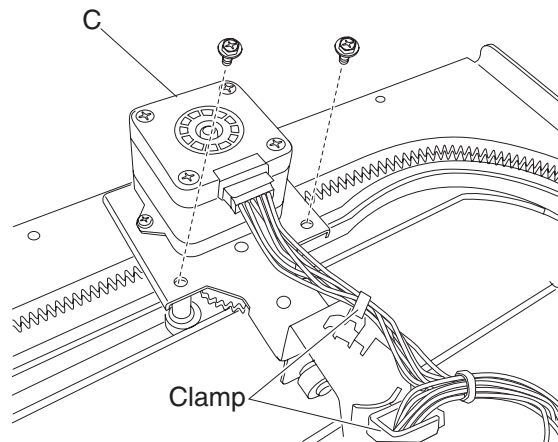
- Do not force the stapler unit frame into the finisher.
- Be sure to hold the stapler unit frame firmly to avoid dropping it.
- Make sure no harnesses are pinched when replacing the stapler unit frame.
- Be sure to replace the grounding wire.
- Ensure that the white connector and the yellow connector are properly replaced.

## Stapler unit assembly removal

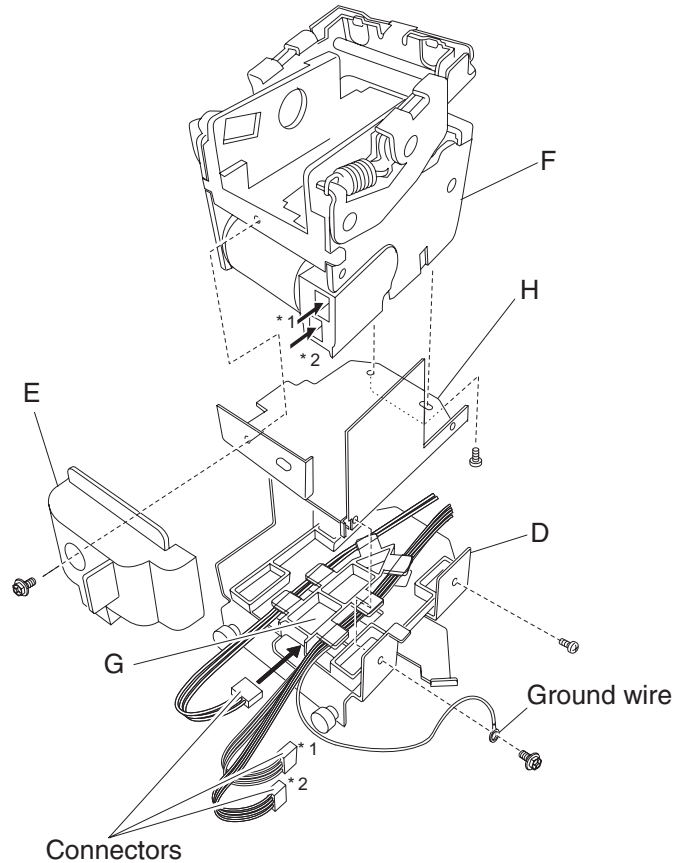
1. Remove the finisher front door assembly. See **"Finisher front door assembly removal"** on page 4-104.
2. Remove the staple cartridge.
3. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
4. Remove the rear lower cover. See **"Rear lower cover removal"** on page 4-100.
5. Remove the stapler unit frame. See **"Stapler unit frame removal"** on page 4-131.
6. Remove the five screws securing the stapler unit frame (A) to the plate (B).



7. Remove the stapler unit frame (A).
8. Release the harness from the three clamps on the stapler unit frame (A).
9. Remove the two screws securing the stapler carriage motor assembly (C) to the stapler carriage assembly (D).
10. Remove the stapler carriage motor assembly (C).



11. Remove the screw securing the stapler cover (E) to the stapler unit assembly (F).
12. Remove the stapler cover (E).
13. Disconnect the two connectors from the stapler unit assembly (F).
14. Disconnect the connector from the sensor (stapler carriage HP) (G).
15. Remove the two screws securing the bracket (H) to the stapler carriage assembly (D).
16. Remove the bracket (H).
17. Remove the two screws securing the bracket (H) to the stapler unit assembly (F).



18. Remove the stapler unit assembly (F).

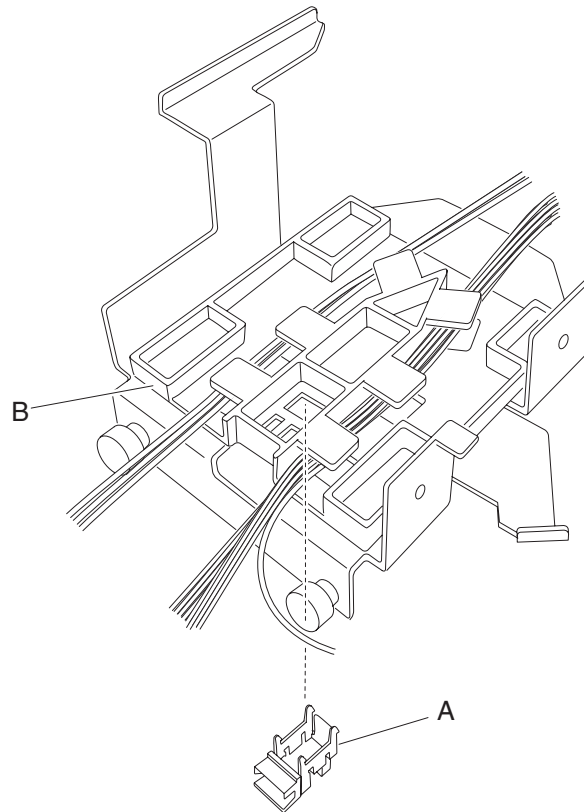
**Replacement notes:**

- When replacing the stapler unit assembly (F), make sure the ground wire is reconnected.
- Make sure the stapler carriage assembly (D) and the stapler carriage motor assembly (C) move freely without binding.



### **Sensor (stapler carriage HP) removal**

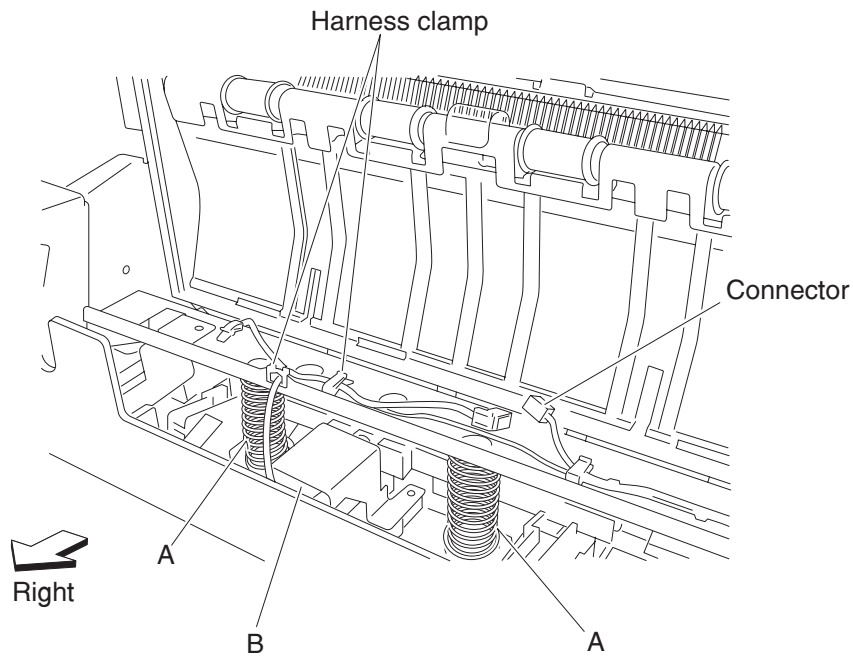
1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the staple cartridge.
3. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
4. Remove the rear lower cover. See **“Rear lower cover removal” on page 4-100.**
5. Remove the stapler unit frame. See **“Stapler unit frame removal” on page 4-131.**
6. Remove the stapler unit assembly. See **“Stapler unit assembly removal” on page 4-133.**
7. Release the hooks securing the sensor (stapler carriage HP) (A) to the stapler carriage assembly (B).



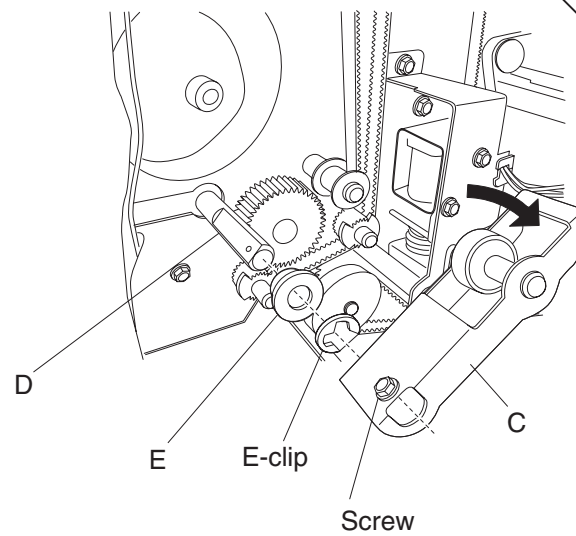
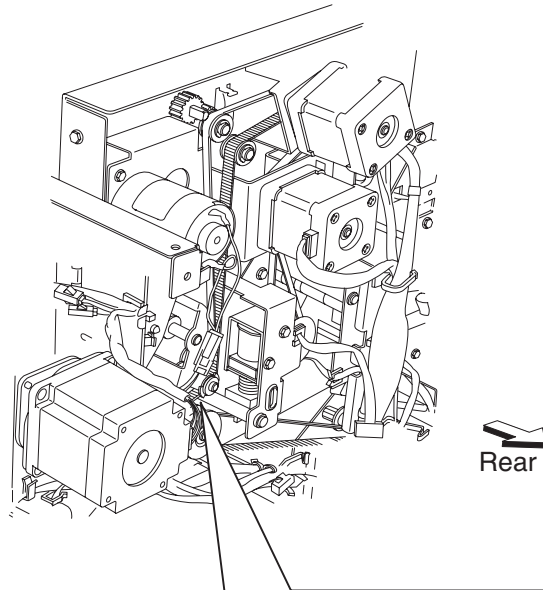
8. Remove the sensor (stapler carriage HP) (A).

### ***Media eject unit assembly removal***

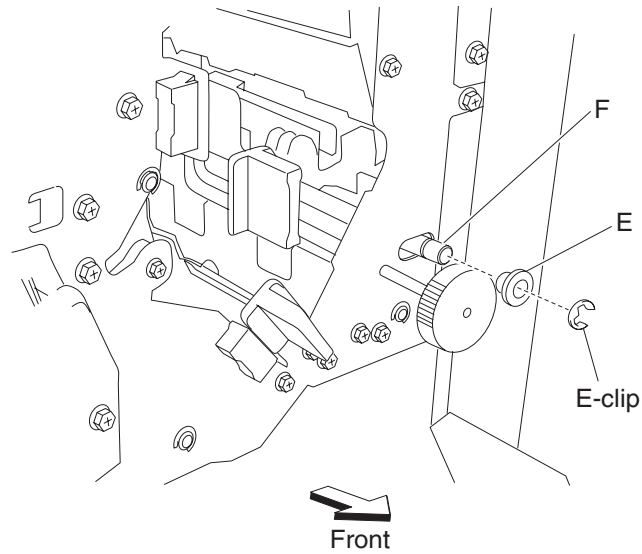
1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-97.**
4. Remove the upper media bin vertical cover. See **“Right eject cover removal” on page 4-98.**
5. Remove the two media eject unit springs (A) by pushing them downward.
6. Disconnect the connector from the eject unit solenoid (B).
7. Release the harness from the two clamps.



8. Remove the screw securing the eject clamp lever assembly (C) from the shaft (D) on the rear of the finisher.
9. Remove the eject clamp lever assembly (C).
10. Remove the e-clip securing the shaft (D) to the rear of the finisher.
11. Remove the 8 mm bushing (E) on the rear side.

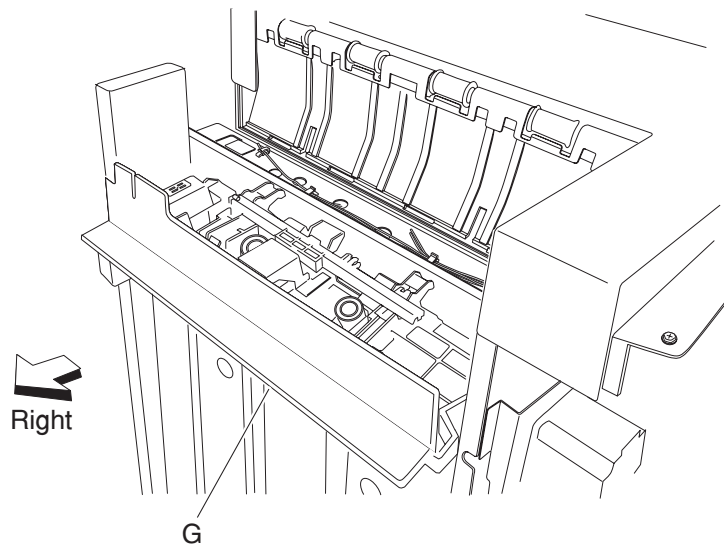


12. Remove the e-clip securing the shaft (F) to the front of the finisher.
13. Remove the 8 mm bushing (E) on the front side.



14. Gently move the left side of the media eject unit assembly (G) out of the finisher followed by the right side.  
**Note:** Do not force the media eject unit assembly out of the finisher. Remove the left side before the right side.

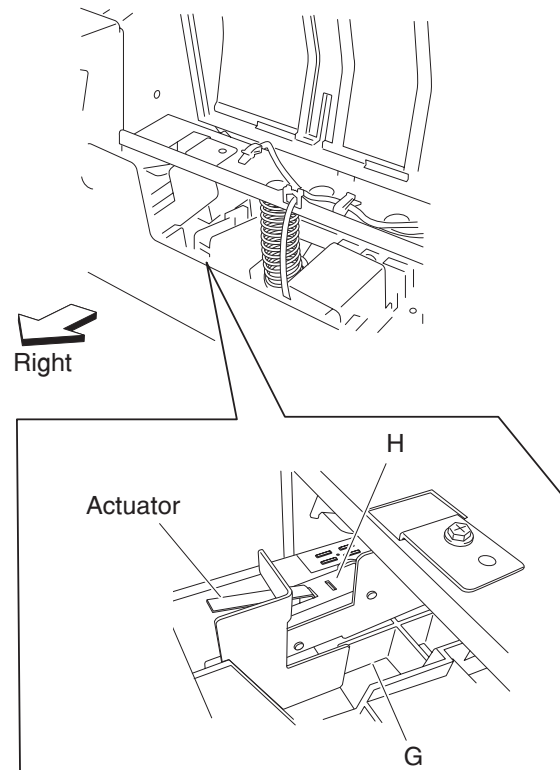
**Note:** Tilting the media eject unit assembly slightly may make the removal easier.



15. Remove the media eject unit assembly.

**Replacement notes**

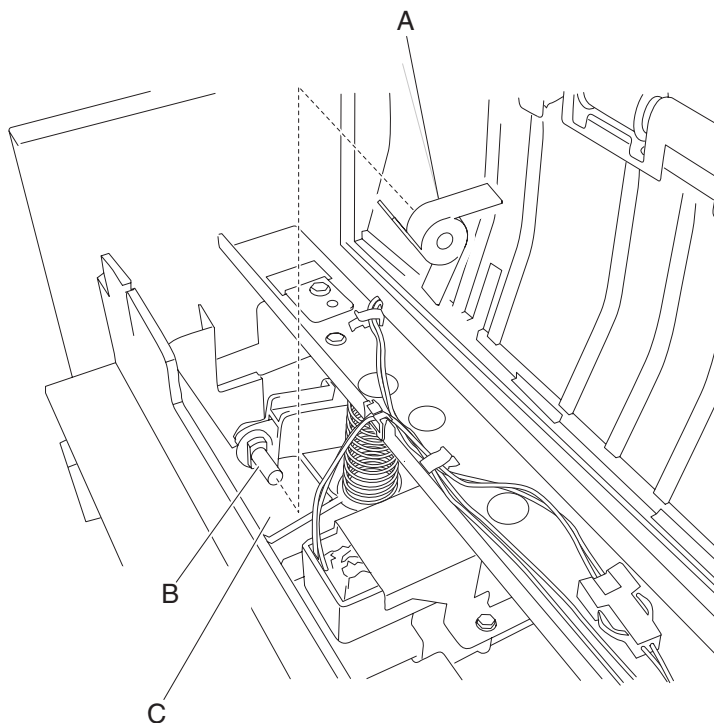
- Do not force the media eject unit assembly into the finisher. Insert the right side before the left side.
- Make sure the media eject unit assembly properly actuates the switch (eject cover interlock) (H) without binding.



### ***Sub paddle removal***

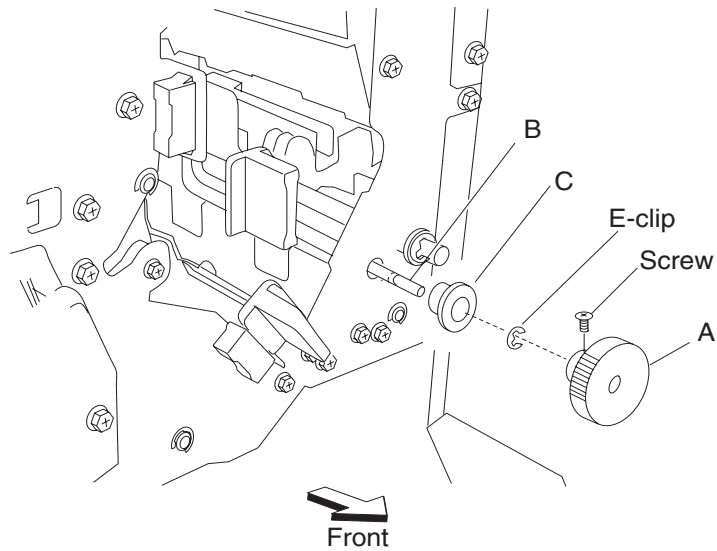
1. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-97.**
2. Gently remove the two sub paddles (A) from the two shafts (B).

**Replacement note:** Make sure the sub paddles are properly installed as shown in the figure. The paddles must not come in contact with the media eject unit assembly (C).



### ***Sub paddle drive shaft assembly removal***

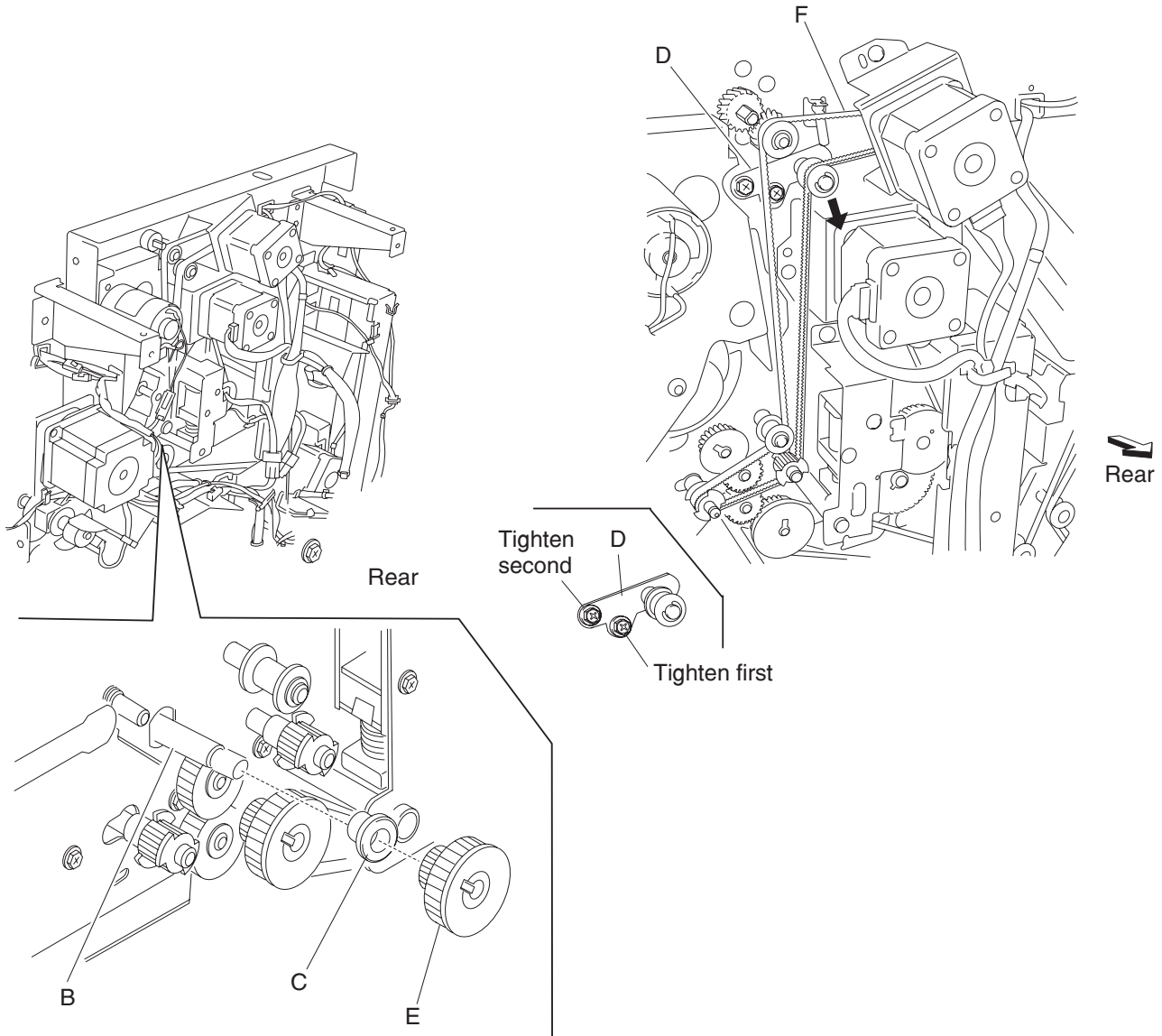
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the media eject unit assembly. See **“Media eject unit assembly removal” on page 4-136.**
4. Loosen the screw securing the knob (A) to the sub paddle drive shaft assembly (B) on the front of the finisher.
5. Remove the knob (A).
6. Remove the one e-clip securing the sub paddle drive shaft assembly (B).
7. Remove the bushing (C).



8. Loosen the two screws securing the belt tensioner bracket (D) to the rear of the finisher.
9. Release the hook of the sub paddle drive gear 23T (E) from the sub paddle drive shaft assembly (B).
10. Remove the sub paddle drive gear 23T (E).
11. Remove the e-clip and the 6 mm bushing (C).
12. Move the sub paddle drive shaft assembly (B) toward the rear of the finisher and outward.
13. Remove the sub paddle drive shaft assembly (B).

**Replacement notes:**

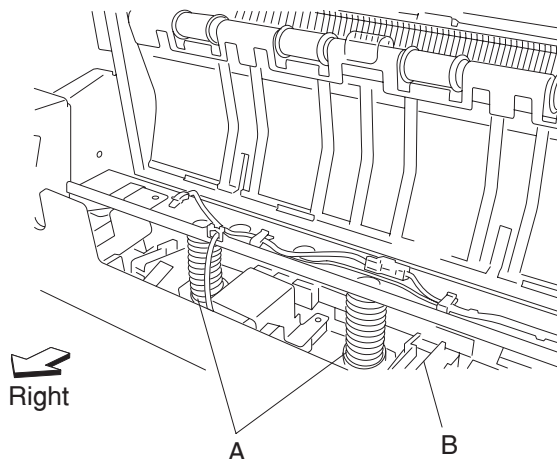
- The tension of the belt (exit) (F) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (D).
- Tighten the two screws in the order shown.





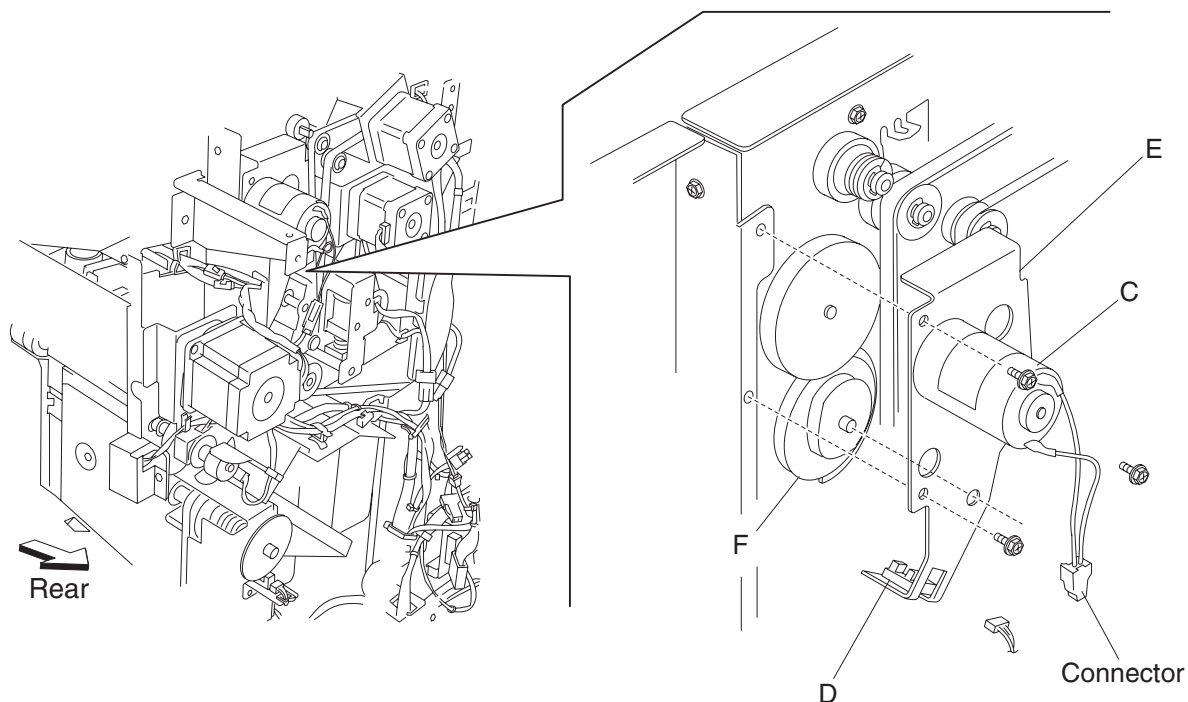
## Media eject clamp motor assembly removal

1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
2. Remove the upper media bin assembly. See **“Upper media bin assembly removal”** on page 4-97.
3. Remove the two media eject unit springs (A) attached to the media eject unit assembly (B) by pushing them downward.



4. Disconnect the connector from the media eject clamp motor (C).
5. Disconnect the connector from the sensor (media eject clamp HP) (D).
6. Remove the three screws securing the bracket (E) to the finisher.
7. Remove the bracket (E).

**Note:** When removing the bracket, turn the media eject clamp gear 70T (F) so that it does not interact with the sensor (media eject clamp HP) (D).

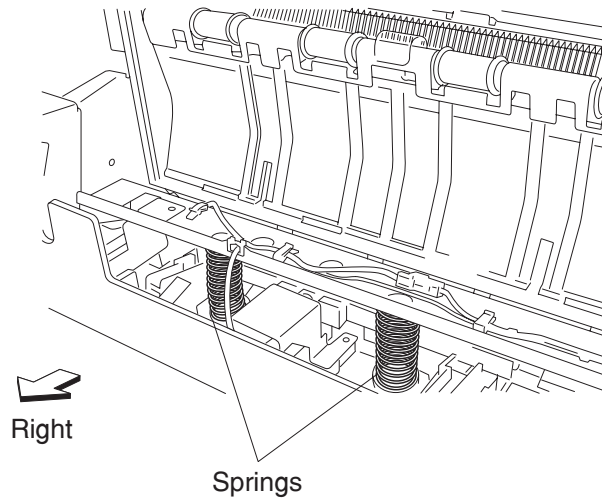


8. Remove the two screws securing the media eject clamp motor to the bracket (E).
9. Remove the media eject clamp motor (C).

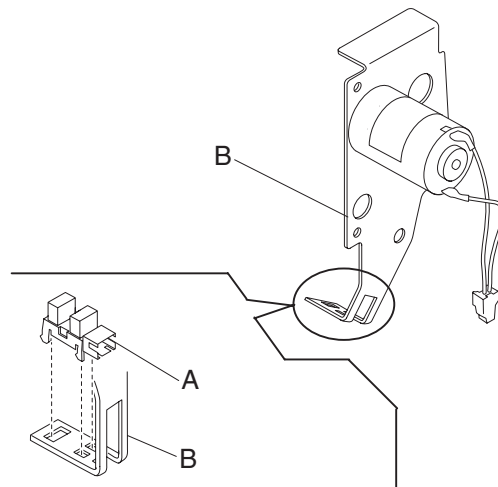
**Replacement note:** When replacing the bracket, turn the media eject clamp gear 70T (F) so that it interacts with the sensor (media eject clamp HP).

### ***Sensor (media eject clamp HP) removal***

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
2. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-97.**
3. Remove the two media eject unit springs attached to the media eject unit assembly by pushing them downward.

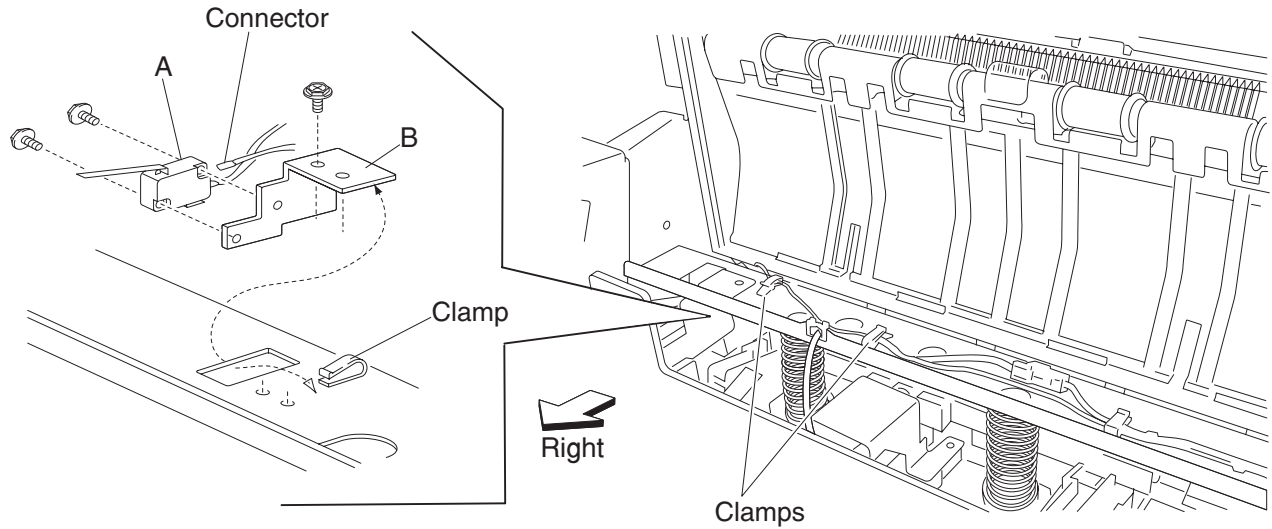


4. Remove the media eject clamp motor assembly. See **“Media eject clamp motor assembly removal” on page 4-143.**
5. Release the hooks of the sensor (media eject clamp HP) (A) from the bracket (B).
6. Remove the sensor (media eject clamp HP) (A).



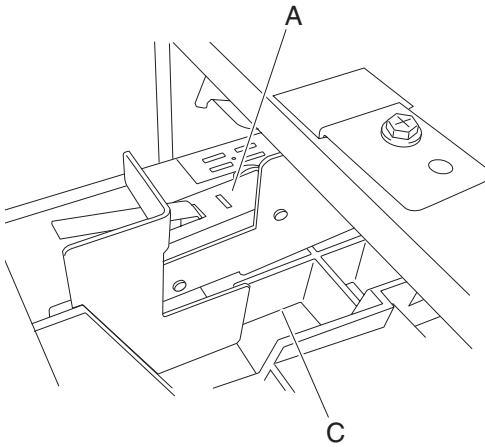
## Switch (eject cover interlock) removal

1. Remove the upper media bin assembly. See **“Upper media bin assembly removal”** on page 4-97.
2. Disconnect the connector from the switch (eject cover interlock) (A).
3. Release the harness from the two clamps.
4. Remove the screw securing the bracket (B) to the finisher.
5. Remove the bracket (B) from the square hole in the finisher.
6. Remove the two screws securing the switch (eject cover interlock) (A) from the bracket (B).



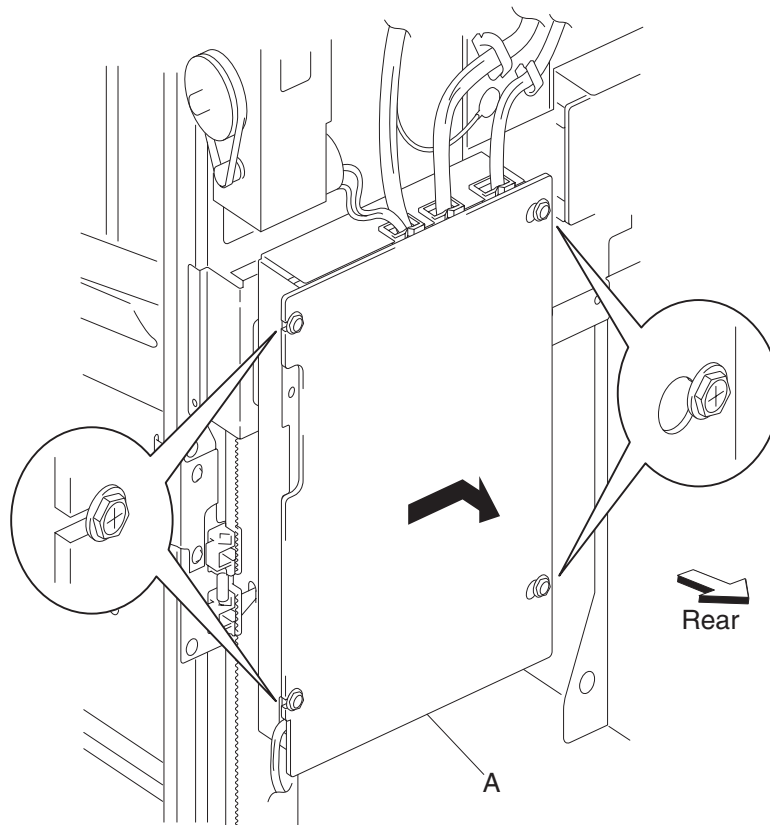
7. Remove the switch (eject cover interlock) (A).

**Replacement note:** Make sure the media eject unit assembly (C) properly actuates the switch (media eject interlock) (A) without binding.



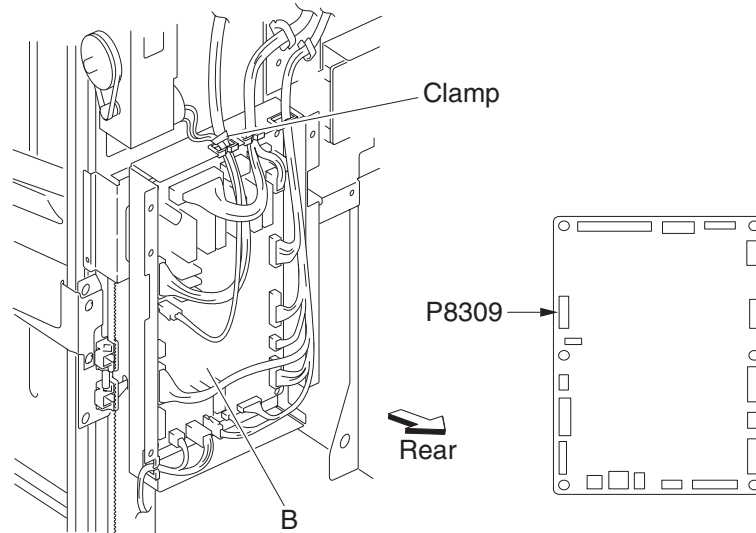
## Media compiler unit assembly removal

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal"** on page 4-104.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the rear lower cover. See **"Rear lower cover removal"** on page 4-100.
4. Remove the upper media bin assembly. See **"Upper media bin assembly removal"** on page 4-97.
5. Remove the upper media bin vertical cover. See **"Right eject cover removal"** on page 4-98.
6. Remove the stapler unit frame. See **"Stapler unit frame removal"** on page 4-131.
7. Remove the media eject clamp motor assembly. See **"Media eject clamp motor assembly removal"** on page 4-143.
8. Remove the media eject unit assembly. See **"Media eject unit assembly removal"** on page 4-136.
9. Remove the media eject motor assembly. See **"Media eject motor assembly removal"** on page 4-155.
10. Loosen the four screws securing the plate (A) to the finisher.
11. Move the plate to the right and outward.

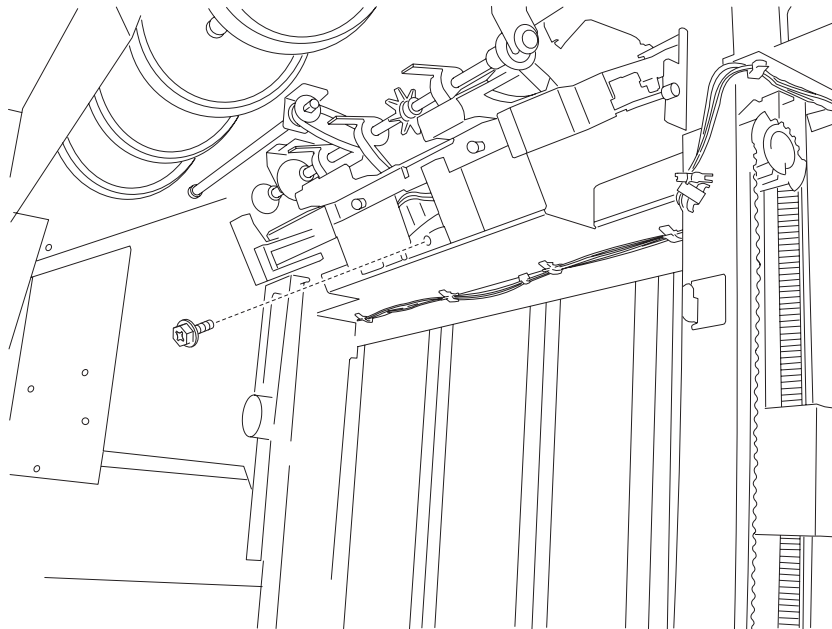


12. Remove the plate.

13. Disconnect the connector P8309 from the finisher controller card assembly (B).
14. Release the harness from the clamps.

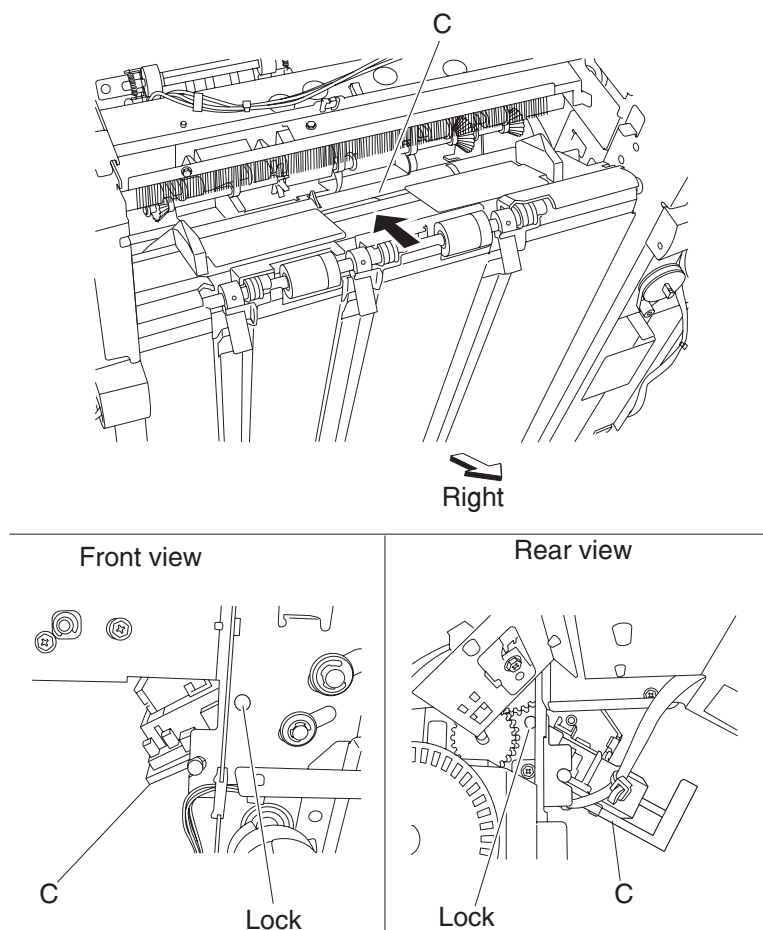


15. Remove the screw securing the media compiler unit assembly (C) to the finisher. This screw is found inside the finisher.



Inside view

- 16.** Release the media compiler assembly (C) by pushing the front lock and the rear lock inward to release the front boss and the rear boss from the finisher.

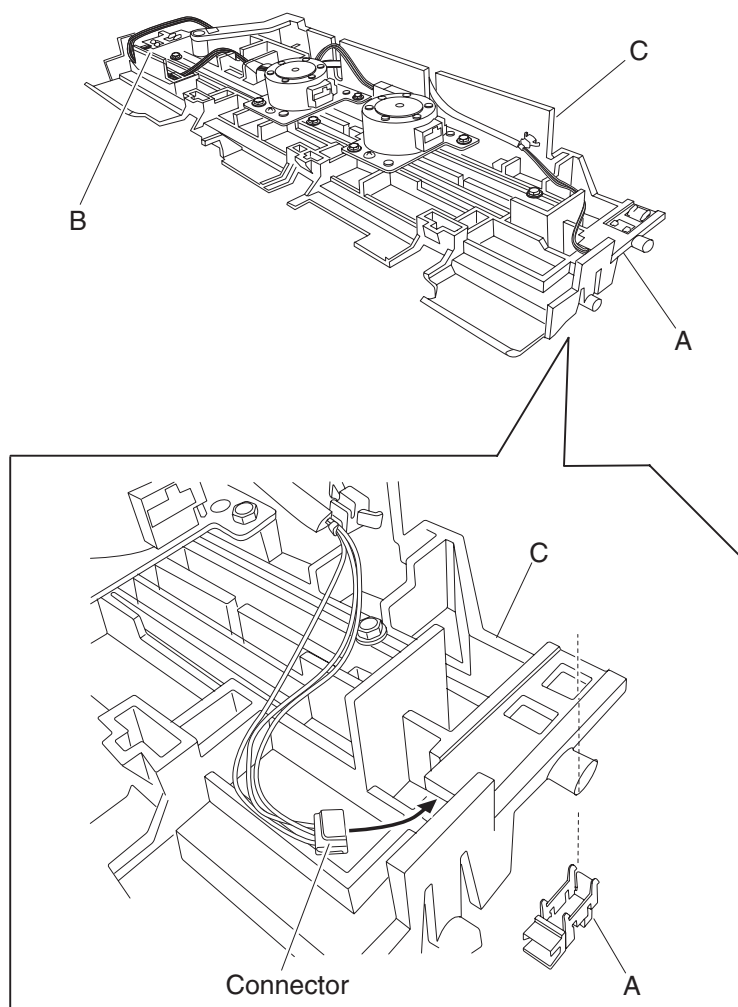


- 17.** Remove the harness from any additional parts.
- 18.** Remove the media compiler unit assembly through the inside of the finisher and out the front.

## Sensor (front tamper HP) and sensor (rear tamper HP) removals

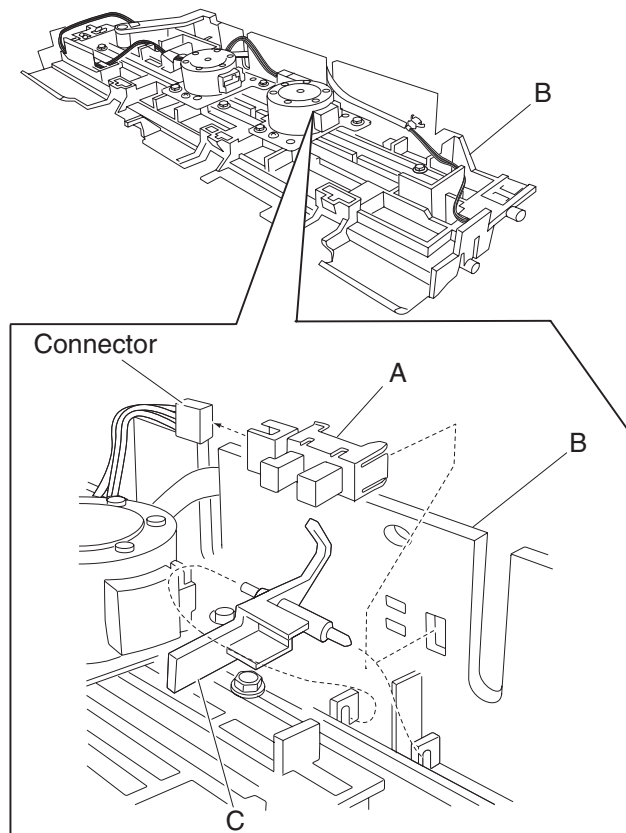
1. Remove the finisher front door assembly. See **"Finisher front door assembly removal"** on page 4-104.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the rear lower cover. See **"Rear lower cover removal"** on page 4-100.
4. Remove the upper media bin assembly. See **"Upper media bin assembly removal"** on page 4-97.
5. Remove the upper media bin vertical cover. See **"Right eject cover removal"** on page 4-98.
6. Remove the stapler unit frame. See **"Stapler unit frame removal"** on page 4-131.
7. Remove the media eject clamp motor assembly. See **"Media eject clamp motor assembly removal"** on page 4-143.
8. Remove the media eject unit assembly. See **"Media eject unit assembly removal"** on page 4-136.
9. Remove the media eject motor assembly. See **"Media eject motor assembly removal"** on page 4-155
10. Remove the media compiler unit assembly. See **"Media compiler unit assembly removal"** on page 4-146.
11. Disconnect the connector from the sensor (front tamper HP) (A) or the sensor (rear tamper HP) (B).
12. Release the hooks securing the sensor (front tamper HP) (A) or the sensor (rear tamper HP) (B) from the media compiler unit assembly (C).
13. Remove the sensor(s).

**Note:** The sensors are identical.



## Sensor (compiler media in) removal

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal"** on page 4-104.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the rear lower cover. See **"Rear lower cover removal"** on page 4-100.
4. Remove the upper media bin assembly. See **"Upper media bin assembly removal"** on page 4-97.
5. Remove the upper media bin vertical cover. See **"Right eject cover removal"** on page 4-98.
6. Remove the stapler unit frame. See **"Stapler unit frame removal"** on page 4-131.
7. Remove the media eject clamp motor assembly. See **"Media eject clamp motor assembly removal"** on page 4-143.
8. Remove the media eject unit assembly. See **"Media eject unit assembly removal"** on page 4-136.
9. Remove the media eject motor assembly. See **"Media eject motor assembly removal"** on page 4-155.
10. Remove the media compiler unit assembly. See **"Media compiler unit assembly removal"** on page 4-146.
11. Disconnect the connector from the sensor (compiler media in) (A).
12. Release the hooks securing the sensor (compiler media in) (A) to the compiler unit assembly (B).
13. Move the compiler media present actuator (C) downward as shown.

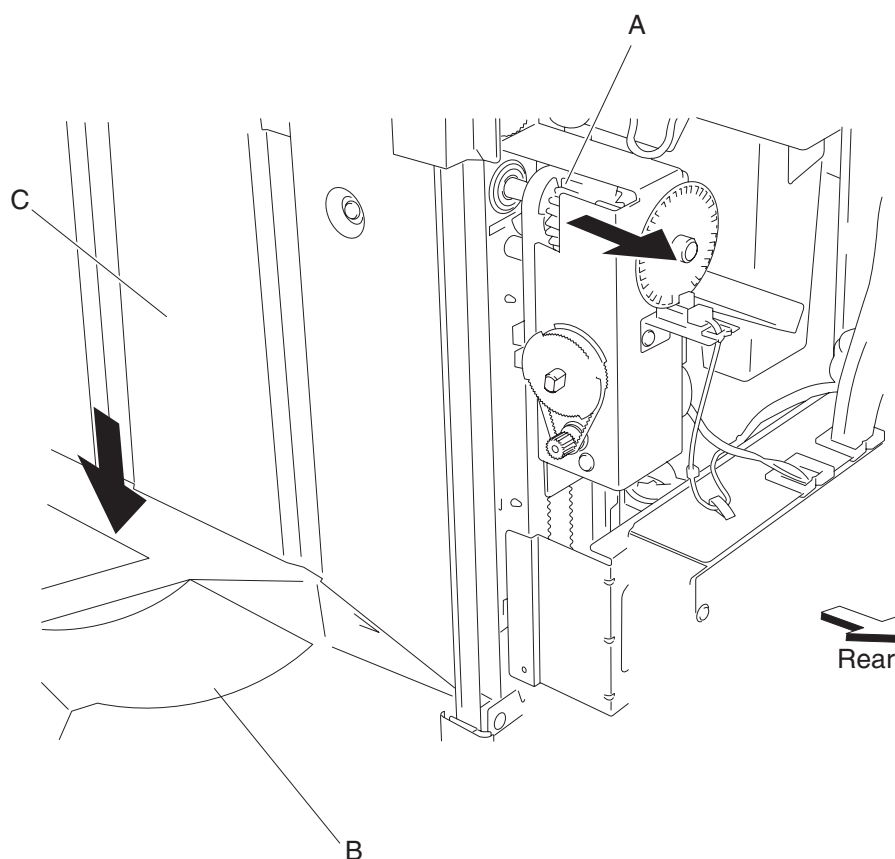


14. Remove the sensor (compiler media present) (A).



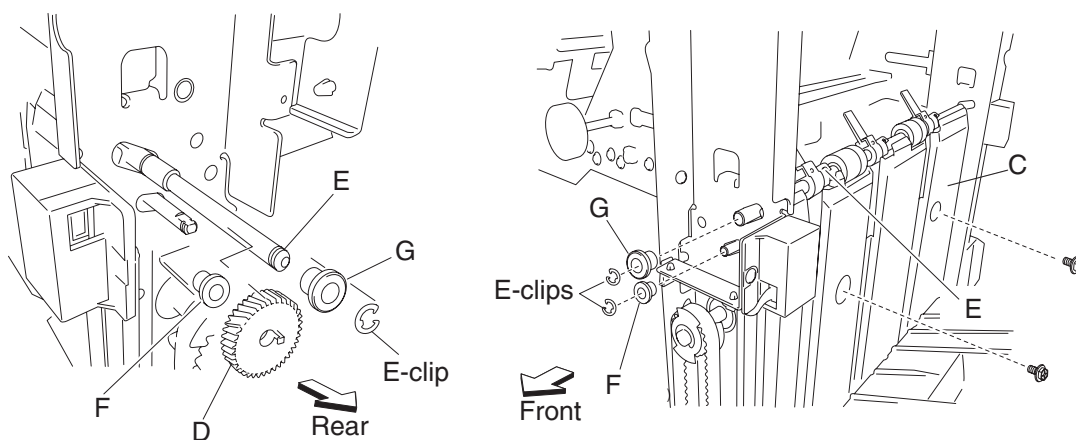
## Media eject shaft assembly removal

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal" on page 4-104.**
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-101.**
3. Move the slip clutch gear 24T (A) toward the rear as shown to disengage the stacker bin (B).
4. Move the stacker bin down as shown to its lowest position after it is disengaged.  
**Note:** Make sure the stacker bin is at its lowest position before continuing.
5. Remove the upper media bin assembly. See **"Upper media bin assembly removal" on page 4-97.**
6. Remove the four screws securing the right panel (C) to the finisher.

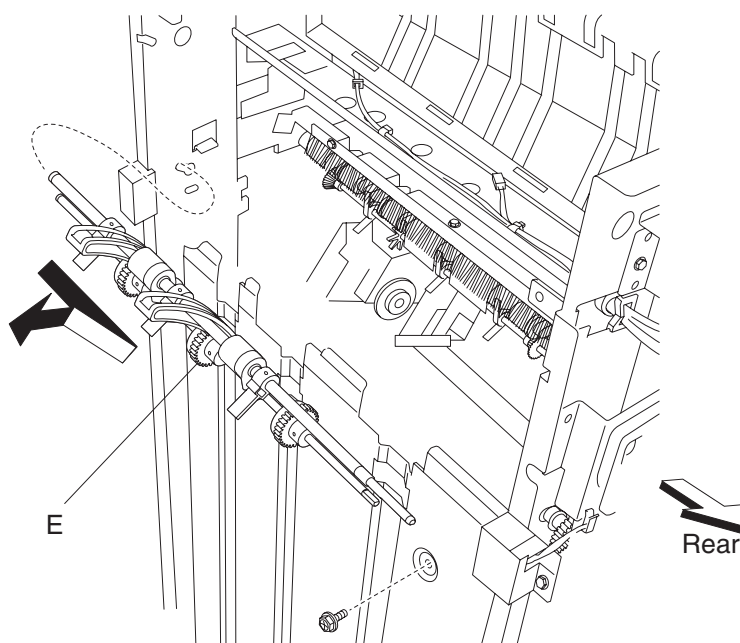


7. Remove the media eject motor assembly. See **"Media eject motor assembly removal" on page 4-155.**
8. Release the hook of the media eject shaft gear 39T (D) from the media eject shaft assembly (E).
9. Remove the media eject shaft gear 39T (D).
10. Remove the 6 mm bushing (F).
11. Use a prying tool to remove the e-clip securing the media eject shaft assembly (E) to the rear of the finisher.
12. Remove the 8 mm bushing (G).
13. Remove the two e-clips securing the media eject shaft assembly (E) to the front of the finisher.
14. Remove the 6 mm bushing (F) and the 8 mm bushing (G).

- 15.** Move the media eject shaft assembly toward the rear and outward as shown.

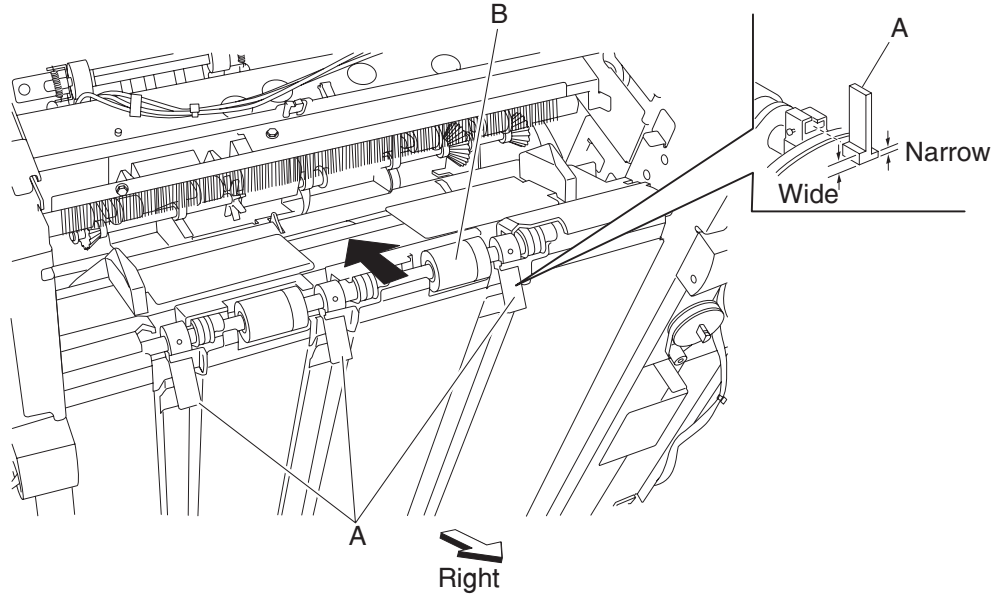


- 16.** Remove the media eject shaft assembly (E).



## Clamp paddle removal

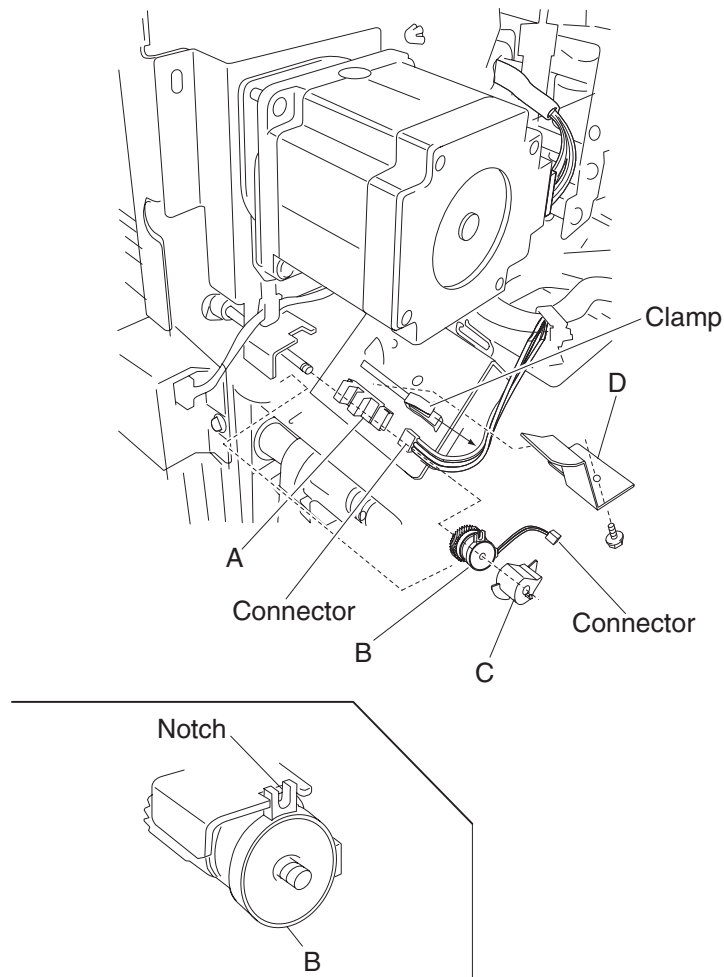
1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the media eject shaft assembly. See **“Media eject shaft assembly removal” on page 4-151.**
4. Remove the three clamp paddles (A) by sliding them out of the media eject shaft assembly (B).



**Replacement note:** Replacement is easier if you lightly moisten the rubber surface of the paddles with water.

## Media eject clutch assembly removal

1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
2. Disconnect the connector from the sensor (media eject shaft HP) (A).
3. Release the harness from the clamp.
4. Disconnect the connector from the media eject clutch (B).
5. Release the harness from the clamp.
6. Release the hook securing the media eject clutch actuator (C) to the media eject clutch (B).
7. Remove the screw securing the spring clamp (D) to the finisher.

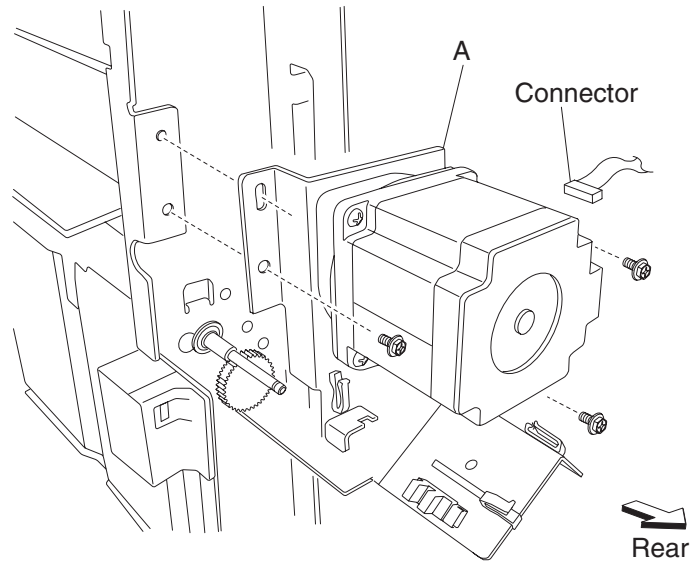


8. Remove the spring clamp (D).
9. Remove the media eject clutch actuator (C).
10. Remove the media eject clutch assembly (B).

**Installation note:** Make sure the hook on the media eject clutch assembly is placed in the notch of the bracket.

## Media eject motor assembly removal

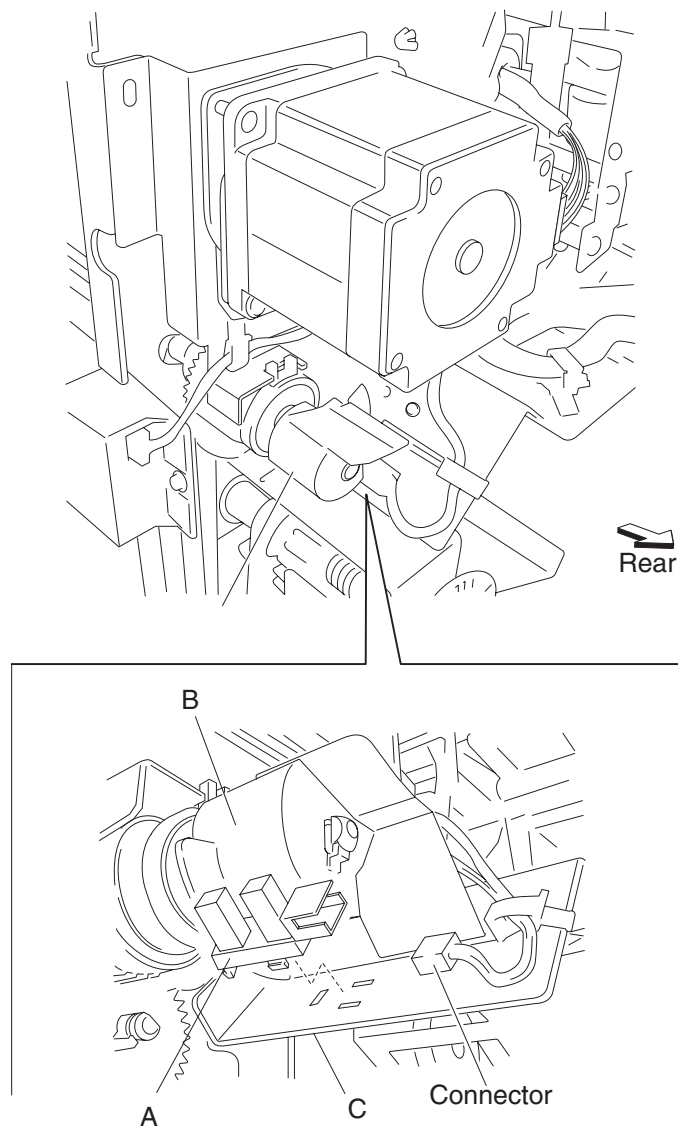
1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
2. Remove the media eject clutch. See **“Media eject clutch assembly removal”** on page 4-154.
3. Disconnect the connector from the media eject motor assembly (A).
4. Disconnect the connector from the sensor (media bin level 2) (B).
5. Remove the three screws securing the media eject motor assembly (A).



6. Remove the media eject motor assembly (A).
7. Remove any remaining harnesses from the clamps.

### Sensor (media eject shaft HP) removal

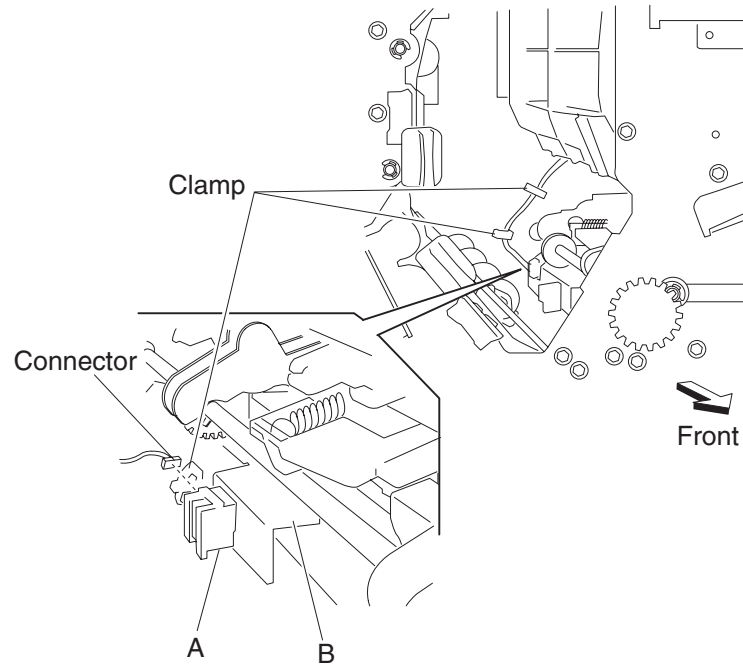
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
2. Disconnect the connector from the sensor (media eject shaft HP) (A).
3. Rotate the media eject clutch actuator (B) by hand so it clears the sensor (media eject shaft HP) (A).
4. Release the hooks securing the sensor (media eject shaft HP) (A) to the bracket (C).



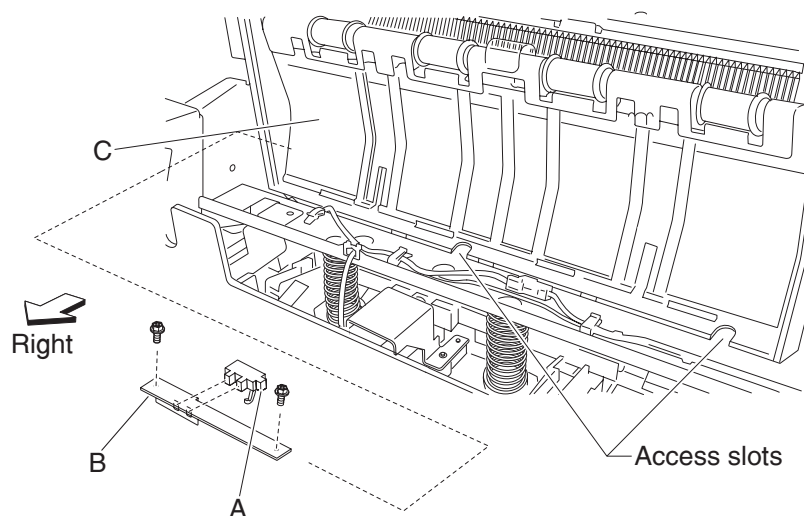
5. Remove the sensor (media eject shaft HP) (A).

### ***Sensor (lower media exit) removal***

1. Open the finisher front door assembly.
2. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-97.**
3. Disconnect the connector from the sensor (lower media exit) (A).
4. Remove the harness from the clamps.
5. Remove the two screws securing the bracket (B) to the finisher.



**Note:** The upper media bin vertical cover (C) has slots that make access to the screws easier, as shown.

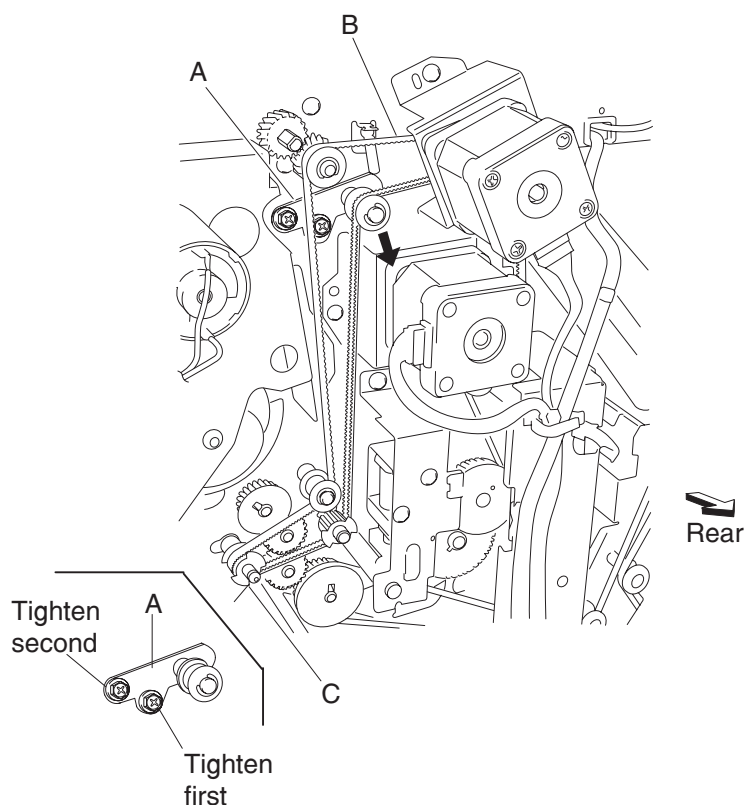


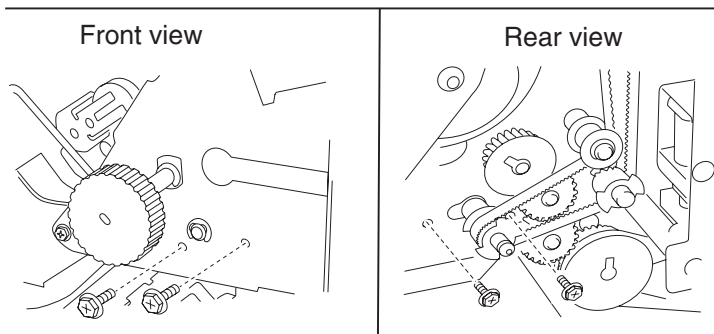
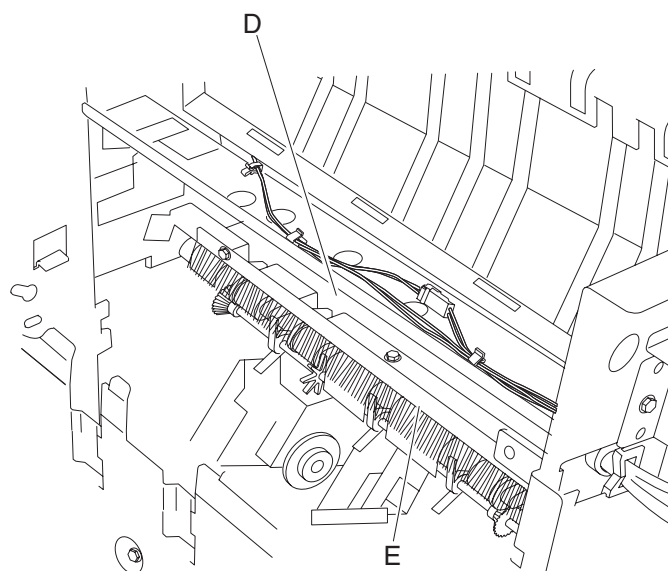
- 6.** Remove the bracket (B).
- 7.** Release the hooks securing the sensor (lower media exit) (A) to the bracket.
- 8.** Remove the sensor (lower media exit) (A).



## Lower media exit roll assembly removal

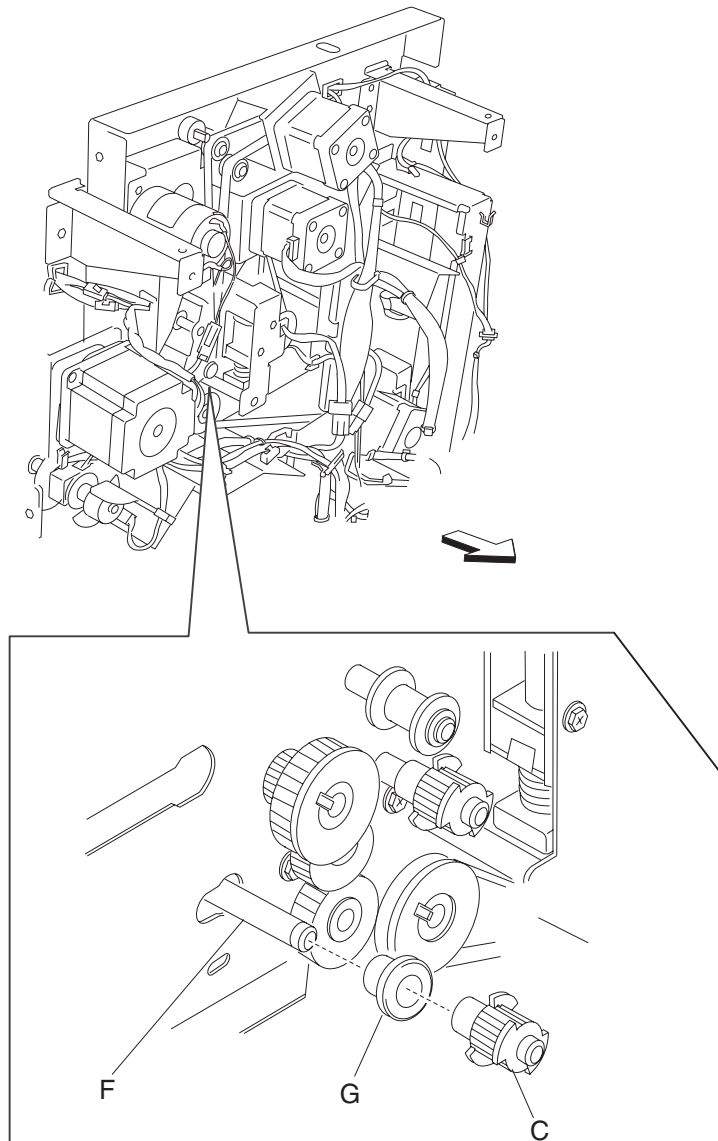
1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the upper media bin assembly. See **“Upper media bin assembly removal” on page 4-97.**
4. Remove upper media bin vertical cover. See **“Right eject cover removal” on page 4-98.**
5. Remove the stapler unit frame. See **“Stapler unit frame removal” on page 4-131.**
6. Remove the media eject clamp motor assembly. See **“Media eject clamp motor assembly removal” on page 4-143.**
7. Remove the media eject unit assembly. See **“Media eject unit assembly removal” on page 4-136.**
8. Remove the media compiler unit assembly. See **“Media compiler unit assembly removal” on page 4-146.**
9. Remove the media eject motor assembly. See **“Media eject motor assembly removal” on page 4-155.**
10. Remove the media eject shaft assembly. See **“Media eject shaft assembly removal” on page 4-151.**
11. Remove the main paddle shaft assembly. See **“Paddle and roll exit assembly removal” on page 4-163.**
12. Loosen the two screws securing the belt tensioner bracket (A) to the finisher, and move the bracket down in the direction of the arrow.
13. Remove the belt (exit) (B) from the lower exit roll drive pulley 20T (C).





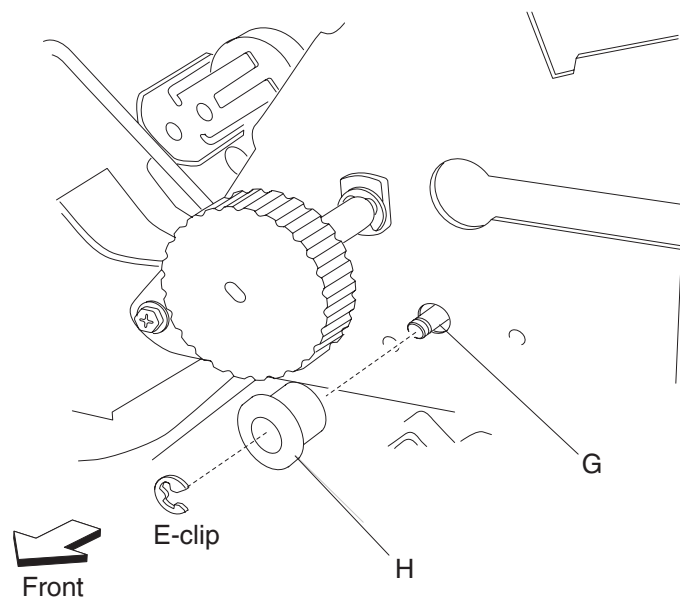
- 14.** Release the hook of the lower exit roll drive pulley 20T (C) from the lower media exit roll assembly (F).
- 15.** Remove the lower exit roll drive pulley 20T (C).

- 16.** Remove the 6 mm ball bearing (G).

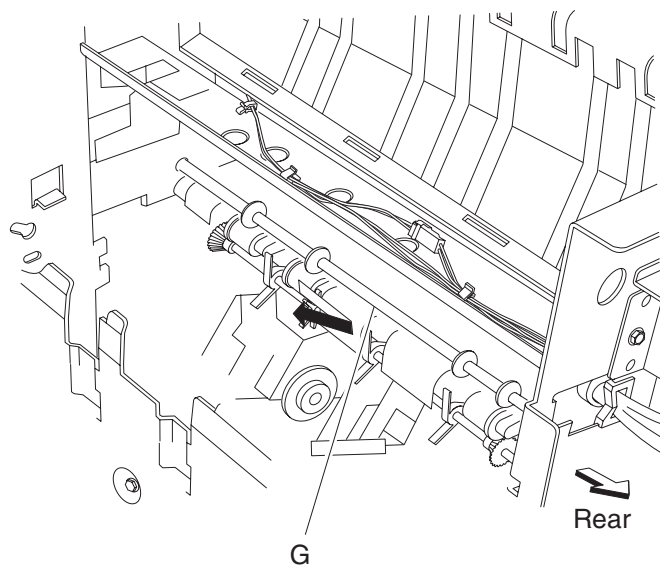


- 17.** Use a prying tool to remove the e-clip on the front of the finisher securing the lower media exit roll assembly (F) to the finisher.

- 18.** Remove the 6 mm bushing (H).



- 19.** Move the lower media exit roll assembly (F) towards the rear and outward, as shown.



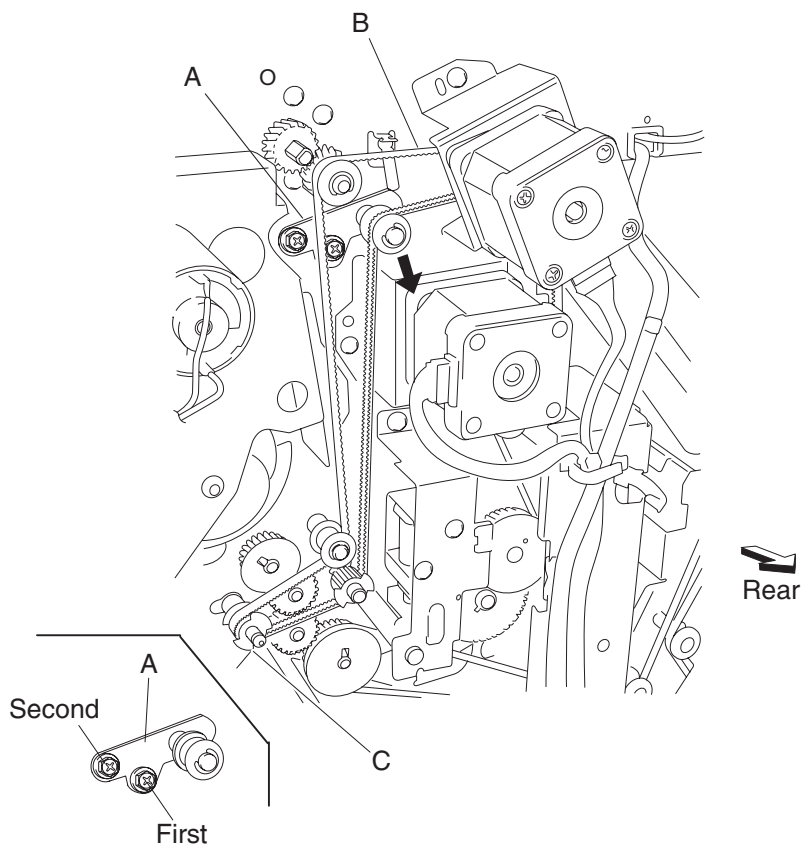
- 20.** Remove the lower media exit roll assembly (F).

## Paddle and roll exit assembly removal

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal"** on page 4-104.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the rear lower cover. See **"Rear lower cover removal"** on page 4-100.
4. Remove the upper media bin assembly. See **"Upper media bin assembly removal"** on page 4-97.
5. Remove the upper media bin vertical cover. See **"Right eject cover removal"** on page 4-98.
6. Remove the stapler unit frame. See **"Stapler unit frame removal"** on page 4-131.
7. Remove the media eject clamp motor assembly. See **"Media eject clamp motor assembly removal"** on page 4-143.
8. Remove the media eject unit assembly. See **"Media eject unit assembly removal"** on page 4-136.
9. Remove the media compiler unit assembly. See **"Media compiler unit assembly removal"** on page 4-146.
10. Remove the media eject motor assembly. See **"Media eject motor assembly removal"** on page 4-155.
11. Remove the media eject shaft assembly. See **"Media eject shaft assembly removal"** on page 4-151.
12. Loosen the two screws securing the belt tensioner bracket (A) to the finisher, and move it down, as shown.

**Replacement note:** When replacing the belt tensioner bracket (A), tighten the screws in the order shown.

13. Remove the belt (exit) (B) from the lower exit roll drive pulley 20T (C).

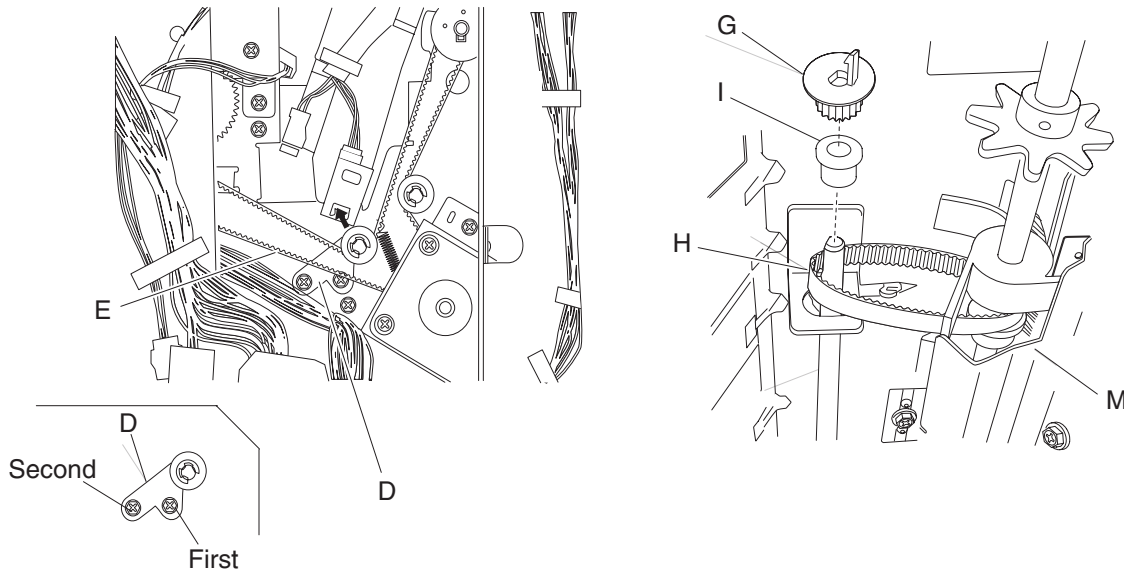


14. Loosen the two screws securing the belt tensioner bracket (D) to the finisher and move it upward, as shown.

**Replacement note:** When replacing the belt tensioner bracket (D), tighten the screws in the order shown.

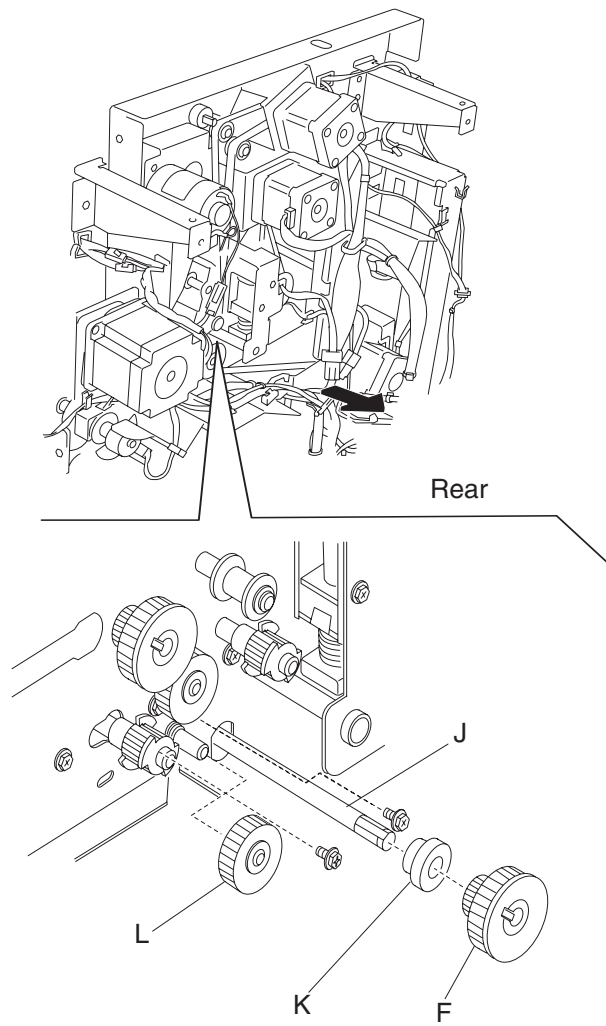
15. Remove the belt (paddle/entrance) (E) from the main paddle drive pulley/gear 44/20T (F).
16. Release the hook from the main paddle shaft drive pulley 17T (G) inside the finisher.
17. Remove the main paddle shaft drive pulley 17T (G).

**Note:** The belt (H) will become attached.



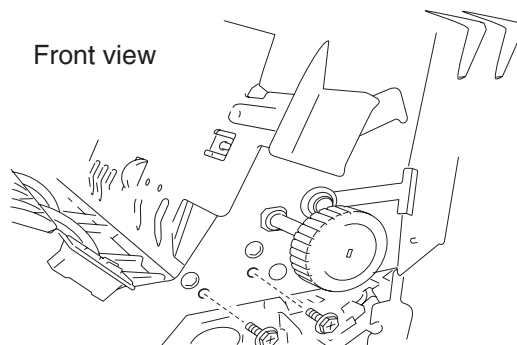
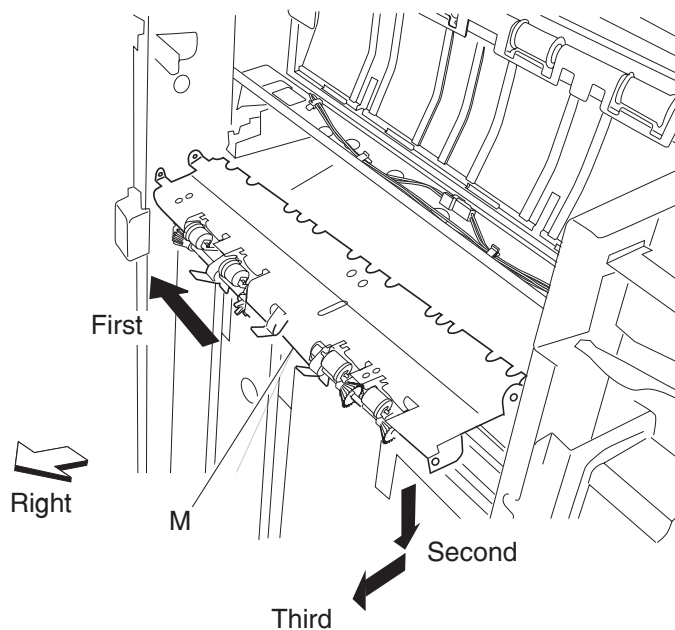
18. Remove the 6 mm bushing (I).
19. Release the hook of the main paddle drive pulley/gear 44/20T (F) from the shaft (J).
20. Remove the main paddle drive pulley/gear 44/20T (F).
21. Remove the 6 mm bushing (K).
22. Remove the main paddle idler gear 23T right (L).
23. Remove the two front and the two rear screws securing the main paddle shaft assembly (M).
24. Move the main paddle shaft assembly (M) forward and then downward and outward.

- 25.** Remove the main paddle shaft assembly.



**Replacement notes:**

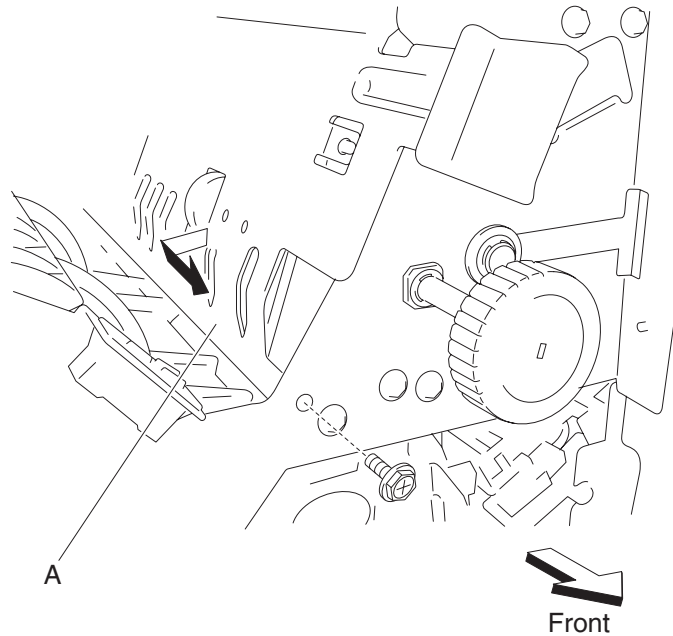
- The tension of the belt (exit) (A) and the belt (paddle/entrance) (E) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (A and D).
- Tighten the screws in the order shown.





### ***Lower pinch guide assembly removal***

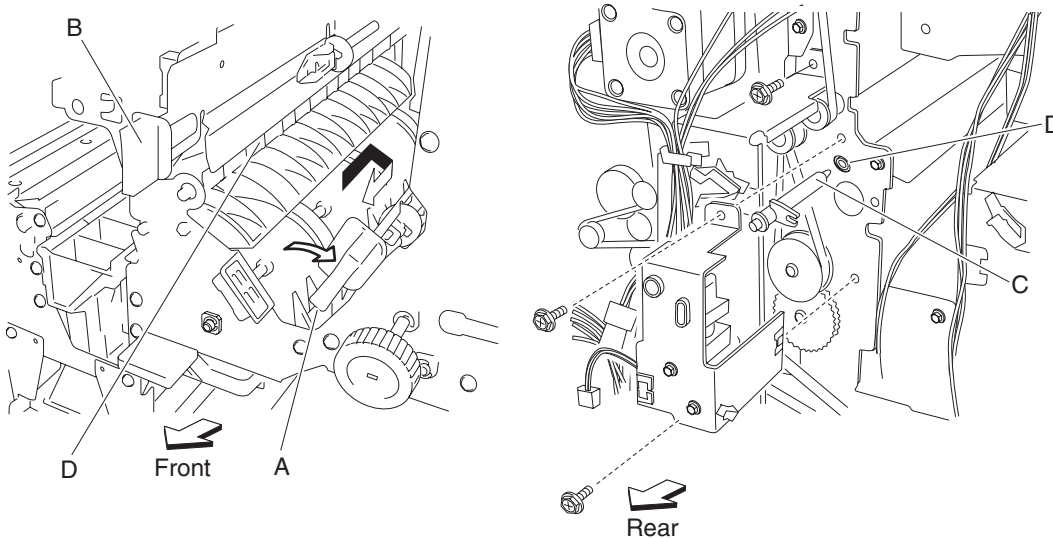
1. Open the finisher front door assembly.
2. Open the lower pinch guide assembly (A) by lifting it upward.
3. Remove the screw securing the lower pinch guide assembly (A) to the finisher.
4. Move the lower pinch guide assembly (A) upward and outward.



5. Remove the lower pinch guide assembly (A).

### Finisher diverter gate removal

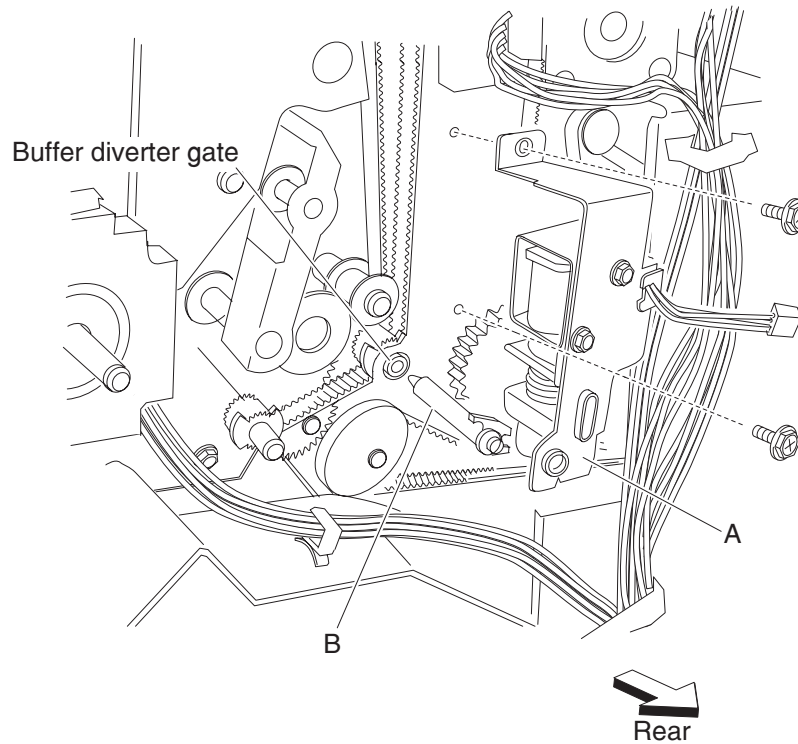
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Open the lower pinch guide assembly (A) to the right.
4. Open the upper pinch guide assembly (B) to the right.
5. Remove the finisher diverter gate solenoid. See **“Finisher diverter gate solenoid removal” on page 4-179.**
6. Remove the link (C).
7. Move the finisher diverter gate (D) toward the rear, to the right, and forward, as shown.



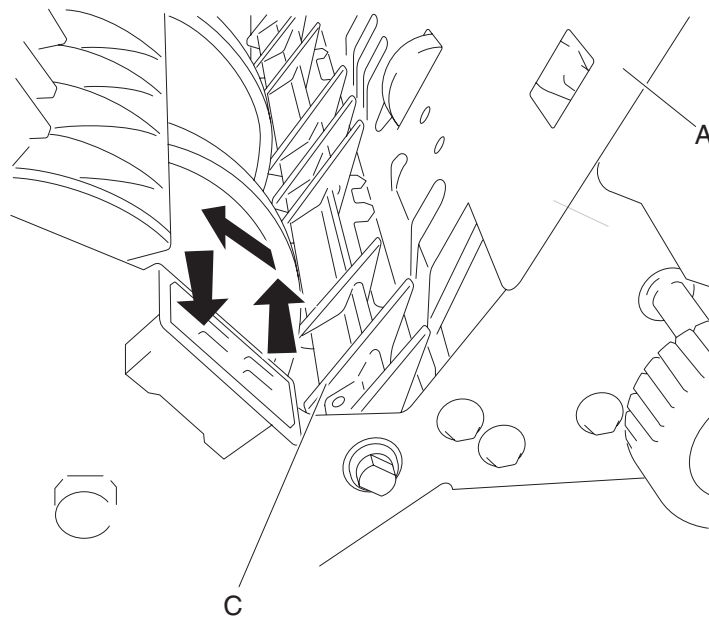
8. Remove the finisher diverter gate (D).

## Buffer diverter gate removal

1. Open the finisher front door assembly.
2. Move the lower pinch guide assembly (A) to the right.
3. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
4. Remove the buffer diverter gate solenoid. See **"Buffer diverter gate solenoid removal"** on page 4-180.
5. Remove the link (B).



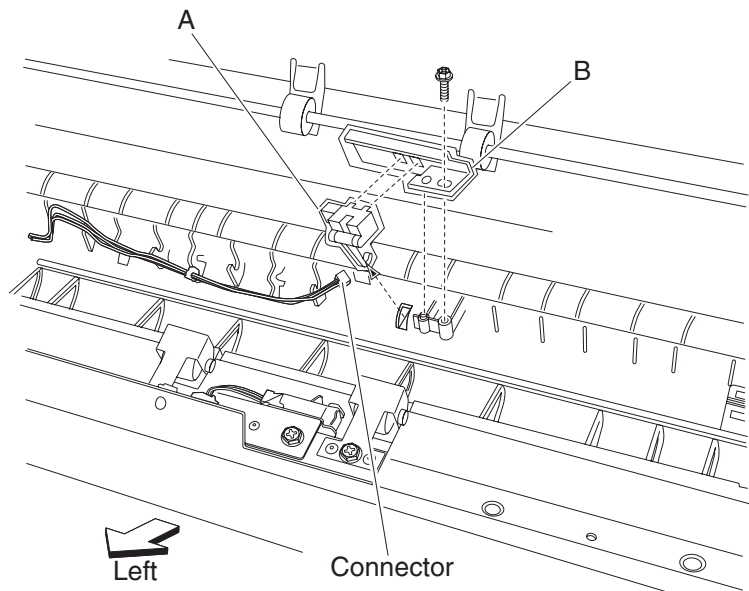
6. Move the buffer diverter gate (C) toward the rear, the left, and then forward, as shown.



7. Remove the buffer diverter gate (C).

## Sensor (buffer path) removal

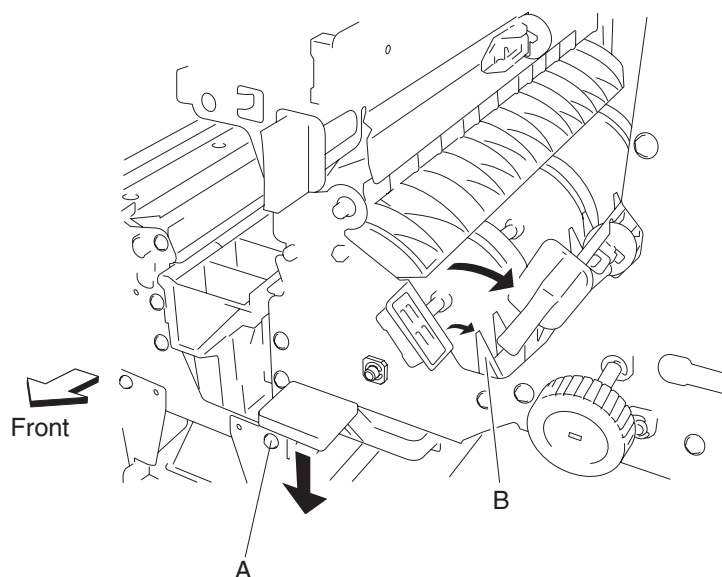
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the top cover. See **“Top cover removal” on page 4-96.**
4. Remove the left lower cover. See **“Left lower cover removal” on page 4-105.**
5. Remove the left upper cover. See **“Left upper cover removal” on page 4-106.**
6. Remove the punch carriage assembly. See **“Punch carriage assembly removal” on page 4-118.**
7. Disconnect the connector from the sensor (buffer path) (A).
8. Remove the screw securing the bracket (B) to the finisher.



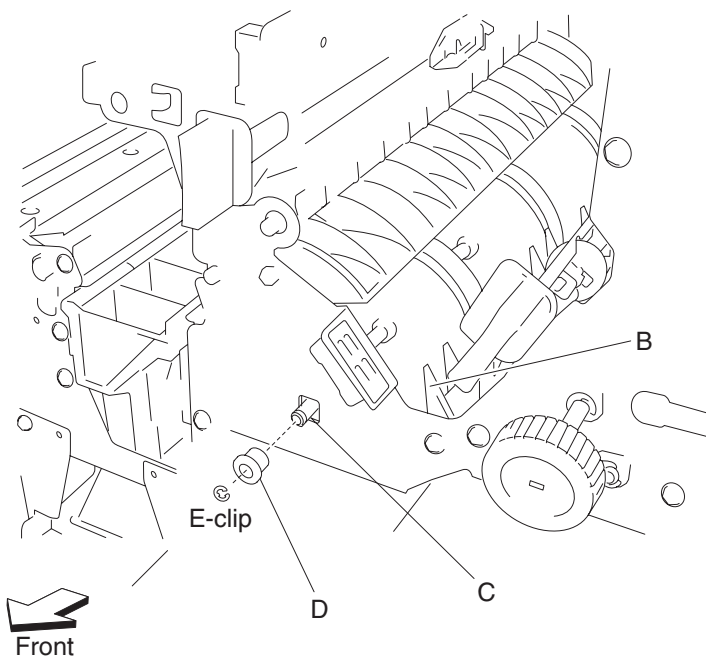
9. Remove the bracket (B).
10. Release the hooks securing the sensor (buffer path) (A) to the bracket (B).
11. Remove the sensor (buffer path) (A).

## Buffer roll assembly removal

1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
2. Open the finisher front door assembly.
3. Remove the stapler unit cartridge.
4. Move the stapler unit assembly by hand as far to the rear as it will go.
5. Lower the buffer pinch guide assembly (A).
6. Move the lower pinch guide assembly to the right.
7. Position the buffer diverter gate (B) using your finger to its upper most position.

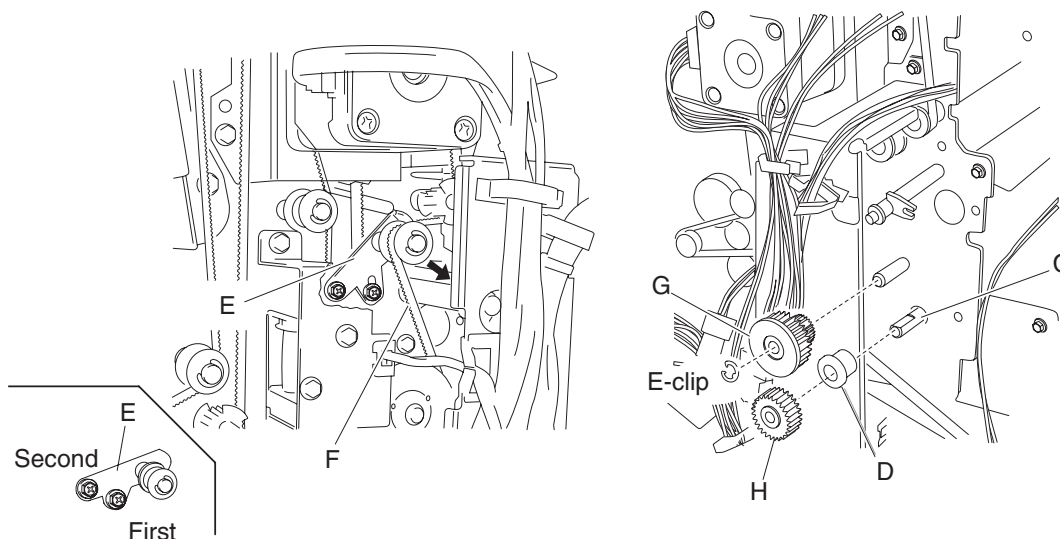


8. Use a prying tool to remove the e-clip securing the buffer roll assembly (C) to the front of the finisher.
9. Remove the 6 mm bushing (D).



10. Remove the finisher diverter gate solenoid. See **“Finisher diverter gate solenoid removal”** on page 4-179.

11. Loosen the two screws securing the belt tensioner bracket (E) to the finisher and move it downward, as shown.
12. Remove the belt (buffer/transport) (F) from the buffer roll drive gear 46T (G).

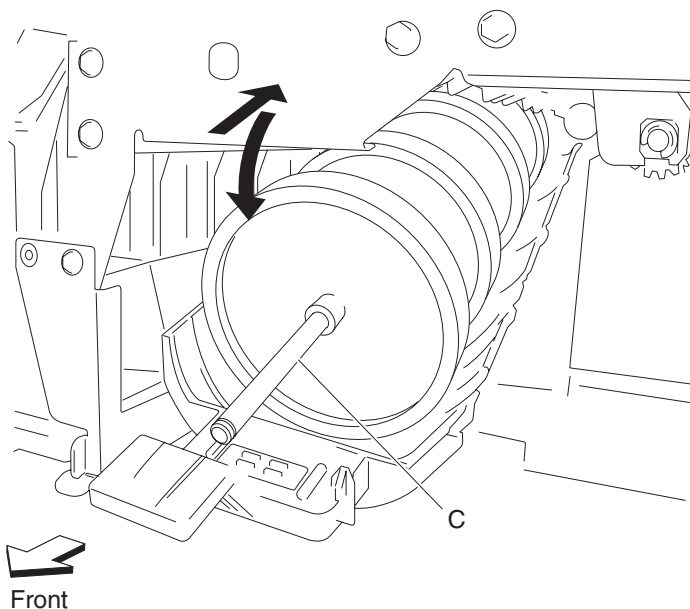


13. Use a prying tool to remove the e-clip securing the buffer roll drive gear 23/53T (G).
14. Remove the buffer roll drive gear 53/23T (G).
15. Release the hook of the buffer roll drive gear 46T (H) from the buffer roll assembly (C).
16. Remove the buffer roll drive gear 46T (H).
17. Remove the 6 mm bushing (D).
18. Remove the buffer roll assembly (C) from inside the finisher.

**Note:** When removing the buffer roll assembly (C), do not touch the rubber surface.

#### Replacement notes:

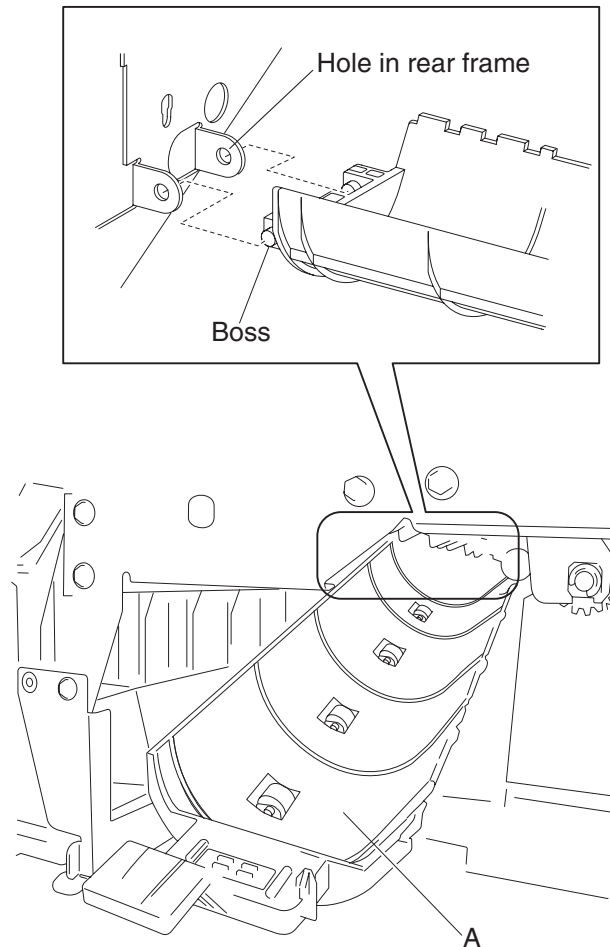
- Make sure the flat spot on the end of the buffer roll assembly (C) is installed to the rear.



- When replacing the buffer roll assembly, do not touch the rubber surface.
- The tension of the belt (buffer/transport) (F) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (E).
- Tighten the two screws in the order shown.

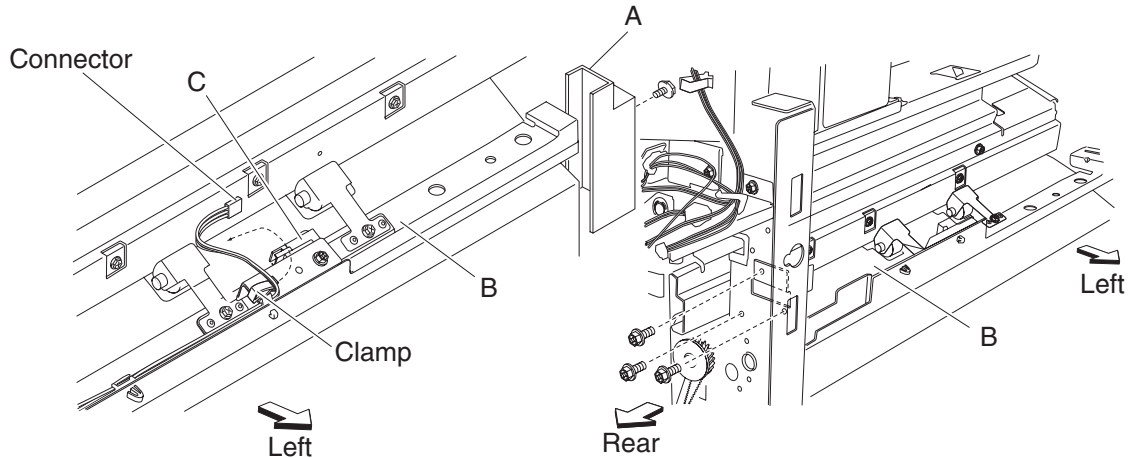
### ***Buffer pinch guide assembly removal***

1. Remove the finisher front door assembly. See **“Finisher front door assembly removal” on page 4-104.**
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the stapler unit frame. See **“Stapler unit frame removal” on page 4-131.**
4. Lower the buffer pinch guide assembly (A) as far as it will go.
5. Move the buffer pinch guide assembly (A) to the right to remove the two bosses from the holes in the finisher.



## Media entrance pinch guide assembly removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal" on page 4-101.**
3. Remove the left lower cover. See **"Left lower cover removal" on page 4-105.**
4. Remove the left upper cover. See **"Left upper cover removal" on page 4-106.**
5. Remove the screw securing the cover (A) to the media entrance pinch guide assembly (B).
6. Remove the cover (A).
7. Disconnect the connector from the sensor (finisher media entrance) (C).
8. Release the harness from the clamps.
9. Remove the three screws securing the media entrance pinch guide assembly (B).

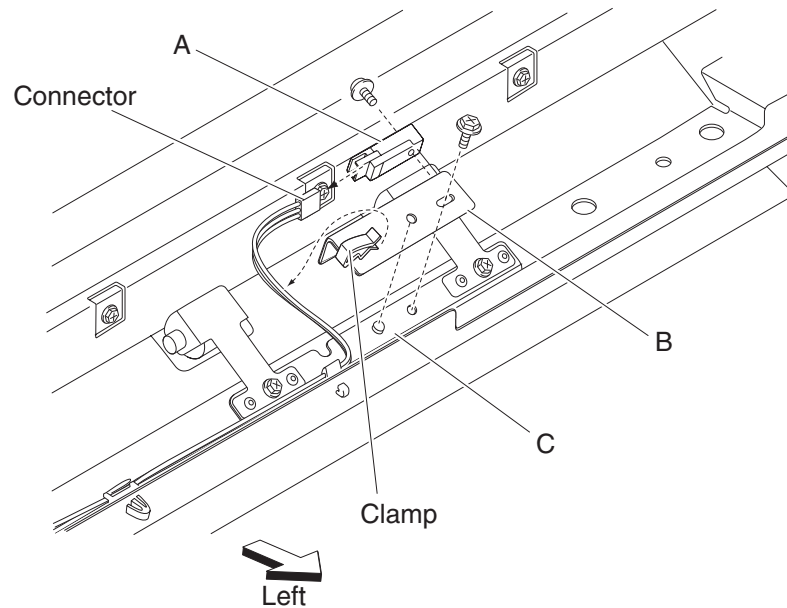


10. Remove the entrance pinch guide assembly (B) from the finisher.



## Sensor (finisher media entrance) removal

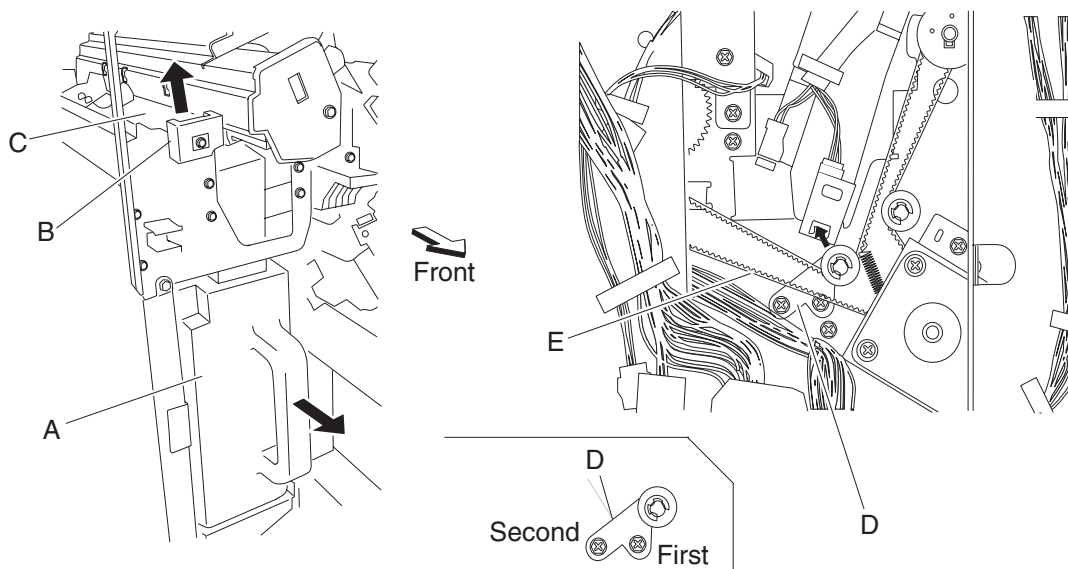
1. Open the front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the top cover. See **“Top cover removal” on page 4-96.**
4. Remove the left lower cover. See **“Left lower cover removal” on page 4-105.**
5. Remove the left upper cover. See **“Left upper cover removal” on page 4-106.**
6. Disconnect the connector from the sensor (finisher media entrance) (A).
7. Release the harness from the clamp.
8. Remove the screw securing the bracket (B) to the media entrance pinch guide assembly (C).



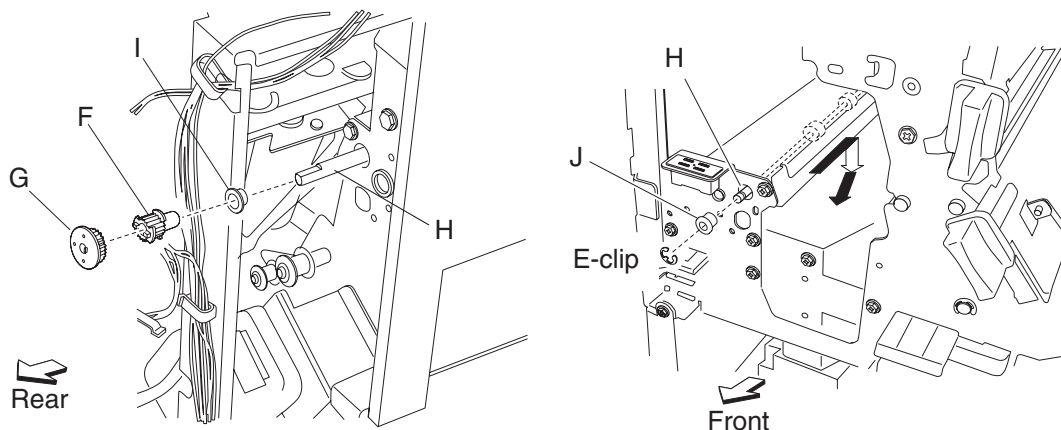
9. Release the hooks securing the sensor (finisher media entrance) (A) to the bracket (B).
10. Remove the sensor (finisher media entrance) (A).

## Media entrance roll assembly removal

1. Remove the finisher front door assembly. See **"Finisher front door assembly removal"** on page 4-104.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the left upper cover. See **"Left upper cover removal"** on page 4-106.
4. Remove the punch waste box (A) from the finisher.
5. Remove the screw securing the cover (B) to the media entrance pinch guide assembly.
6. Remove the cover (B).
7. Lift the media entrance pinch guide assembly (C).
8. Loosen the two screws securing the belt tensioner bracket (D) to the finisher and move it upward in the direction of the arrow.
9. Remove the belt (entrance/paddle) (E) from the entrance drive pulley 20T (F).



10. Release the hook securing the entrance drive gear 23T (G) to the media entrance roll assembly (H).
11. Remove the entrance drive gear 23T (G).
12. Remove the entrance drive pulley 20T (F).
13. Remove the bushing (I).
14. Remove the e-clip securing the media entrance roll assembly (H) to the front of the finisher.
15. Remove the bushing (J).



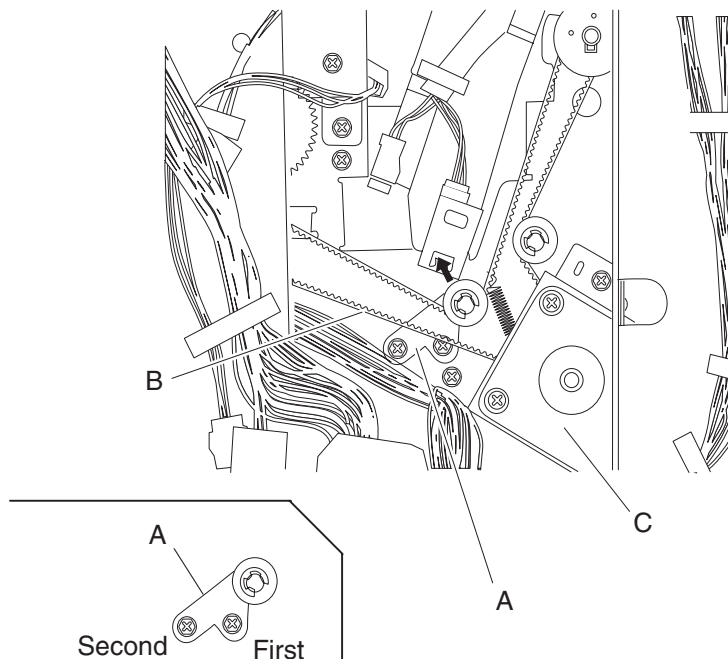
16. Move the media entrance roll assembly (H) toward the rear, downward, and then forward.
17. Remove the media entrance roll assembly (H) through the inside of the finisher.  
**Note:** When removing the media entrance roll assembly (H), do not touch the rubber surface.

**Replacement notes:**

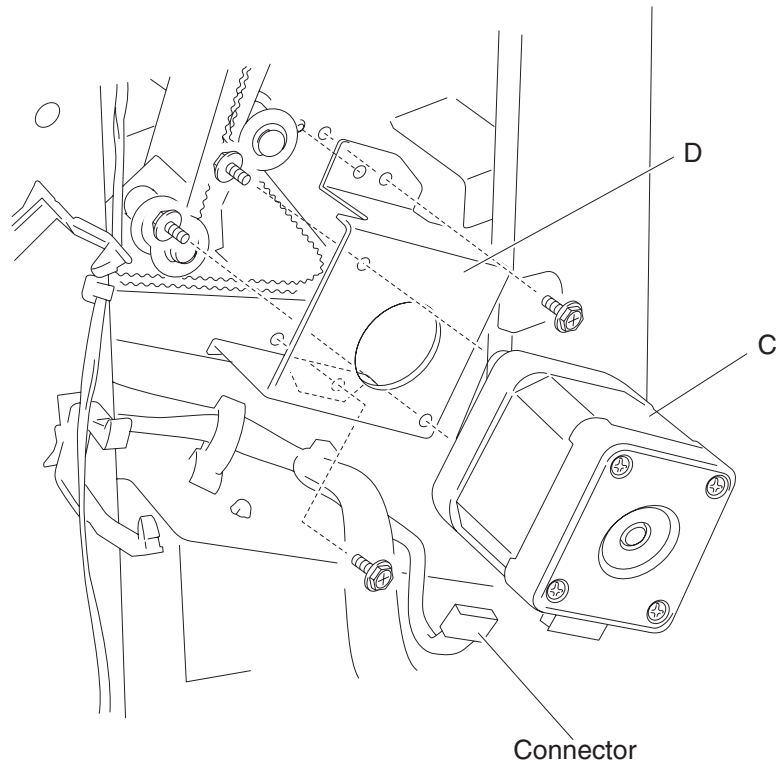
- Make sure the flat spot on the media entrance roll assembly (H) is installed to the rear.
- When replacing the media entrance roll assembly (H), do not touch the rubber surface.
- The tension of the belt (entrance/paddle) (E) is automatically adjusted to the force of the spring attached to the belt tensioner bracket (D).
- Tighten the two screws in the order shown.

***Drive motor (entrance/paddle) and belt (entrance/paddle) removal***

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101**.
2. Loosen the two screws securing the belt tensioner bracket (A) to the finisher and move upward, as shown.
3. Remove the belt (entrance/paddle) (B) from the drive motor (entrance/paddle) (C).
4. Disconnect the connector from the drive motor (entrance/paddle) (C).



5. Remove the two screws securing the bracket (D) to the finisher.



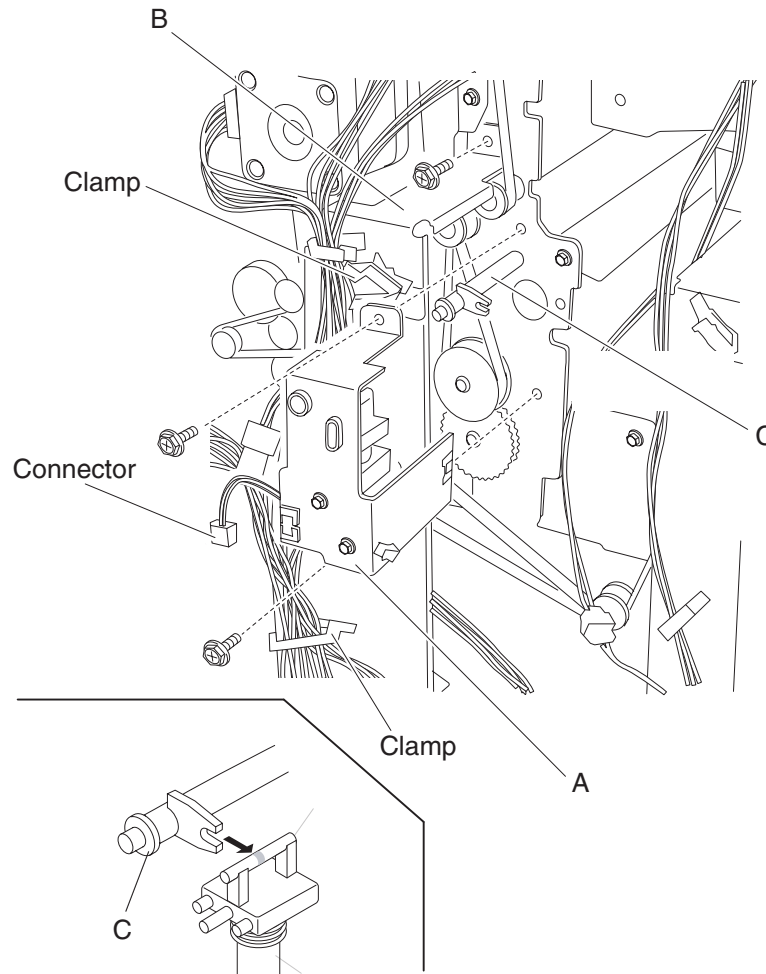
6. Remove the bracket (D).
7. Remove the two screws securing the bracket (D) to the drive motor (entrance/paddle) (C).
8. Remove the drive motor (entrance/paddle) (C).
9. Remove the belt (entrance/paddle) (B).

**Replacement notes:**

- The tension of the belt (entrance/paddle) (B) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (A).
- Tighten the two screws in the order shown.

## Finisher diverter gate solenoid removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Disconnect the connector from the finisher diverter gate solenoid (A).
4. Release the harness from the clamp.
5. Remove the two screws securing the bracket (B) to the finisher.  
**Note:** The bracket should not be removed from the finisher, it should be gently moved to provide better access to the finisher diverter gate solenoid mounting screws.
6. Remove the two screws securing the finisher diverter gate solenoid (A) to the finisher.
7. Remove the finisher diverter gate solenoid (A).  
**Note:** The link (C) may remain inserted into the finisher.

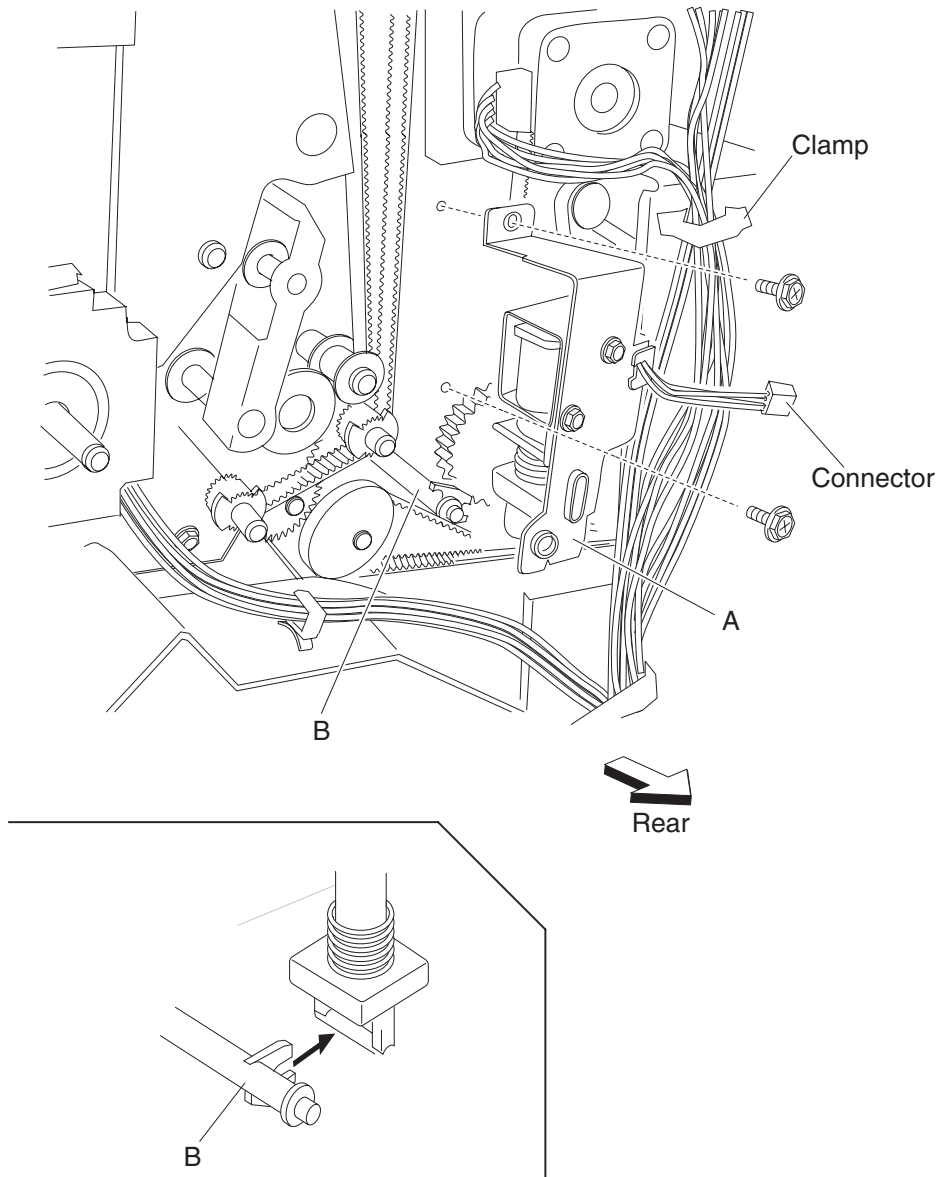


8. Remove the link.  
**Note:** When the link is removed, the finisher diverter gate may become detached. See **“Finisher diverter gate removal” on page 4-168.**

## Buffer diverter gate solenoid removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Disconnect the connector from the buffer diverter gate solenoid (A).
4. Release the harness from the clamp.
5. Remove the two screws securing the buffer diverter gate solenoid to the finisher.
6. Remove the buffer diverter gate solenoid.

**Note:** The link (B) may remain inserted into the finisher.

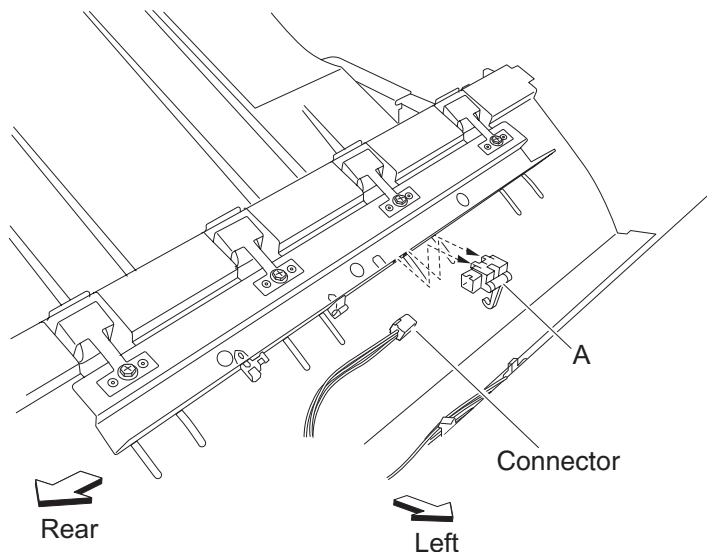


7. Remove the link.

**Note:** When the link is removed, the buffer diverter gate may become detached. See **“Buffer diverter gate removal” on page 4-169.**

### **Sensor (upper media exit) removal**

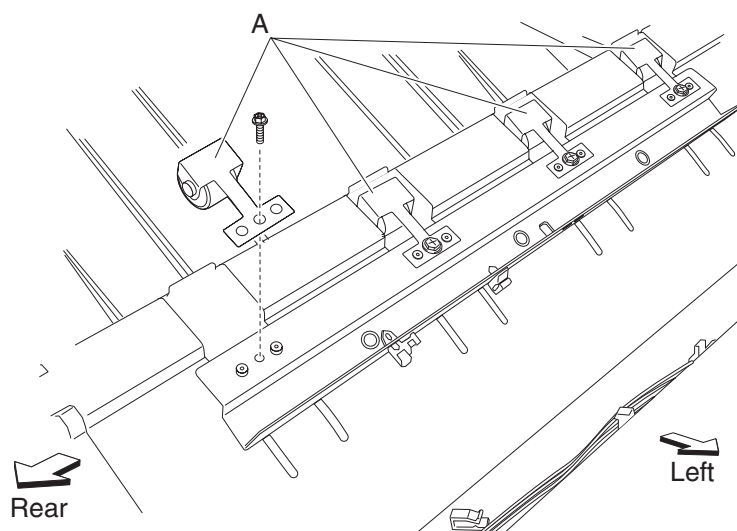
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the top cover. See **"Top cover removal"** on page 4-96.
4. Disconnect the connector from the sensor (upper media exit) (A).



5. Release the hooks securing the sensor (upper media exit) (A) to the finisher.
6. Remove the sensor (upper media exit) (A).

### **Upper media exit pinch roll assembly removal**

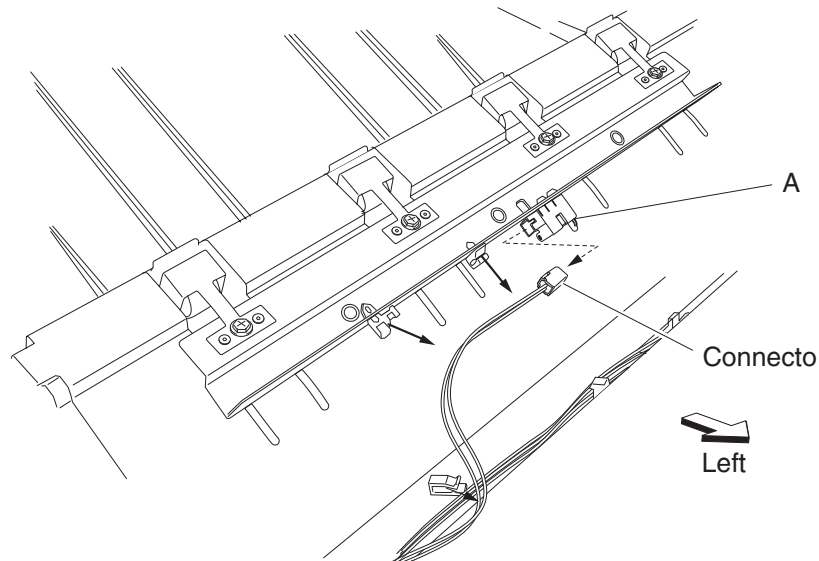
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the top cover. See **"Top cover removal"** on page 4-96.
4. Remove the four screws securing the four upper media exit pinch roll assemblies (A) to the finisher.



5. Remove the four upper media exit pinch roll assembly (A).

### ***Upper media exit roll assembly removal***

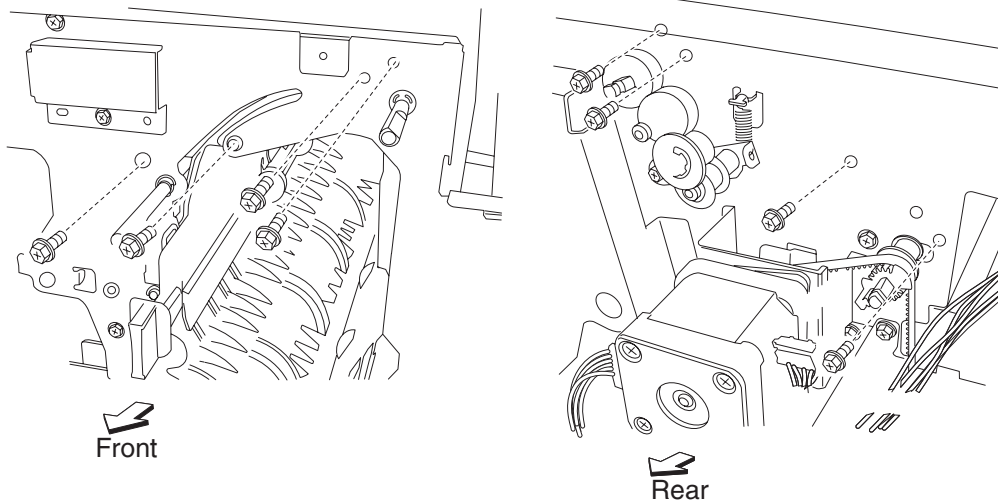
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the top cover. See **“Top cover removal” on page 4-96.**
4. Remove the drive motor (exit). See **“Drive motor (exit) assembly and belt (exit) removal” on page 4-190.**
5. Disconnect the connector from the sensor (upper media exit) (A).



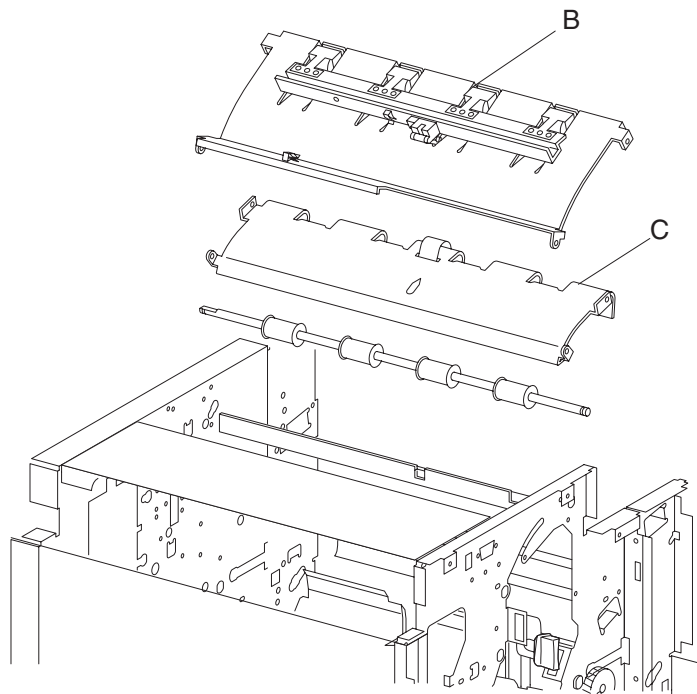
6. Release the harness from the clamps.



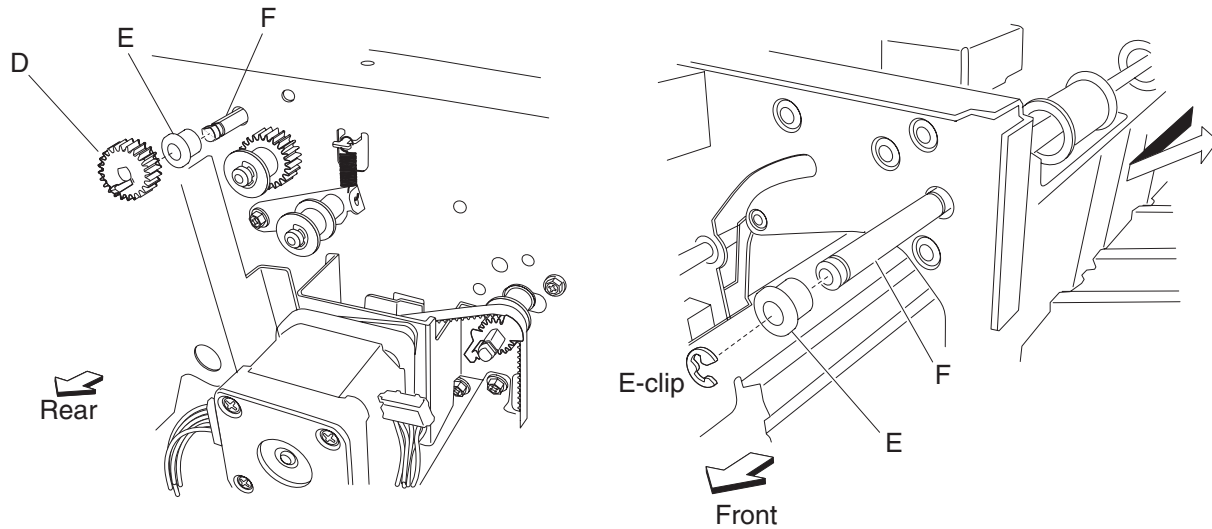
7. Remove the two front and two rear screws securing the upper exit guide assembly (B).
8. Remove the upper exit guide assembly.
9. Remove the two front screws and the two rear screws securing the bracket (C) to the finisher.



10. Remove the bracket (C).



11. Release the hook from the upper media exit roll drive gear 20T(D).
12. Remove the upper media exit roll drive gear 20T.
13. Remove the 6 mm bushing.
14. Use a prying tool to remove the e-clip securing the upper media exit roll assembly (F) to the front of the finisher.
15. Remove the 6 mm bushing (E).
16. Move the upper media exit roll assembly frontward and outward in the direction of the arrow.



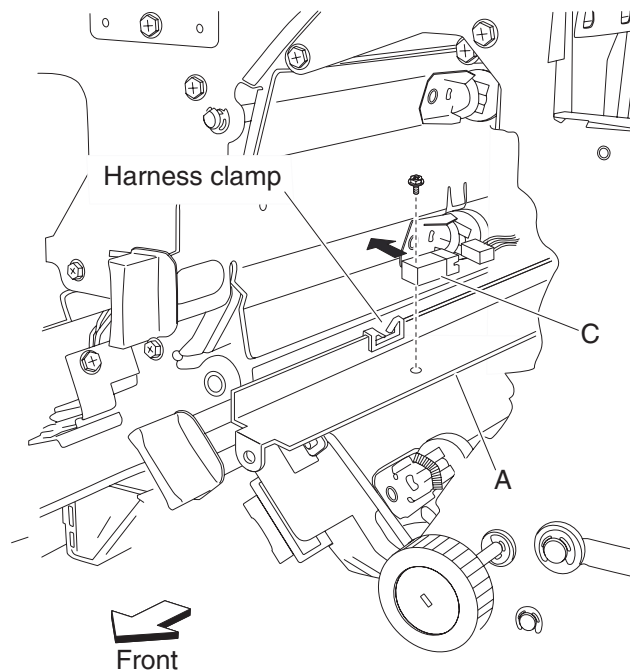
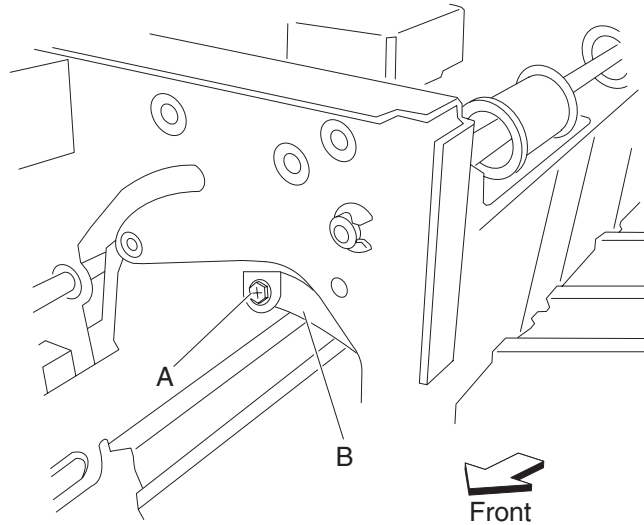
17. Remove the upper media exit roll assembly (F).  
**Note:** When removing the upper media exit roll assembly (F), do not touch the rubber surface.

**Replacement notes:**

- Make sure the flat spot of the upper media exit roll assembly (F) is installed to the rear.
- When replacing the upper media exit roll assembly (F), do not touch the rubber surface.

### **Sensor (upper media bin full) removal**

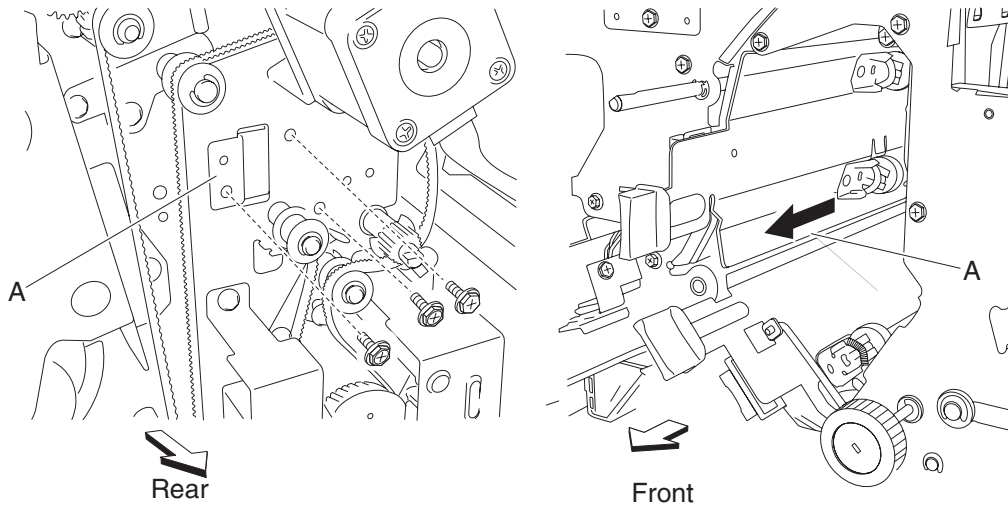
1. Open the finisher front door assembly.
2. Remove the screw securing the bracket (A) to the upper media bin vertical cover (B).
3. Move the bracket frontward and downward to gain access to the harness and connector.
4. Release the harness from the clamp.
5. Move the bracket (B) frontward again, and remove the screw securing the sensor (upper media bin full) (C) to the bracket.



6. Remove the sensor (upper media bin full) (C).
7. Disconnect the connector from the sensor (upper media bin full) (C).

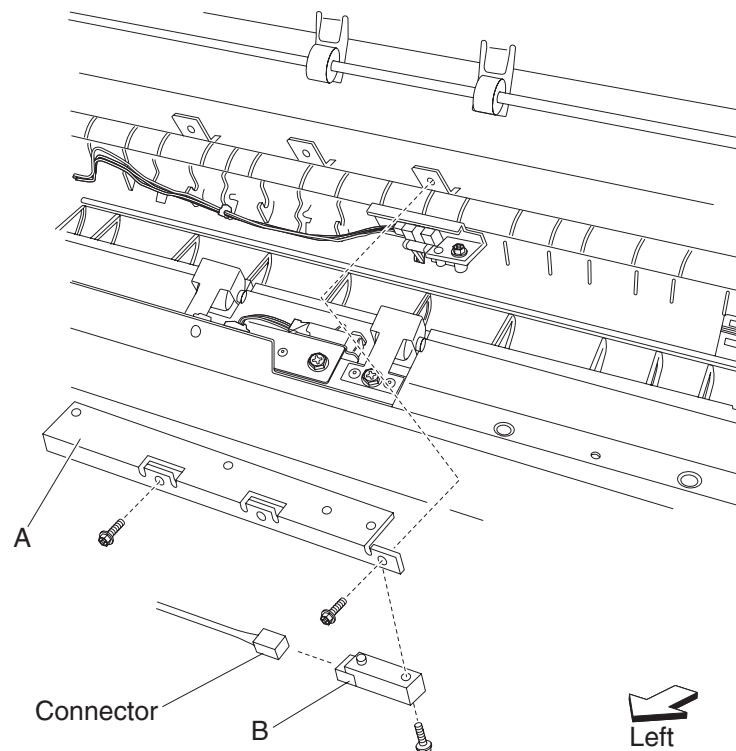
## Upper pinch guide assembly removal

1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
3. Remove the drive motor (buffer/transport). See **“Drive motor (buffer/transport) and belt (buffer/transport) removal” on page 4-192.**
4. Remove the three screws securing the hinge of the upper pinch guide assembly (A) on the rear of the finisher.
5. Move the upper pinch guide assembly hinge from the rear of the finisher.
6. Remove the upper pinch guide assembly (A) from the inside of the finisher in the direction of the arrow.



## Sensor (diverter gate) removal

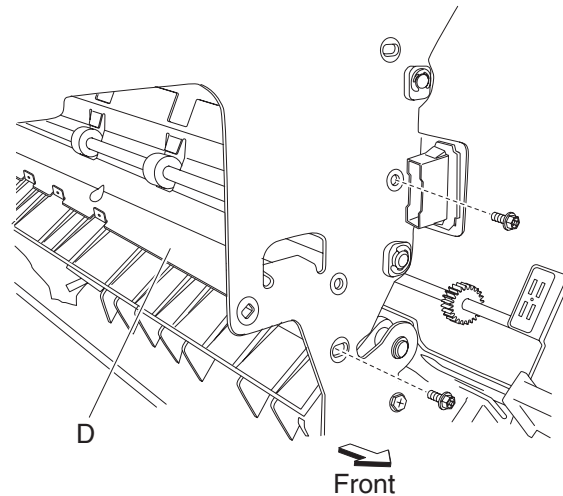
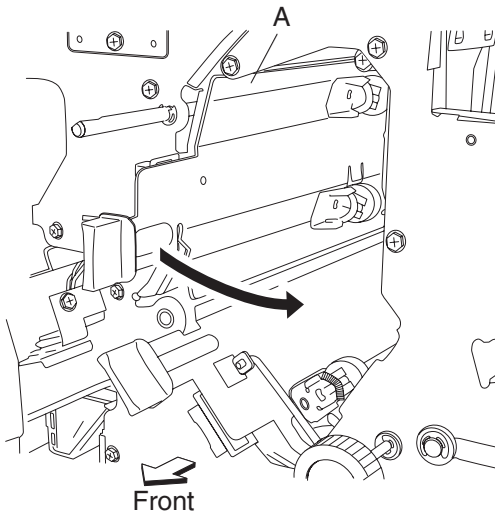
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the top cover. See **"Top cover removal"** on page 4-96.
4. Remove the left lower cover. See **"Left lower cover removal"** on page 4-105.
5. Remove the left upper cover. See **"Left upper cover removal"** on page 4-106.
6. Remove the punch carriage assembly. See **"Punch carriage assembly removal"** on page 4-118.
7. Remove the two screws securing the bracket (A) to the finisher.
8. Remove the bracket (A).
9. Disconnect the connector from the sensor (diverter gate) (B).
10. Remove the screw securing the sensor (diverter gate) (B) to the bracket (A).



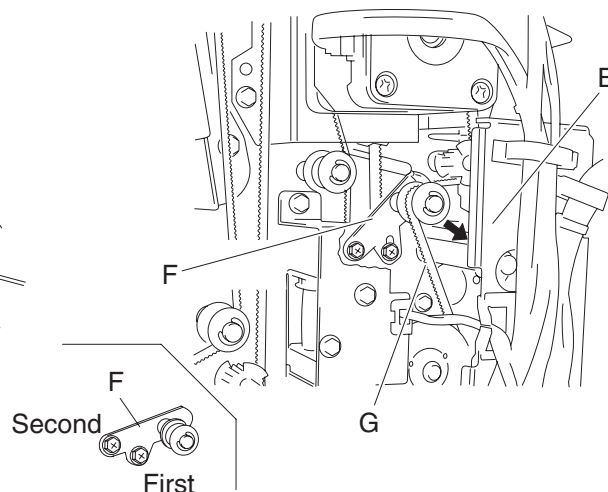
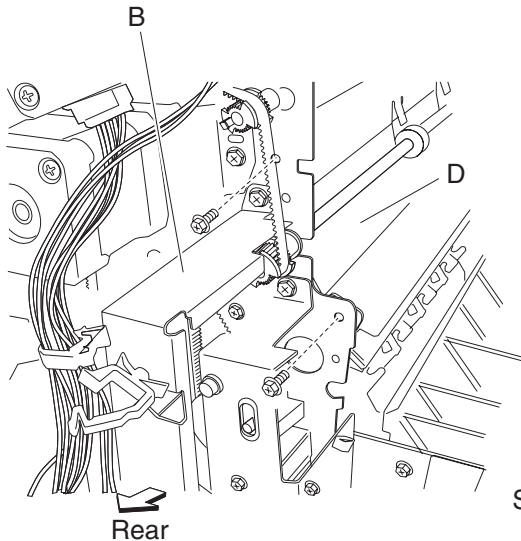
11. Remove the sensor (diverter gate) (B).

## Upper media transport roll assembly removal

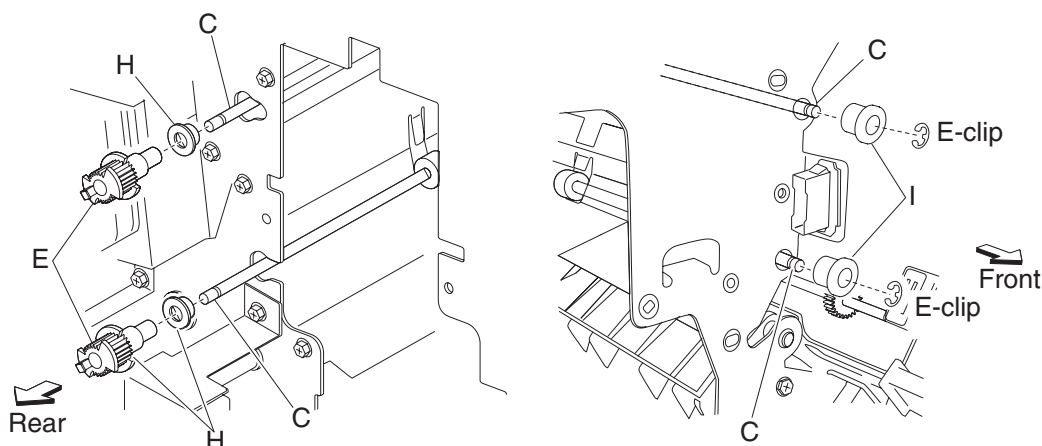
1. Open the finisher front door assembly.
2. Remove the rear upper cover. See **"Rear upper cover removal"** on page 4-101.
3. Remove the top cover. See **"Top cover removal"** on page 4-96.
4. Remove the left lower cover. See **"Left lower cover removal"** on page 4-105.
5. Remove the left upper cover. See **"Left upper cover removal"** on page 4-106.
6. Remove the punch carriage assembly. See **"Punch carriage assembly removal"** on page 4-118.
7. Open the upper pinch guide assembly (A) toward the right.
8. Remove the two screws securing the bracket (B) on the rear of the finisher.



9. Move the bracket (B) slightly toward the exit side of the finisher.  
**Note:** It is not necessary to remove the bracket from the finisher; it should only be slightly moved to provide better access to the two upper media transport roll assemblies (C) for removal.



10. Remove the two screws securing the bracket (D).  
**Note:** It is not necessary to remove the bracket from the finisher; it should only be slightly moved to provide better access to the two upper media transport roll drive pulleys 20T(E).
11. Loosen the two screws securing the belt tensioner bracket (F) to the finisher, and move the bracket downward as shown.
12. Remove the belt (buffer/transport) (G) from the two upper media transport roll drive pulleys 20T (E).
13. Release the hook securing the appropriate upper media transport roll drive pulley 20T (E) to the appropriate upper media transport roll assembly (C).
14. Remove the appropriate upper media transport roll drive pulley 20T (E).
15. Remove the appropriate bushing (H).
16. With a prying tool, remove the e-clip securing the appropriate upper media transport roll assembly (C) to the front of the finisher.



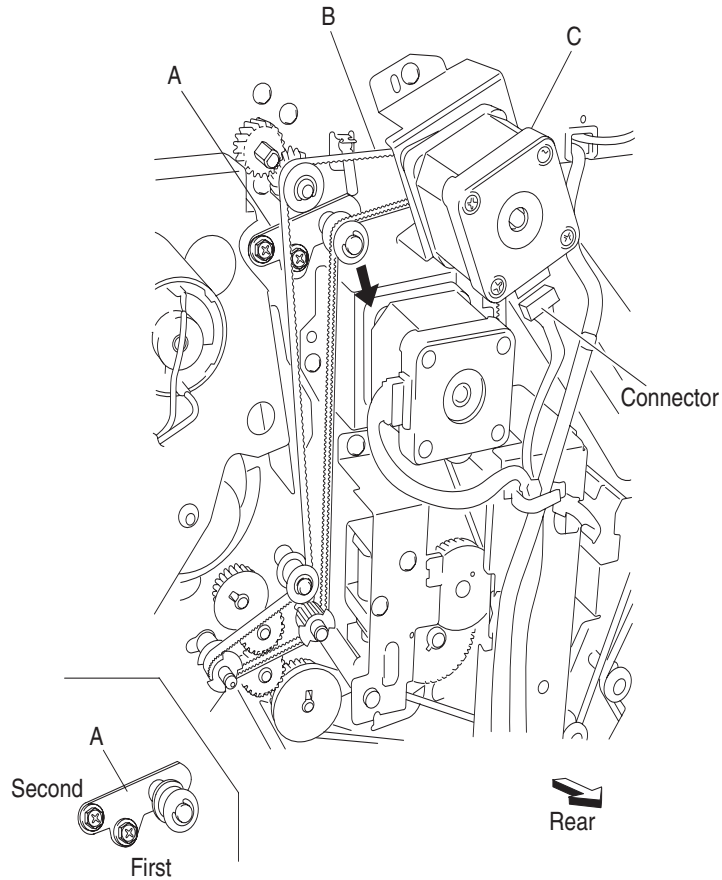
17. Remove the appropriate 6 mm bushing (I).
18. Move the appropriate upper media transport roll assembly (C) toward the front and outward.
19. Remove the appropriate upper media transport roll assembly (C).  
**Note:** When removing the upper media transport roll assembly (C), do not touch the rubber surface.

#### Replacement notes

- Make sure the flat spot on the upper media transport roll assembly (C) is installed to the rear.
- When replacing the upper media transport roll assembly (C), do not touch the rubber surface.
- The tension of the belt (buffer/transport) (G) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (F).
- Tighten the two screws in the order shown.

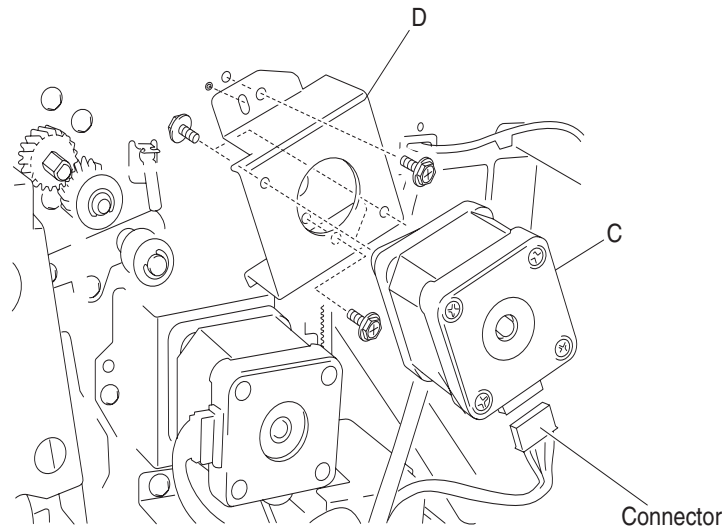
**Drive motor (exit) assembly and belt (exit) removal**

1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
2. Loosen the two screws securing the belt tensioner bracket (A) to the finisher, and move it down as shown.
3. Remove the belt (exit) (B) from the drive motor (exit) assembly (C).
4. Disconnect the connector from the drive motor (exit) assembly.





5. Remove the two screws securing the bracket (D) to the finisher.
6. Remove the bracket (D).
7. Remove the two screws securing the drive motor (exit) assembly to the bracket (D).



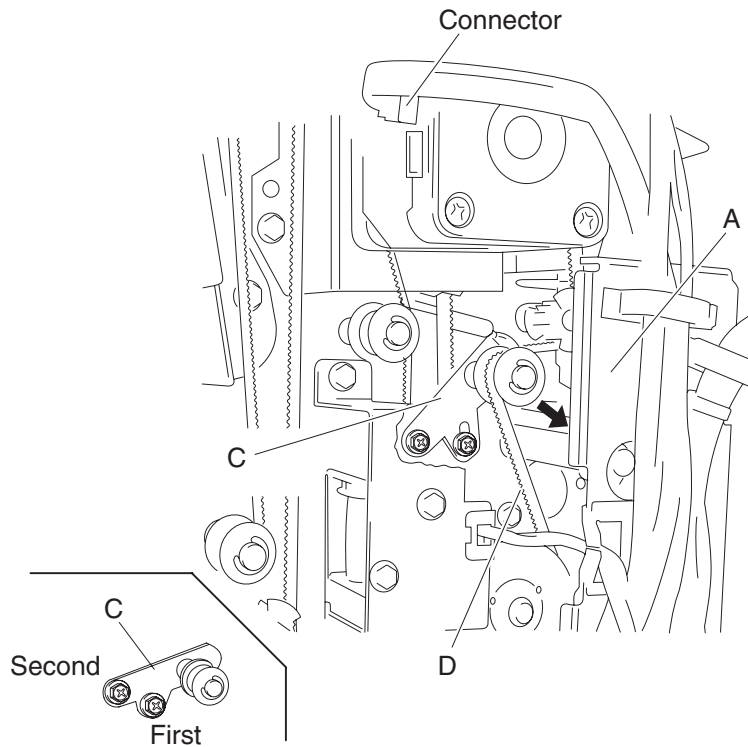
8. Remove the drive motor (exit) assembly (C).

**Replacement notes:**

- The tension of the belt (exit) (B) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (A).
- Tighten the two screws in the order shown.

**Drive motor (buffer/transport) and belt (buffer/transport) removal**

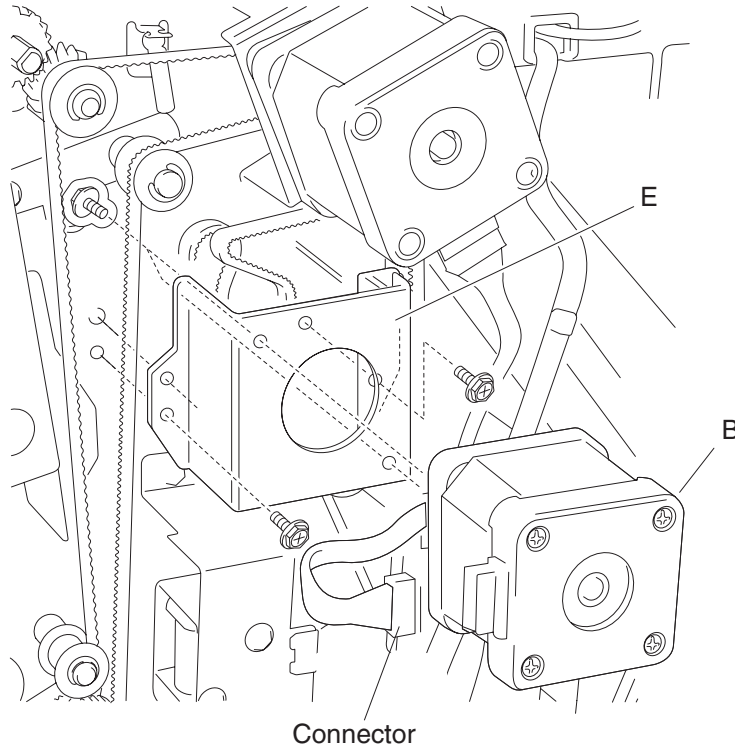
1. Remove the rear upper cover. See **“Rear upper cover removal” on page 4-101.**
2. Remove the two screws securing the bracket (A) on the rear of the finisher.
3. Move the bracket slightly.  
**Note:** It is not necessary to remove the bracket from the finisher. It should only be slightly moved to provide better access to the drive motor (buffer/transport) (B) for removal.
4. Loosen the two screws securing the belt tensioner bracket (C) to the finisher, and move it down as shown.
5. Remove the belt (buffer/transport) (D) from the drive motor (buffer/transport).



6. Disconnect the connector from the drive motor (buffer/transport).
7. Remove the two screws securing the bracket (E) to the finisher.
8. Remove the bracket.
9. Remove the two screws securing the drive motor (buffer/transport) to the bracket.
10. Remove the drive motor (buffer/transport).
11. Remove the belt (buffer/transport) (D).

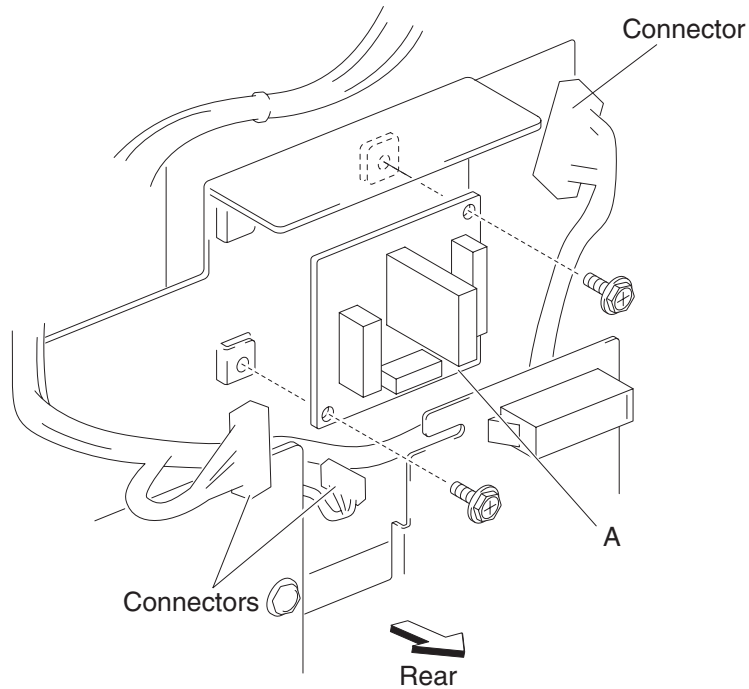
**Replacement notes:**

- The tension of the belt (buffer/transport) (D) is automatically adjusted by the force of the spring attached to the belt tensioner bracket (C).
- Tighten the two screws in the order shown.



### ***Bridge unit interface card assembly removal***

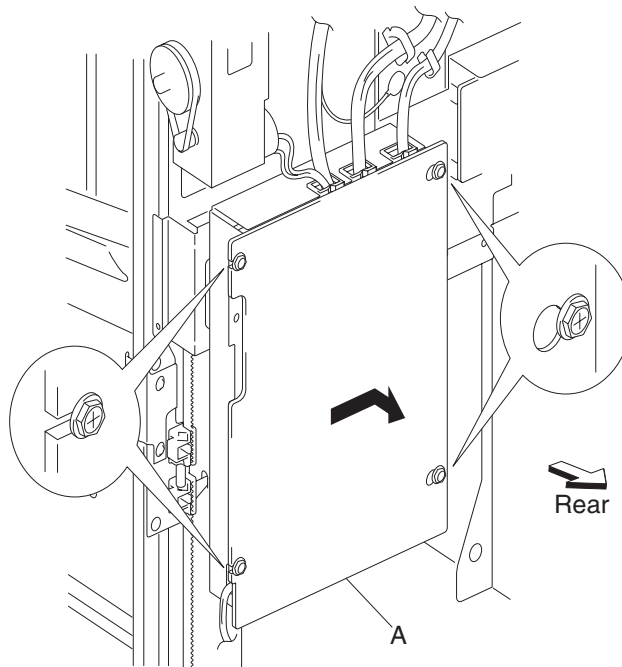
1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
2. Disconnect all the connectors from the bridge unit interface card assembly (A).
3. Remove the two screws securing the bridge unit interface card assembly (A) to the finisher.



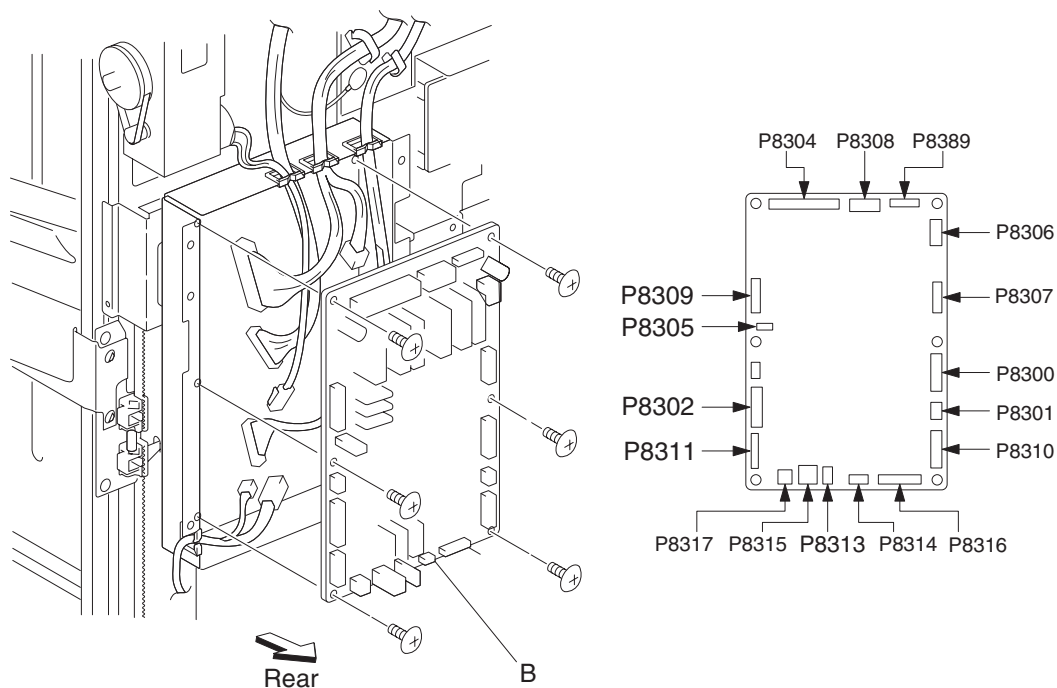
4. Remove the bridge unit interface card assembly (A).

## Finisher controller card assembly removal

1. Remove the rear upper cover. See **“Rear upper cover removal”** on page 4-101.
2. Remove the rear lower cover. See **“Rear lower cover removal”** on page 4-100.
3. Loosen the four screws securing the plate (A) to the finisher.
4. Move the plate (A) to the right and outward.



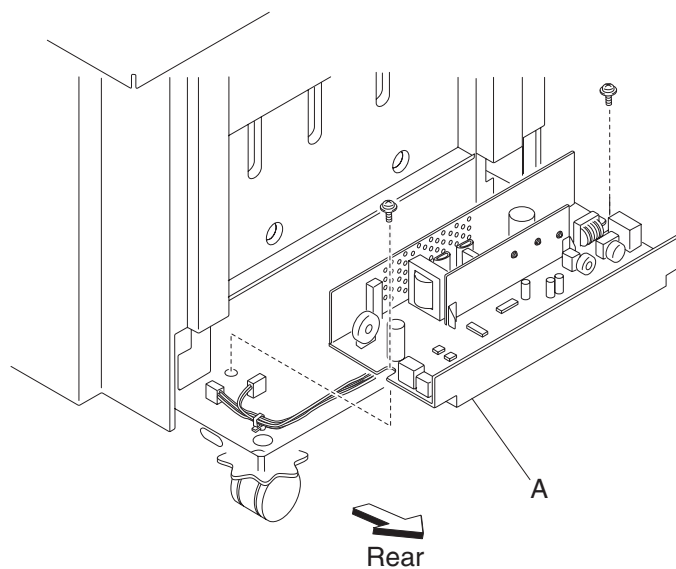
5. Remove the plate (A).
6. Disconnect the connectors from the finisher controller card assembly (B).



7. Remove the six screws securing the finisher controller card assembly (B).
8. Remove the finisher controller card assembly (B).

**Finisher low voltage power supply (LVPS) removal**

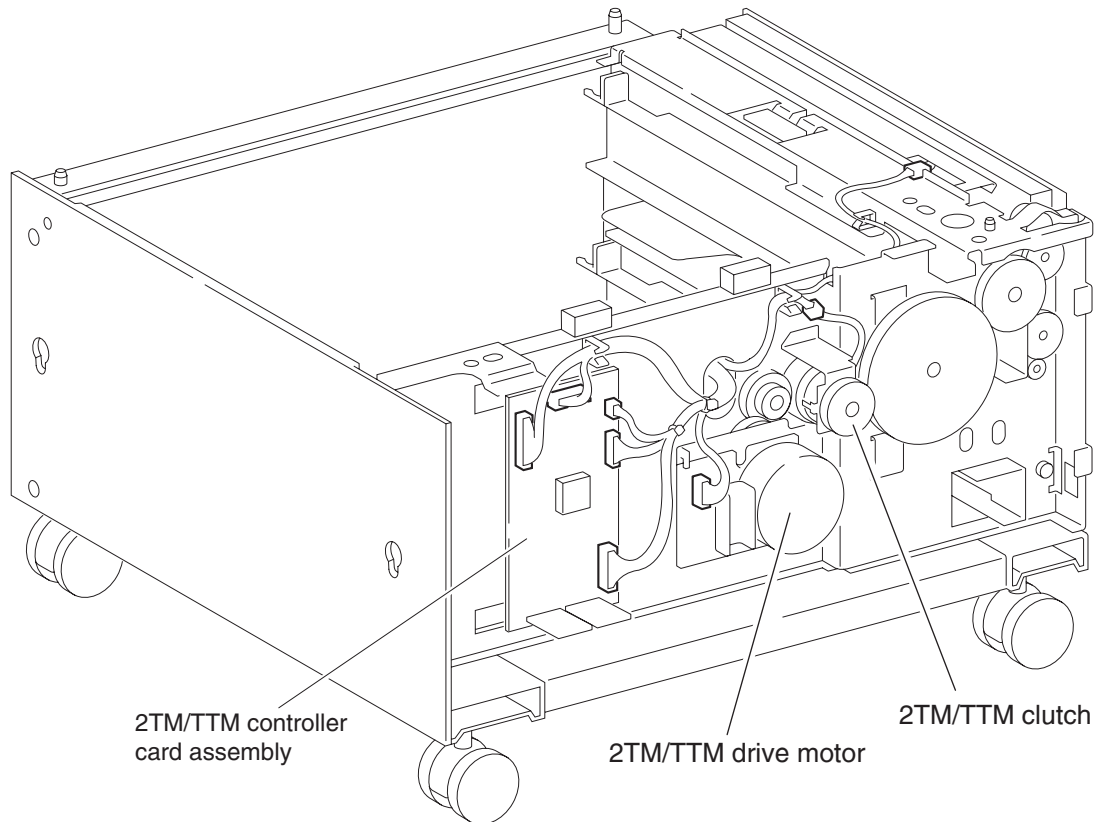
1. Remove the right lower cover. See **“Rear lower cover removal” on page 4-100.**
2. Disconnect all the connectors from the finisher LVPS (A).
3. Remove the two screws securing the finisher LVPS (A) to the finisher.

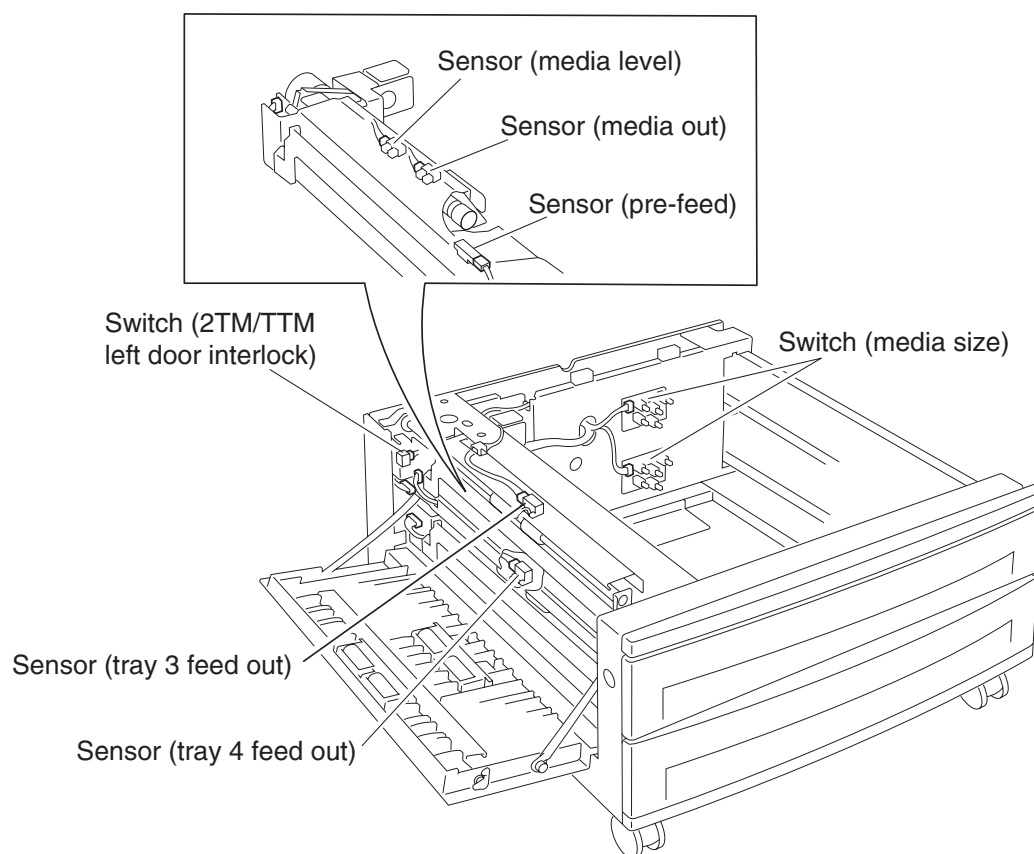


4. Remove the finisher LVPS (A).

## 5. Component locations

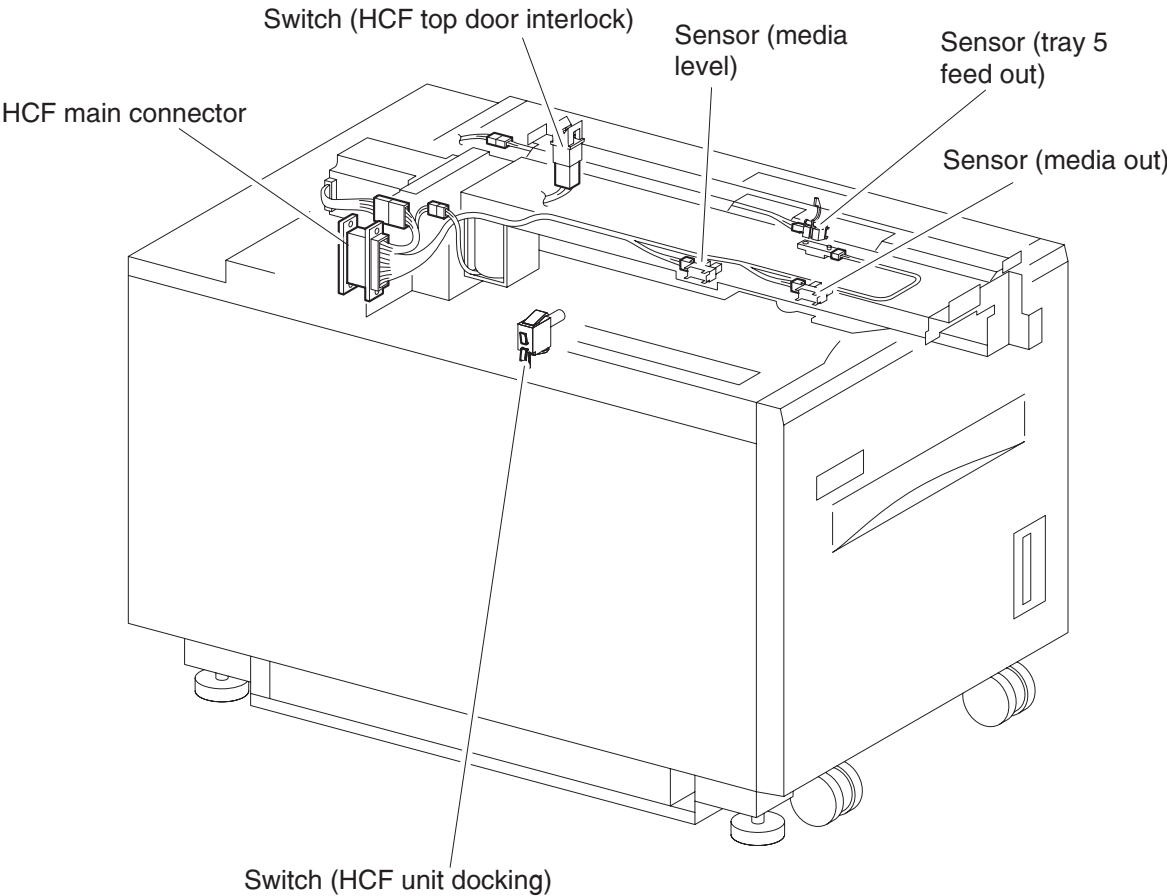
### 2TM components

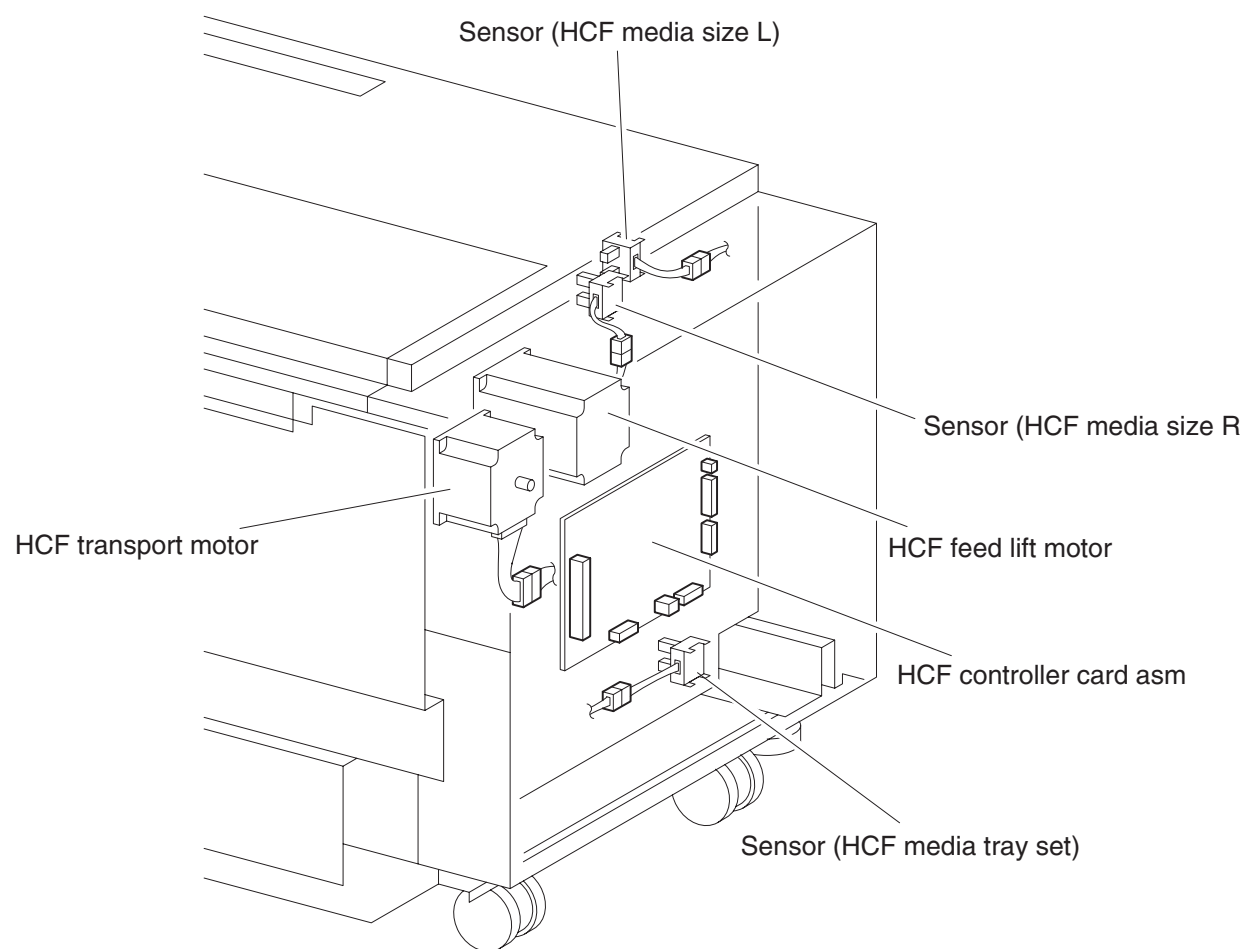






# HCF components

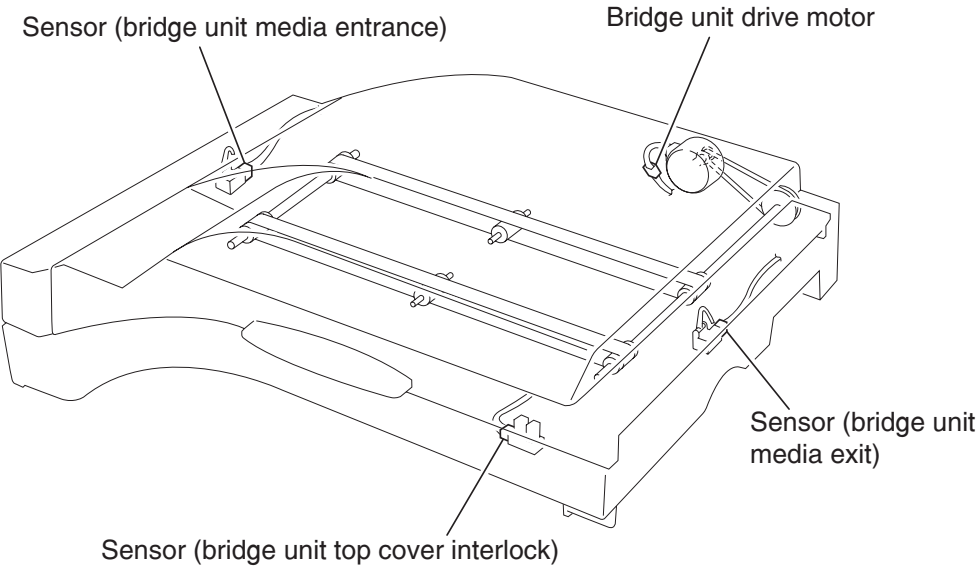




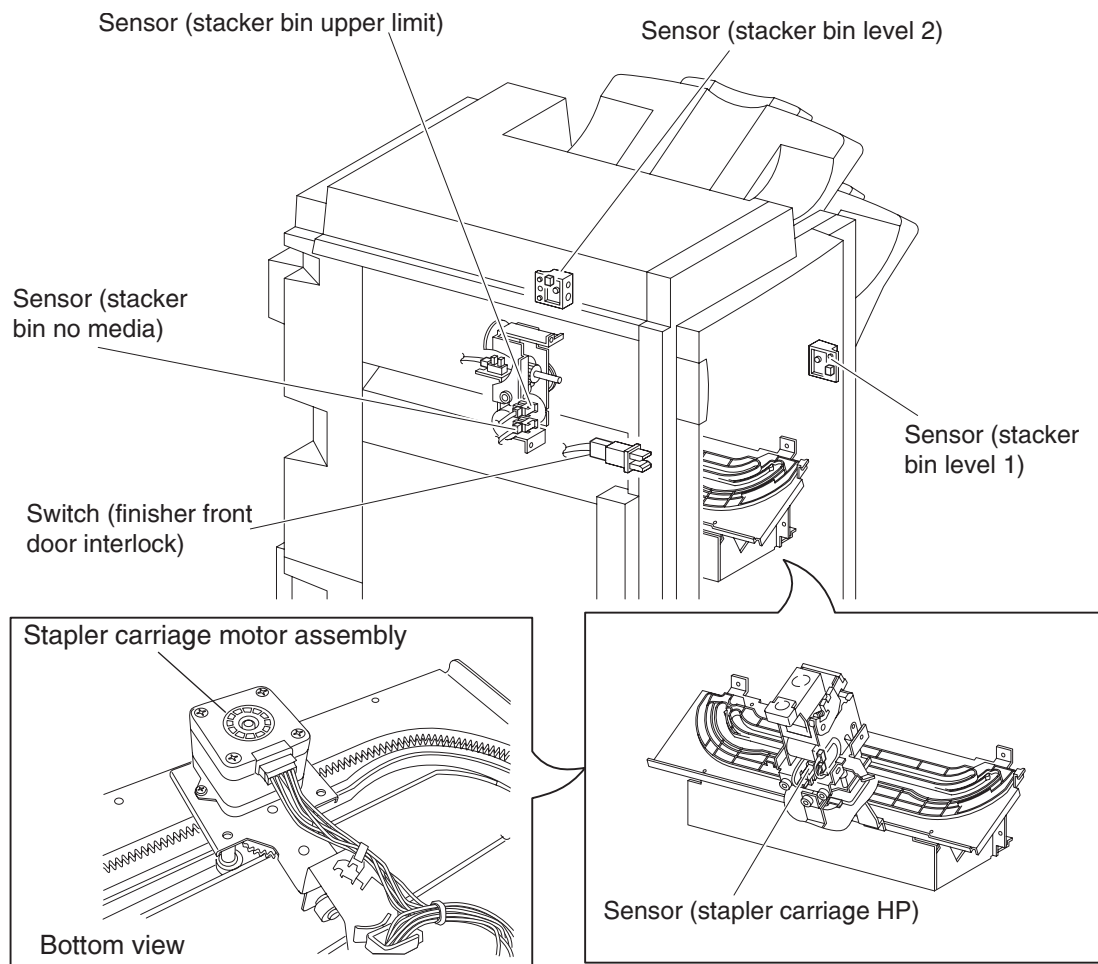
---

# Finisher components

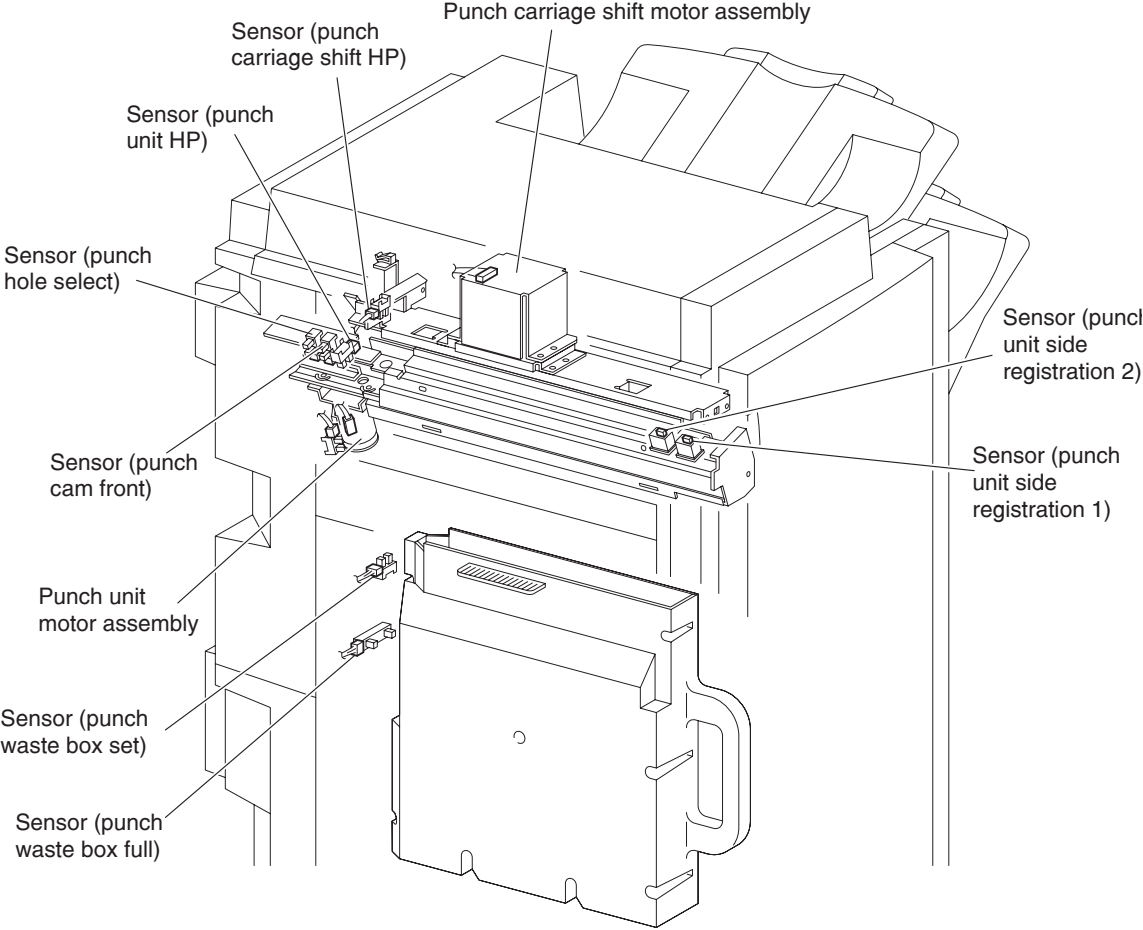
## Bridge unit assembly



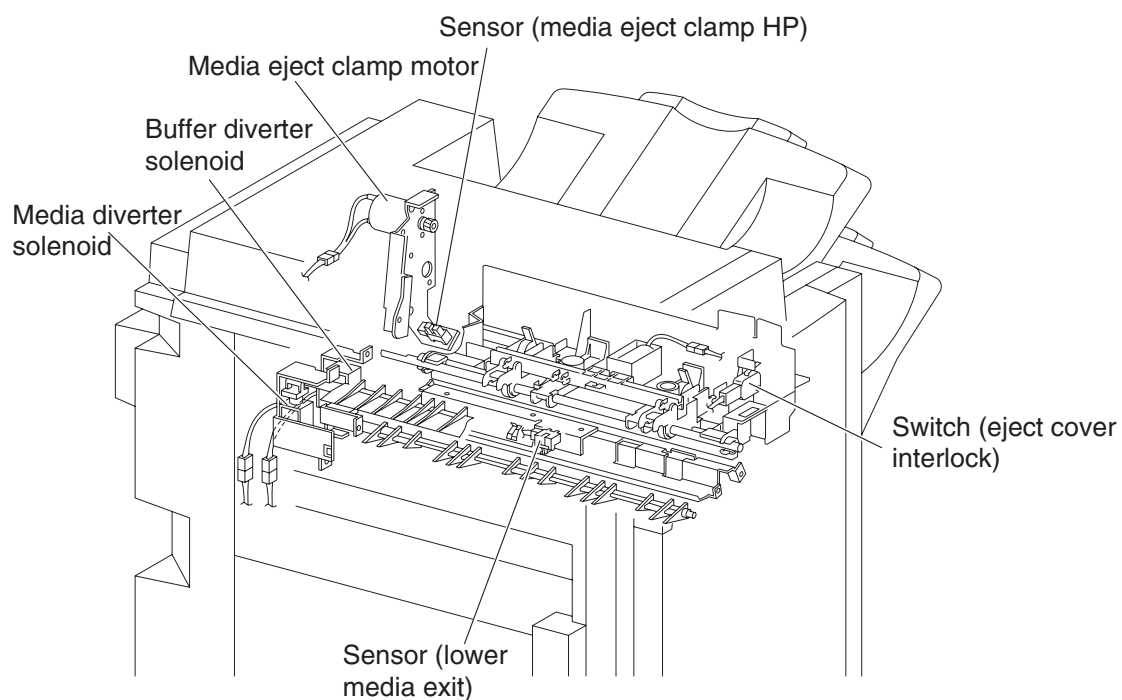
## Stacker lift and stapler



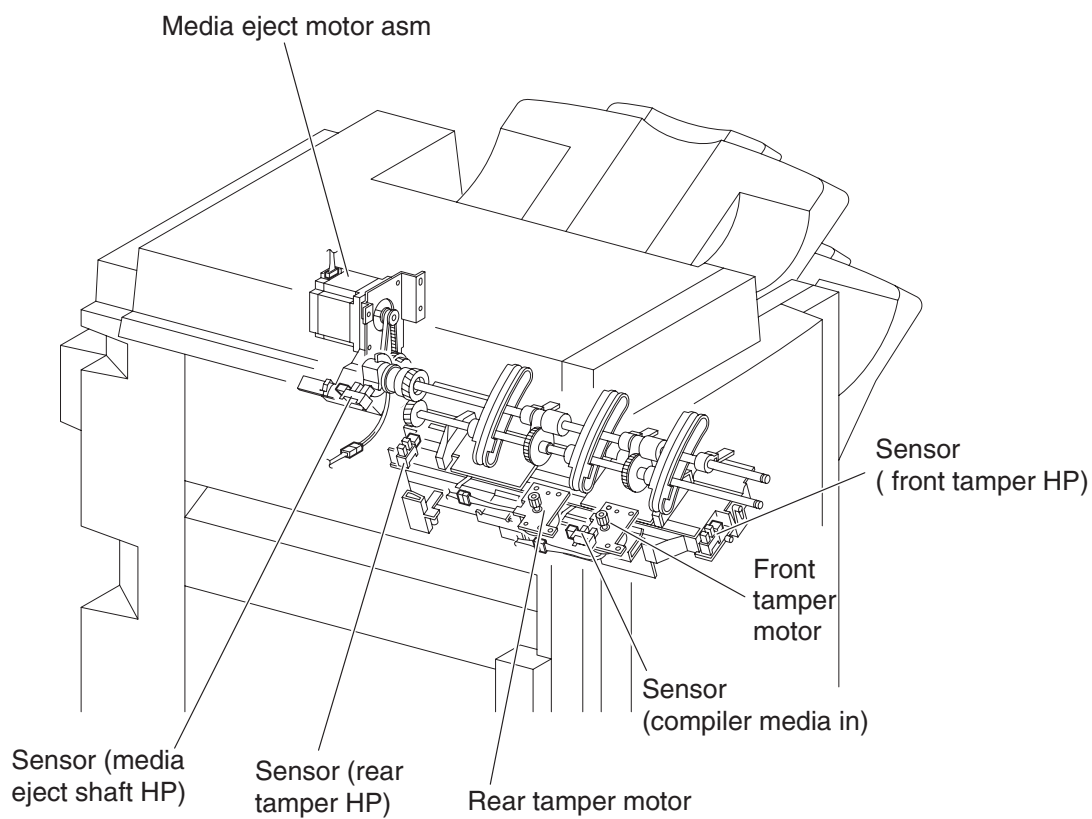
**Punch unit**



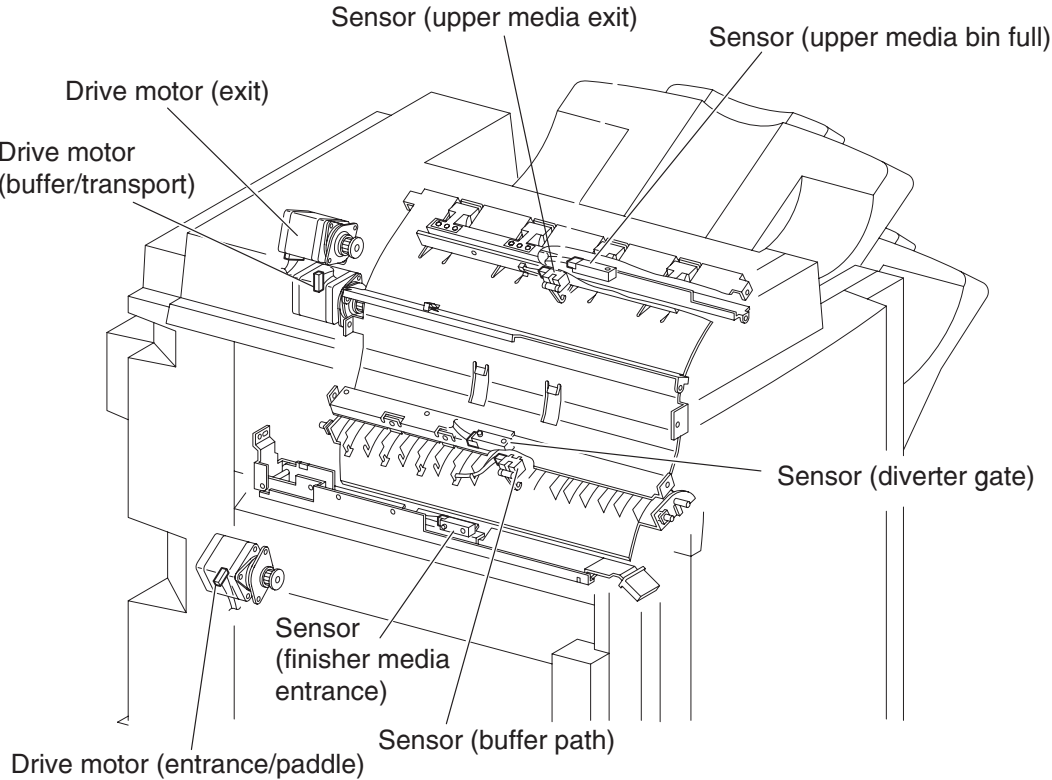
## ***Diverter and media eject***



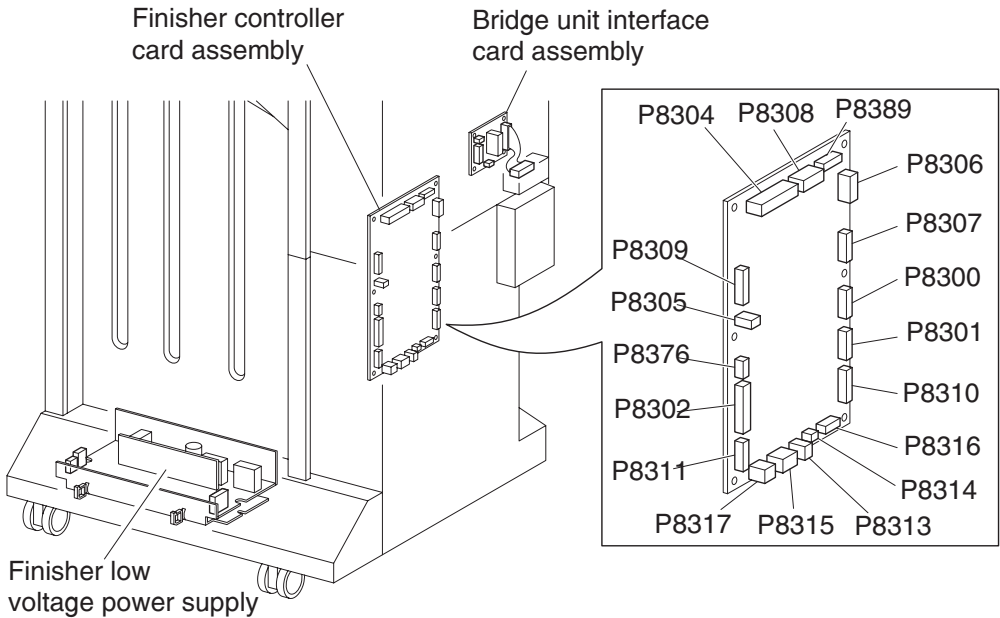
## ***Media eject and media compiler***



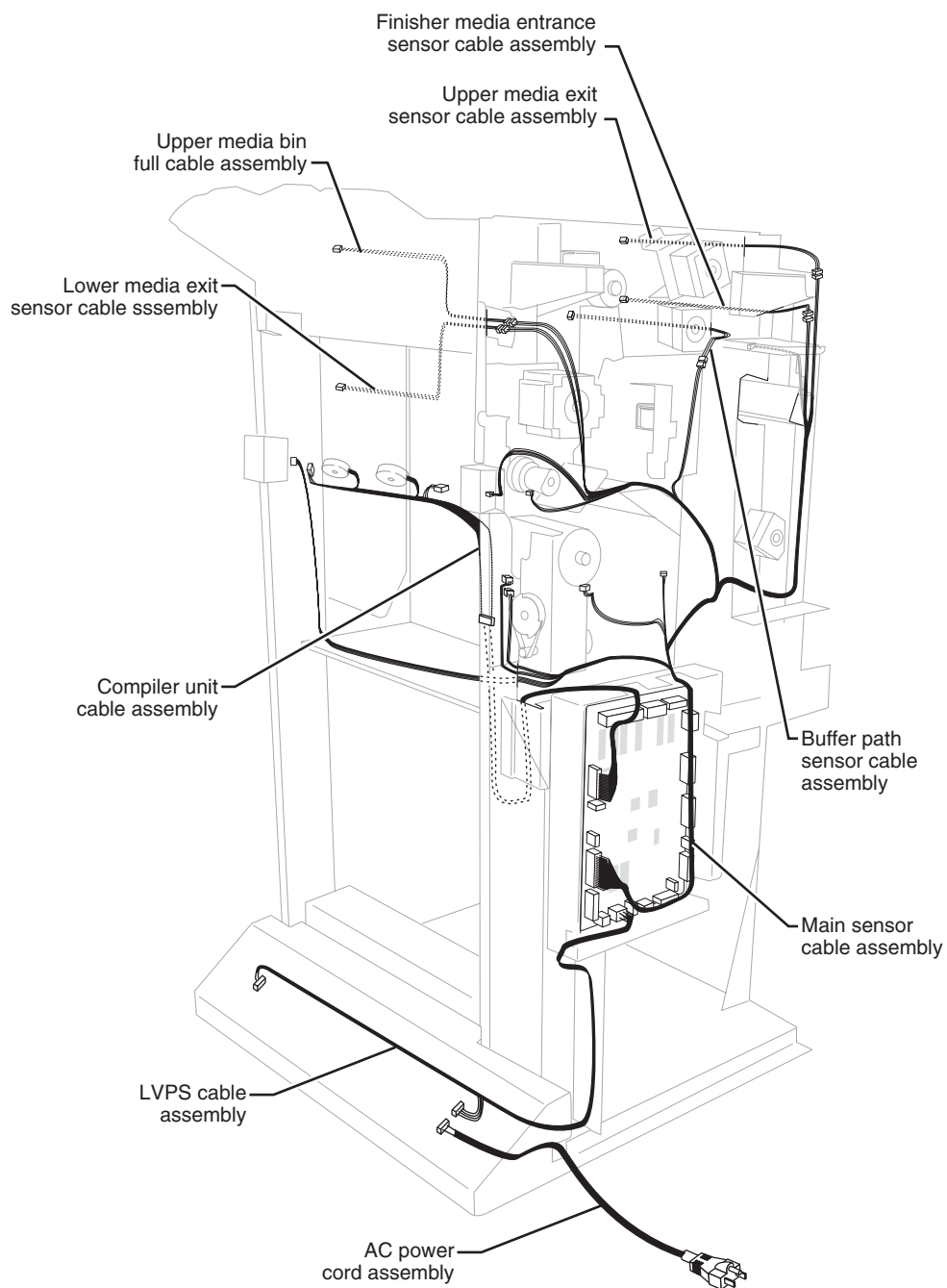
**Buffer, upper exit, lower exit, and drive motors**



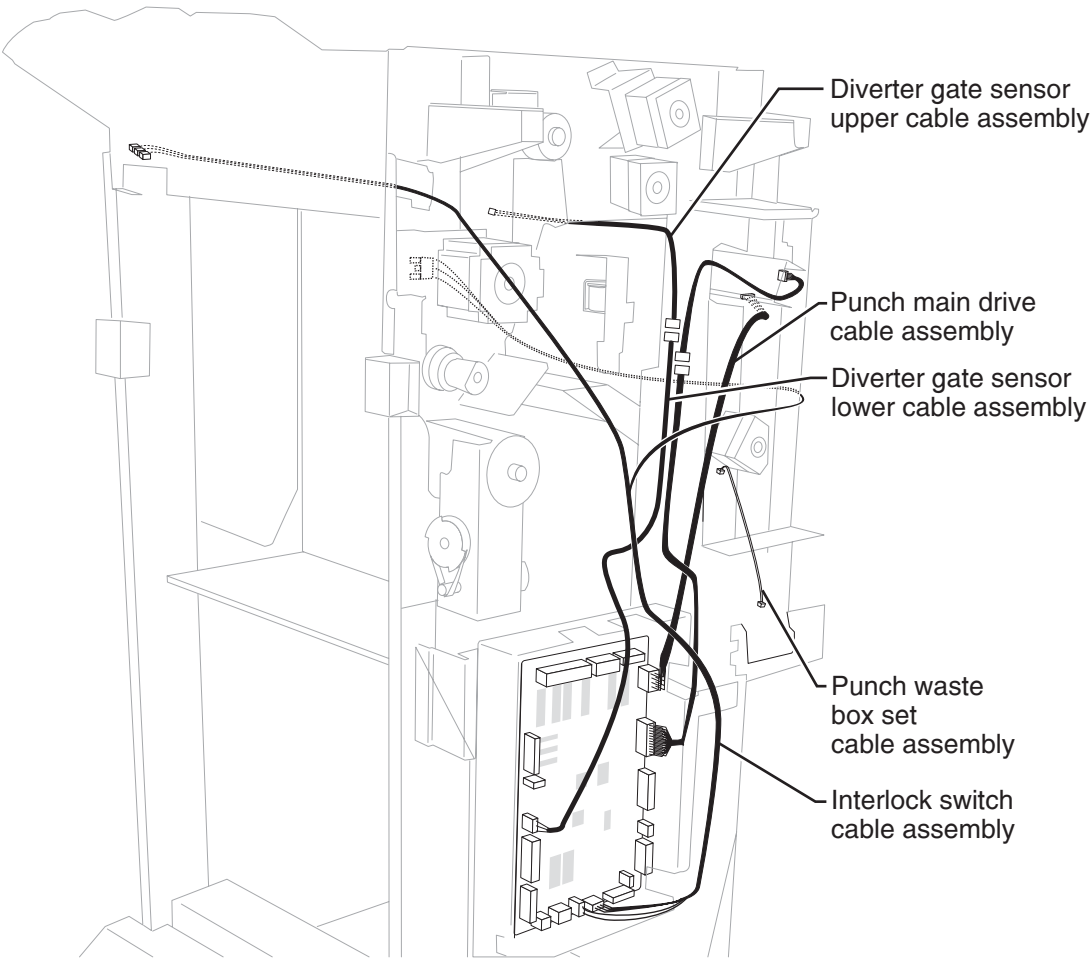
**Finisher controller card assembly**

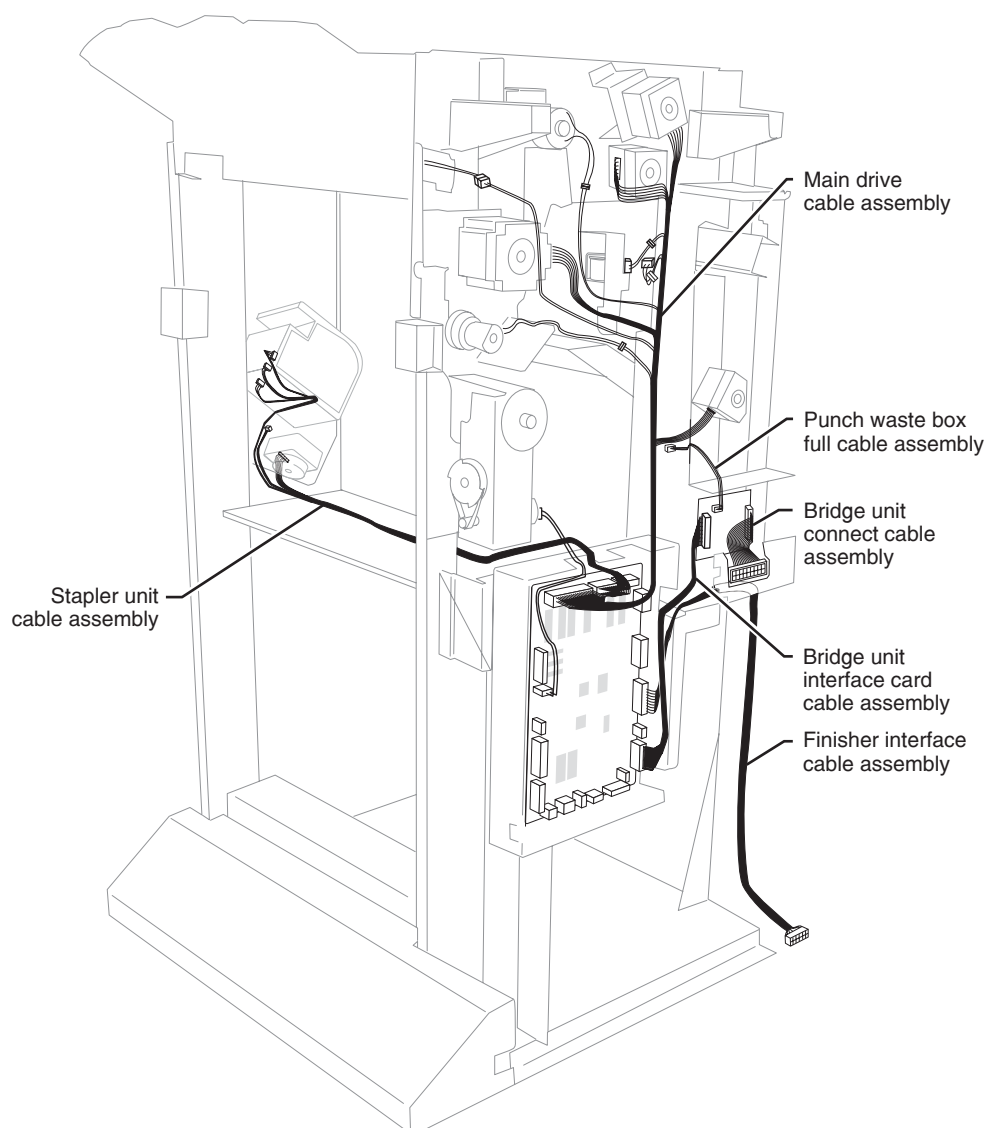


## Cabling

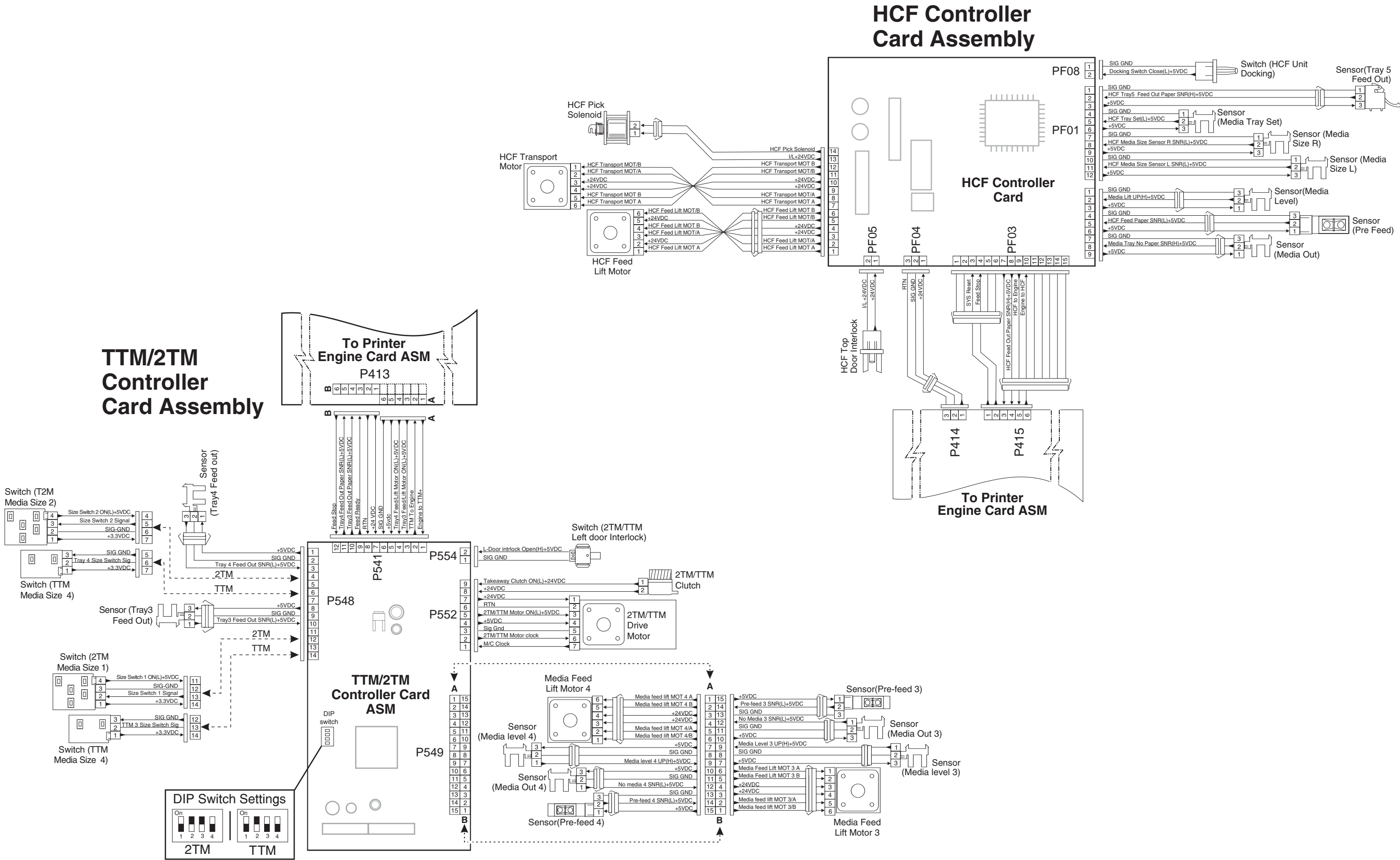




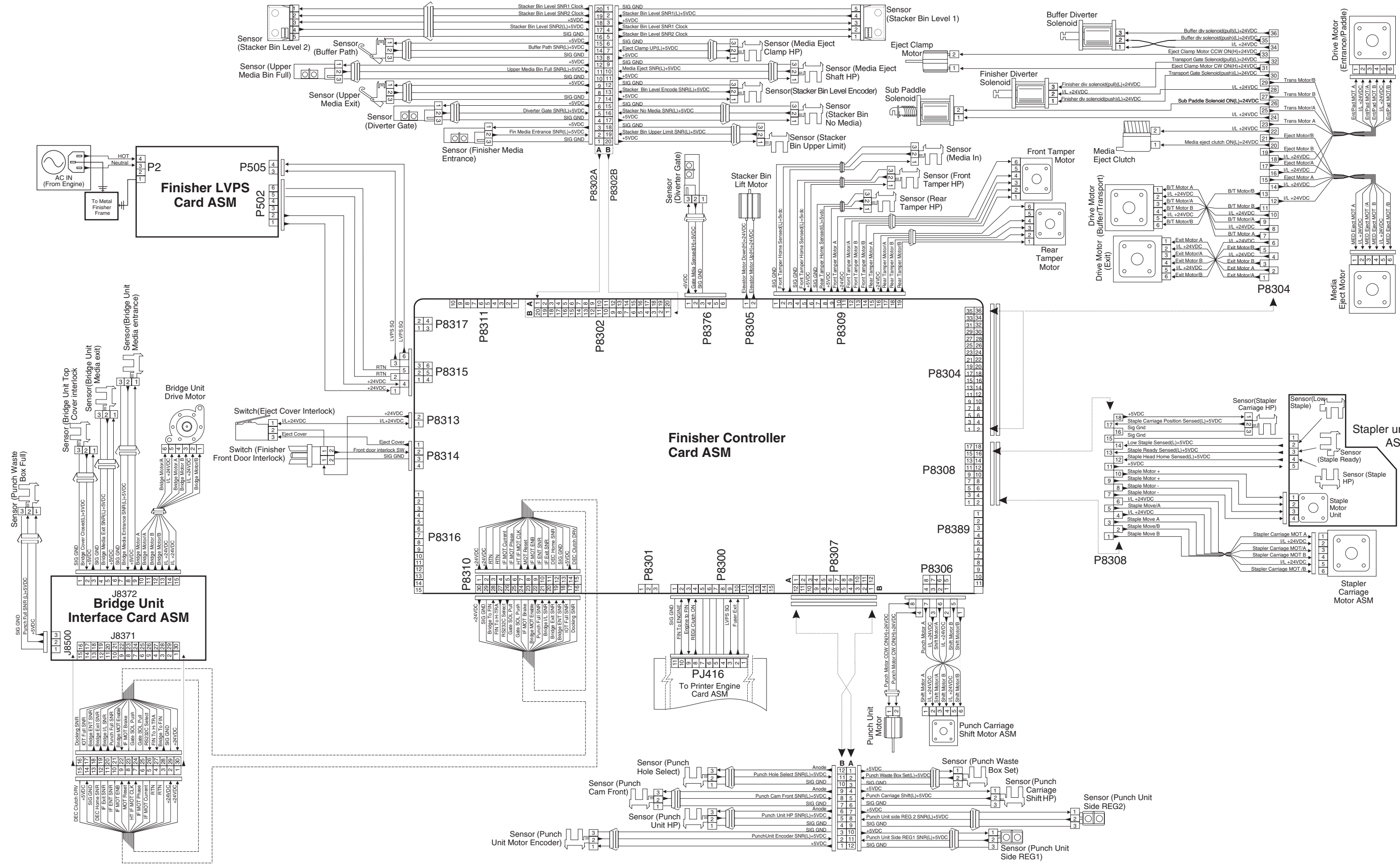




Electronic component diagram



Electronic component diagram



## 6. Preventive maintenance

This chapter describes procedures for printer preventive maintenance. Follow these recommendations to help prevent problems and maintain optimum performance.

### Safety inspection guide

The purpose of this inspection guide is to aid you in identifying unsafe conditions.

If any unsafe conditions exist, find out how serious the hazard could be and if you can continue before you correct the hazard.

Check the following items:

- Damaged, missing, or altered parts, especially in the area of the on/off switch and the power supply
- Damaged, missing, or altered covers, especially in the area of the top cover and the power supply cover
- Possible safety exposure from any non-Lexmark attachments

### Lubrication specifications

Lubricate only when parts are replaced or as needed, not on a scheduled basis. Use of lubricants other than those specified can cause premature failure. Some unauthorized lubricants may chemically attack polycarbonate parts. Use IBM no. 10 oil, P/N 1280443 (Approved equivalents: Mobil DTE27, Shell Tellus 100, Fuchs Renolin MR30), IBM no. 23 grease (Approved equivalent Shell Darina 1), and grease, P/N 99A0394 to lubricate appropriate areas.

### Maintenance recommendations

<b>2TM</b>	<b>Every service call</b>	<b>Every 300,000 pages</b>
Feed rolls	Clean with water or alcohol	Replace
Pick rolls	Clean with water or alcohol	Replace
Separation rolls	Clean with water of alcohol	Replace
<b>HCF</b>		
Feed rolls	Clean with water or alcohol	Replace
Pick rolls	Clean with water or alcohol	Replace
Separation rolls	Clean with water of alcohol	Replace
<b>Finisher</b>		
Bridge unit belts	Inspect	Clean with water or alcohol
Main paddles (3)	Inspect	Clean with water or alcohol
Sub paddles (2)	Inspect	Clean with water or alcohol
Clamp paddles (3)	Inspect	Clean with water or alcohol
Punch waste box	Clean	Clean
Stapler cartridge	Inspect for correct operation	Inspect for correct operation

7500-XXX

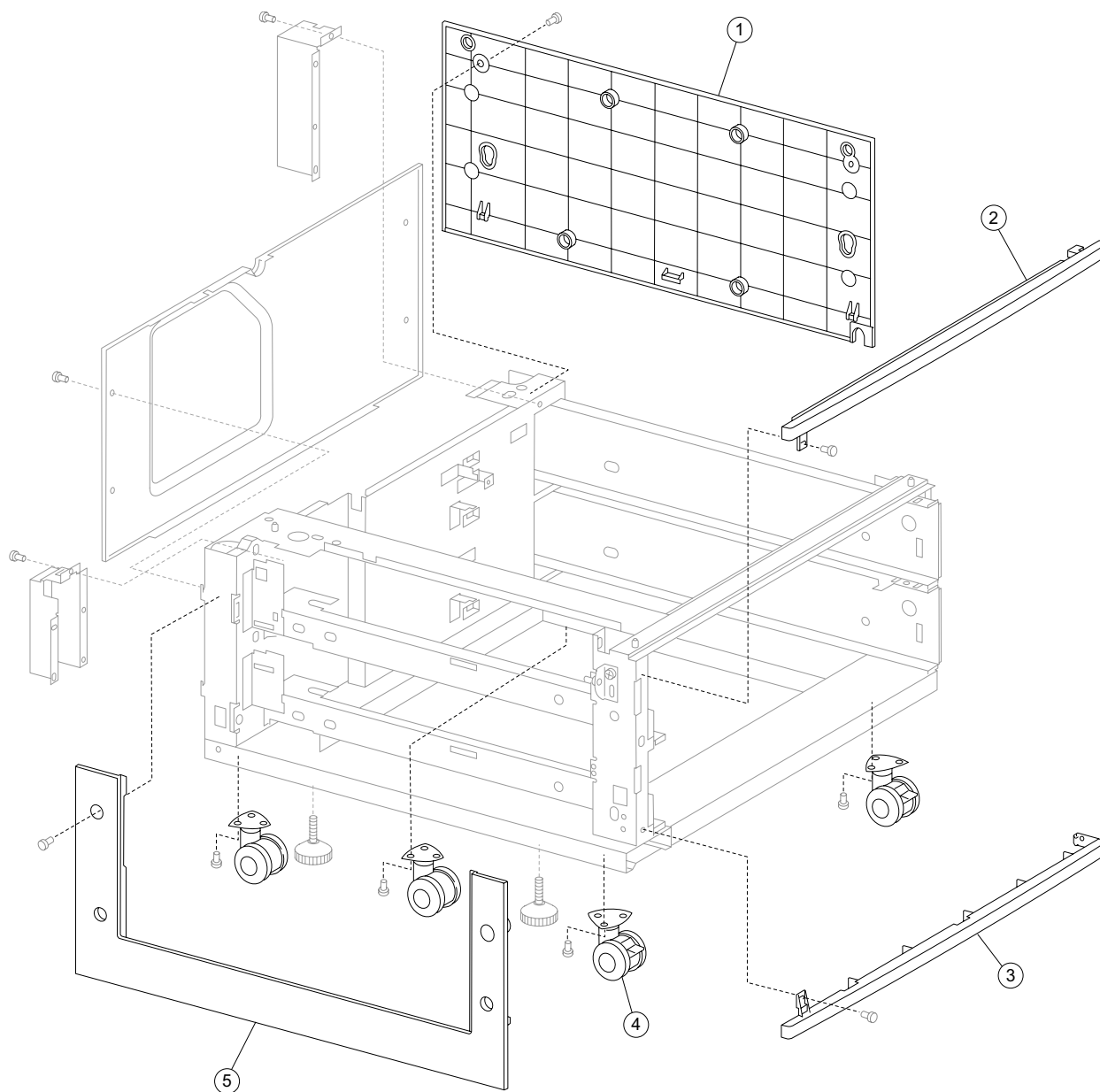
# 7. Parts catalog

## How to use this parts catalog

The following legend is used in the parts catalog:

Asm- Index	Part number	Units/ option	Units/ FRU	Description
---------------	----------------	------------------	---------------	-------------

- **Asm-index:** Identifies the assembly and the item in the diagram. For example 3-1 indicates Assembly 3 and item number 1 in the table.
- **Part number:** Identifies the unique number that identifies this FRU.
- **Units/option:** Refers to the number of units in a particular option. It does not include the rest of the base machine.
- **Units/FRU:** Refers to the number of units packaged together and identified by the part number.
- **NS:** (Not shown) in the Assembly-Index column indicates that the part is procurable but is not pictured in the illustration.
- **PP:** (Parts Packet) in the parts description column indicates the part is contained in a parts packet.

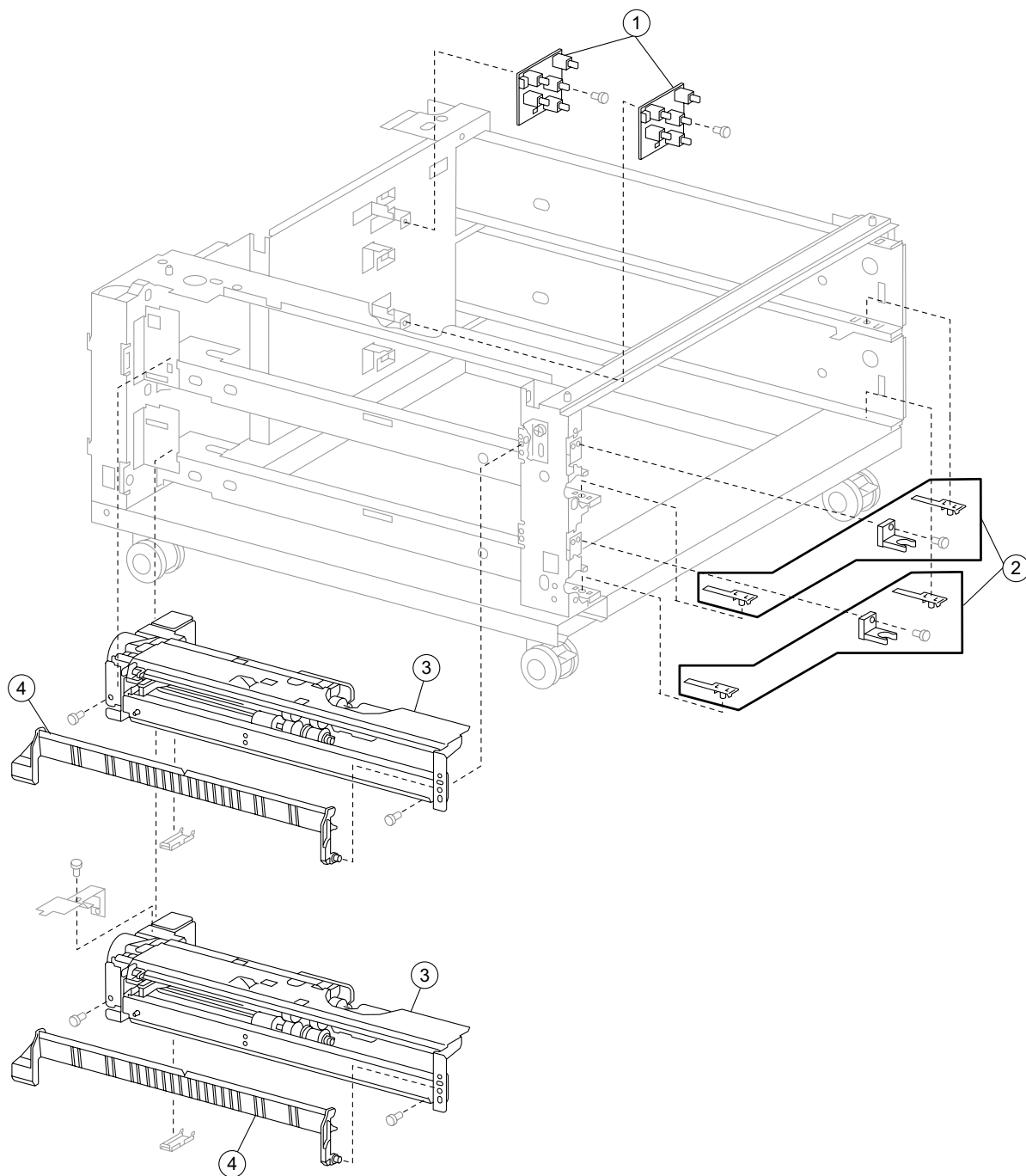
**Assembly 1: 2X 500-sheet drawer (2TM)—covers**



**Assembly 1: 2X 500-sheet drawer (2TM)—covers**

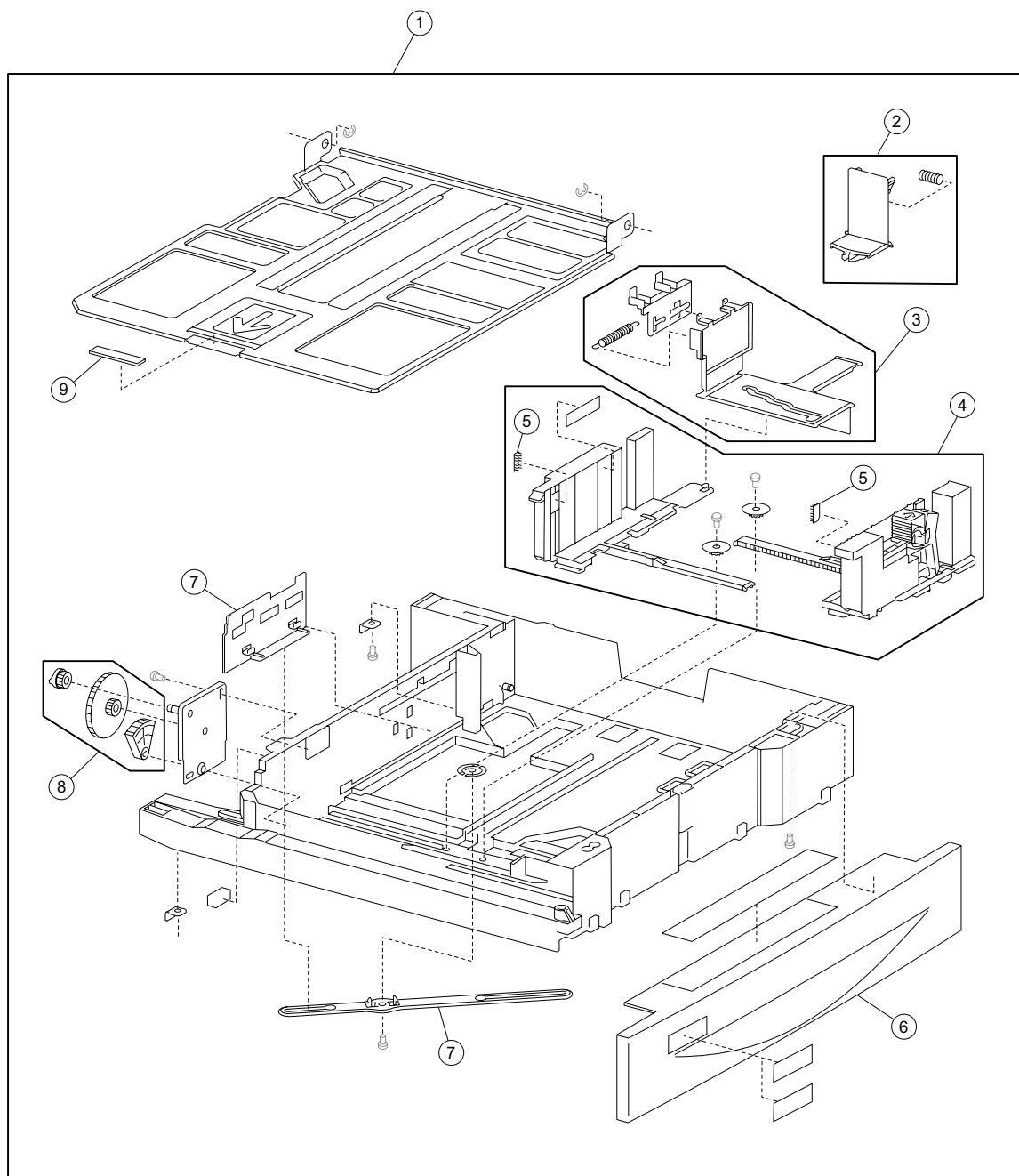
Asm-Index	Part number	Units/ option	Units/ FRU	Description
1-1	40X0689	1	1	Right cover
2	40X0687	1	1	Top cover
3	40X0688	1	1	Foot cover
4	40X0691	4	1	Locking caster
5	40X0690	1	1	Left cover

## Assembly 2: 2X 500-sheet drawer (2TM)—media tray and media feed units



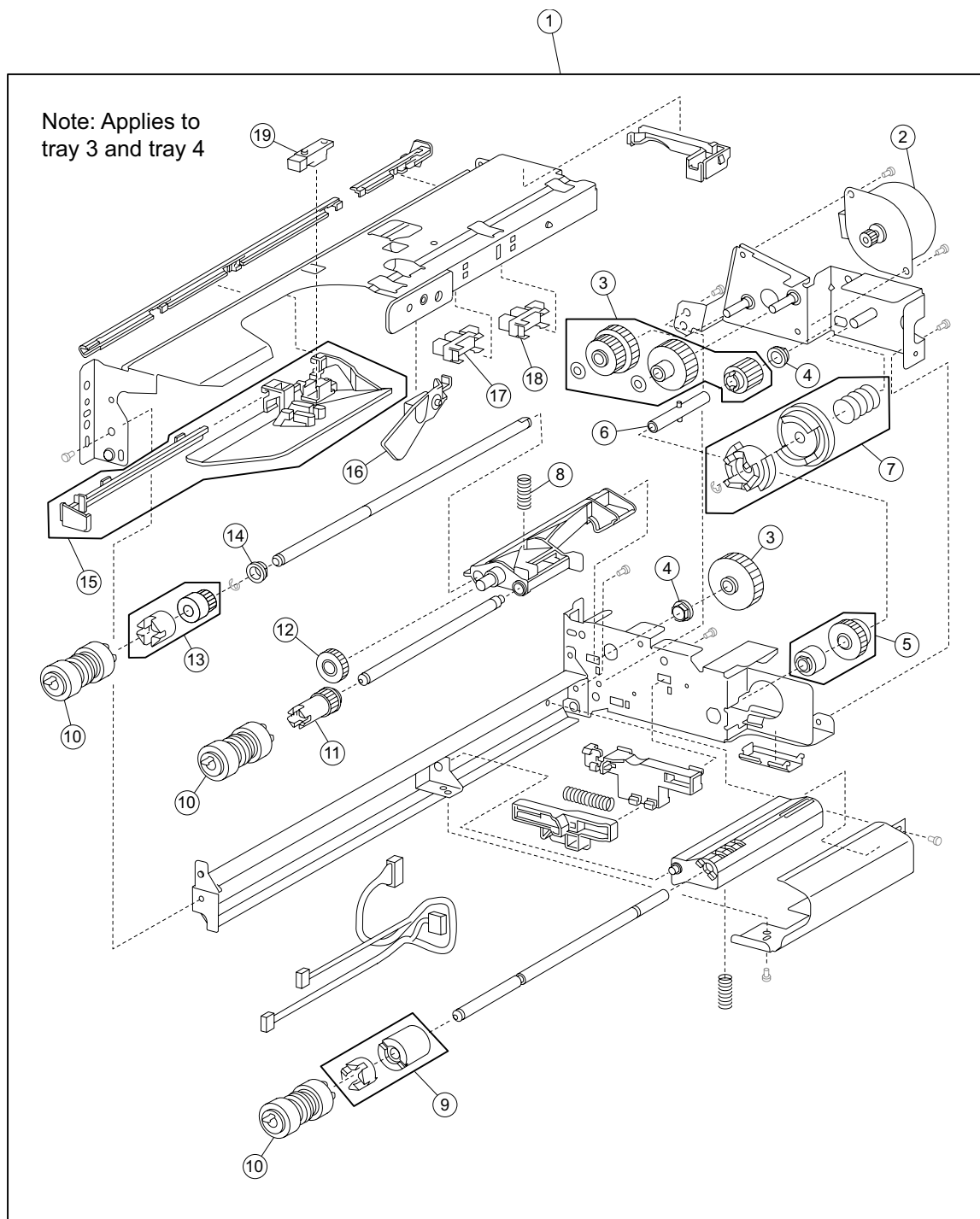
**Assembly 2: 2X 500-sheet drawer (2TM)—media tray and media feed units**

Asm-Index	Part number	Units/ option	Units/ FRU	Description
2-1	40X0570	2	1	Switch (media size)
2	40X0569	2	3	Media tray catch kit includes: <ul style="list-style-type: none"> <li>• Media tray catch</li> <li>• Media tray slide (2 each)</li> </ul>
3	40X0581	2	1	Media feed unit assembly (this comes assembled)
4	40X0572	2	1	Vertical turn guide

**Assembly 3: 2X 500-sheet drawer (2TM)—media tray**

### Assembly 3: 2X 500-sheet drawer (2TM)—media tray

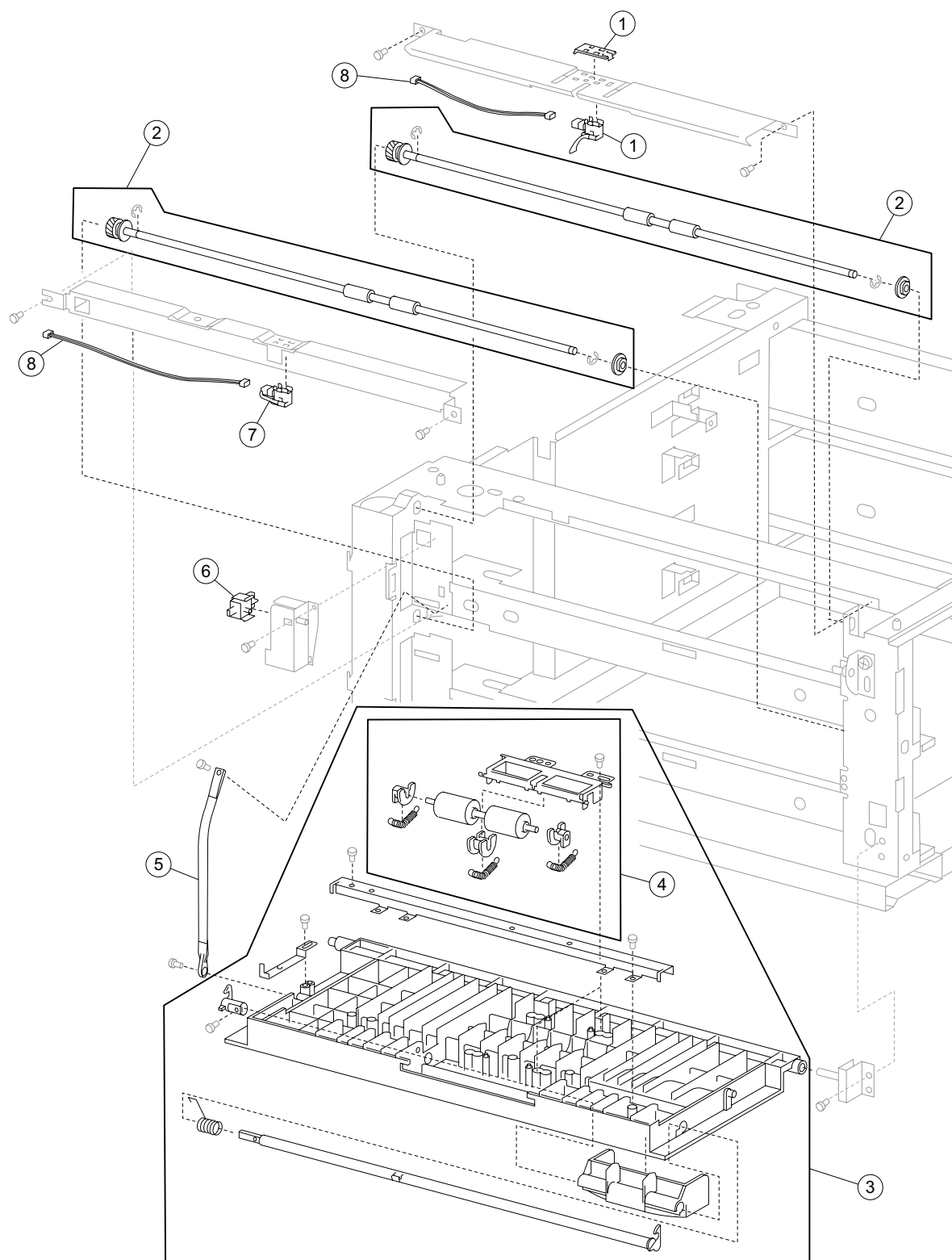
Asm-Index	Part number	Units/ option	Units/ FRU	Description
3-1	40X0573	2	3	Media tray assembly (this comes assembled) <ul style="list-style-type: none"> <li>• Media tray assembly</li> <li>• Labels (2 each)</li> </ul>
2	40X0578	2	2	Media tray end guide kit includes: <ul style="list-style-type: none"> <li>• Media tray end guide</li> <li>• Spring</li> </ul>
3	40X0577	2	4	Media tray side guide actuator kit includes: <ul style="list-style-type: none"> <li>• Media tray side guide actuator</li> <li>• Media tray side guide slide (2 each)</li> <li>• Spring</li> </ul>
4	40X0576	2	5	Media tray side guide kit includes: <ul style="list-style-type: none"> <li>• Media max label</li> <li>• Front media tray guide assembly</li> <li>• Rear media tray guide</li> <li>• Pinion gear (2 each)</li> </ul>
5	40X0966	4	1	Media tray separation brush
6	40X0574	2	1	Media tray front cover
7	40X0579	2	2	Media tray end guide actuator kit includes: <ul style="list-style-type: none"> <li>• Media end guide actuator</li> <li>• Actuator link</li> </ul> <p><b>Note:</b> The graphic on the previous page, shows two #7 callouts. These callouts are the two items that make up the media tray end guide actuator kit.</p>
8	40X0580	2	3	Media tray lift gear kit includes: <ul style="list-style-type: none"> <li>• Tray lift coupling gear 13T</li> <li>• Tray lift gear 13/60T</li> <li>• Tray lift sector gear 12T</li> </ul>
9	40X0965	2	1	Media tray separation pad

**Assembly 4: 2X 500-sheet drawer (2TM)– media feed unit**

## Assembly 4: 2X 500-sheet drawer (2TM)– media feed unit

Asm-Index	Part number	Units/option	Units/FRU	Description
4-1	40X0581	2	1	Media feed unit assembly (this comes assembled)
2	40X0582	2	1	Media feed lift motor
3	40X0585	2	6	Media feed drive gear kit includes: <ul style="list-style-type: none"> <li>• Media feed unit drive gear 13T</li> <li>• Media feed unit drive gear 28/21T</li> <li>• Media feed unit drive gear 29T</li> <li>• Media feed unit drive gear 27T</li> <li>• 2 mm washer (2 each)</li> </ul> <b>Note:</b> The graphic on the previous page, shows two #3 callouts. These callouts are the items that make up the media feed drive gear kit.
4	40X0880	2	1	6 mm bushing
5	40X0967	2	2	Media tray lift one-way clutch/gear kit includes: <ul style="list-style-type: none"> <li>• Media tray lift one-way clutch</li> <li>• Media tray lift one-way gear</li> </ul>
6	40X0968	2	1	Media tray lift one-way shaft
7	40X0583	2	3	Tray lift coupling kit includes: <ul style="list-style-type: none"> <li>• Tray lift coupling</li> <li>• Tray lift coupling gear 31T</li> <li>• Spring</li> </ul>
8	40X0590	2	1	Pick roll assembly spring
9	40X0593	2	2	Separation roll friction clutch kit includes: <ul style="list-style-type: none"> <li>• Separation roll one-way friction clutch</li> <li>• Separation roll spacer</li> </ul>
10	40X0594	1	6	Feed unit roll kit includes: <ul style="list-style-type: none"> <li>• Feed roll (2 each)</li> <li>• Pick roll (2 each)</li> <li>• Separation roll (2 each)</li> </ul>
11	40X0970	2	1	Pick roll drive gear
12	40X0969	2	1	Pick roll idler gear
13	40X0591	2	2	Feed roll one-way clutch kit includes: <ul style="list-style-type: none"> <li>• Feed roll one-way clutch</li> <li>• Feed roll one-way gear 22T</li> </ul>
14	40X0952	2	1	Bushing 6 mm
15	40X0586	2	2	Media feed unit front guide kit includes: <ul style="list-style-type: none"> <li>• Media feed unit front guide</li> <li>• Media feed unit front guide rail</li> </ul>
16	40X0587	2	1	Media out actuator
17	40X0588	2	1	Sensor (media out)
18	40X0588	2	1	Sensor (media level)
19	40X0589	2	1	Sensor (pre-feed)

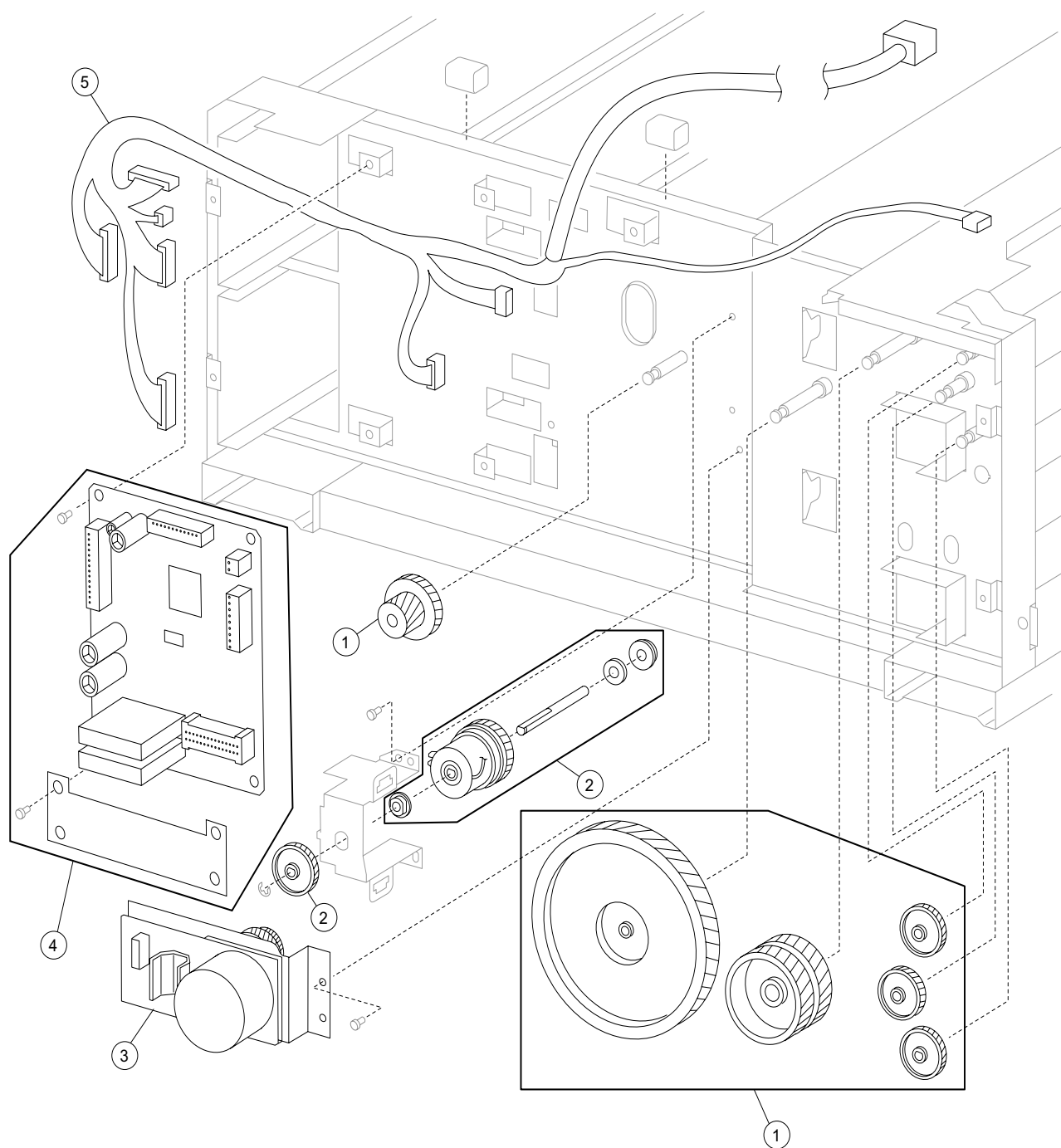
**Note:** Assembly index items 17 and 18 are identical sensors with different functions; therefore, are the same part number with different descriptions.

**Assembly 5: 2X 500-sheet drawer (2TM)– left door**



**Assembly 5: 2X 500-sheet drawer (2TM)– left door**

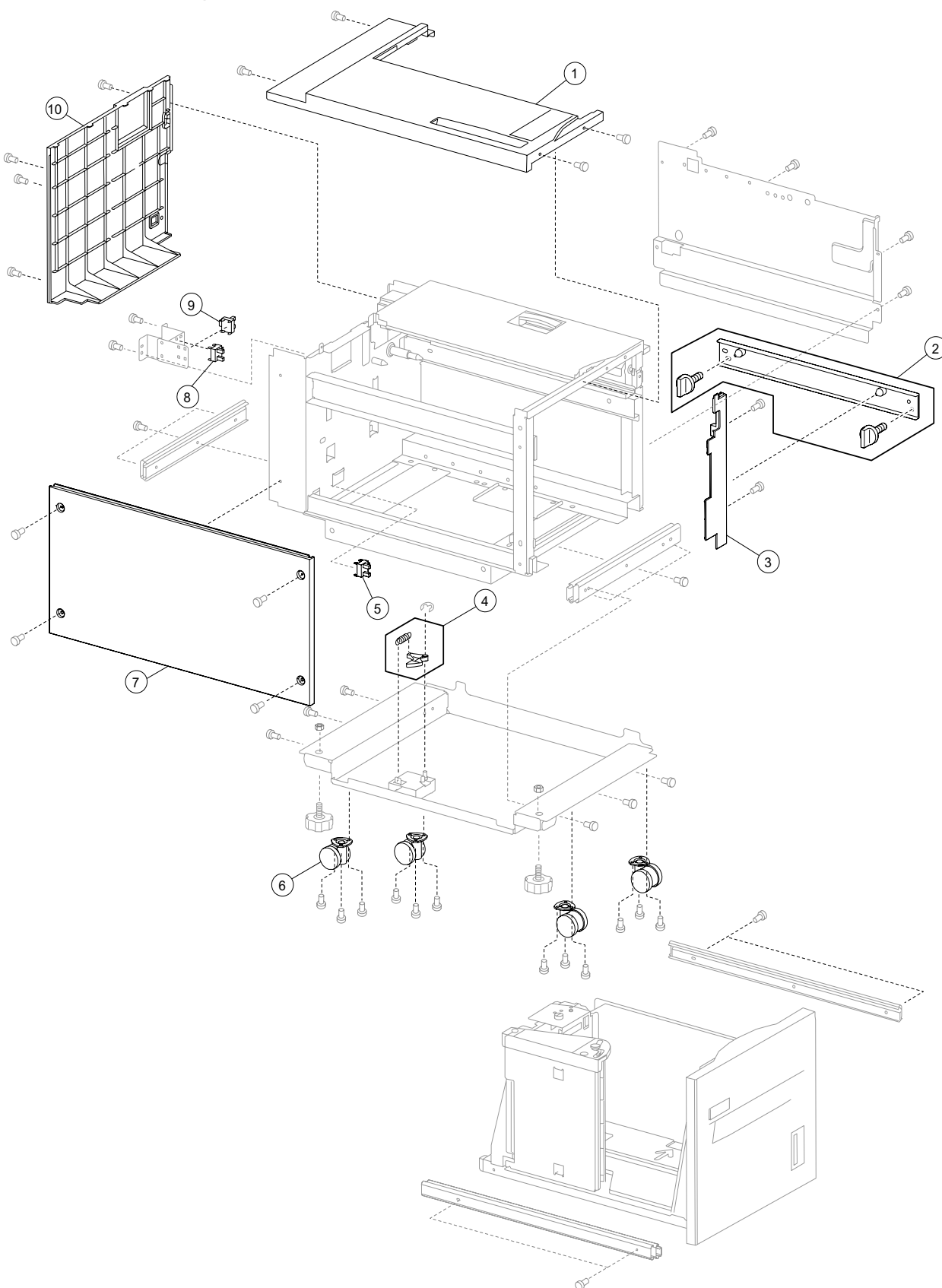
Asm-Index	Part number	Units/ option	Units/ FRU	Description
5-1	40X0692	1	2	Sensor (tray 3 feed-out) kit includes: <ul style="list-style-type: none"> <li>• Sensor (tray 3 feed-out)</li> <li>• Sensor protector</li> </ul>
2	40X0695	2	2	2TM/TTM media transport roll assembly includes: <ul style="list-style-type: none"> <li>• 2TM/TTM media transport roll assembly</li> <li>• Bushing 8 mm</li> </ul>
3	40X0733	1	1	2TM/TTM left door assembly (this comes assembled)
4	40X0696	1	1	2TM/TTM left door pinch roll assembly (this comes assembled)
5	40X0697	1	1	2TM/TTM left door support strap
6	40X0610	1	1	Switch (2TM/TTM left door interlock)
7	40X0694	1	1	Sensor (tray 4 feed-out)
8	40X0693	1	2	Sensor cable kit includes: <ul style="list-style-type: none"> <li>• Tray 3 feed-out sensor cable</li> <li>• Tray 4 feed-out sensor cable</li> </ul>

**Assembly 6: 2X 500-sheet drawer (2TM)– drive and electrical**

**Assembly 6: 2X 500-sheet drawer (2TM)– drive and electrical**

Asm-Index	Part number	Units/ option	Units/ FRU	Description
6-1	40X0701	1	6	2TM drive gear kit includes: <ul style="list-style-type: none"> <li>• 2TM drive gear 22T/40T</li> <li>• 2TM drive gear 126T</li> <li>• 2TM drive gear 60T</li> <li>• 2TM drive gear 37T (2 each)</li> <li>• 2TM drive gear 32T</li> </ul>
2	40X0699	1	6	2TM/TTM clutch kit includes: <ul style="list-style-type: none"> <li>• 2TM/TTM clutch assembly</li> <li>• Shaft</li> <li>• Bushing 8 mm</li> <li>• Clutch gear 38T</li> <li>• Bushing 8 mm</li> <li>• Washer</li> </ul>
3	40X0700	1	1	2TM/TTM drive motor
4	40X2735	1	1	2TM/TTM controller card assembly
5	40X0702	1	1	2TM main cable assembly

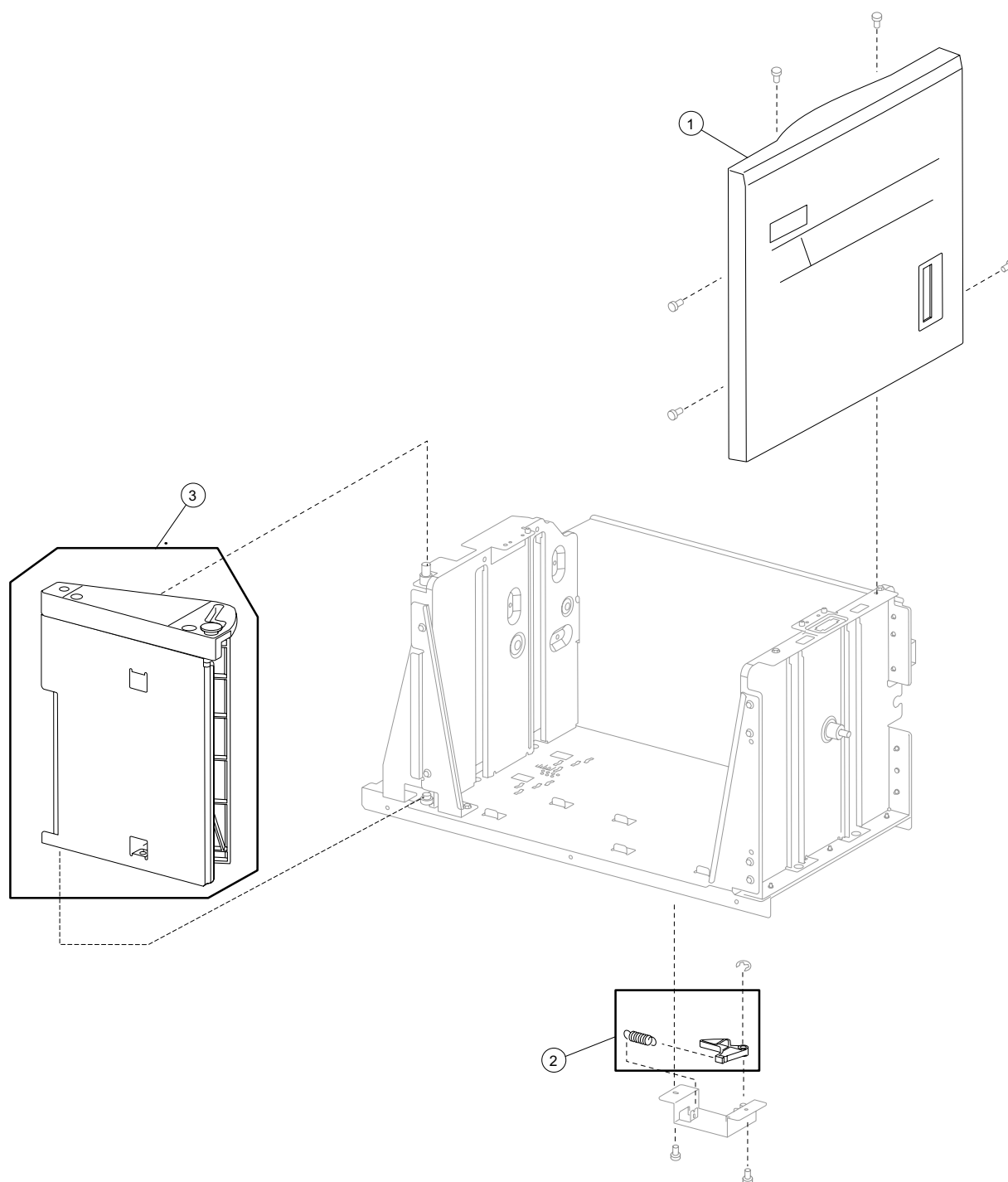
## Assembly 7: High capacity feed (HCF)– covers and media tray



## Assembly 7: High capacity feed (HCF)– covers and media tray

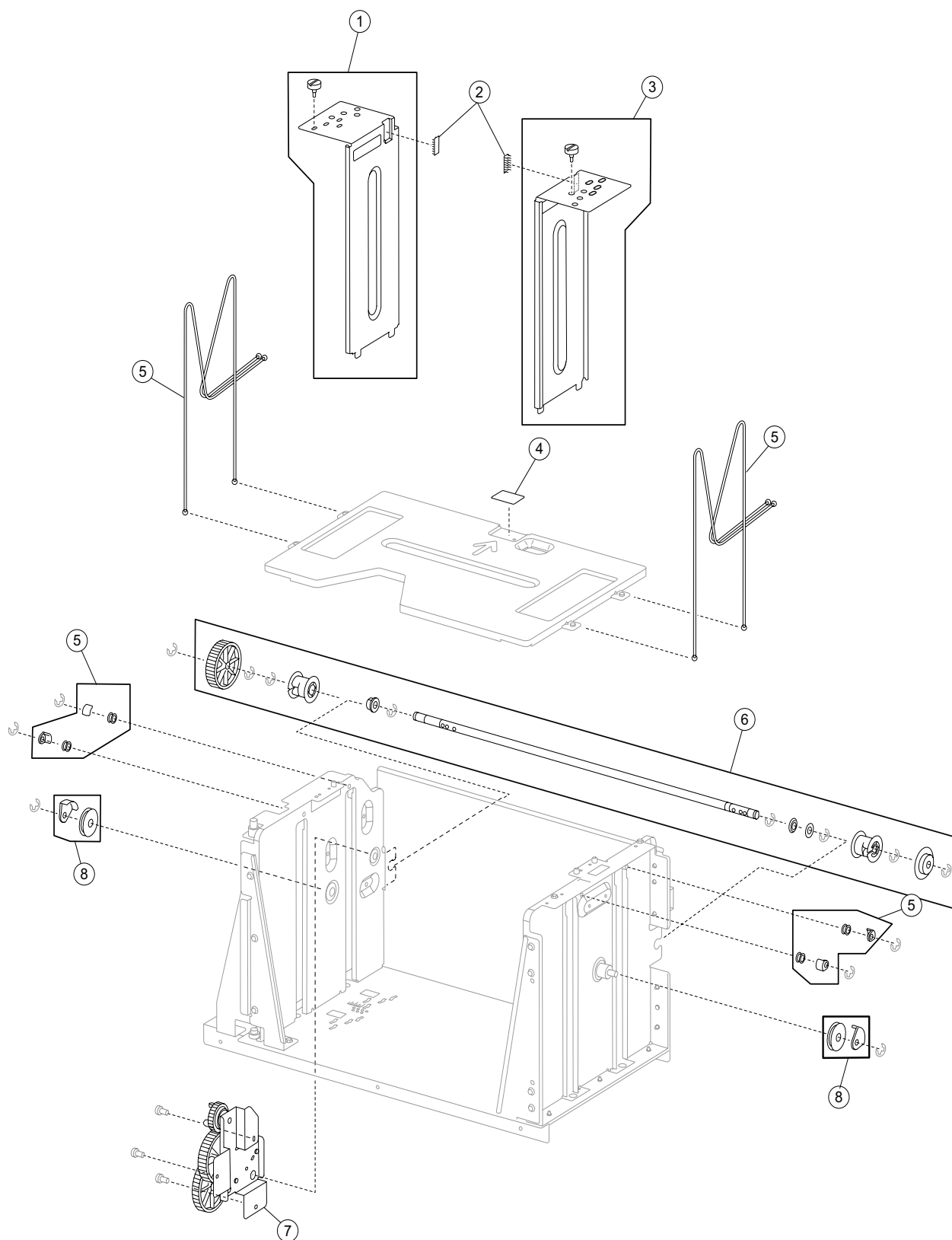
Asm-Index	Part number	Units/ option	Units/ FRU	Description
7-1	40X0738	1	1	Top cover
2	40X0745	1	3	HCF docking bracket kit <ul style="list-style-type: none"> <li>• HCF docking bracket</li> <li>• HCF docking bracket screw (2 each)</li> </ul>
3	40X0746	1	1	Inner front cover
4	40X0740	2	2	HCF docking latch kit includes: <ul style="list-style-type: none"> <li>• Docking latch</li> <li>• Spring</li> </ul>
5	40X0739	1	1	Sensor (HCF media tray set)
6	40X0741	4	1	Caster
7	40X0742	1	1	Left cover
8	40X0739	1	1	Sensor (HCF media size L)
9	40X0739	1	1	Sensor (HCF media size R)
10	40X0743	1	1	Rear cover

## Assembly 8: High capacity feed (HCF)– media tray



## Assembly 8: High capacity feed (HCF)– media tray

Asm-Index	Part number	Units/option	Units/FRU	Description
8-1	40X0747	1	1	HCF media tray front cover assembly (this comes assembled)
2	40X0740	2	2	Docking latch kit includes: <ul style="list-style-type: none"> <li>• Docking latch</li> <li>• Spring</li> </ul>
3	40X0749	1	2	HCF media long edge guide kit (this comes assembled) includes: <ul style="list-style-type: none"> <li>• Media long edge guide assembly</li> <li>• Wave washer</li> </ul>

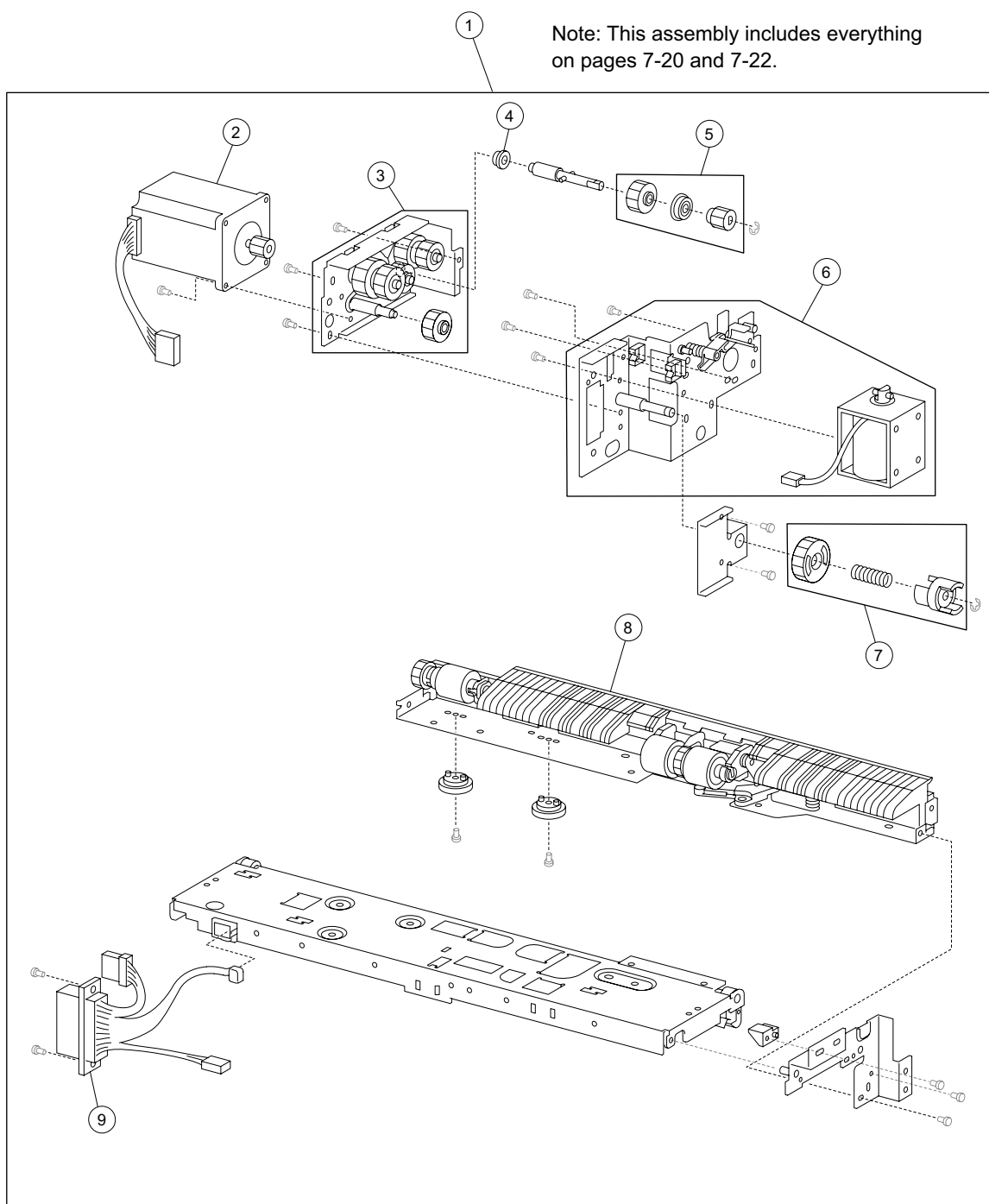
**Assembly 9: High capacity feed (HCF)– media tray lift**



## Assembly 9: High capacity feed (HCF)– media tray lift

Asm-Index	Part number	Units/ option	Units/ FRU	Description
9-1	40X0750	1	2	HCF rear media guide kit includes: <ul style="list-style-type: none"> <li>• HCF rear media guide</li> <li>• Screw</li> </ul>
2	40X0966	2	1	Media tray separation brush
3	40X0751	1	2	HCF front media guide kit includes: <ul style="list-style-type: none"> <li>• HCF front media guide</li> <li>• Screw</li> </ul>
4	40X0752	1	1	HCF separation pad
5	40X0757	1	12	HCF lift cable kit includes: <ul style="list-style-type: none"> <li>• HCF lift cable (4 each)</li> <li>• HCF lift cable pulley (4 each)</li> <li>• HCF lift cable guide (4 each)</li> </ul>
6	40X0754	1	7	HCF media tray lift shaft kit includes: <ul style="list-style-type: none"> <li>• Bushing 8 mm - front</li> <li>• HCF media tray lift shaft</li> <li>• Bushing 8 mm - rear</li> <li>• Washer</li> <li>• HCF media tray lift shaft cable pulley</li> <li>• HCF media tray lift shaft gear 10T</li> <li>• HCF media tray lift shaft gear 51T</li> </ul>
7	40X0753	1	1	HCF media tray lift gear bracket assembly (this comes assembled)
8	40X0756	2	2	HCF lift cable large pulley kit includes: <ul style="list-style-type: none"> <li>• HCF lift cable large pulley</li> <li>• HCF lift cable large guide</li> </ul>

### Assembly 10: High capacity feed (HCF)– media feed unit



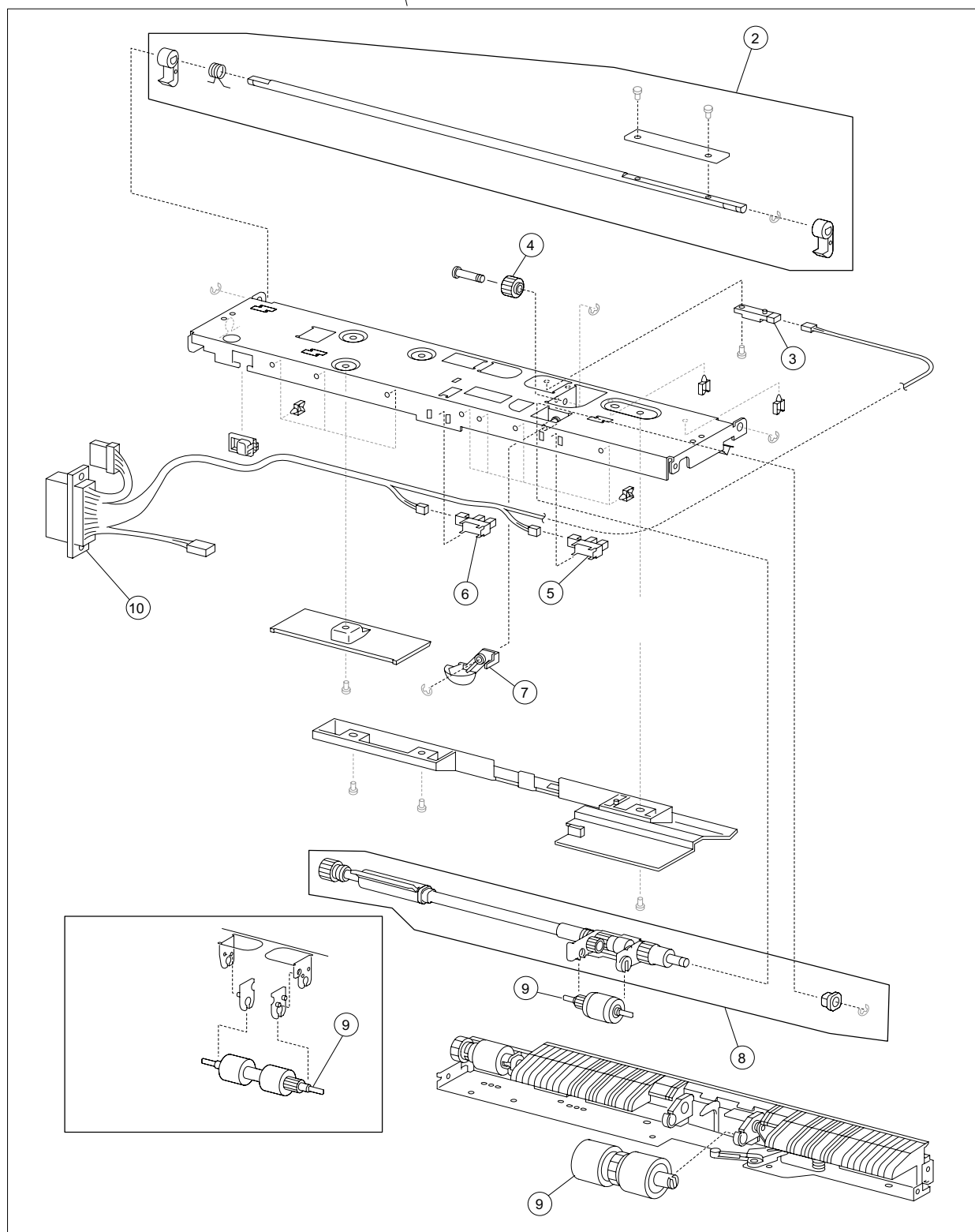
## Assembly 10: High capacity feed (HCF)– media feed unit

Asm-Index	Part number	Units/ option	Units/ FRU	Description
10-1	40X0758	1	1	HCF feed unit assembly (this comes assembled)
2	40X0759	1	1	HCF feed lift motor
3	40X0760	1	1	HCF feed lift gear bracket assembly
4	40X0913	1	1	Ball bearing 6 mm
5	40X0761	1	3	HCF separation drive gear kit includes: <ul style="list-style-type: none"> <li>• HCF separation drive gear 25T</li> <li>• Bushing 6 mm</li> <li>• HCF separation drive gear 19T</li> </ul>
6	40X0762	1	1	HCF pick solenoid assembly
7	40X0763	1	3	HCF media tray lift coupling kit includes: <ul style="list-style-type: none"> <li>• HCF media tray lift coupling gear 40T</li> <li>• Spring</li> <li>• HCF media tray lift coupling</li> </ul>
8	40X0771	1	1	HCF separation roll shaft assembly (this comes assembled)
9	40X0766	1	1	HCF feed unit cable assembly

## Assembly 11: High capacity feed (HCF)– media feed unit

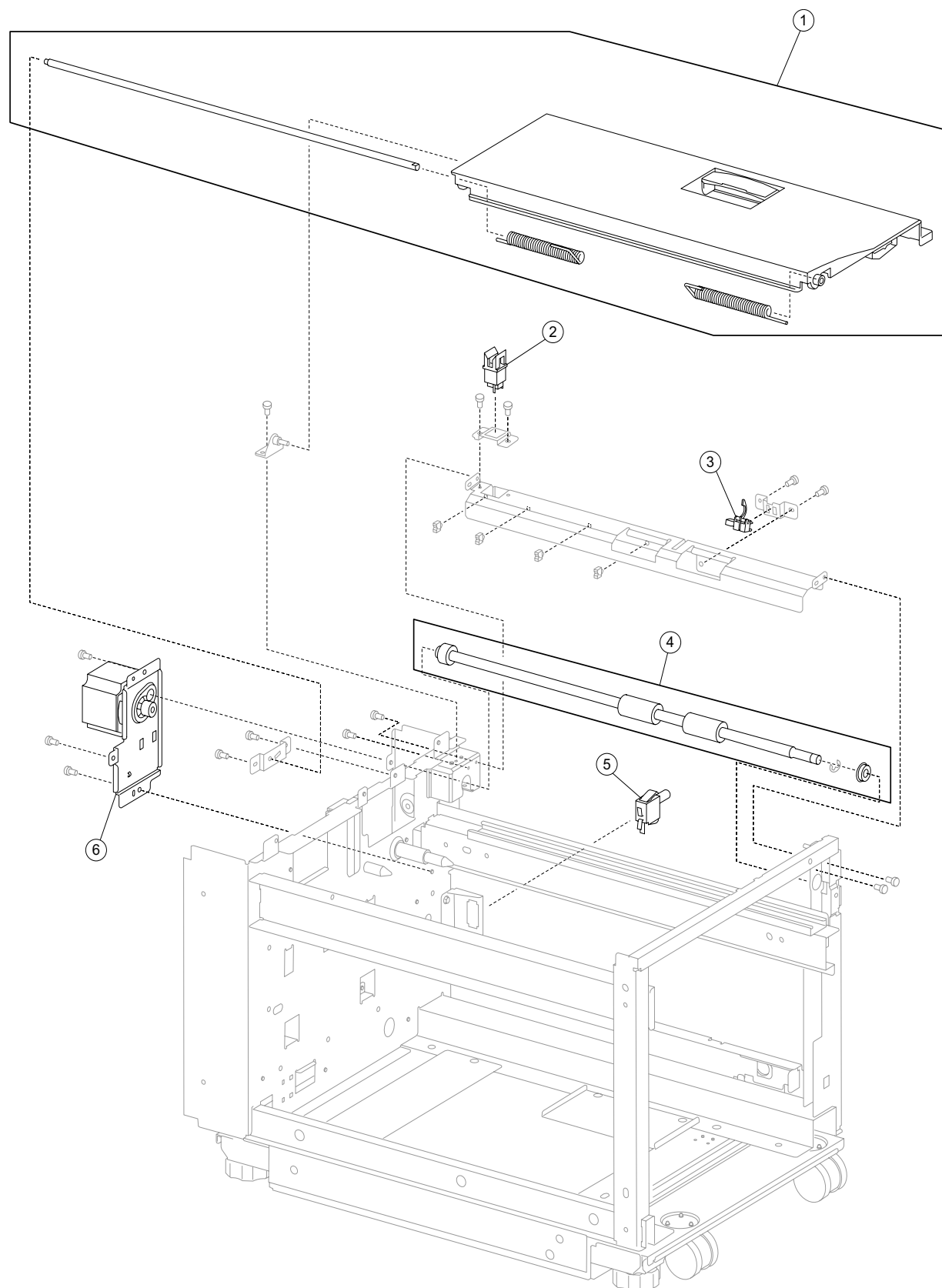
1

Note: This page includes everything on pages 7-20 and 7-22.



## Assembly 11: High capacity feed (HCF)– media feed unit

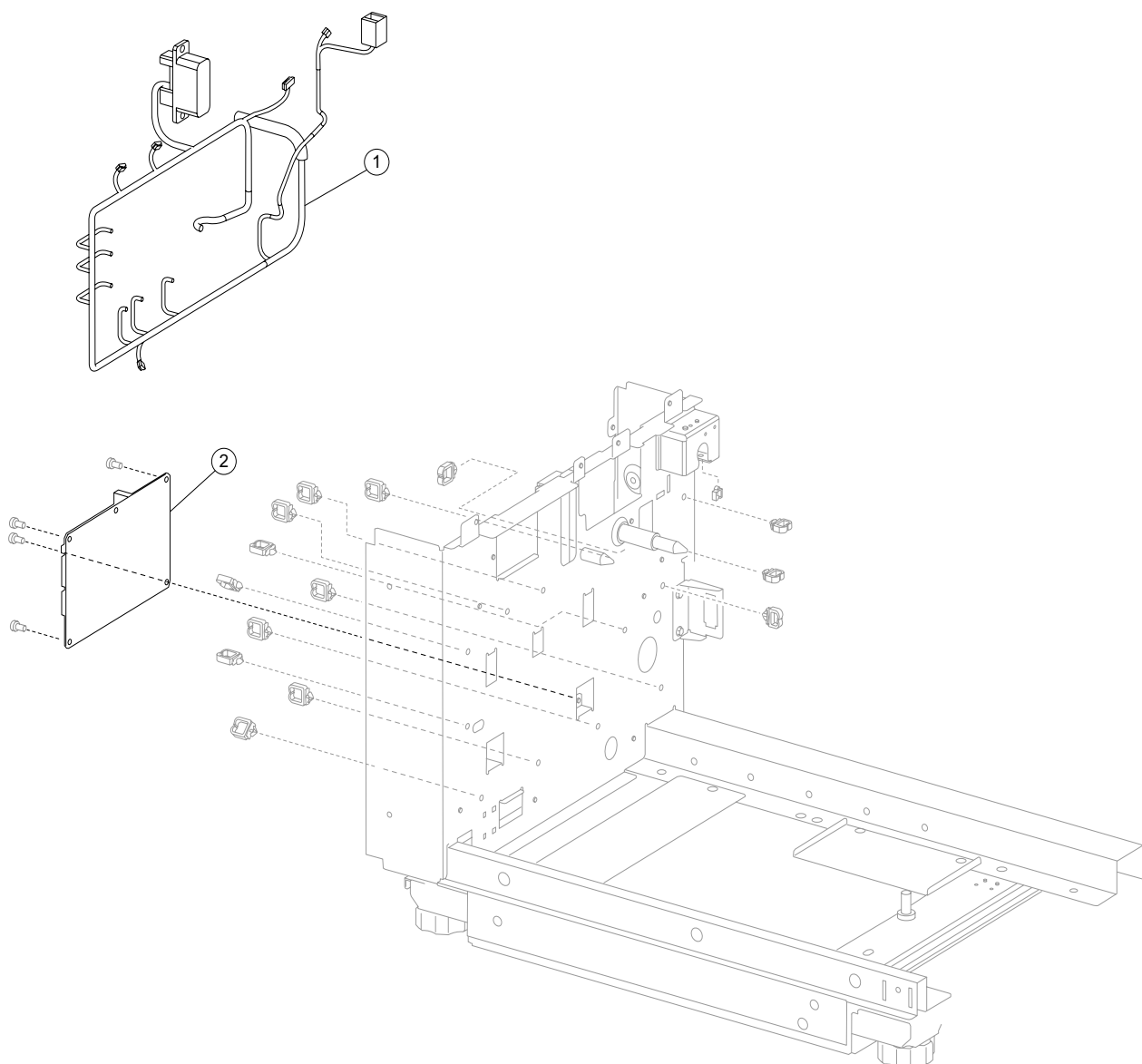
Asm-Index	Part number	Units/ option	Units/ FRU	Description
11-1	40X0758	1	1	HCF feed unit assembly (this comes assembled)
2	40X0764	1	5	HCF feed unit latch kit includes: <ul style="list-style-type: none"> <li>• HCF feed unit latch (2 each)</li> <li>• Spring</li> <li>• HCF feed unit latch shaft</li> <li>• HCF feed unit latch cover</li> </ul>
3	40X0589	1	1	Sensor (pre-feed)
4	40X0765	1	1	HCF pick roll idler gear
5	40X0768	1	1	Sensor (media out)
6	40X0768	1	1	Sensor (media level)
7	40X0767	1	1	HCF media out actuator
8	40X0769	1	2	HCF pick roll shaft kit includes: <ul style="list-style-type: none"> <li>• HCF pick roll shaft assembly</li> <li>• Bushing 6 mm</li> </ul>
9	40X0770	1	3	HCF feed unit roll kit includes: <ul style="list-style-type: none"> <li>• HCF feed roll</li> <li>• HCF pick roll</li> <li>• HCF separation roll</li> </ul>
10	40X0766	1	1	HCF feed unit cable assembly

**Assembly 12: High capacity feed (HCF)– top door and transport**

## Assembly 12: High capacity feed (HCF)– top door and transport

Asm-Index	Part number	Units/ option	Units/ FRU	Description
12-1	40X0773	1	4	HCF top door kit includes: <ul style="list-style-type: none"> <li>• HCF top door</li> <li>• HCF top door shaft</li> <li>• HCF top door spring R</li> <li>• HCF top door spring L</li> </ul>
2	40X0553	1	1	Switch (HCF top door interlock)
3	40X0774	1	1	Sensor (tray 5 feed-out)
4	40X0775	1	2	HCF media transport roll kit includes: <ul style="list-style-type: none"> <li>• HCF media transport roll assembly</li> <li>• Ball bearing 8 mm</li> </ul>
5	40X0777	1	1	Switch (HCF unit docking interlock)
6	40X0776	1	1	HCF transport motor

## Assembly 13: High capacity feed (HCF)– electrical

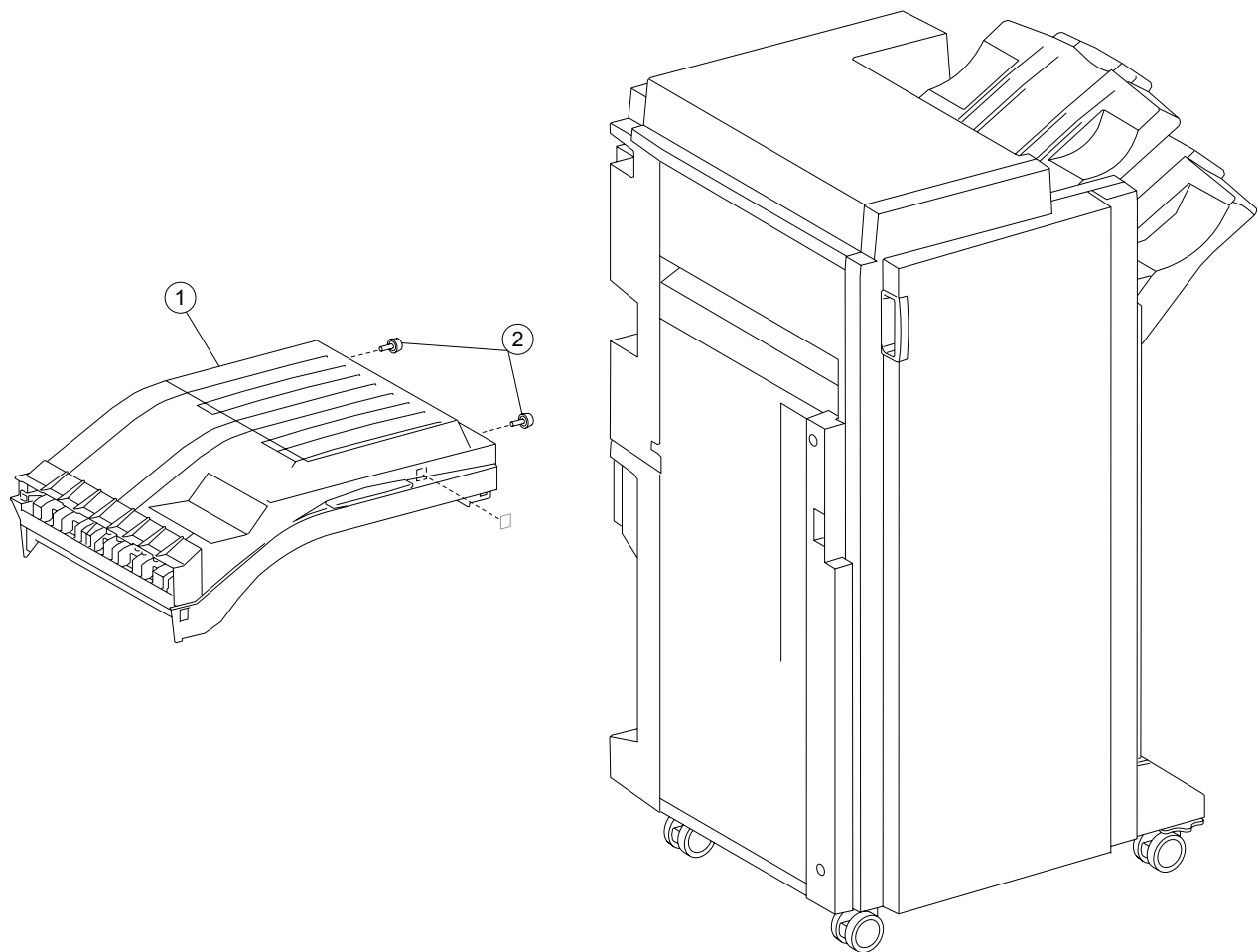




**Assembly 13: High capacity feed (HCF)– electrical**

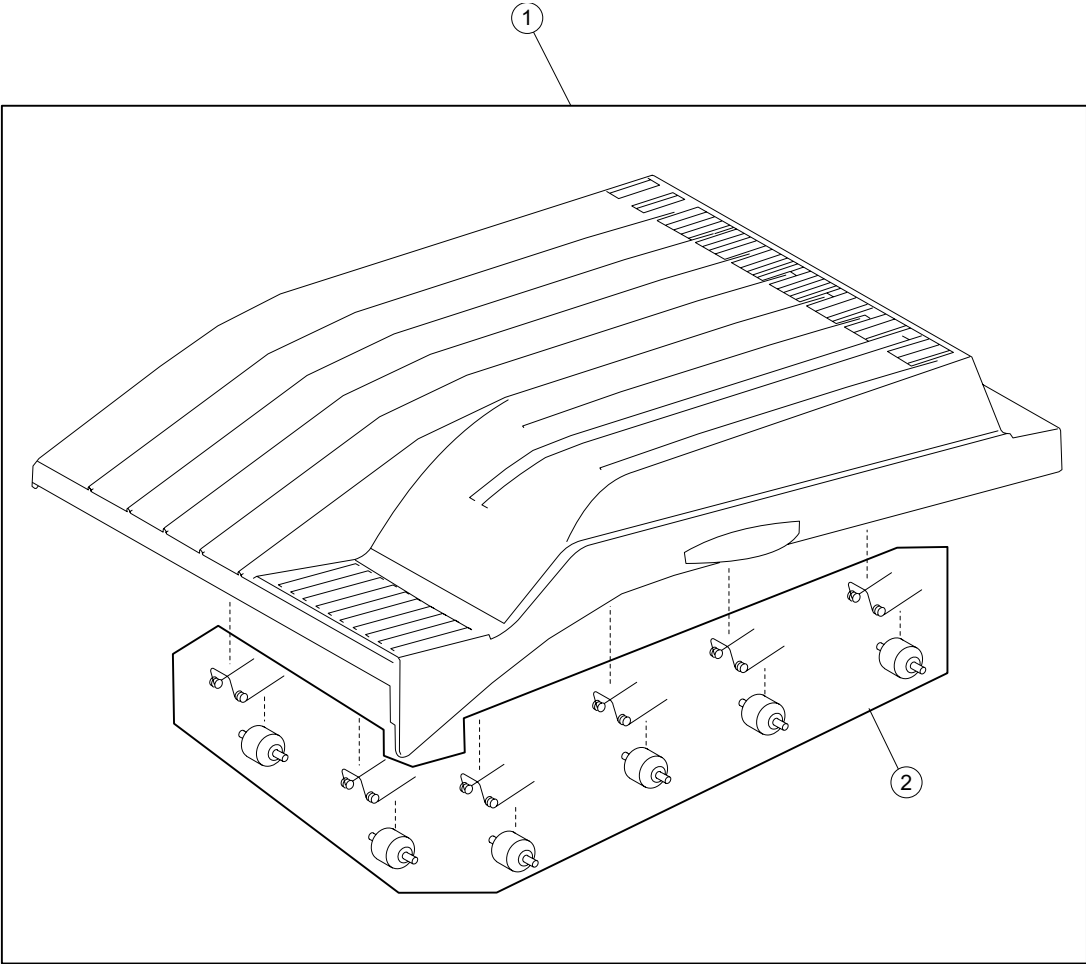
Asm-Index	Part number	Units/ option	Units/ FRU	Description
13-1	40X0779	1	1	HCF main cable assembly
2	40X0778	1	1	HCF controller card assembly

Assembly 14: Finisher– bridge unit

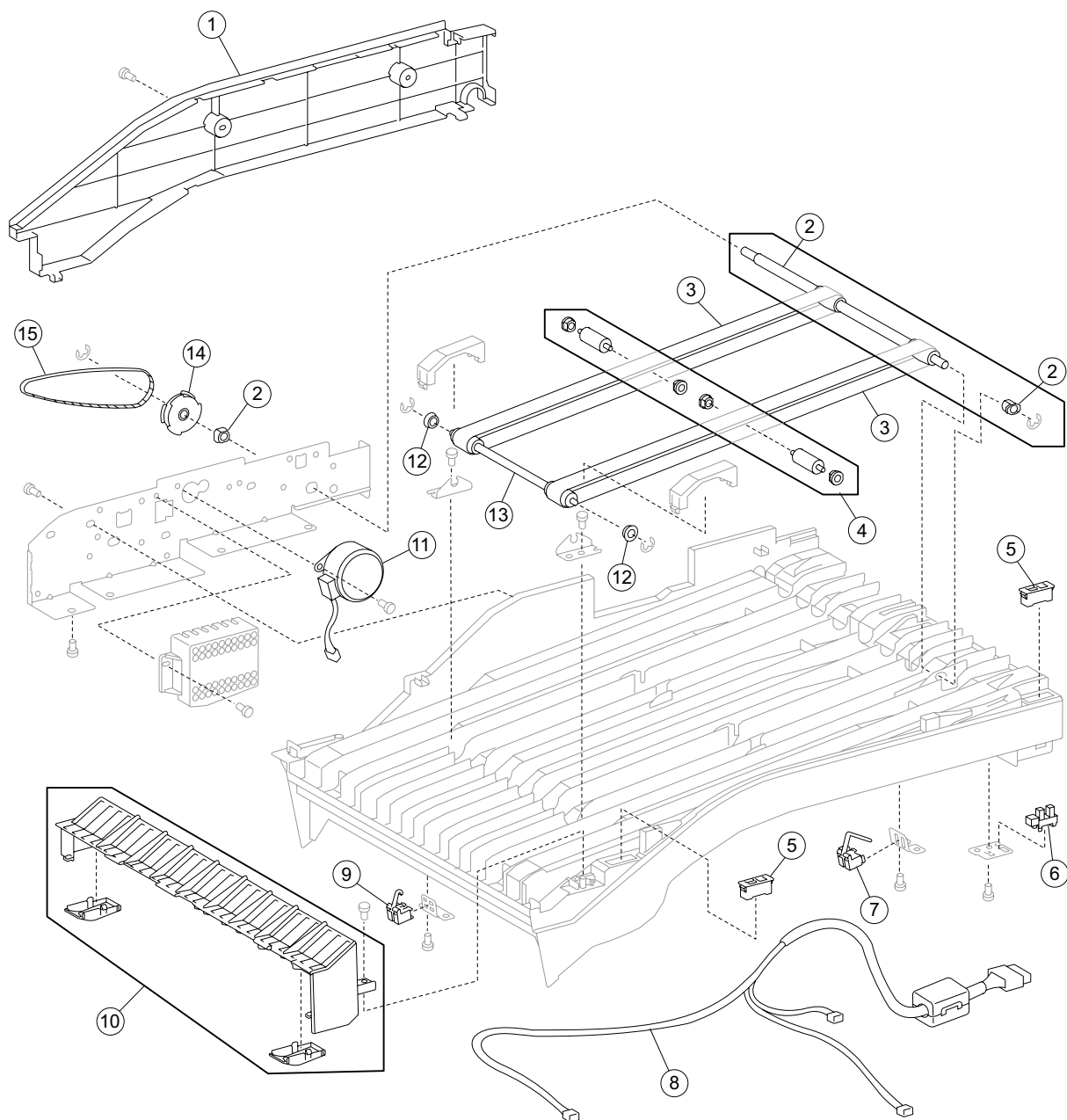


Asm-Index	Part number	Units/option	Units/FRU	Description
14-1	40X0811	1	1	Bridge unit assembly
2	40X0810	1	2	Bridge unit assembly docking screw (2 each)

Assembly 15: Finisher– bridge unit top cover assembly

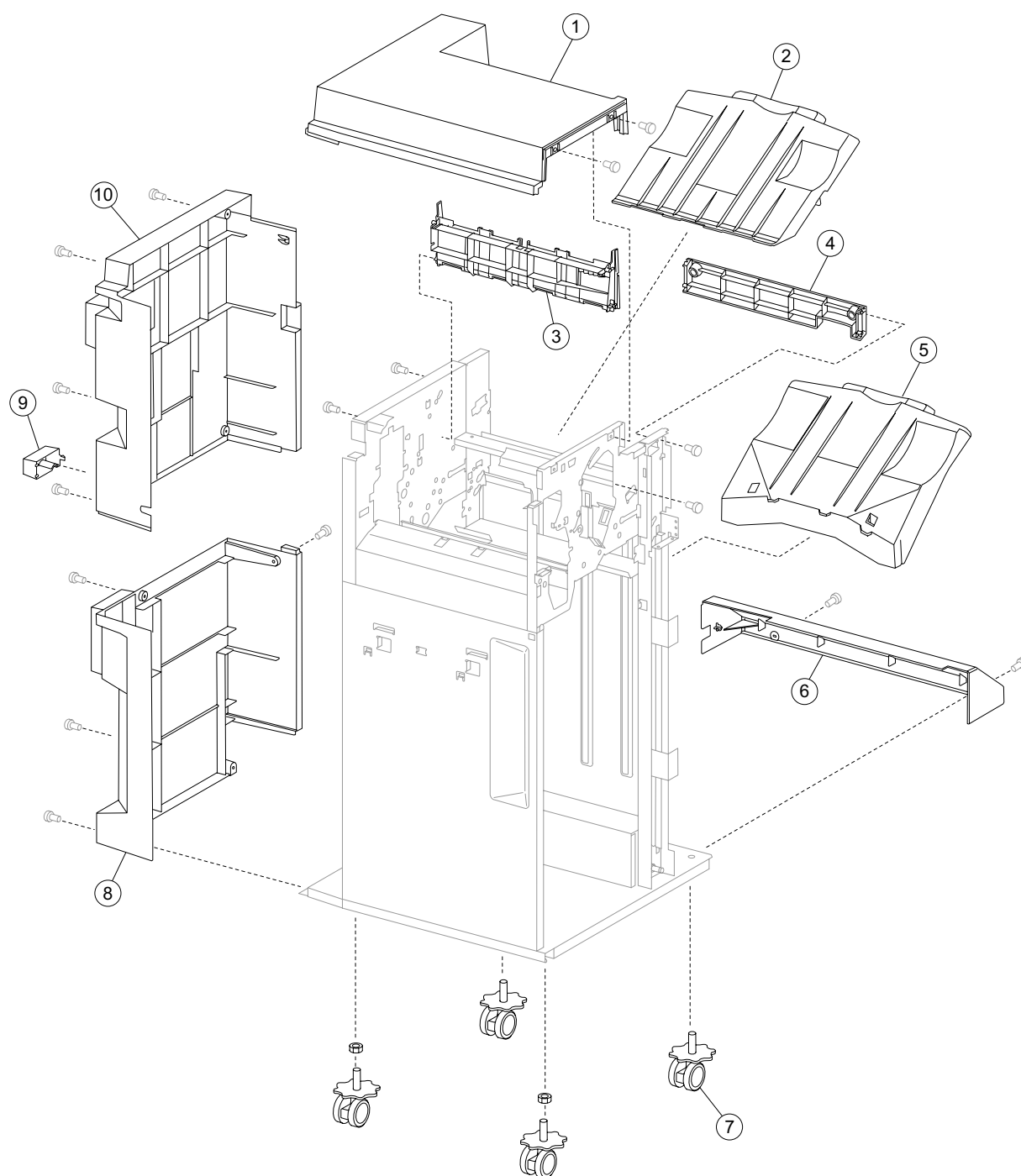


Asm-Index	Part number	Units/option	Units/FRU	Description
15-1	40X0813	1	1	Bridge unit top cover assembly
2	40X0812	1	12	Bridge unit pinch roll kit includes: <ul style="list-style-type: none"><li>• Bridge unit pinch roll (6 each)</li><li>• Spring (6 each)</li></ul>

**Assembly 16: Finisher– bridge unit lower assembly**

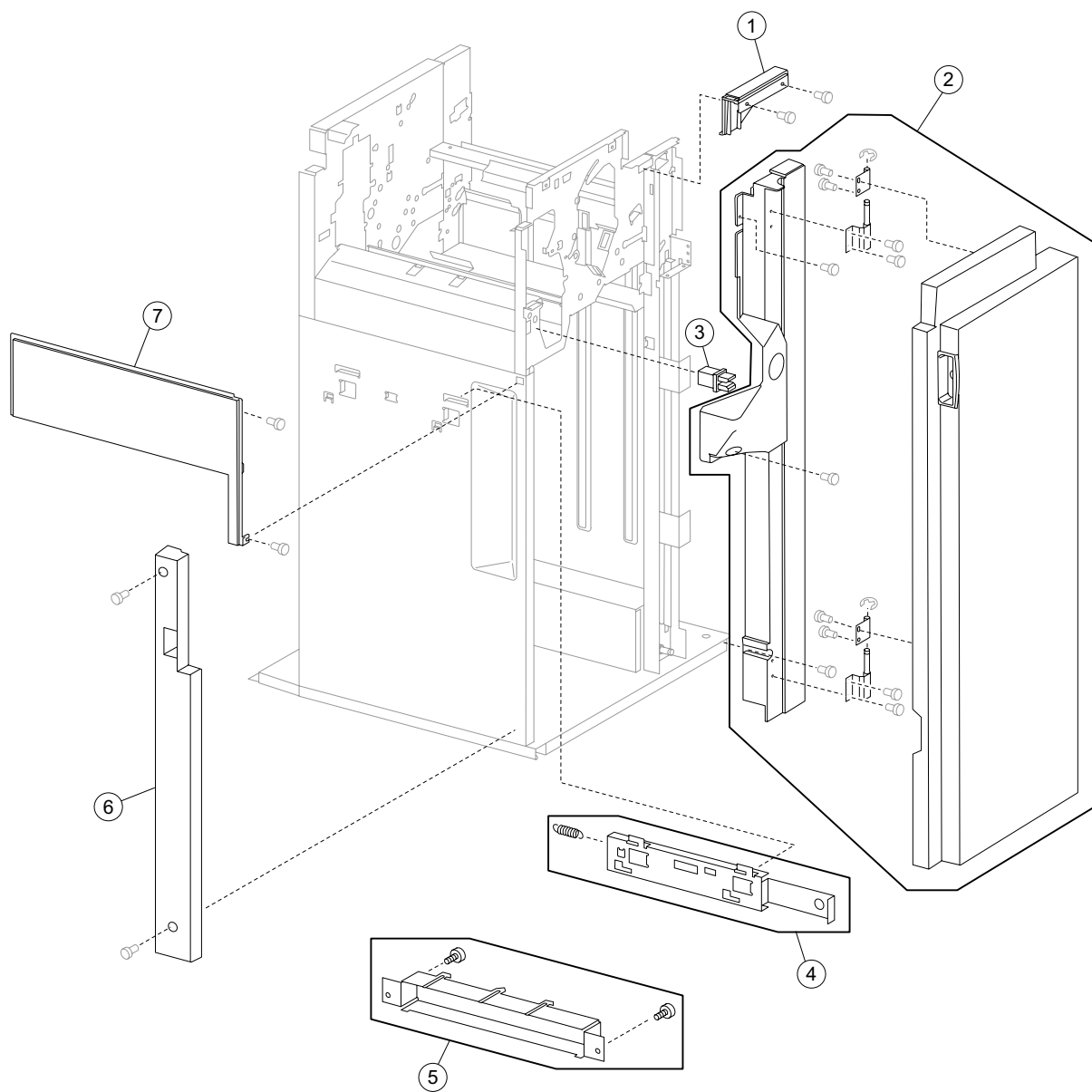
## Assembly 16: Finisher— bridge unit lower assembly

Asm-Index	Part number	Units/ option	Units/ FRU	Description
16-1	40X0814	1	1	Bridge unit rear cover
2	40X0822	1	3	Bridge unit right shaft kit includes: <ul style="list-style-type: none"> <li>• 6 mm bushing - front</li> <li>• Bridge unit right shaft assembly</li> <li>• 6 mm bushing - rear</li> </ul>
3	40X0820	1	2	Transport belts (2 each)
4	40X0821	1	6	Idler roll kit includes: <ul style="list-style-type: none"> <li>• Idler roll (2 each)</li> <li>• Bushing (4 each)</li> </ul>
5	40X0824	8	1	Magnetic catch
6	40X0825	1	1	Sensor (bridge unit top cover interlock)
7	40X0826	1	1	Sensor (bridge unit media exit)
8	40X0828	1	1	Bridge unit cable assembly
9	40X0827	1	1	Sensor (bridge unit media entrance)
10	40X0818	1	3	Bridge unit entrance guide kit includes: <ul style="list-style-type: none"> <li>• Bridge unit entrance guide</li> <li>• Lower guides (2 each)</li> </ul>
11	40X0817	1	1	Bridge unit drive motor
12	40X0819	2	1	Ball bearing 4 mm
13	40X0823	1	1	Bridge unit left shaft assembly
14	40X0816	1	1	Bridge unit drive pulley
15	40X0815	1	1	Bridge unit drive belt

**Assembly 17: Finisher— covers**

## Assembly 17: Finisher— covers

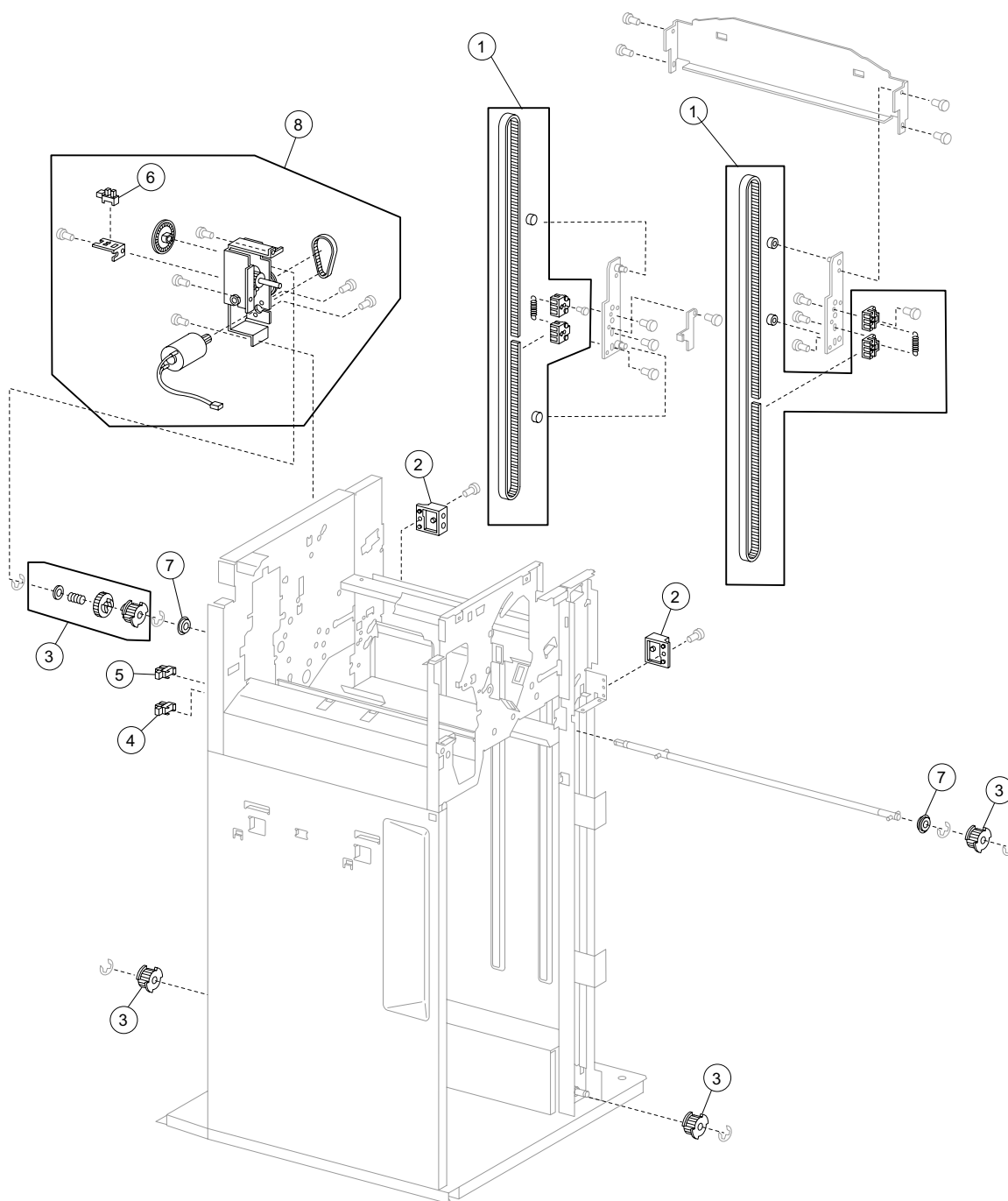
Asm-Index	Part number	Units/ option	Units/ FRU	Description
17-1	40X0829	1	1	Top cover
2	40X0831	1	1	Upper media bin assembly
3	40X0830	1	1	Upper media bin vertical cover
4	40X0832	1	1	Right eject cover
5	40X0833	1	1	Stacker media bin
6	40X0834	1	1	Right lower LVPS cover
7	40X0835	4	1	Caster
8	40X0836	1	1	Rear lower cover
9	40X0837	1	1	Bridge unit hookup cover
10	40X0838	1	1	Rear upper cover

**Assembly 18: Finisher— covers and front door**



## Assembly 18: Finisher— covers and front door

Asm-Index	Part number	Units/ option	Units/ FRU	Description
18-1	40X0839	1	1	Upper media bin front cover
2	40X0841	1	1	Finisher front door assembly (this comes assembled)
3	40X0840	1	1	Switch (finisher front door interlock)
4	40X0842	1	2	Finisher docking latch kit includes: <ul style="list-style-type: none"> <li>• Finisher docking latch assembly</li> <li>• Spring</li> </ul>
5	40X0843	1	3	Finisher docking bracket kit includes: <ul style="list-style-type: none"> <li>• Finisher docking bracket</li> <li>• Screw (2 each)</li> </ul>
6	40X0844	1	1	Left lower cover
7	40X0845	1	1	Left upper cover

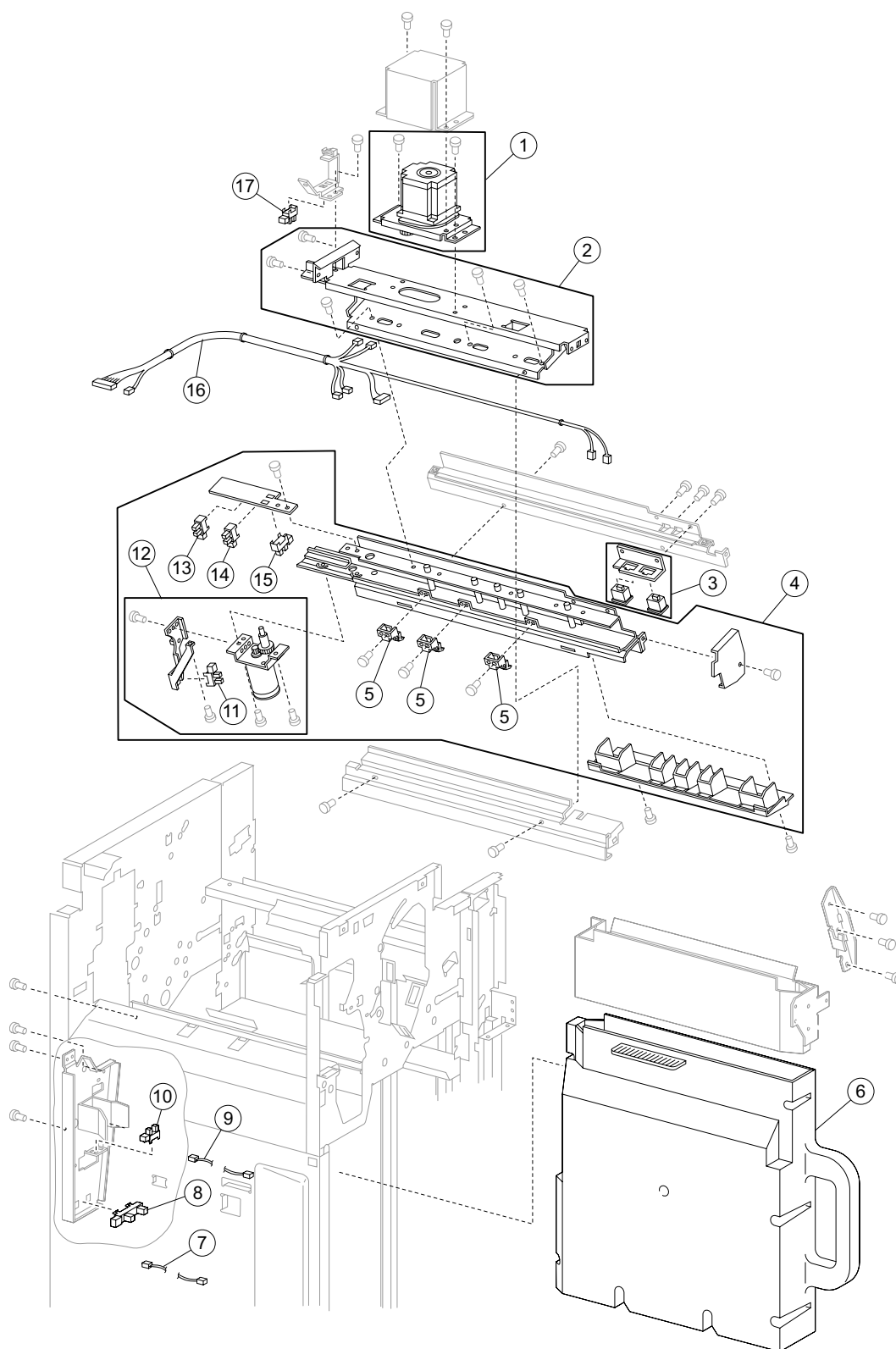
**Assembly 19: Finisher– stacker bin lift**

## Assembly 19: Finisher– stacker bin lift

Asm-Index	Part number	Units/ option	Units/ FRU	Description
19-1	40X0846	2	6	Carriage lift belt kit includes: <ul style="list-style-type: none"> <li>• Carriage lift belt</li> <li>• Belt clamp (2 each)</li> <li>• Spring</li> <li>• Roll (2 each)</li> </ul>
2	40X0847	2	1	Sensor (stacker bin level)
3	40X0849	1	7	Stacker slip clutch pulley kit includes: <ul style="list-style-type: none"> <li>• Pulley, 18T (3 each)</li> <li>• Slip clutch pulley, 18T</li> <li>• Slip clutch gear, 24T</li> <li>• Spring</li> <li>• Washer</li> </ul>
4	40X0850	1	1	Sensor (stacker bin no media)
5	40X0850	1	1	Sensor (stacker bin upper limit)
6	40X0850	1	1	Sensor (stacker bin level encoder)
7	40X0848	2	1	Ball bearing 10 mm
8	40X0851	1	3	Stacker bin lift motor assembly <ul style="list-style-type: none"> <li>• Bracket with sensor</li> <li>• Encoder</li> <li>• Stacker bin lift motor</li> </ul>

**Note:** Assembly index items 4, 5, and 6 are identical sensors with different functions; therefore, they are the same part number with different descriptions.

## Assembly 20: Finisher– punch

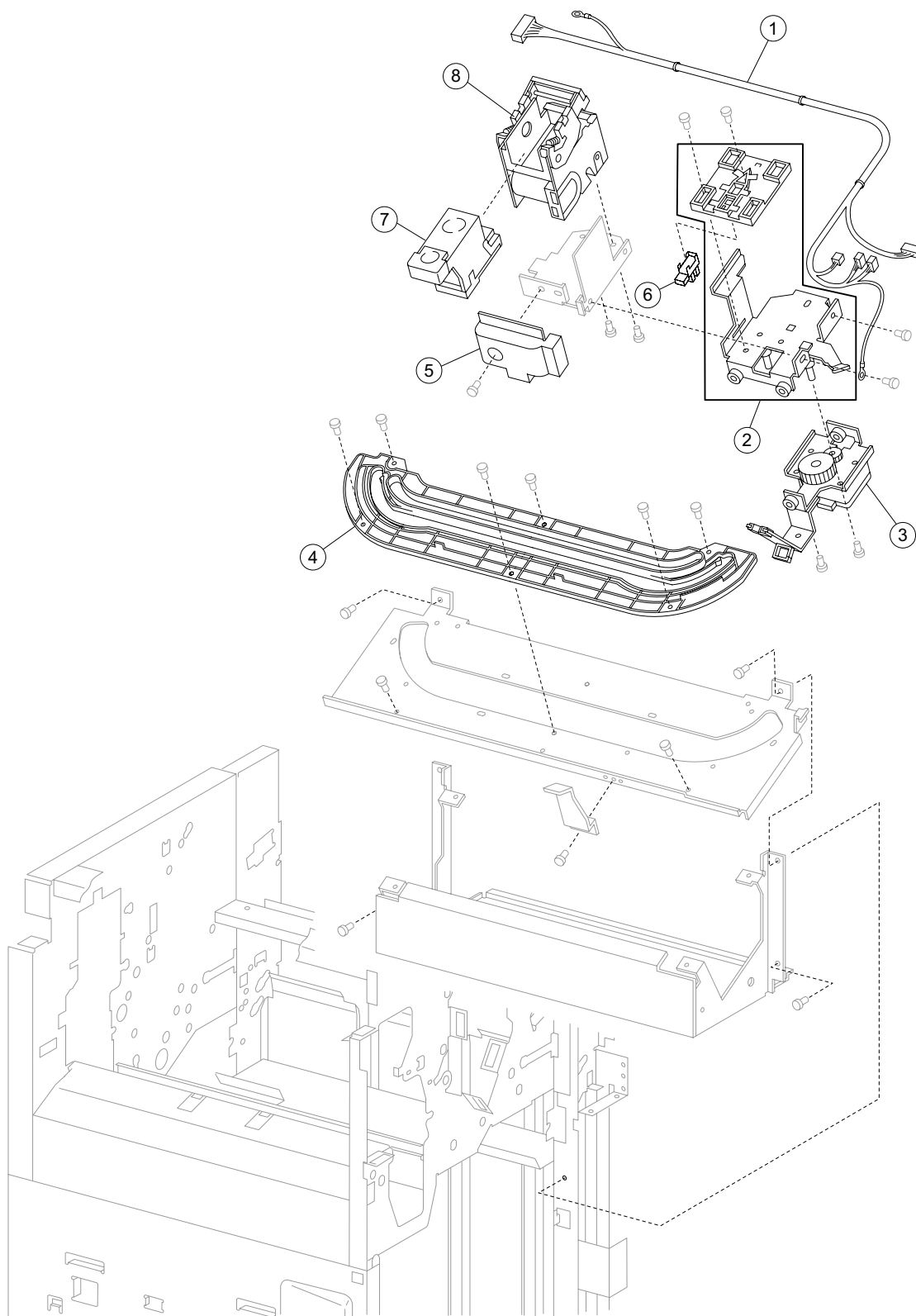


## Assembly 20: Finisher– punch

Asm-Index	Part number	Units/option	Units/FRU	Description
20-1	40X0854	1	1	Punch carriage shift motor assembly
2	40X0855	1	1	Punch carriage assembly
3	40X0856	1	1	Sensor (punch unit side reg) assembly <ul style="list-style-type: none"> <li>• Sensor (punch unit side reg1)</li> <li>• Sensor (punch unit side reg2)</li> <li>• Bracket</li> </ul>
4	40X0857	1	1	2/3 punch unit assembly (this comes assembled)
4	40X0858	1	1	2/4 punch unit assembly (this comes assembled)
5	40X0859	3	1	Punch media stopper assembly
6	40X0862	1	1	Punch waste box
7	40X0930	1	1	Punch waste box full cable assembly
8	40X0864	1	1	Sensor (punch waste box full)
9	40X0865	1	1	Punch waste box set cable assembly
10	40X0861	1	1	Sensor (punch waste box set)
11	40X0850	1	1	Sensor (punch unit motor encoder)
12	40X0860	1	1	Punch unit motor assembly
13	40X0850	1	1	Sensor (punch hole select)
14	40X0850	1	1	Sensor (punch cam front)
15	40X0850	1	1	Sensor (punch unit HP)
16	40X0853	1	1	Punch unit cable assembly
17	40X0850	1	1	Sensor (punch carriage shift HP)

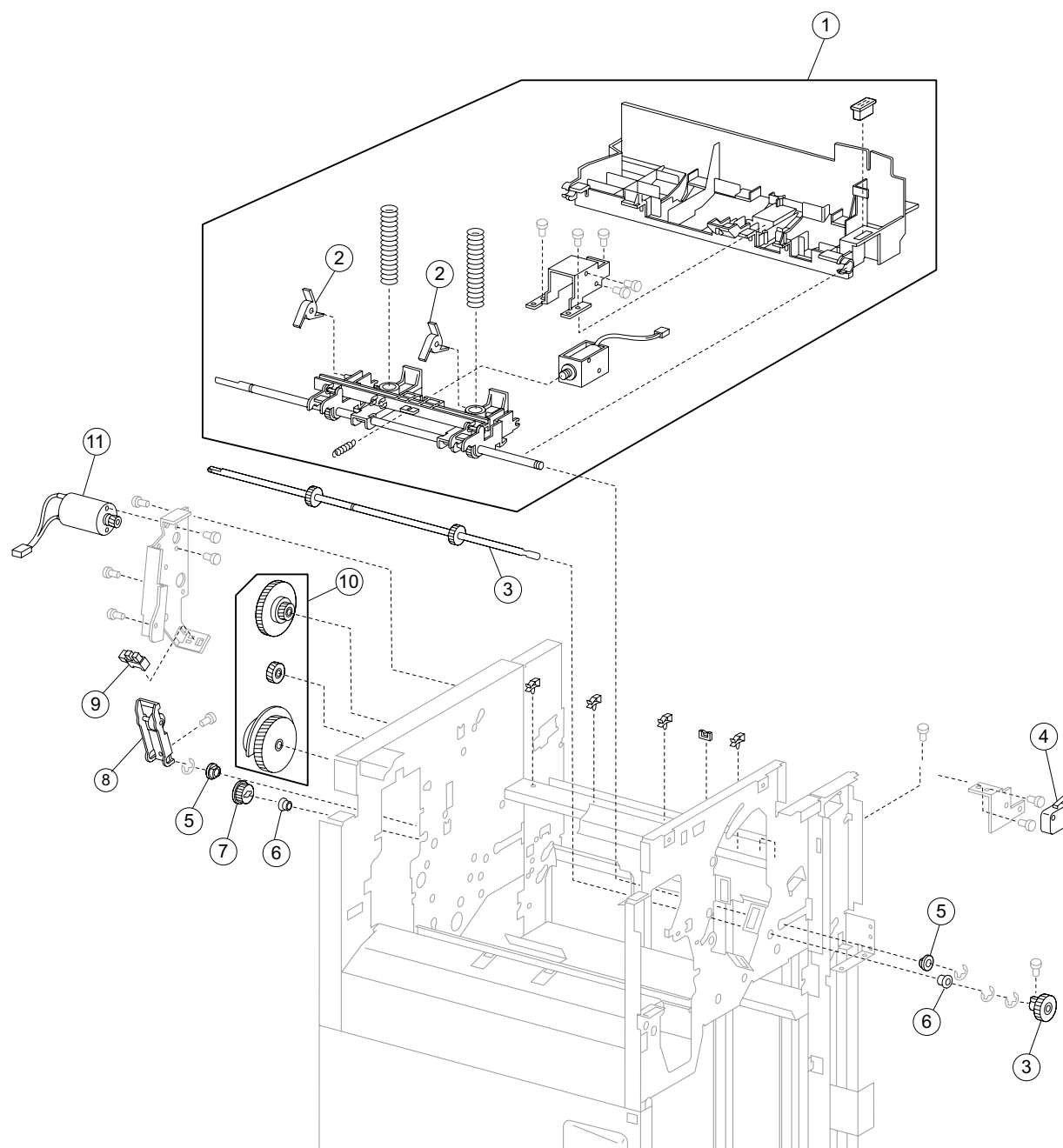
**Note:** Assembly index items 11, 13, 14, 15, and 17 are identical sensors with different functions; therefore, they are the same part number with different descriptions.

## Assembly 21: Finisher– stapler



## Assembly 21: Finisher– stapler

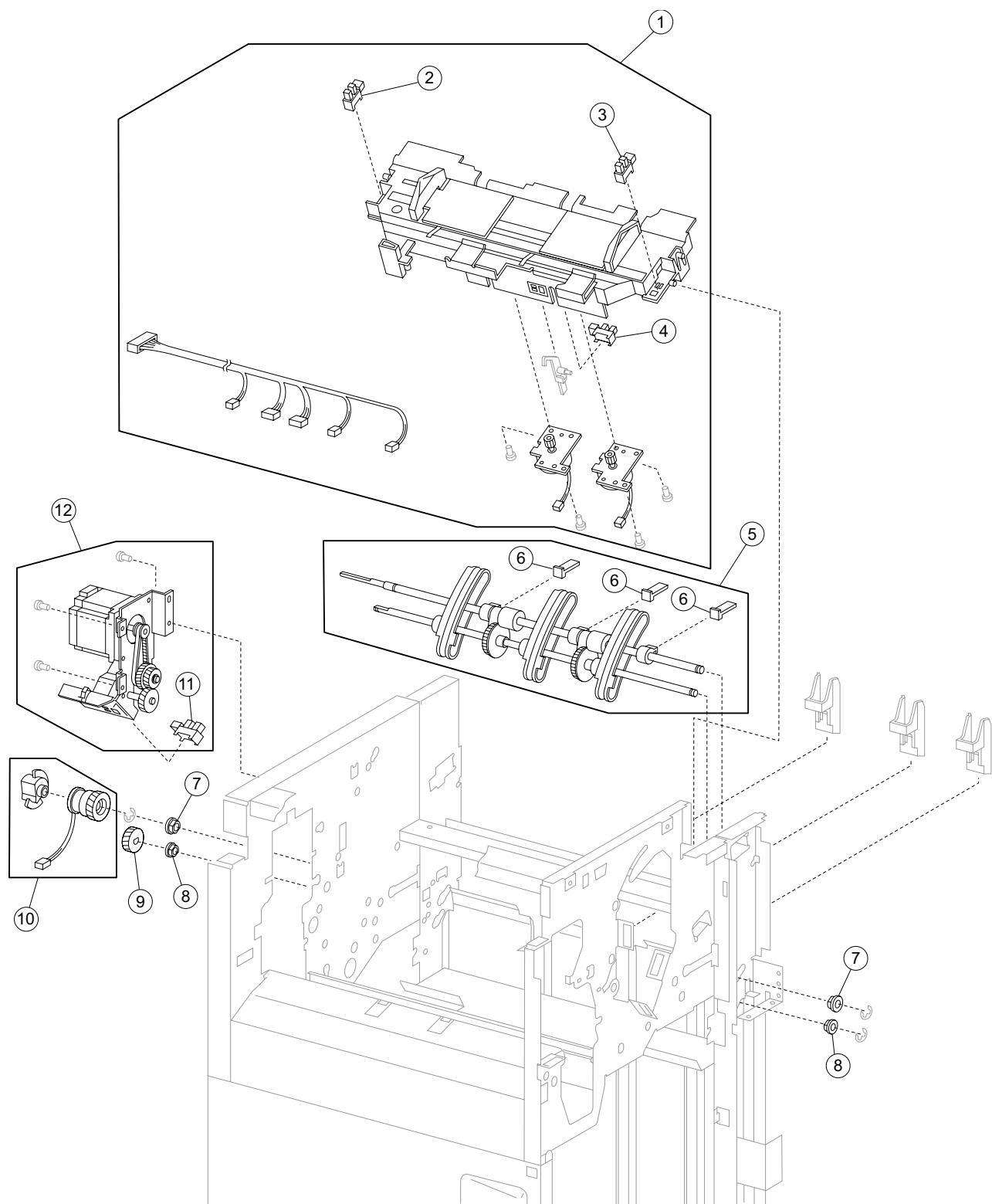
Asm-Index	Part number	Units/option	Units/FRU	Description
21-1	40X0870	1	1	Stapler unit cable assembly
2	40X0869	1	2	Stapler carriage kit includes: <ul style="list-style-type: none"> <li>• Stapler carriage wire guide</li> <li>• Stapler carriage assembly</li> </ul>
3	40X0871	1	1	Stapler carriage motor assembly
4	40X0872	1	1	Stapler carriage rack gear
5	40X0868	1	1	Stapler unit cover
6	40X0850	1	1	Sensor (stapler carriage HP)
7	40X0866	1	1	Staple cartridge
8	40X0867	1	1	Stapler unit assembly

**Assembly 22: Finisher— media eject**



## Assembly 22: Finisher— media eject

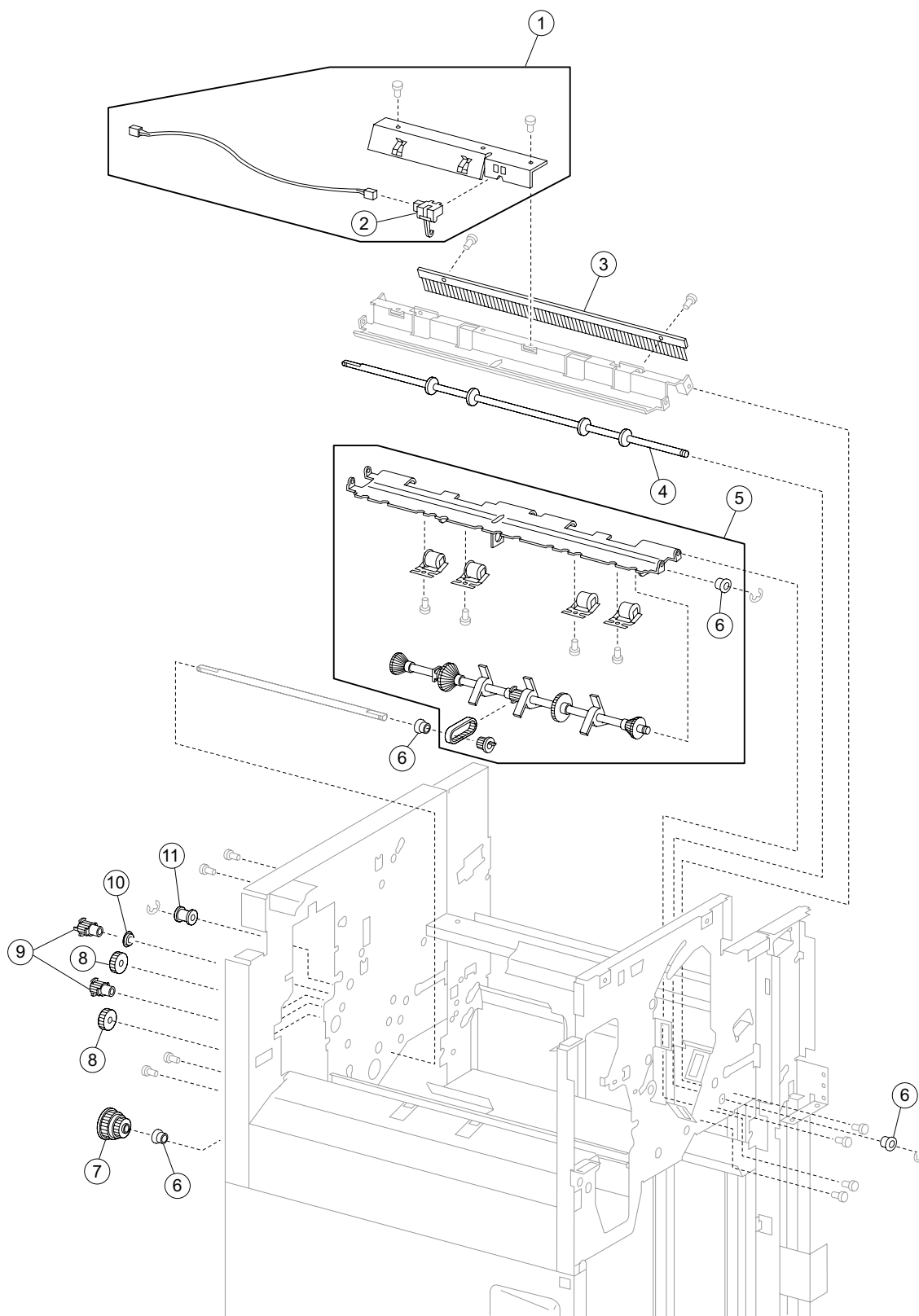
Asm-Index	Part number	Units/ option	Units/ FRU	Description
22-1	40X0873	1	1	Media eject unit assembly (this comes assembled)
2	40X0874	2	1	Sub paddle
3	40X0875	1	2	Sub paddle drive shaft kit includes: <ul style="list-style-type: none"> <li>• Sub paddle drive shaft assembly</li> <li>• Knob</li> </ul>
4	40X0882	1	1	Switch (eject cover interlock)
5	40X1388	4	1	Bushing 8 mm
6	40X0888	15	1	Bushing 6 mm
7	40X0879	2	2	Sub paddle/entrance drive gear 23T
8	40X0877	1	1	Eject clamp lever assembly
9	40X0825	1	1	Sensor (media eject clamp HP)
10	40X0881	1	3	Eject clamp gear kit includes: <ul style="list-style-type: none"> <li>• Eject clamp gear 70T</li> <li>• Eject clamp gear 23T</li> <li>• Eject clamp gear 68/20T</li> </ul>
11	40X0876	1	1	Media eject clamp motor

**Assembly 23: Finisher– eject and compiler unit**

## Assembly 23: Finisher– eject and compiler unit

Asm-Index	Part number	Units/option	Units/FRU	Description
23-1	40X0883	1	1	Media compiler unit assembly (this comes assembled)
2	40X0850	1	1	Sensor (rear tamper HP)
3	40X0850	1	1	Sensor (front tamper HP)
4	40X0825	1	1	Sensor (compiler media in)
5	40X0886	1	1	Media eject shaft assembly
6	40X0887	3	1	Clamp paddle
7	40X0888	15	1	Bushing 6 mm
8	40X1388	4	1	Bushing 8 mm
9	40X0889	2	1	Media eject shaft gear 39T
10	40X0890	1	2	Media eject clutch kit includes: <ul style="list-style-type: none"> <li>• Media eject clutch</li> <li>• Media eject clutch actuator</li> </ul>
11	40X0825	1	1	Sensor (media eject shaft HP)
12	40X0891	1	1	Media eject motor assembly

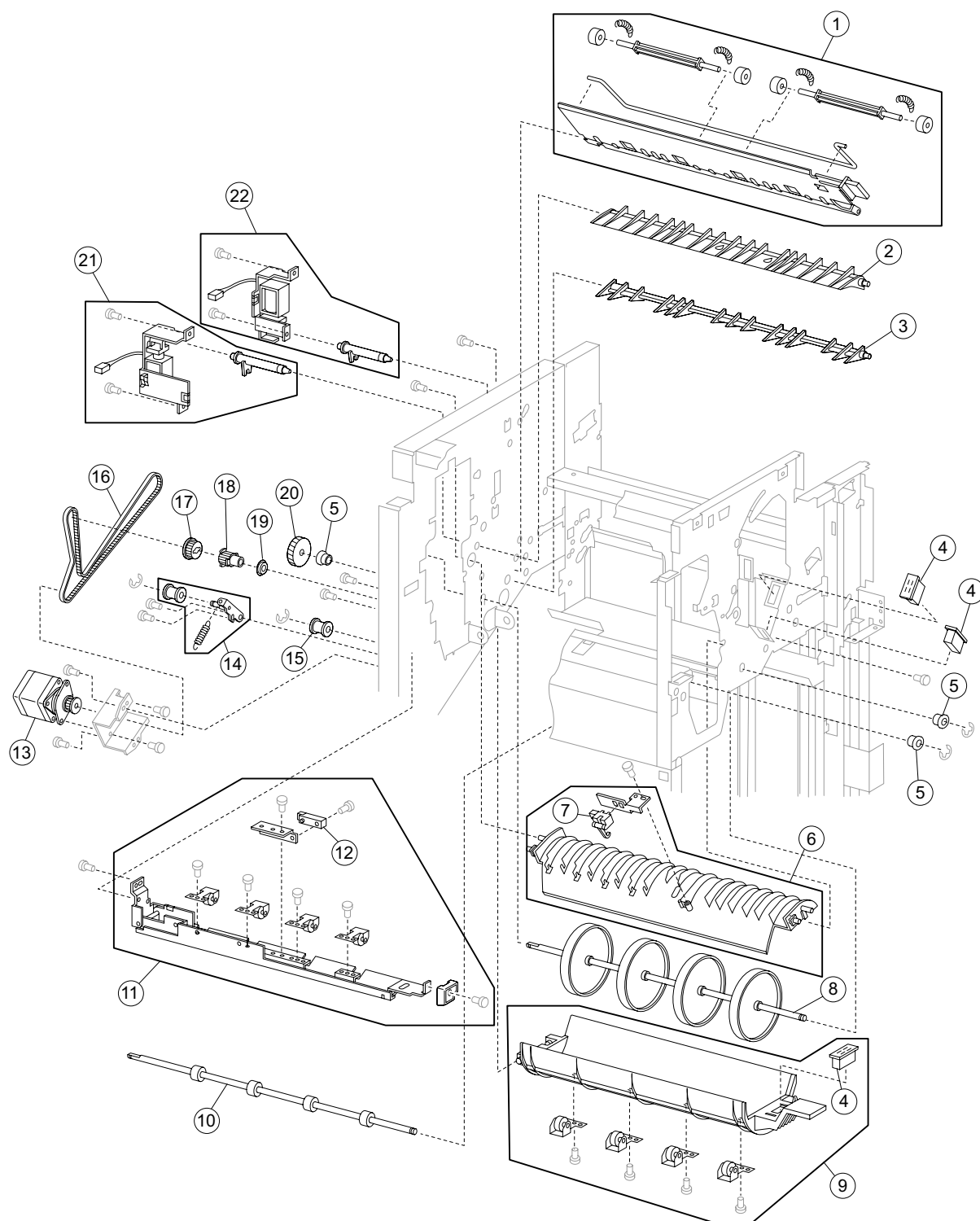
**Note:** Assembly index items 2 and 3 are identical sensors with different functions; therefore, they are the same part number with different descriptions.

**Assembly 24: Finisher— lower exit drive**

## Assembly 24: Finisher– lower drive

Asm-Index	Part number	Units/ option	Units/ FRU	Description
24-1	40X0892	1	1	Sensor (lower media exit) with bracket
2	40X0893	1	1	Sensor (lower media exit)
3	40X0894	1	1	Static eliminator brush
4	40X0895	1	1	Lower media exit roll assembly
5	40X0896	1	2	Main paddle shaft kit includes: (this comes assembled) <ul style="list-style-type: none"> <li>• Main paddle shaft assembly</li> <li>• Main paddle shaft drive pulley 17T</li> </ul>
6	40X0888	15	1	Bushing 6 mm
7	40X0900	1	1	Main paddle drive pulley/gear 44/20T
8	40X0899	1	2	Main paddle idler gear kit includes: <ul style="list-style-type: none"> <li>• Main paddle idler gear 23TR</li> <li>• Main paddle idler gear 23TL</li> </ul>
9	40X0898	1	2	Lower exit roll drive pulley kit includes: <ul style="list-style-type: none"> <li>• Lower exit roll drive pulley 20T</li> <li>• Idler pulley 20T</li> </ul>
10	40X0913	4	1	Ball bearing 6 mm
11	40X0897	3	1	Belt idler pulley

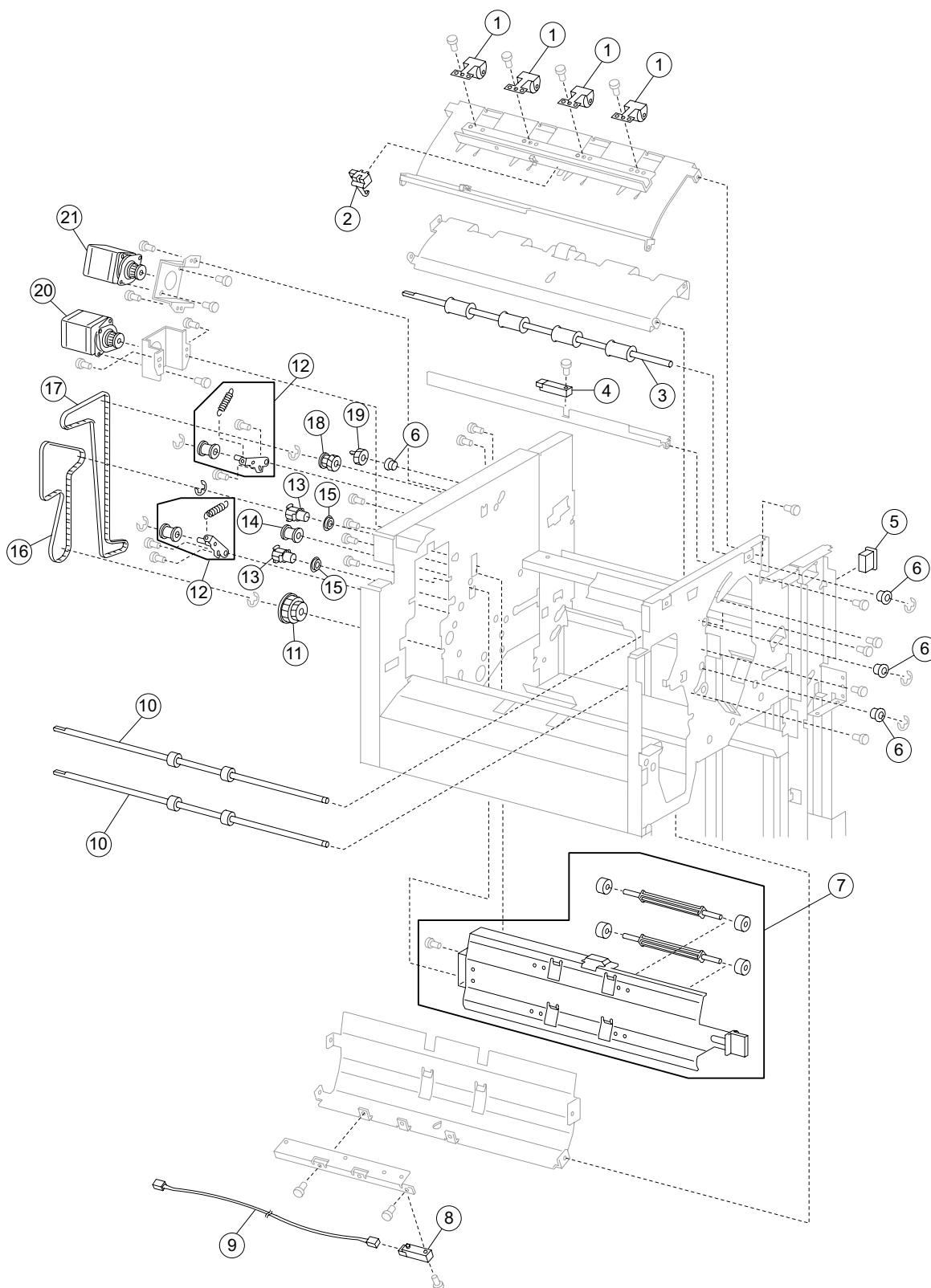
## Assembly 25: Finisher— buffer and entrance drive



## Assembly 25: Finisher— buffer and entrance drive

Asm-Index	Part number	Units/option	Units/FRU	Description
25-1	40X0901	1	1	Lower pinch guide assembly (this comes assembled)
2	40X0902	1	1	Finisher diverter gate
3	40X0903	1	1	Buffer diverter gate
4	40X0824	8	1	Magnetic catch
5	40X0888	15	1	Bushing 6 mm
6	40X0904	1	1	Buffer upper guide assembly
7	40X0893	1	1	Sensor (buffer path)
8	40X0905	1	1	Buffer roll assembly
9	40X0906	1	1	Buffer pinch guide assembly (this comes assembled)
10	40X0909	1	1	Media entrance roll assembly
11	40X0907	1	1	Media entrance pinch guide assembly (this comes assembled)
12	40X0908	1	1	Sensor (finisher media entrance)
13	40X0910	1	1	Drive motor (entrance/paddle)
14	40X0912	3	3	Belt tensioner pulley kit includes: <ul style="list-style-type: none"> <li>• Belt idler pulley</li> <li>• Spring</li> <li>• Belt tensioner bracket</li> </ul>
15	40X0897	3	1	Belt idler pulley
16	40X0911	1	1	Belt entrance/paddle, 31.6 cm
17	40X0879	2	1	Sub paddle/entrance drive gear 23T
18	40X0914	1	1	Media entrance roll drive pulley 20T
19	40X0913	4	1	Ball bearing 6 mm
20	40X0915	1	1	Buffer roll drive gear 46T
21	40X0916	1	2	Media diverter solenoid kit includes: <ul style="list-style-type: none"> <li>• Media diverter solenoid</li> <li>• Media diverter solenoid link</li> </ul>
22	40X0917	1	2	Buffer diverter solenoid kit includes: <ul style="list-style-type: none"> <li>• Buffer diverter solenoid</li> <li>• Buffer diverter solenoid link</li> </ul>

## Assembly 26: Finisher— buffer, transport, and upper drive

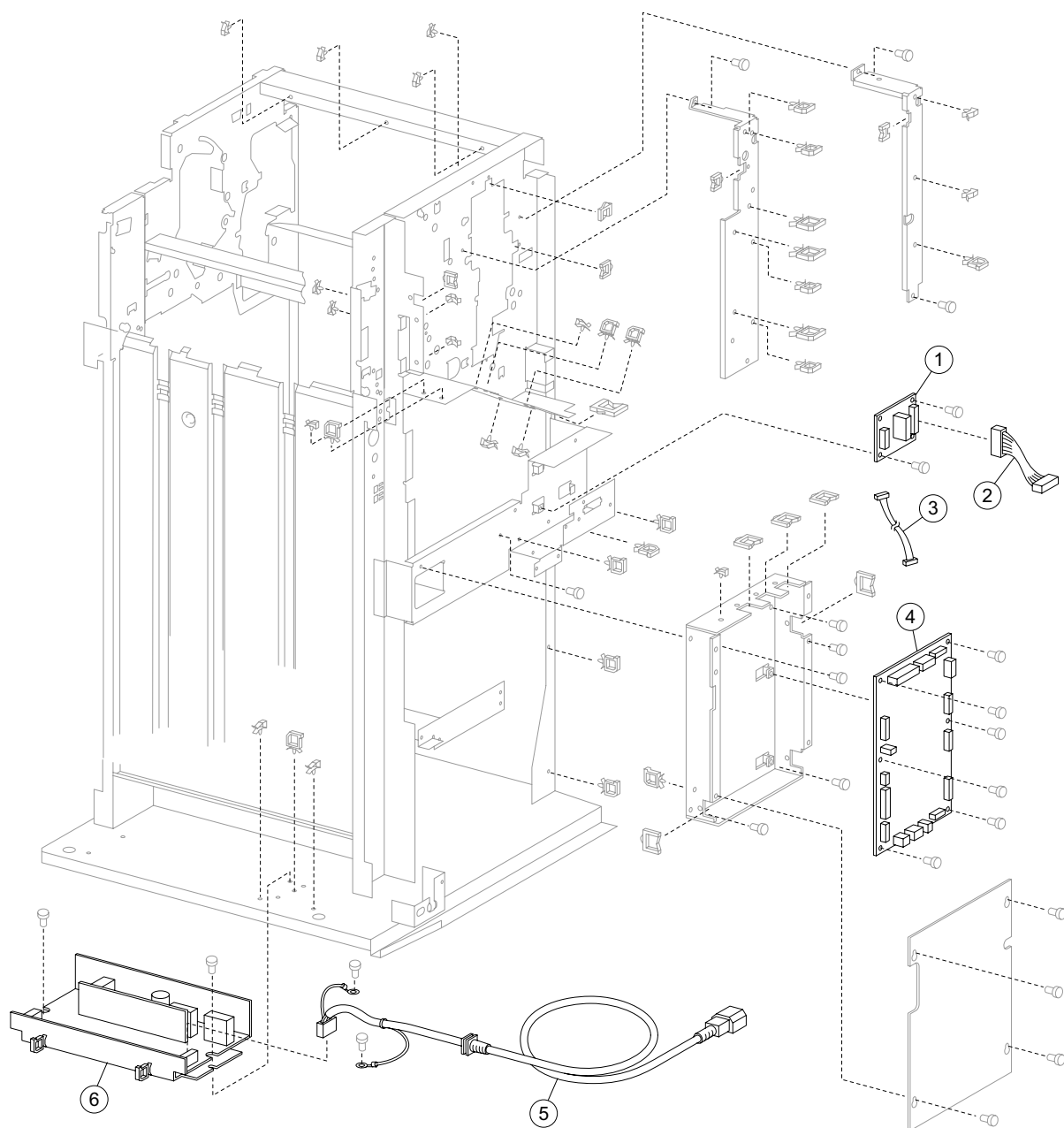




## Assembly 26: Finisher– transport and upper drive

Asm-Index	Part number	Units/option	Units/FRU	Description
26-1	40X0918	4	1	Upper media exit pinch roll assembly
2	40X0893	1	1	Sensor (upper media exit)
3	40X0919	1	1	Upper media exit roll assembly
4	40X0908	1	1	Sensor (upper media bin full)
5	40X0824	8	1	Magnetic catch
6	40X0888	15	1	Bushing 6 mm
7	40X0920	1	1	Upper pinch guide assembly (this comes assembled)
8	40X0921	1	1	Sensor (diverter gate)
9	40X0922	1	1	Diverter gate sensor upper cable assembly
10	40X0923	2	1	Upper media transport roll assembly
11	40X0924	1	1	Buffer roll drive pulley/gear 53/23T
12	40X0912	3	3	Belt tensioner bracket kit includes: <ul style="list-style-type: none"> <li>• Belt idler pulley</li> <li>• Spring</li> <li>• Belt tensioner bracket</li> </ul>
13	40X0925	2	1	Upper media transport roll drive pulley 20T
14	40X0897	3	1	Belt idler pulley
15	40X0913	4	1	Ball bearing 6 mm
16	40X0928	1	1	Belt (buffer transport) 19.8 cm
17	40X0929	1	1	Belt (exit) 27.7 cm
18	40X0926	1	1	Upper media exit roll drive pulley/gear, 20T/20T
19	40X0927	1	1	Upper media exit roll drive gear 20T
20	40X0910	1	1	Drive motor (buffer/transport)
21	40X0910	1	1	Drive motor (exit)

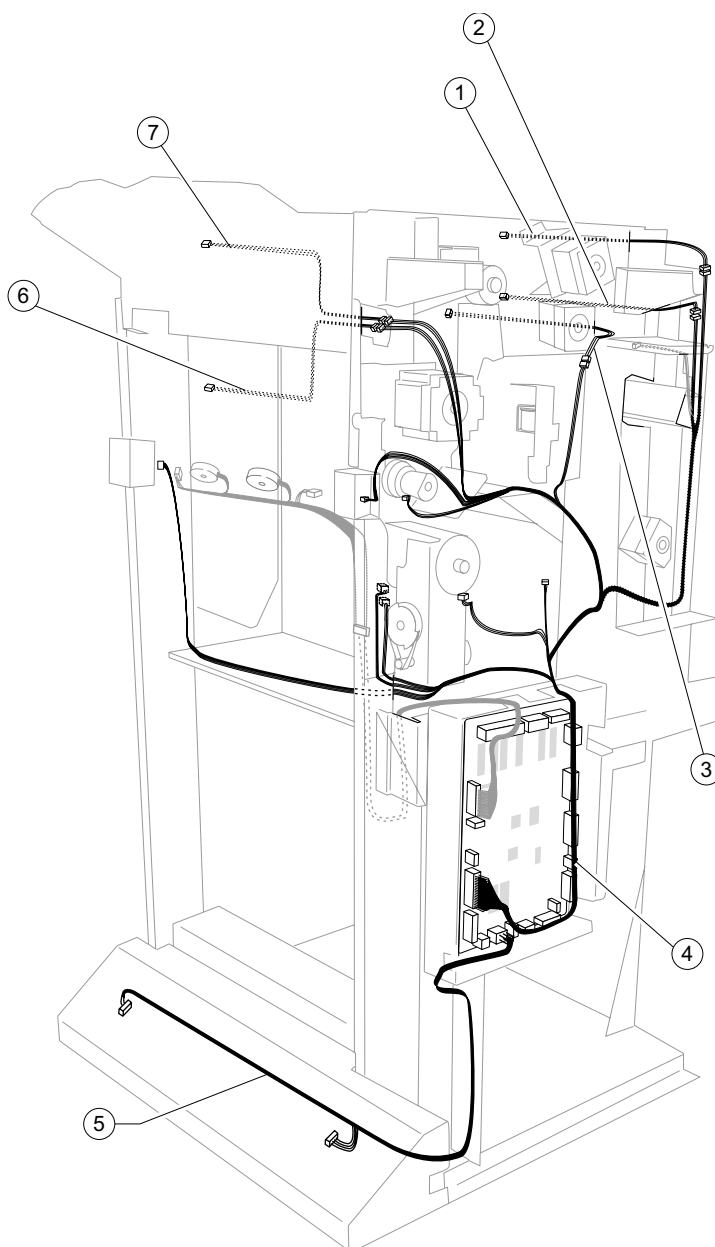
## Assembly 27: Finisher— electronics



## Assembly 27: Finisher– electronics

Asm-Index	Part number	Units/option	Units/FRU	Description
27-1	40X0931	1	1	Bridge unit interface card assembly
2	40X0932	1	1	Bridge unit connect cable assembly
3	40X0933	1	1	Bridge unit interface card cable assembly
4	40X0934	1	1	Finisher controller card assembly
5	40X0935	1	1	AC power cord assembly
6	40X0936	1	1	Finisher LVPS card assembly

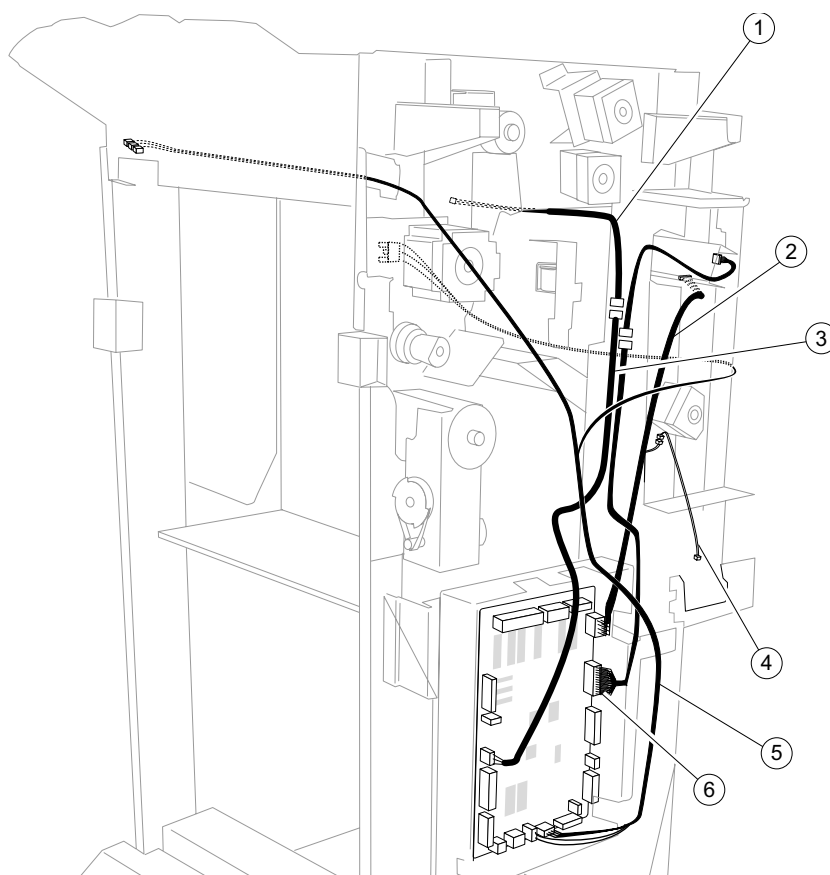
## Assembly 28: Finisher— cables 1



## Assembly 28: Finisher– cables 1

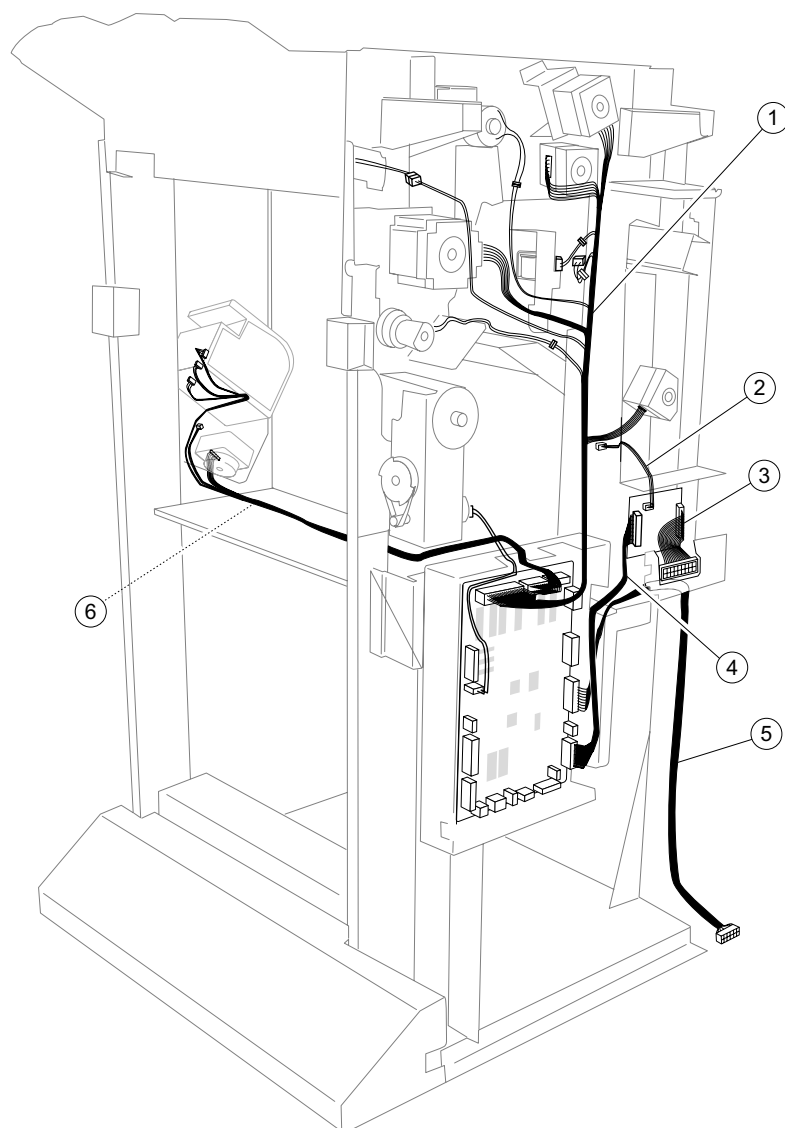
Asm-Index	Part number	Units/option	Units/FRU	Description
28-1	40X0942	1	1	Upper media exit sensor cable assembly
2	40X0940	1	1	Finisher media entrance sensor cable assembly
3	40X0941	1	1	Buffer path sensor cable assembly
4	40X0937	1	1	Main sensor cable assembly
5	40X0946	1	1	Finisher LVPS cable assembly
6	40X0892	1	3	Sensor (lower media exit) assembly <ul style="list-style-type: none"> <li>• Sensor (lower media exit)</li> <li>• Lower media exit sensor cable assembly</li> <li>• Bracket</li> </ul>
7	40X0943	1	1	Upper media bin full sensor cable assembly

## Assembly 29: Finisher– cables 2



Asm-Index	Part number	Units/ option	Units/ FRU	Description
29-1	40X0922	1	1	Diverter gate sensor upper cable assembly
2	40X0944	1	1	Punch main drive cable assembly
3	40X0950	1	1	Diverter gate sensor lower cable assembly
4	40X0865	1	1	Punch waste box set cable assembly
5	40X0947	1	1	Interlock switch cable assembly
6	40X0945	1	1	Punch main sensor cable assembly

## Assembly 30: Finisher– cables 3



Asm-Index	Part number	Units/option	Units/FRU	Description
30-1	40X0938	1	1	Main drive cable assembly
2	40X0930	1	1	Punch waste box full cable assembly
3	40X0932	1	1	Bridge unit connect cable assembly
4	40X0931	1	1	Bridge unit interface card assembly
5	40X0939	1	1	Finisher interface cable assembly
6	40X0870	1	1	Stapler unit cable assembly

7500-XXX



# Index

## A

accessing service menus **3-1**

acronyms **1-51**

## B

belts

buffer/transport **4-192**

entrance/paddle **4-177**

exit **4-190**

bridge unit

bridge unit interface card assembly **4-194**

drive motor **5-5**

entrance guide **4-91**

locations **5-5**

parts catalog **7-28**

pinch roller **4-95**

sensor (bridge unit media entrance) **4-93**

sensor (bridge unit media exit) **4-94**

sensor (bridge unit top cover interlock) **4-92**

bridge unit top cover assembly

parts catalog **7-29**

buffer diverter gate **4-169**

buffer diverter gate solenoid **4-180**

buffer pinch guide assembly **4-173**

buffer roll assembly **4-171**

## C

cables

locations **5-10**

parts catalog **7-54, 7-56, 7-57**

carriage lift belt left **4-107**

carriage lift belt right **4-109**

clamp paddle **4-153**

compiler unit

parts catalog **7-44**

component locations **5-1**

2TM components **5-1**

finisher components **5-5**

HCF components **5-3**

Configuration Menu

ADF Edge Erase **3-42**

available menus **3-33**

Disk Encryption **3-43**

Energy Conserve **3-41**

entering **3-33**

Envelope Prompts **3-43**

EVENT LOG **3-42**

Factory Defaults **3-41**

FB Edge Erase **3-42**

Font Sharpening **3-48**

Format Fax Storage **3-42**

Jobs On Disk **3-43**

Key Repeat Initial Delay **3-50**

Key Repeat Rate **3-50**

LES Applications **3-49**

Maintenance Counter Value **3-35**

Min Copy Memory **3-41**

Panel Menus **3-40**

Paper Prompts **3-43**

PPDS Emulation **3-40**

Print Quality Pages **3-38**

REGISTRATION **3-36**

Quick Test **3-37**

Require Standby **3-49**

Reset Maintenance Counter **3-35**

Short Edge Printing **3-49**

SIZE SENSING **3-39**

Tray Low Message **3-49**

Wipe Disk **3-46**

confirming the installation status **2-2**

covers

bridge unit top cover assembly **7-29**

finisher **7-32**

finisher front door assembly **4-104**

left lower cover **4-105**

left upper cover **4-106**

parts catalog **7-34**

rear lower cover **4-100**

rear upper cover **4-101**

right eject cover **4-98**

right lower LVPS cover **4-99**

top cover **4-96**

upper media bin front cover **4-102**

## D

diagnostic aids **3-1**

accessing service menus **3-1**

diagnostic information

confirming the installation status **2-2**

error code messages - 2X 500-sheet drawer (2TM) **2-3**

error code messages - finisher **2-50**

error code messages - HCF **2-36**

service checks - 2X 500-sheet drawer (2TM) **2-5**

service checks - finisher **2-58**

service checks - HCF **2-37**

start **2-1**

using service checks **2-1**

Diagnostic Menus

entering diagnostic menus **3-2**

Diagnostics Menus

available tests **3-2**

BASE SENSOR TEST **3-16**

DEVICE TESTS **3-17**

Disk Test/Clean **3-17**

Quick Disk Test **3-17**

DUPLEX TESTS

**3-10**

Quick Test **3-10**

**EVENT LOG 3-22**

- Clear the Event Log **3-24**
- Display the Event Log **3-22**
- Print the Event Log **3-24**

**FINISHER TESTS**

- Feed Tests **3-14**
- Hole Punch Test **3-14**
- Sensor Test **3-14**
- Staple Test **3-13**

**HARDWARE TESTS 3-7**

- Button Test **3-7**
- CACHE Test **3-9**
- DRAM Test **3-8**
- Panel Test **3-7**
- Parallel Wrap **3-9**

**INPUT TRAY TESTS**

- Feed Tests **3-10**
- Sensor Test **3-11**

**MOTOR TESTS 3-5****OUTPUT TRAY TESTS**

- Feed Tests **3-12**
- Feed To All Bins **3-12**
- Sensor Test **3-13**

**PRINT TESTS 3-6****PRINTER SETUP 3-19**

- Configuration ID **3-20**
- Defaults **3-19**
- Edge to Edge **3-21**
- Engine Setting 1 to 4 **3-20**
- Model Name **3-20**
- Parallel Strobe Adjustment **3-22**
- Permanent Page Count **3-20**
- Printed Page Count **3-20**
- Serial Number **3-20**

**SCANNER TESTS**

- ASIC Test **3-25**
- Feed Test **3-25**
- Scanner Manual Registration **3-26**
- Scanner manual registration factory defaults **3-30**
- Sensor Test **3-31**

**drive motors**

- bridge unit **5-5**
- buffer/transport **4-192**
- entrance/paddle **4-177**
- exit **4-190**

**E****eject unit**

- parts catalog **7-44**

**electronics**

- parts catalog **7-52**

**entrance drive**

- parts catalog **7-48**

**error code messages - 2X 500-sheet drawer (2TM) 2-3****error code messages - finisher 2-50****error code messages - HCF 2-36****error codes**

- 243.00 sensor (pre-feed) on jam (tray 3 media feed) **2-5**
- 243.01 sensor (tray 3 feed-out) on jam (tray 3 media feed) **2-6**
- 243.02 sensor (tray 2 feed-out) on jam (tray 3 media feed) **2-8**
- 243.03 sensor (registration) on jam (tray 3 media feed) **2-10**
- 243.04 sensor (tray 3 feed-out) static jam **2-12**
- 244.00 sensor (tray 4 feed-out) on jam (tray 4 media feed) **2-13**
- 244.01 sensor (tray 3 feed-out) on jam (tray 4 media feed) **2-14**
- 244.02 sensor (tray 2 feed-out) on jam (tray 4 media feed) **2-16**
- 244.03 sensor (registration) on jam (tray 4 media feed) **2-18**
- 244.04 sensor (pre-feed) on jam (tray 4 media feed) **2-20**
- 244.05 sensor (tray 4 feed-out) static jam **2-22**
- 245.00 sensor (tray 5 feed-out) on jam **2-37**
- 245.01 sensor (tray 2 feed-out) on jam **2-39**
- 245.02 sensor (registration) on jam **2-40**
- 245.03 sensor (tray 5 feed-out) static jam **2-42**
- 280.00 sensor (bridge unit media entrance) on jam **2-58**
- 280.01 sensor (bridge unit media entrance) static jam A **2-59**
- 280.02 sensor (bridge unit media entrance) static jam B **2-60**
- 281.00 sensor (bridge unit media exit) on jam A **2-62**
- 281.01 sensor (bridge unit media exit) on jam B **2-63**
- 281.02 sensor (bridge unit media exit) on jam C **2-65**
- 281.03 sensor (bridge unit media exit) static jam **2-66**
- 282.00 sensor (finisher media entrance) on jam **2-67**
- 282.01 sensor (finisher media entrance) static jam **2-69**
- 283.00 sensor (finisher buffer path) on jam A **2-70**
- 283.01 sensor (finisher buffer path) on jam B **2-74**
- 283.02 sensor (buffer path) static jam A **2-77**
- 283.03 sensor (buffer path) static jam B **2-78**
- 283.04 sensor (buffer path) static jam C **2-79**
- 284.00 sensor (lower media exit) off jam A **2-80**
- 284.01 sensor (lower media exit) on jam A **2-81**
- 284.02 sensor (lower media exit) on jam B **2-83**
- 284.03 sensor (lower media exit) on jam C **2-86**
- 284.04 sensor (lower media exit) off jam B **2-88**
- 284.05 sensor (lower media exit) static jam **2-90**
- 285.00 finisher eject set jam **2-92**
- 286.00 sensor (compiler media present) static jam **2-93**
- 287.00 sensor (upper media exit) on jam A **2-94**
- 287.01 sensor (upper media exit) off jam A **2-96**
- 287.02 sensor (upper media exit) on jam B **2-98**
- 287.03 sensor (upper media exit) on jam C **2-100**
- 287.04 sensor (upper media exit) off jam B **2-101**
- 287.05 sensor (upper media exit) static jam A **2-103**
- 287.06 sensor (upper media exit) static jam B **2-105**
- 287.07 sensor (upper media exit) static jam C **2-106**
- 288.00 sensor (diverter gate) on jam **2-107**
- 288.01 sensor (diverter gate) static jam (to top bin) A **2-110**

- 288.02 sensor (diverter gate) static jam (to top bin) B **2-111**
- 288.03 sensor (diverter gate) static jam (to top bin) C **2-112**
- 288.04 sensor (diverter gate) static jam (to stacker bin) A **2-113**
- 288.05 sensor (diverter gate) static jam (to stacker bin) B **2-115**
- 288.06 sensor (diverter gate) static jam (to stacker bin) C **2-116**
- 943.00 tray 3 lift up / no tray failure **2-23**
- 944.00 tray 4 lift up / no tray failure **2-24**
- 945.00 HCF unit media tray lift failure **2-44**
- 945.01 HCF unit NVM R/W failure **2-45**
- 980.00 2TM/TTM controller card assembly communication failure **2-26**
- 980.01 tray 5 HCF communication failure **2-45**
- 980.02 finisher communication failure **2-117**
- 981.00 stacker bin fail **2-118**
- 981.01 stacker bin upper limit failure **2-119**
- 981.02 stacker bin lower limit failure **2-121**
- 982.00 sensor (front tamper HP) on failure **2-124**
- 982.01 sensor (front tamper HP) off failure **2-125**
- 983.00 sensor (rear tamper HP) on failure **2-126**
- 983.01 sensor (rear tamper HP) off failure **2-128**
- 984.00 sensor (punch unit HP) on failure **2-129**
- 984.01 sensor (punch unit HP) off failure **2-130**
- 985.00 sensor (punch carriage shift HP) on failure **2-131**
- 985.01 sensor (punch carriage shift HP) off failure **2-133**
- 986.00 sensor (media eject clamp HP) on failure **2-134**
- 986.01 sensor (media eject clamp HP) off failure **2-135**
- 987.00 sensor (media eject shaft HP) on failure **2-136**
- 988.00 sensor (punch unit side reg) on failure **2-139**
- 988.01 sensor (media eject shaft HP) off failure **2-138**
- 988.01 sensor (punch unit side reg) off failure **2-141**
- 989.00 stapler unit failure **2-143**
- 990.00 sensor (stapler carriage HP) on failure **2-144**
- 990.01 sensor (stapler carriage HP) off failure **2-145**
- 995.00 finisher NVRAM R/W failure **2-146**
- 996.00 finisher type failure **2-146**
- 999.00 finisher engine/RIP functional failure **2-146**
- error messages
  - 2TM/TTM left door assembly open **2-28**
  - bridge unit top cover open **2-147**
  - bridge unit top door open **2-150**
  - finisher eject cover open **2-150**
  - finisher front door open **2-149**
  - finisher upper media bin full **2-150**
  - HCF top door assembly open **2-46**
  - HCF unit docking failure or tray 5 set failure **2-47**
  - media size mismatch in width **2-30**
  - no media in the select media tray **2-29**
  - no media in the selected media tray **2-48**
  - no punch waste box **2-151**
  - punch waste box full **2-152**
  - stacker lower safety failure **2-157**
  - stacker media bin full (mix size) **2-153**
  - stacker media bin full (no mix) **2-155**
  - stacker set over count failure **2-158**
  - staple cartridge empty **2-159**
  - tray 3 media size failure **2-26**
  - tray 3 media size mismatch in length **2-31**
  - tray 4 media size failure **2-27**
  - tray 4 media size mismatch in length **2-33**
- ESD-sensitive parts **4-1**
- exiting Configuration Menu **3-50**
- exiting Diagnostics Menu **3-32**
- F**
  - finisher controller card assembly **4-195**
  - Finisher diverter gate **4-168**
  - front door
    - parts catalog **7-34**
- G**
  - general information **1-1**
- L**
  - left lower cover **4-105**
  - left upper cover **4-106**
  - locations
    - bridge unit assembly **5-5**
    - buffer, upper exit, lower exit and drive motors **5-9**
    - cables **5-10**
    - diverter and media eject **5-8**
    - electronic component diagram **5-13**
    - finisher control card assembly **5-9**
    - media eject and media compiler **5-8**
    - punch unit **5-7**
    - stacker lift and staple **5-6**
  - low voltage power supply (LVPS)
    - removal **4-196**
  - lower exit drive
    - parts catalog **7-46**
  - lower media exit roll assembly **4-159**
  - lower pinch guide assembly **4-167**
  - lubrication specifications **6-1**
- M**
  - media compiler unit assembly **4-146**
  - media diverter gate solenoid **4-179**
  - media eject
    - parts catalog **7-42**
  - media eject clamp motor assembly **4-143**
  - media eject clutch **4-154**
  - media eject motor assembly **4-155**
  - media eject shaft assembly **4-151**
  - media eject unit assembly
    - removal **4-136**
  - media entrance pinch guide assembly **4-174**
  - media entrance roll assembly **4-176**

**O**

## options and features

- 2X 500-sheet drawer (2TM) **1-1**
  - driving force transmission path **1-2**
  - main components **1-7**
  - media transport **1-3**
  - media tray assembly **1-5**
- description **1-1**
- finisher **1-21**
  - compiler unit assembly **1-35**
  - components **1-21**
  - features **1-24**
  - functions of sensors along the media path **1-30**
  - media size and weight **1-22**
  - media transport **1-24**
  - power supply and interlock **1-50**
  - punch unit **1-32**
  - stacker media bin **1-46**
  - stacker media bin block to stack media **1-22**
  - stapler **1-41**
  - upper media bin **1-45**
  - weight **1-21**
- high capacity feed **1-9**
  - HCF media feed unit assembly operation **1-12**
  - HCF media feed unit assembly sensor/motor functions **1-14**
  - HCF media transport roll assembly operation **1-13**
  - media feeding **1-10**
  - status monitoring **1-15**

**P**paddle and roll exit assembly **4-163**parts catalog **7-1**

- 2X 500-sheet drawer (2TM)– covers **7-3**
- 2X 500-sheet drawer (2TM)– drive and electrical **7-13**
- 2X 500-sheet drawer (2TM)– left door **7-11**
- 2X 500-sheet drawer (2TM)– media feed unit **7-9**
- 2X 500-sheet drawer (2TM)– media tray **7-7**
- 2X 500-sheet drawer (2TM)– media tray and media feed units **7-5**
- bridge unit **7-28**
- bridge unit lower assembly **7-30**
- bridge unit top cover assembly **7-29**
- buffer **7-48, 7-50**
- cables **7-54, 7-56, 7-57**
- covers **7-32**
- covers and front door **7-34**
- eject and compiler unit **7-44**
- electronics **7-52**
- entrance drive **7-48**
- high capacity feed (HCF)– covers and media tray **7-15**
- high capacity feed (HCF)– electrical **7-27**
- high capacity feed (HCF)– media feed unit **7-21, 7-23**
- high capacity feed (HCF)– media tray **7-17**
- high capacity feed (HCF)– media tray lift **7-19**
- high capacity feed (HCF)– top door and transport **7-25**
- how to use this parts catalog **7-1**
- lower exit drive **7-46**
- media eject **7-42**

- punch **7-38**
- stacker bin lift **7-36**
- stapler **7-40**
- transport **7-50**
- upper drive **7-50**

## punch unit

- punch carriage assembly **4-118**
- punch carriage shift motor assembly **4-120**
- punch media stop assembly **4-123**
- punch unit assembly **4-122**
- punch unit motor assembly **4-124**

**R**

- rear upper cover **4-101**
- removal procedures **4-2**
- removals– 2X 500-sheet drawer (2TM) **4-3**
  - 2TM/TTM controller card assembly **4-43**
  - 2TM/TTM left door assembly **4-6**
- caster **4-7**
- drive motor assembly **4-45**
- feed roll **4-28**
- feed roll one-way clutch **4-29**
- feed roll one-way gear 22 tooth **4-30**
- feed unit drive gear - 27 tooth **4-36**
- foot cover **4-4**
- left cover **4-5**
- left door pinch roll assembly **4-41**
- lift coupling assembly **4-18**
- lower media transport roll assembly **4-40**
- media feed lift motor **4-17**
- media feed unit assembly (tray 3) **4-9**
- media feed unit assembly (tray 4) **4-11**
- media feed unit drive gear - 13 tooth **4-21**
- media feed unit drive gear - 28/21 tooth **4-26**
- media feed unit drive gear - 29 tooth **4-27**
- media out actuator **4-22**
- media tray end guide **4-14**
- media tray guides **4-12**
- pick roll **4-34**
- pick roll drive gear 25 tooth **4-35**
- pick roll idler gear - 33 tooth **4-33**
- rear cover **4-5**
- right cover **4-4**
- sensor (media level) **4-23**
- sensor (media out) **4-24**
- sensor (pre-feed) **4-25**
- sensor (tray 3 feed-out) **4-37**
- sensor (tray 4 feed-out) **4-38**
- separation roll **4-32**
- separation roll one-way friction clutch **4-31**
- switch (2TM/TTM left door interlock) **4-42**
- switch (media size) assembly **4-8**
- top cover **4-3**
- transport clutch **4-44**
- tray lift gear group **4-16**
- tray lift one-way gear clutch assembly **4-19**
- upper media transport roll **4-39**

## removals— finisher

(sensor bridge unit top cover interlock) **4-92**  
 belt (buffer/transport) **4-192**  
 belt (entrance/paddle) **4-177**  
 belt (exit) **4-190**  
 bridge unit assembly **4-81**  
 bridge unit drive belt **4-85**  
 bridge unit drive motor assembly **4-90**  
 bridge unit drive pulley **4-85**  
 bridge unit entrance guide **4-91**  
 bridge unit idler rolls **4-88**  
 bridge unit interface card assembly **4-194**  
 bridge unit left shaft assembly **4-87**  
 bridge unit pinch roller **4-95**  
 bridge unit rear cover **4-83**  
 bridge unit right shaft assembly **4-86**  
 bridge unit top cover assembly **4-84**  
 bridge unit transport belts **4-89**  
 buffer diverter gate **4-169**  
 buffer diverter gate solenoid **4-180**  
 buffer pinch guide assembly **4-173**  
 buffer roll assembly **4-171**  
 carriage lift belt left **4-107**  
 carriage lift belt right **4-109**  
 clamp paddle **4-153**  
 drive motor (buffer/transport) **4-192**  
 drive motor (entrance/paddle) **4-177**  
 drive motor (exit) assembly **4-190**  
 finisher **4-79**  
 finisher controller card assembly **4-195**  
 finisher diverter gate solenoid **4-179**  
 finisher front door assembly **4-104**  
 finisher LVPS **4-196**  
 left lower cover **4-105**  
 left upper cover **4-106**  
 lower media exit roll assembly **4-159**  
 lower pinch guide assembly **4-167**  
 media compiler unit assembly **4-146**  
 media diverter gate **4-168**  
 media eject clamp motor assembly **4-143**  
 media eject clutch **4-154**  
 media eject motor assembly **4-155**  
 media eject shaft assembly **4-151**  
 media eject unit assembly **4-136**  
 media entrance pinch guide assembly **4-174**  
 media entrance roll assembly **4-176**  
 paddle and roll exit assembly **4-163**  
 punch carriage assembly **4-118**  
 punch carriage shift motor assembly **4-120**  
 punch media stop assembly **4-123**  
 punch unit assembly **4-122**  
 punch unit motor assembly **4-124**  
 rear lower cover **4-100**  
 rear upper cover **4-101**  
 right eject cover **4-98**  
 right lower low voltage power supply (LVPS) cover **4-99**  
 sensor (bridge unit media entrance) **4-93**  
 sensor (bridge unit media exit) **4-94**  
 sensor (buffer path) **4-170**

sensor (compiler media in) **4-150**  
 sensor (diverter gate) **4-187**  
 sensor (finisher media entrance) **4-175**  
 sensor (front tamper HP) **4-149**  
 sensor (lower media exit) **4-157**  
 sensor (media eject clamp HP) **4-144**  
 sensor (media eject shaft HP) **4-156**  
 sensor (punch cam front) **4-126**  
 sensor (punch carriage shift HP) **4-128**  
 sensor (punch hole select) **4-126**  
 sensor (punch unit HP) **4-126**  
 sensor (punch unit motor encoder) **4-125**  
 sensor (punch unit side registration pair) with bracket **4-121**  
 sensor (punch waste box full) **4-130**  
 sensor (punch waste box set) **4-129**  
 sensor (rear tamper HP) **4-149**  
 sensor (stacker bin level 1) **4-111**  
 sensor (stacker bin level 2) **4-111**  
 sensor (stacker bin level encoder) **4-112**  
 sensor (stacker bin no media) **4-113**  
 sensor (stacker bin upper limit) **4-113**  
 sensor (stapler carriage HP) **4-135**  
 sensor (upper media bin full) **4-185**  
 sensor (upper media exit) **4-181**  
 stacker bin lift motor assembly **4-115**  
 stacker media bin assembly **4-99**  
 stapler unit assembly **4-133**  
 stapler unit frame **4-131**  
 sub paddle **4-140**  
 sub paddle drive shaft assembly **4-141**  
 switch (eject cover interlock) **4-145**  
 switch (finisher front door interlock) **4-103**  
 top cover **4-96**  
 upper media bin assembly **4-97**  
 upper media bin front cover **4-102**  
 upper media exit pinch roll assembly **4-181**  
 upper media exit roll assembly **4-182**  
 upper media transport roll assembly **4-188**  
 upper pinch guide assembly **4-186**

removals— high capacity feeder (HCF)  
 HCF caster **4-50**  
 HCF controller card assembly **4-78**  
 HCF feed lift gear bracket **4-59**  
 HCF feed lift motor **4-58**  
 HCF feed roll assembly **4-69**  
 HCF left cover **4-51**  
 HCF lift cables **4-55**  
 HCF media feed unit assembly **4-58**  
 HCF media long edge guide assembly **4-53**  
 HCF media out actuator **4-64**  
 HCF media transport motor assembly **4-76**  
 HCF media transport roll assembly **4-75**  
 HCF media tray assembly **4-54**  
 HCF media tray front cover **4-52**  
 HCF media tray lift coupling assembly **4-61**  
 HCF pick roll assembly **4-68**  
 HCF pick roll shaft assembly **4-67**  
 HCF pick solenoid assembly **4-62**

HCF rear cover **4-51**  
 HCF right cover **4-47**  
 HCF sensor (HCF media size) **4-49**  
 HCF sensor (HCF media tray set) **4-48**  
 HCF sensor (media level) **4-65**  
 HCF sensor (media out) **4-66**  
 HCF sensor (pre-feed) **4-63**  
 HCF sensor (tray 5 feed-out) **4-74**  
 HCF separation gear group **4-60**  
 HCF separation roll assembly **4-71**  
 HCF separation roll shaft assembly **4-70**  
 HCF switch (top door interlock) **4-73**  
 HCF switch (unit docking interlock) **4-77**  
 HCF top cover **4-46**  
 HCF top door assembly **4-72**  
 HCF tray lift gear bracket **4-57**  
 repair information **4-1**

## S

safety information **xiii**  
 safety inspection guide **6-1**  
 sensors  
     bridge unit media entrance **4-93, 5-5**  
     bridge unit media exit **4-94, 5-5**  
     bridge unit top cover interlock **4-92, 5-5**  
     buffer path **4-170**  
     compiler media in **4-150**  
     diverter gate **4-187**  
     finisher media entrance) **4-175**  
     front tamper HP **4-149**  
     lower media exit **4-157, 5-8**  
     media eject clamp HP **4-144, 5-8**  
     media eject shaft HP **4-156**  
     punch cam front **4-126, 5-7**  
     punch carriage shift HP **4-128, 5-7**  
     punch hole select **4-126, 5-7**  
     punch unit HP **4-126, 5-7**  
     punch unit motor encoder **4-125**  
     punch unit side reg 1 **5-7**  
     punch unit side reg 2 **5-7**  
     punch unit side registration pair with bracket **4-121**  
     punch waste box full **4-130, 5-7**  
     punch waste box set **4-129**  
     punch waste box set) **5-7**  
     rear tamper HP **4-149**  
     stacker bin level 1 **4-111, 5-6**  
     stacker bin level 2 **4-111, 5-6**  
     stacker bin level encoder **4-112**  
     stacker bin no media **4-113**  
     stacker bin upper limit **4-113, 5-6**  
     stapler carriage HP **4-135, 5-6**  
     upper media bin full **4-185**  
     upper media exit **4-181**  
 service checks - 2X 500-sheet drawer (2TM) **2-5**  
 service checks - finisher **2-58**  
 service checks - HCF **2-37**

stacker unit  
     locations **5-6**  
     media bin assembly **4-99**  
     stacker bin lift motor assembly **4-115**  
 staple unit  
     locations **5-6**  
     parts catalog **7-40**  
     stapler carriage motor assembly **5-6**  
     stapler unit assembly **4-133**  
     stapler unit frame **4-131**  
 start **2-1**  
 sub paddle  
     removals **4-140**  
 sub paddle drive shaft assembly **4-141**  
 switches  
     eject cover interlock **4-145, 5-8**  
     finisher front door interlock **4-103, 5-6**

## T

theory  
     2X 500-sheet drawer (2TM) **1-2**  
     finisher **1-24**  
 tools required **1-51**

## U

upper media bin assembly **4-97**  
 upper media exit pinch roll assembly **4-181**  
 upper media exit roll assembly **4-182**  
 upper media transport roll assembly **4-188**  
 upper pinch guide assembly **4-186**



## Part number index

P/N	Description	Page
40X0553	Switch (HCF top door interlock) -----	7-25
40X0569	Media tray catch kit -----	7-5
40X0570	Switch (media size) -----	7-5
40X0572	Vertical turn guide -----	7-5
40X0573	Media tray assembly (this comes assembled) -----	7-7
40X0574	Media tray front cover -----	7-7
40X0576	Media tray side guide kit -----	7-7
40X0577	Media tray side guide actuator kit -----	7-7
40X0578	Media tray end guide kit -----	7-7
40X0579	Media tray end guide actuator kit -----	7-7
40X0580	Media tray lift gear kit -----	7-7
40X0581	Media feed unit assembly -----	7-5
40X0581	Media feed unit assembly (this comes assembled) -----	7-9
40X0582	Media feed lift motor -----	7-9
40X0583	Tray lift coupling kit -----	7-9
40X0585	Media feed drive gear kit -----	7-9
40X0586	Media feed unit front guide kit -----	7-9
40X0587	Media out actuator -----	7-9
40X0588	Sensor (media level) -----	7-9
40X0588	Sensor (media out) -----	7-9
40X0589	Sensor (pre-feed) -----	7-9, 7-23
40X0590	Pick roll assembly spring -----	7-9
40X0591	Feed roll one-way clutch kit -----	7-9
40X0593	Separation roll friction clutch kit -----	7-9
40X0594	Feed unit roll kit -----	7-9
40X0610	Switch (2TM/TTM left door interlock) -----	7-11
40X0687	Top cover -----	7-3
40X0688	Foot cover -----	7-3
40X0689	Right cover -----	7-3
40X0690	Left Cover -----	7-3
40X0691	Locking caster -----	7-3
40X0692	Sensor (tray 3 feed-out) -----	7-11
40X0693	Sensor cable kit -----	7-11
40X0694	Sensor (tray 4 feed-out) -----	7-11
40X0695	2TM/TTM media transport roll assembly -----	7-11
40X0696	2TM/TTM left door pinch roll assembly (this comes assembled) -----	7-11
40X0697	2TM/TTM left door support strap -----	7-11
40X0699	2TM/TTM clutch kit -----	7-13
40X0700	2TM/TTM drive motor -----	7-13
40X0701	2TM drive gear kit -----	7-13
40X0702	2TM main cable assembly -----	7-13
40X0733	2TM/TTM left door assembly (this comes assembled) -----	7-11
40X0738	Top cover -----	7-15
40X0739	Sensor (HCF media size L) -----	7-15
40X0739	Sensor (HCF media size R) -----	7-15
40X0739	Sensor (HCF media tray set) -----	7-15
40X0740	Docking latch kit -----	7-17
40X0740	HCF docking latch kit -----	7-15
40X0741	Caster -----	7-15
40X0742	Left cover -----	7-15
40X0743	Rear cover -----	7-15
40X0745	HCF docking bracket kit -----	7-15
40X0746	Inner front cover -----	7-15
40X0747	HCF media tray front cover assembly (this comes assembled) -----	7-17

40X0749	HCF media long edge guide kit (this comes assembled) -----	7-17
40X0750	HCF rear media edge guide kit -----	7-19
40X0751	HCF front media guide kit -----	7-19
40X0752	HCF separation pad -----	7-19
40X0753	HCF media tray lift gear bracket assembly (this comes assembled) -----	7-19
40X0754	HCF media tray lift shaft kit -----	7-19
40X0756	HCF lift cable large pulley kit -----	7-19
40X0757	HCF lift cable kit -----	7-19
40X0758	HCF feed unit assembly (this comes assembled) -----	7-21, 7-23
40X0759	HCF feed lift motor -----	7-21
40X0760	Feed lift gear bracket assembly -----	7-21
40X0761	HCF separation drive gear kit -----	7-21
40X0762	HCF pick solenoid assembly -----	7-21
40X0763	HCF media tray lift coupling -----	7-21
40X0764	HCF feed unit latch kit -----	7-23
40X0765	HCF pick roll idler gear -----	7-23
40X0766	HCF feed unit cable assembly -----	7-21, 7-23
40X0767	HCF media out actuator -----	7-23
40X0768	Sensor (media level) -----	7-23
40X0768	Sensor (media out) -----	7-23
40X0769	HCF pick roll shaft kit -----	7-23
40X0770	HCF feed unit roll kit (3) -----	7-23
40X0771	HCF separation roll shaft assembly (this comes assembled) -----	7-21
40X0773	HCF top door kit -----	7-25
40X0774	Sensor (tray 5 feed-out) -----	7-25
40X0775	HCF media transport roll kit -----	7-25
40X0776	HCF transport motor -----	7-25
40X0777	Switch (HCF unit docking interlock) -----	7-25
40X0778	HCF controller card assembly -----	7-27
40X0779	HCF main cable assembly -----	7-27
40X0810	Bridge unit assembly docking screw -----	7-28
40X0811	Bridge unit assembly -----	7-28
40X0812	Bridge unit pinch roll kit -----	7-29
40X0813	Bridge unit top cover assembly -----	7-29
40X0814	Bridge unit rear cover -----	7-31
40X0815	Bridge unit drive belt -----	7-31
40X0816	Bridge unit drive pulley -----	7-31
40X0817	Bridge unit drive motor -----	7-31
40X0818	Bridge unit entrance guide kit -----	7-31
40X0819	Ball bearing 4 mm -----	7-31
40X0820	Transport belts -----	7-31
40X0821	Idler roll kit -----	7-31
40X0822	Bridge unit right shaft kit -----	7-31
40X0823	Bridge unit left shaft assembly -----	7-31
40X0824	Magnetic catch -----	7-31, 7-49, 7-51
40X0825	Sensor (bridge unit top cover interlock) -----	7-31
40X0825	Sensor (compiler media in) -----	7-45
40X0825	Sensor (media eject clamp HP) -----	7-43
40X0825	Sensor (media eject shaft HP) -----	7-45
40X0826	Sensor (bridge unit media exit) -----	7-31
40X0827	Sensor (bridge unit media entrance) -----	7-31
40X0828	Bridge unit cable assembly -----	7-31
40X0829	Top cover -----	7-33
40X0830	Upper media bin vertical cover -----	7-33
40X0831	Upper media bin assembly -----	7-33
40X0832	Right eject cover -----	7-33
40X0833	Stacker media bin -----	7-33
40X0834	Right lower LVPS cover -----	7-33
40X0835	Caster -----	7-33



40X0836	Rear lower cover	7-33
40X0837	Bridge unit hookup cover	7-33
40X0838	Rear upper cover	7-33
40X0839	Upper media bin front cover	7-35
40X0840	Switch (finisher front door interlock)	7-35
40X0841	Finisher front door assembly	7-35
40X0842	Finisher docking latch kit	7-35
40X0843	Finisher docking bracket kit	7-35
40X0844	Left lower cover	7-35
40X0845	Left upper cover	7-35
40X0846	Carriage lift belt kit	7-37
40X0847	Sensor (stacker bin level)	7-37
40X0848	Ball bearing 10 mm	7-37
40X0849	Stacker slip clutch pulley kit	7-37
40X0850	Sensor (front tamper HP)	7-45
40X0850	Sensor (punch cam front)	7-39
40X0850	Sensor (punch carriage shift HP)	7-39
40X0850	Sensor (punch hole select)	7-39
40X0850	Sensor (punch unit HP)	7-39
40X0850	Sensor (punch unit motor encoder)	7-39
40X0850	Sensor (rear tamper HP)	7-45
40X0850	Sensor (stacker bin level encoder)	7-37
40X0850	Sensor (stacker bin no media)	7-37
40X0850	Sensor (stacker bin upper limit)	7-37
40X0850	Sensor (stapler carriage HP)	7-41
40X0851	Stacker bin lift motor assembly	7-37
40X0853	Punch unit cable assembly	7-39
40X0854	Punch carriage shift motor assembly	7-39
40X0855	Punch carriage assembly	7-39
40X0856	Sensor (punch unit side reg) assembly	7-39
40X0857	2/3 punch unit assembly (this comes assembled)	7-39
40X0858	2/4 punch unit assembly (this comes assembled)	7-39
40X0859	Punch media stopper assembly	7-39
40X0860	Punch unit motor assembly	7-39
40X0861	Sensor (punch waste box set)	7-39
40X0862	Punch waste box	7-39
40X0864	Sensor (punch waste box full)	7-39
40X0865	Punch waste box set cable assembly	7-39, 7-56
40X0866	Staple cartridge	7-41
40X0867	Stapler unit assembly	7-41
40X0868	Stapler unit cover	7-41
40X0869	Stapler carriage kit	7-41
40X0870	Stapler unit cable assembly	7-41, 7-57
40X0871	Stapler carriage motor assembly	7-41
40X0872	Stapler carriage rack gear	7-41
40X0873	Media eject unit assembly (this comes assembled)	7-43
40X0874	Sub paddle	7-43
40X0875	Sub paddle drive shaft kit	7-43
40X0876	Media eject clamp motor	7-43
40X0877	Eject clamp lever assembly	7-43
40X0878	Bushing 8 mm	7-45
40X0879	Sub paddle/entrance drive gear 23T	7-43, 7-49
40X0880	6 mm bushing	7-9
40X0881	Eject clamp gear kit	7-43
40X0882	Switch (eject cover interlock)	7-43
40X0883	Media compiler unit assembly (this comes assembled)	7-45
40X0886	Media eject shaft assembly	7-45
40X0887	Clamp paddle	7-45
40X0888	6 mm bushing	7-49, 7-51

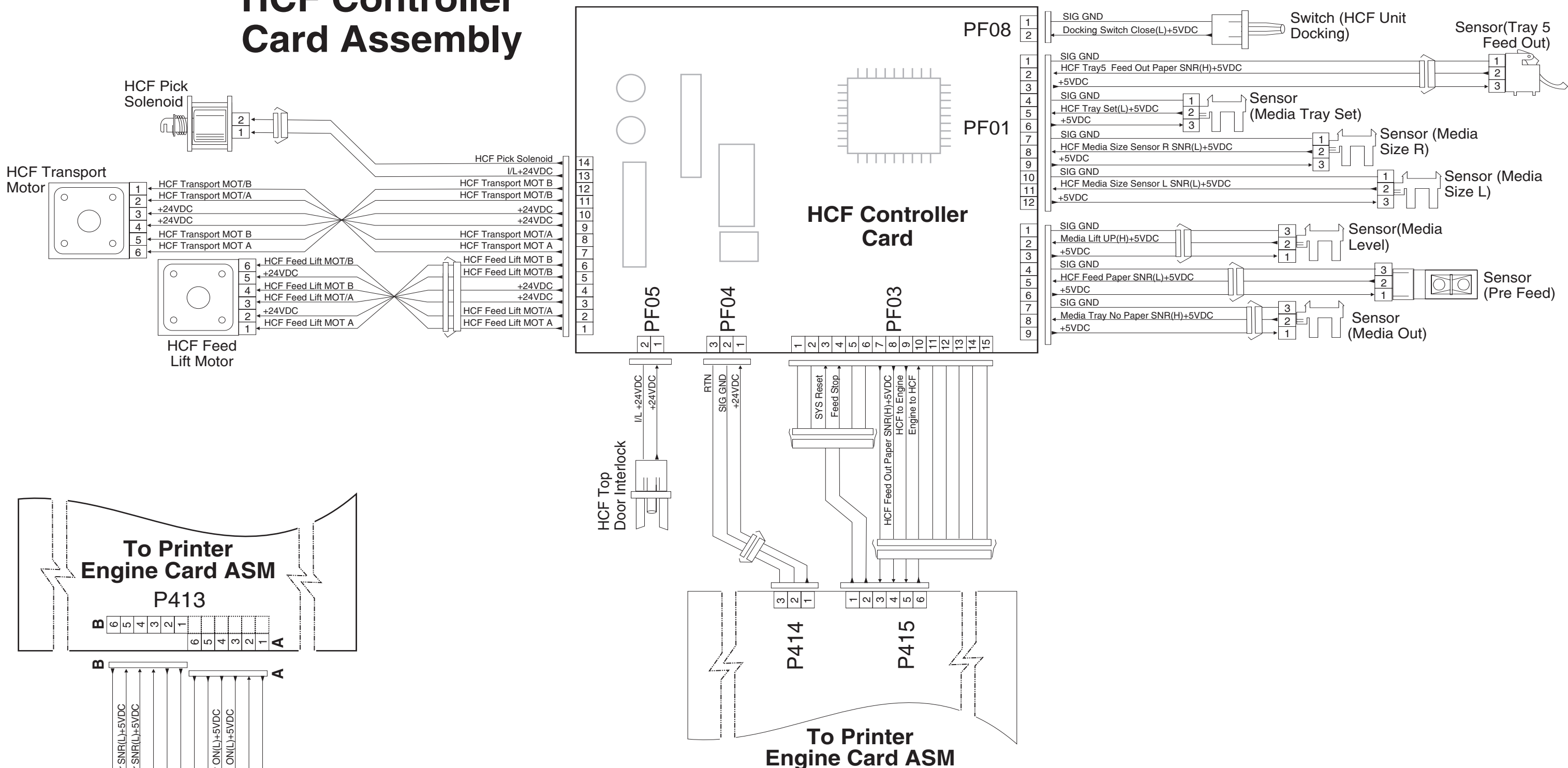
40X0888	Bushing 6 mm	7-43, 7-45, 7-47
40X0889	Media eject shaft gear 39T	7-45
40X0890	Media eject clutch kit	7-45
40X0891	Media eject motor assembly	7-45
40X0892	Sensor (lower media exit) assembly	7-55
40X0892	Sensor (lower media exit) with bracket	7-47
40X0893	Sensor (buffer path)	7-49
40X0893	Sensor (lower media exit)	7-47
40X0893	Sensor (upper media exit)	7-51
40X0894	Static eliminator brush	7-47
40X0895	Lower media exit roll assembly	7-47
40X0896	Main paddle shaft kit	7-47
40X0897	Belt idler pulley	7-47, 7-49, 7-51
40X0898	Lower exit roll drive pulley kit	7-47
40X0899	Main paddle idler gear kit	7-47
40X0900	Main paddle drive pulley/gear 44/20T	7-47
40X0901	Lower pinch guide assembly (this comes assembled)	7-49
40X0902	Finisher diverter gate	7-49
40X0903	Buffer diverter gate	7-49
40X0904	Buffer upper guide assembly	7-49
40X0905	Buffer roll assembly	7-49
40X0906	Buffer pinch guide assembly (this comes assembled)	7-49
40X0907	Media entrance pinch guide assembly (this comes assembled)	7-49
40X0908	Sensor (finisher media entrance)	7-49
40X0908	Sensor (upper media bin full)	7-51
40X0909	Media entrance roll assembly	7-49
40X0910	Drive motor (buffer/transport)	7-51
40X0910	Drive motor (entrance/paddle)	7-49
40X0910	Drive motor (exit)	7-51
40X0911	Belt, entrance/paddle, 31.6 cm	7-49
40X0912	Belt tensioner bracket kit	7-51
40X0912	Belt tensioner pulley kit	7-49
40X0913	6 mm ball bearing	7-21, 7-47, 7-49, 7-51
40X0914	Media entrance roll drive pulley 20T	7-49
40X0915	Buffer roll drive gear 46T	7-49
40X0916	Media diverter solenoid kit	7-49
40X0917	Buffer diverter solenoid kit	7-49
40X0918	Upper media exit pinch roll assembly	7-51
40X0919	Upper media exit roll assembly	7-51
40X0920	Upper pinch guide assembly (this comes assembled)	7-51
40X0921	Sensor (diverter gate)	7-51
40X0922	Diverter gate sensor upper cable assembly	7-51, 7-56
40X0923	Upper media transport roll assembly	7-51
40X0924	Buffer roll drive pulley/gear 53/23T	7-51
40X0925	Upper media transport roll drive pulley 20T	7-51
40X0926	Upper media exit roll drive pulley/gear, 20T/20T	7-51
40X0927	Upper media exit roll drive gear, 20T	7-51
40X0928	Belt (buffer transport), 19.8 cm	7-51
40X0929	Belt (exit) 27.7 cm	7-51
40X0930	Punch waste box full cable assembly	7-39, 7-57
40X0931	Bridge unit interface card assembly	7-53, 7-57
40X0932	Bridge unit connect cable assembly	7-53, 7-57
40X0933	Bridge unit interface card cable assembly	7-53
40X0934	Finisher controller card assembly	7-53
40X0935	AC power cord assembly	7-53
40X0936	Finisher LVPS card assembly	7-53
40X0937	Main sensor cable assembly	7-55
40X0938	Main drive cable assembly	7-57
40X0939	Finisher interface cable assembly	7-57

40X0940	Finisher media entrance sensor cable assembly	7-55
40X0941	Buffer path sensor cable assembly	7-55
40X0942	Upper media exit sensor cable assembly	7-55
40X0943	Upper media bin full sensor cable assembly	7-55
40X0944	Punch main drive cable assembly	7-56
40X0945	Punch main sensor cable assembly	7-56
40X0946	Finisher LVPS cable assembly	7-55
40X0947	Interlock switch cable assembly	7-56
40X0950	Diverter gate sensor lower cable assembly	7-56
40X0952	6 mm bushing	7-9
40X0965	Media tray separation pad	7-7
40X0966	Media tray separation brush	7-7, 7-19
40X0967	Media tray lift one-way clutch/gear kit	7-9
40X0968	Media tray lift one-way shaft	7-9
40X0969	Pick roll idler gear	7-9
40X0970	Pick roll drive gear	7-9
40X1388	Bushing 8 mm	7-43
40X2735	2TM/TTM controller card assembly	7-13

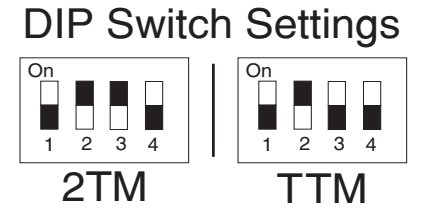
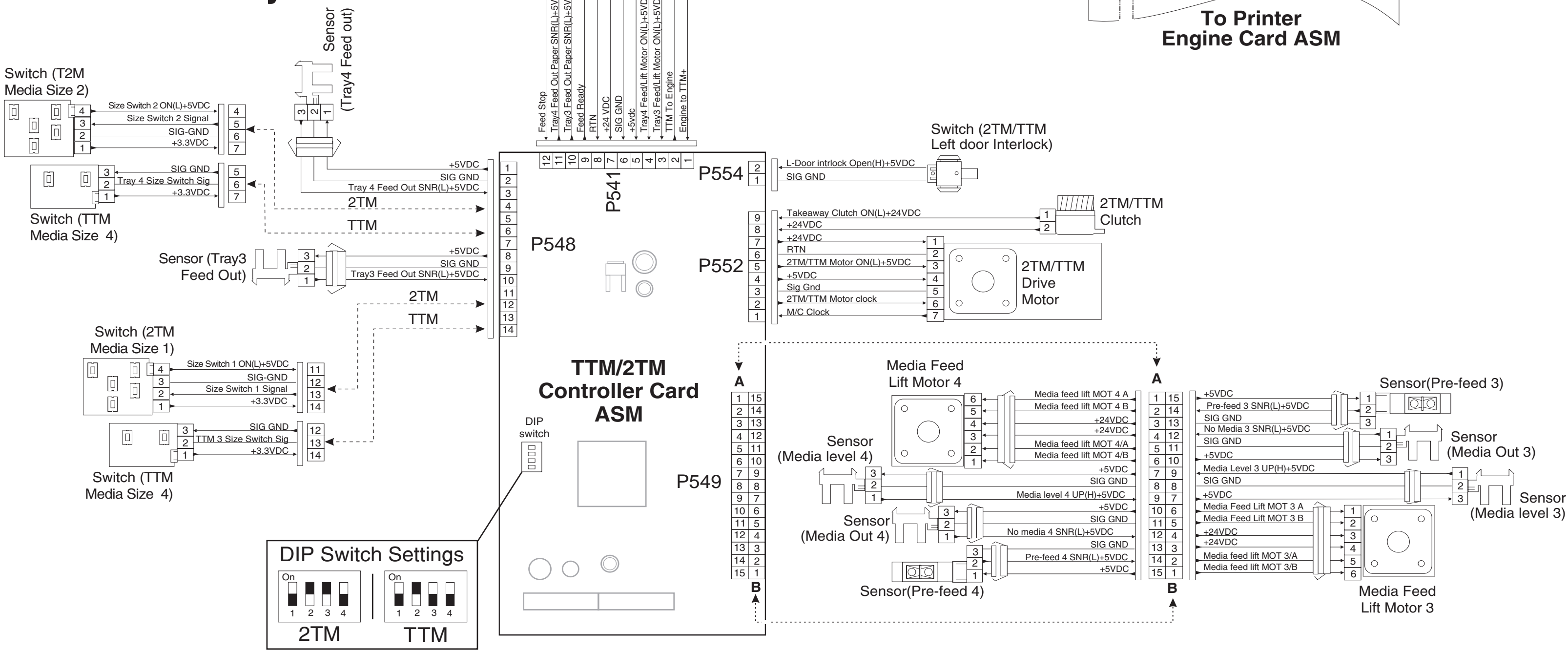
7500-XXX

# 7500 Options Service Manual

## HCF Controller Card Assembly



## TTM/2TM Controller Card Assembly



Electronic component diagram

