Section 11 - Locating P/J Connectors Contents

Use the table and maps in this section to locate specific P/J connectors within the printer.
To find the location of a P/J:

1. Locate the P/J connector number in the first column of the table.
2. Locate the corresponding map and location number, such as M2-5, in the second column.
3. Go to the map (M2) number and locate item number (5).

P/J Location Table

P/J	Map & Number	Connected to...	Other end connected to...
1	M2-7 M9-3	LVPS (110VAC)	Main Switch F52/F53
12	M5-4	Fuser Heat Rods & STS	J23 AC Drive PWB & J600
13	M1-5	Finisher AC voltage connector	CE11 & CE12 (110VAC line)
19	M9-11	Output - Noise Filter PWB	F51/F53
20	M9-7	AC Drive PWB	AC Hot and AC N
23	M9-9	AC Drive PWB	P/J12 Fuser Heat Rods & STS
100	M3-5	Registration Sensor	P/J459 MCU PWB
101	M3-7	Take Away Roll 1 Sensor	P/J403 MCU PWB
102	M3-6	Tray 1 No Paper Sensor	P/J459 MCU PWB
103	M3-4	Tray 1 Level Sensor	P/J459 MCU PWB
104	M5-5	Fuser Exit Sensor	P/J462 MCU PWB
105	M4-29	Tray 1 Paper Size Sensor	P/J461 MCU PWB
106	M1-1	SOS Sensor	P/J456 MCU PWB
107	M3-1	MSI Size Sensor	P/J403 MCU PWB
108	M3-8	MSI No Paper Sensor	P/J403 MCU PWB
109	M5-12	Face Up Exit Sensor	P/J462 MCU PWB
127	M4-11	MCU PWB	Toner Sensor
133	M5-2	Full Stack Sensor	P/J462 MCU PWB
140	M6-5	Tray 2 No Paper Sensor	P/J408 MCU PWB
141	M6-4	Tray 2 Level Sensor	P/J408 MCU PWB

P/J Location Table continued

P/J	Map & Number	Connected to...	Other end connected to...
142	M6-1	Tray 2 Size Sensor	P/J408 MCU PWB
143	M6-6	Take Away Roll Sensor	P/J408 MCU PWB
144	M6-7	Tray 2 Left Cover Interlock Switch	P/J607 and P/J408 MCU PWB
200	M4-13	Registration Clutch	P/J462 MCU PWB
201	M4-18	Take Away Clutch	P/J462 MCU PWB
202	M4-17	Feed Clutch 1	P/J462 MCU PWB
203	M4-19	Lift Up Motor 1	P/J403 MCU PWB
204	M5-3	Fuser Fan	P/J460 MCU PWB
205	M4-10	Main Motor	P/J460 MCU PWB
207	M1-6	Scanner Motor Assembly	P/J456 MCU PWB
208	M3-2	MSI Feed Clutch	P/J403 MCU PWB
209	M5-10	Offset Motor	P/J462 MCU PWB
210	M5-1	Exit Gate Solenoid	P/J462 MCU PWB
218	M5-6	Inverter CW Clutch	P/J462 MCU PWB
219	M5-7	Inverter CCW Clutch	P/J462 MCU PWB
232	M4-32	Interlock Switch 2	P/J458 MCU PWB
233	M4-31	Interlock Switch 1	P/J458 MCU PWB
234	M4-6	CRU Switch 1 and CRU Switch 2	P/J407 Laser Diode Driver P/J456 MCU PWB
235	M9-6	LVPS Fan	P/J401 MCU PWB
240	M6-9	Tray 2 Feed Clutch	P/J408 MCU PWB
241	M6-10	Tray 2 Lift Up Motor	P/J408 MCU PWB
400	M4-3	MCU PWB	P/J501 & P502 LVPS
401	M4-16	MCU PWB	P/J477 AC Drive P/J235 Fuser Fan
402	M4-27	MCU PWB	P/J422 - ESS Mother PWB

P/J Location Table continued

P/J	Map & Number	Connected to...	Other end connected to...
403	M4-22	MCU PWB	P/J107 MSI Size Sensor P/J108 MSI No Paper Sensor P/J208 MSI Feed Clutch
404	M4-25	MCU PWB	P/J611 Duplex Module
405	M4-23	MCU PWB	P/J612 Mailbox or P612 Finisher
406	M4-24	MCU PWB	P/J480/P/J481 HCF Cabinet PWB
407	M1-2	Laser Diode Driver	P/J456 MCU PWB
408	M4-26	MCU PWB	P/J140 No Paper Sensor 2 P/J141 Level 2 Sensor P/J142 Size 2 Paper Sensor P/J143 Take Away Roll 2 Sensor P/J144 Left Cover 2 Interlock Switch P/J240 Tray 2 Feed Clutch P/J241 Tray 2 Lift Up Motor
410	M4-28	MCU PWB	Type D0 Console
416	M7-6	ESS Mother PWB	P/J430 Laser Diode Driver
417	M2-4 M7-4	Control Panel	P/J421 ESS Mother PWB
420	M7-5	ESS Mother PWB	P/J501/502 LVPS PWB
421	M7-3	ESS Mother PWB	P/J417 Control Panel PWB
422	M7-2	ESS Mother PWB	P/J402 MCU PWB
423	M7-7	QMS Video Controller	ESS Mother PWB
430	M1-3	Laser Diode Driver	ESS Mother PWB
454	M4-7	MCU PWB	P/J606 CRU - CRU Memory
456	M4-2	MCU PWB	P/J106 SOS Sensor P/J207 ROS Motor P/J234 CRU Interlock P/J407 Laser Diode Driver
457	M4-5	MCU PWB	P/J500 HVPS
458	M4-4	MCU PWB	P/J233 Interlocks SW1 and SW2

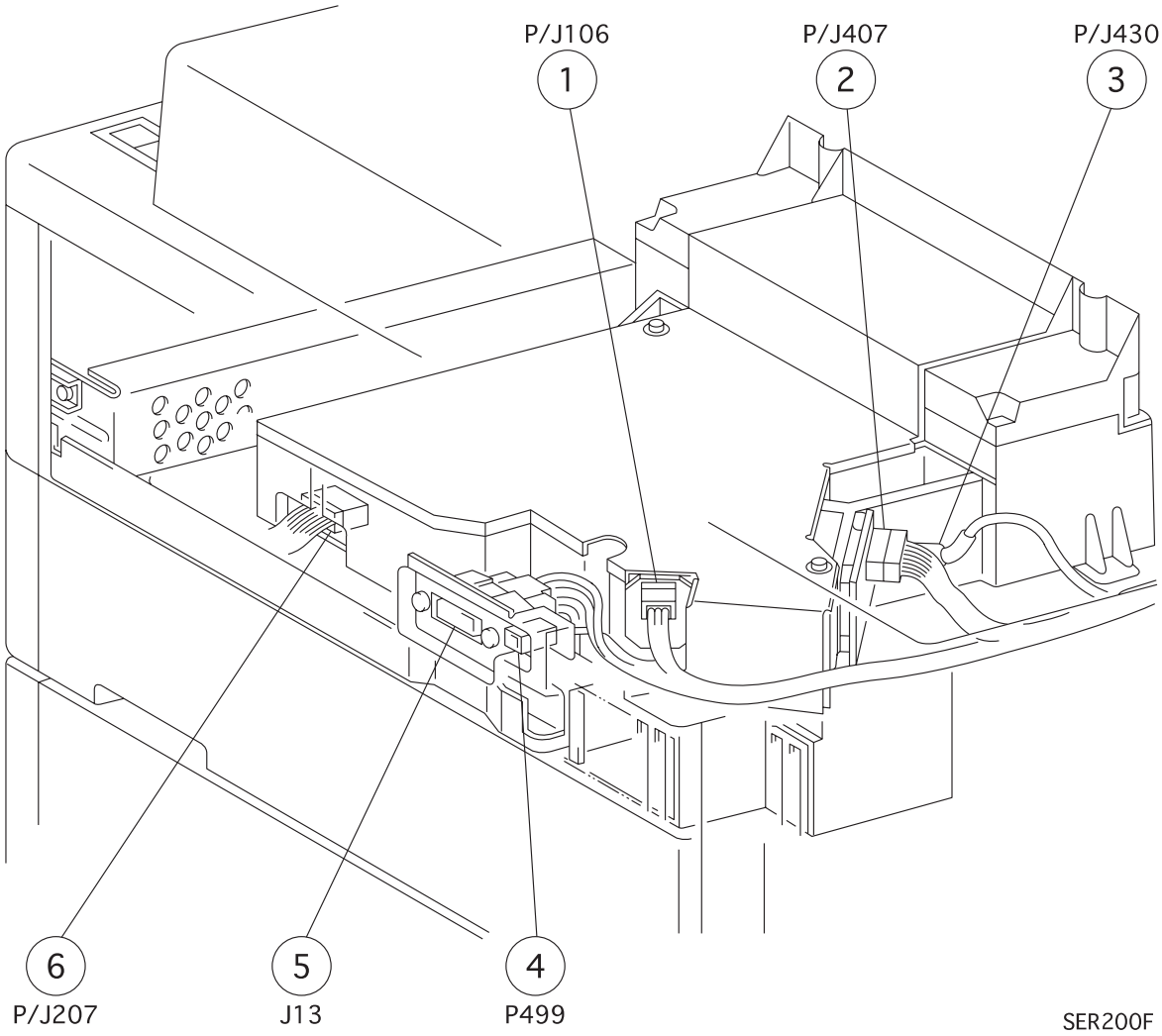
P/J Location Table continued

P/J	Map & Number	Connected to...	Other end connected to...
459	M4-21	MCU PWB	P/J100 Registration Sensor P/J102 No Paper 1 Sensor P/J103 Level 1 Sensor
460	M4-9	MCU PWB	P/J204 Fuser Fan P/J205 Main Motor
461	M4-20	MCU PWB	P/J105 Size Sensor 1
462	M4-12	MCU PWB	P/J202 Feed Clutch 1 P/J201 Take Away Roll 1 Clutch P/J200 Registration Clutch P/J104 Fuser Exit Sensor P/J601 Face Up Exit Sensor P/J601 Full Stack Sensor P/J601 Exit Gate Solenoid P/J218 Inverter CW Clutch P/J219 Inverter CCW Clutch
477	M9-10	AC Drive PWB	P/J401 MCU PWB
478	M9-8	AC Drive PWB	Test output connector
499	M1-4	Test output connector	P/J478 AC Drive PWB
500	M4-1	HVPS	P/J457 MCU PWB
501	M2-2 M9-4	LVPS	P/J420 ESS Mother PWB P/J400 MCU PWB
502	M2-17 M9-5	LVPS	P/J420 ESS Mother PWB P/J400 MCU PWB
600	M5-9	Fuser STS	P/J462 MCU PWB
601	M5-8	P109 Face Up Exit Sensor P133 Full Stack Sensor P210 Exit Gate Solenoid	P/J462 MCU PWB
602	M5-11	P218 Inverter CW Clutch P219 Inverter CCW Clutch	P/J642 MCU PWB
603	M3-9	P/J604 MSI	P/J403 MCU PWB
604	M3-3	P107 MSI Size Sensor J108 MSI No Paper Sensor P200 MSI Feed Clutch	P/J403 MCU PWB
606	M4-8	CRU - CRU Memory	P/J454 MCU PWB

P/J Location Table continued

P/J	Map & Number	Connected to...	Other end connected to...
607	M6-8	P/J143 Take Away Roll Sensor P/J144 Tray 2 Left Cover Interlock Switch	P/J408 MCU PWB
611 A,B	M8-6	P/J473 Duplex PWB	P/J404 MCU PWB
612 A,B	M8-5	P/J800 Mailbox PWB P/J830 Finisher PWB	P/J405 MCU PWB
613 A~D	M8-7	P/J406 MCU PWB	P/J480 Finisher PWB P/J481 Finisher PWB
F51~ 54	M9-1	Main Power Switch	P/J19 Noise Filter PWB P/J20 AC Drive PWB P/J1 LVPS PWB
F55	M9-13	Noise Filter PWB	AC Power Cord Hot
F56	M9-12	Noise Filter PWB	AC Power Cord Neutral
F 5230	M4-14 M6-3	Main Interlock Switch	P/J458 MCU PWB
F 5231	M4-15 M6-2	Main Interlock Switch	P/J458 MCU PWB
BTR	M6-11 M8-4	Bias Transfer Roll	HVPS
CB	M6-13 M8-3	Charge Roll	HVPS
DTS	M6-12 M8-1	Detack Saw	HVPS
DB	M8-2	Magnet Roll	HVPS
T4	M9-2	Frame Ground	P/J1 LVPS PWB

P/J Location Map 1



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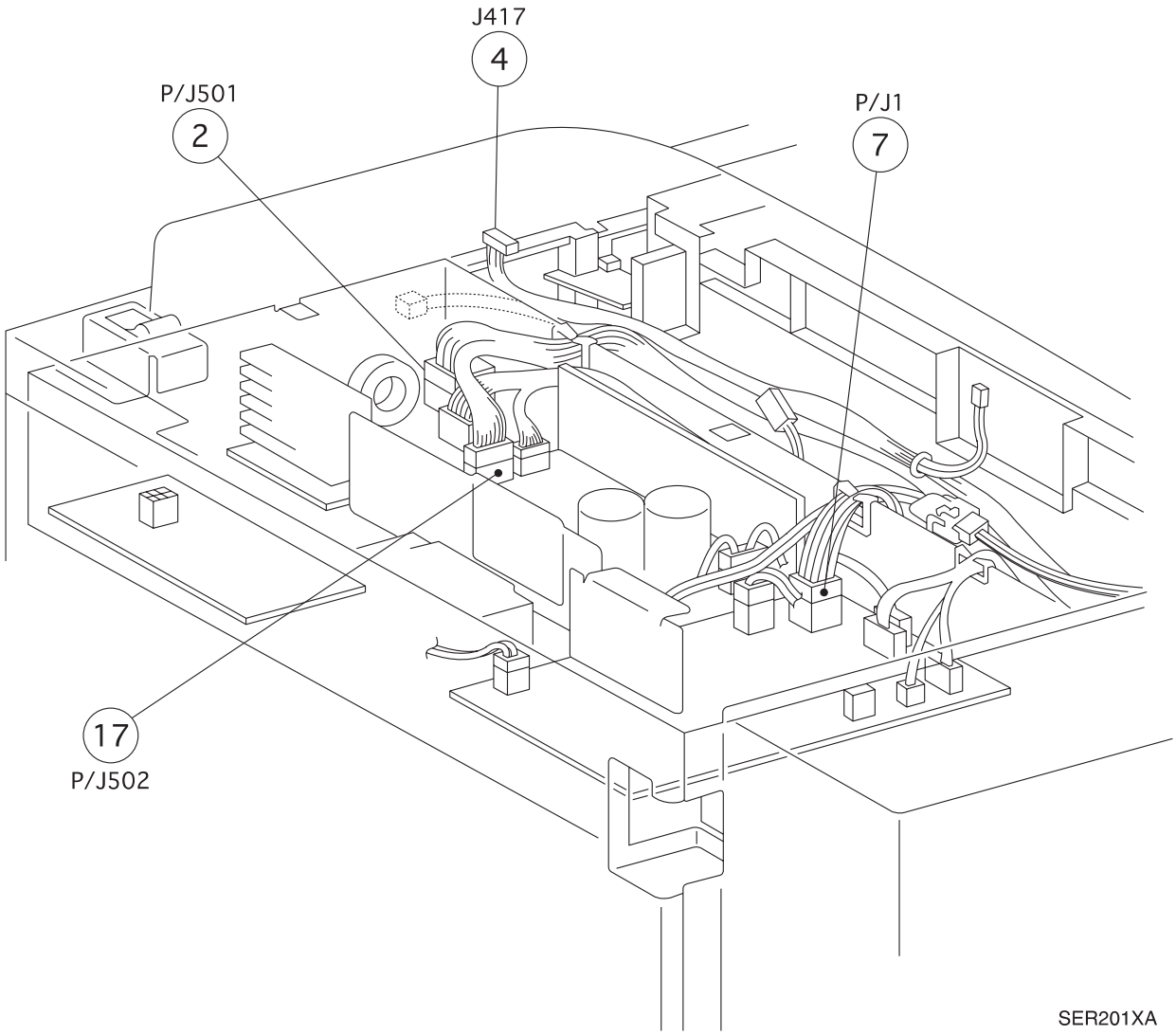
P/J Location Map 2



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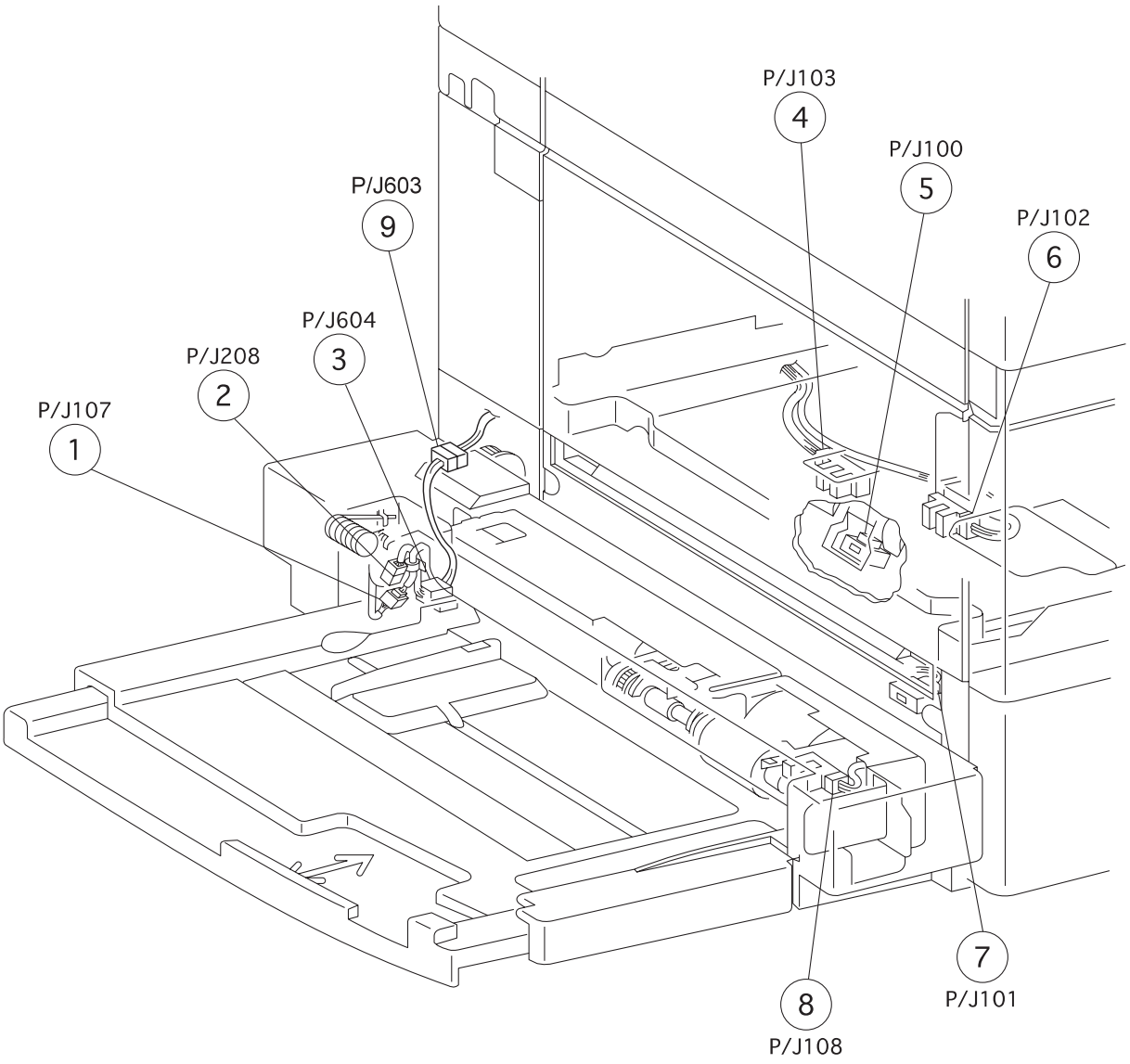
P/J Location Map 3



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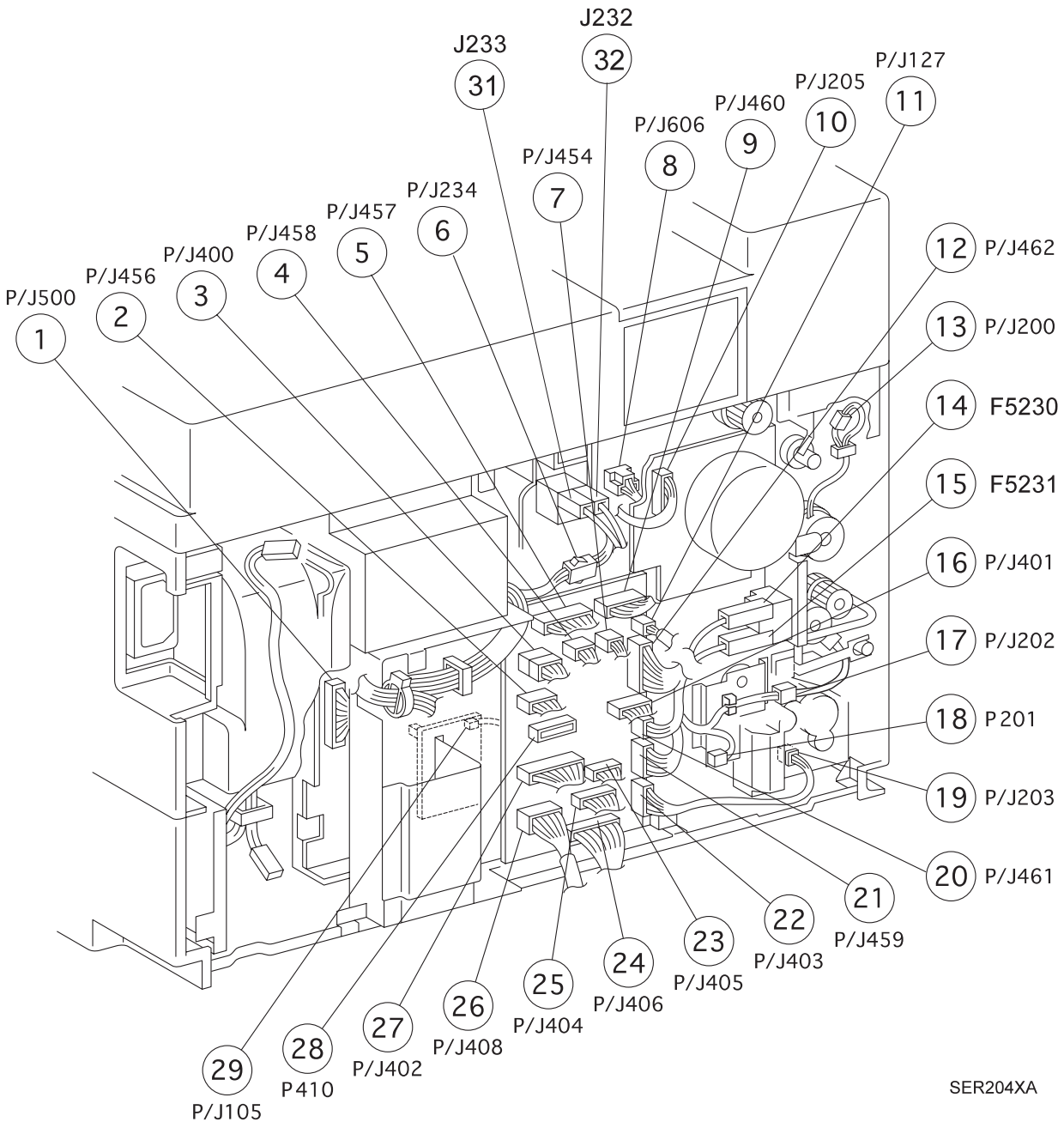
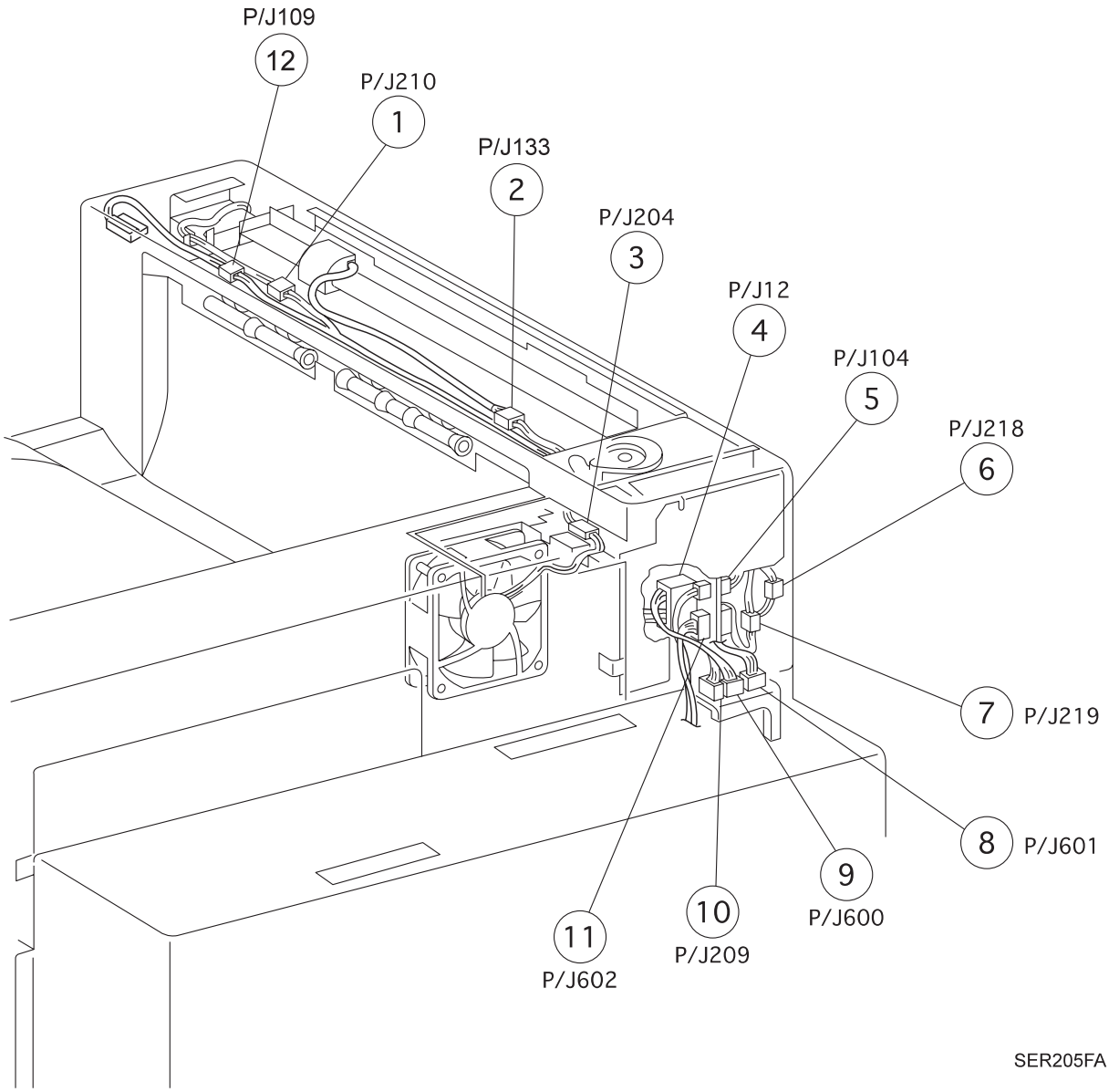
P/J Location Map 4



SER204XA

P/J Location Map 5



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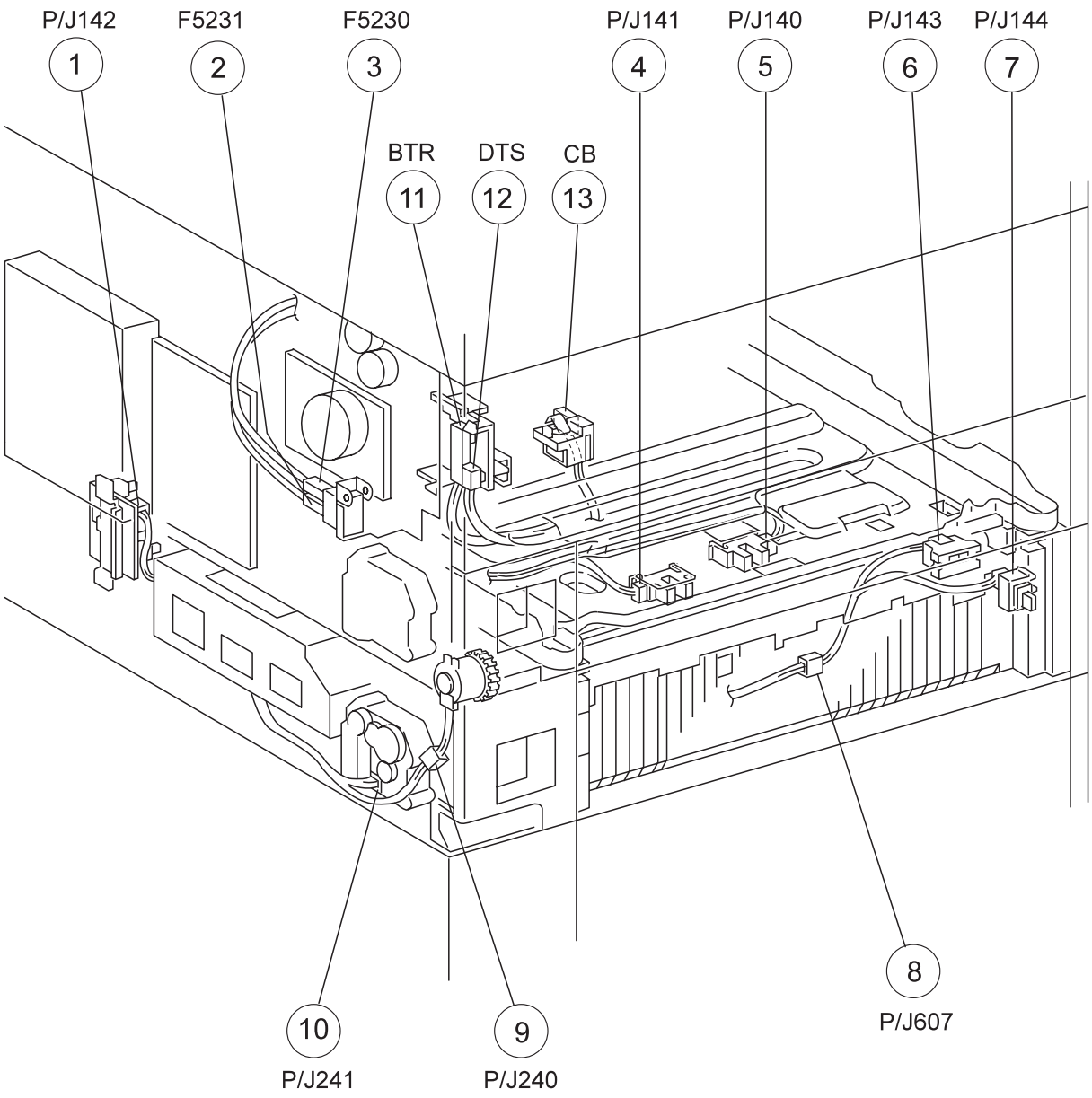
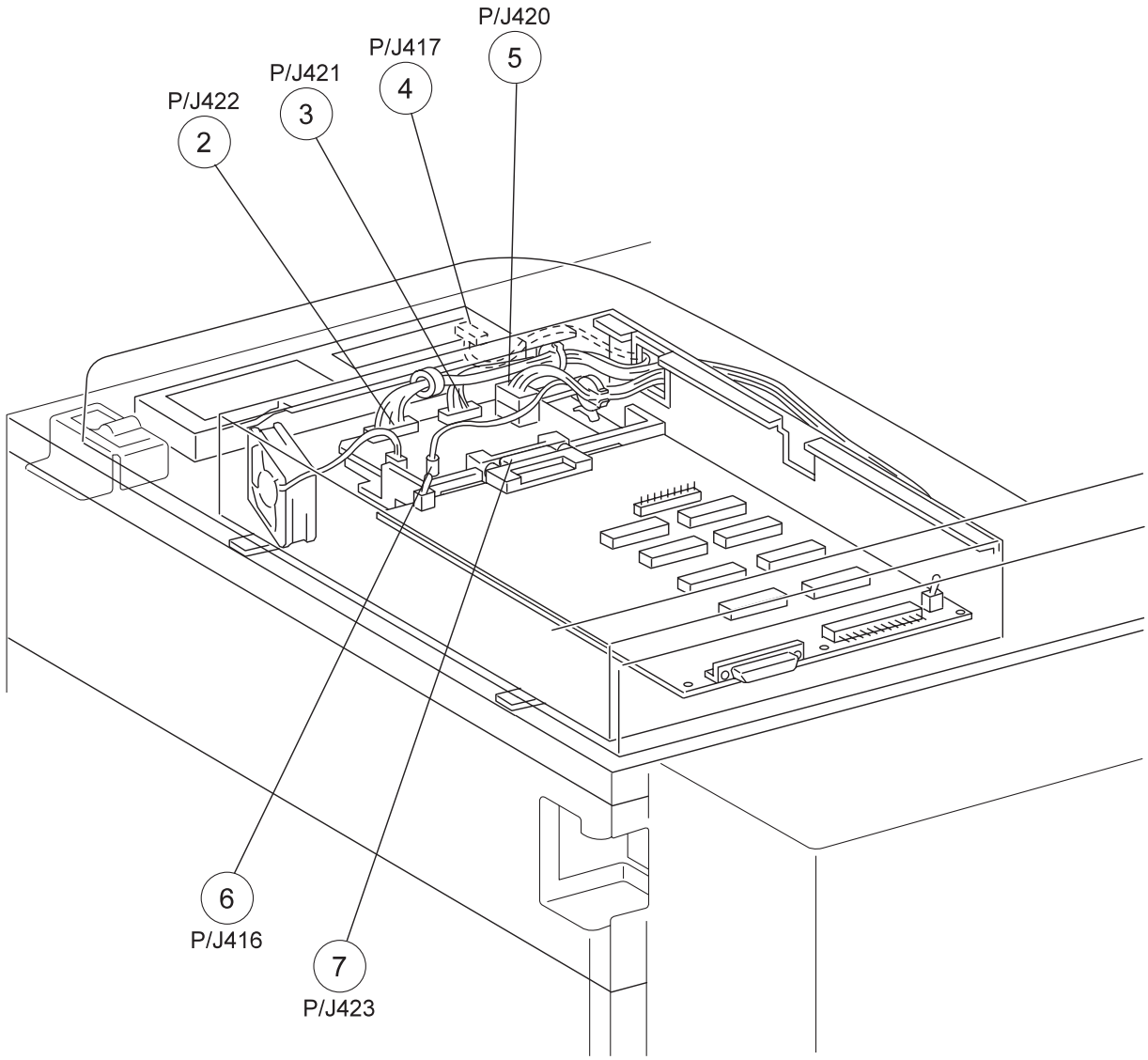
P/J Location Map 6



SER221F

P/J Location Map 7



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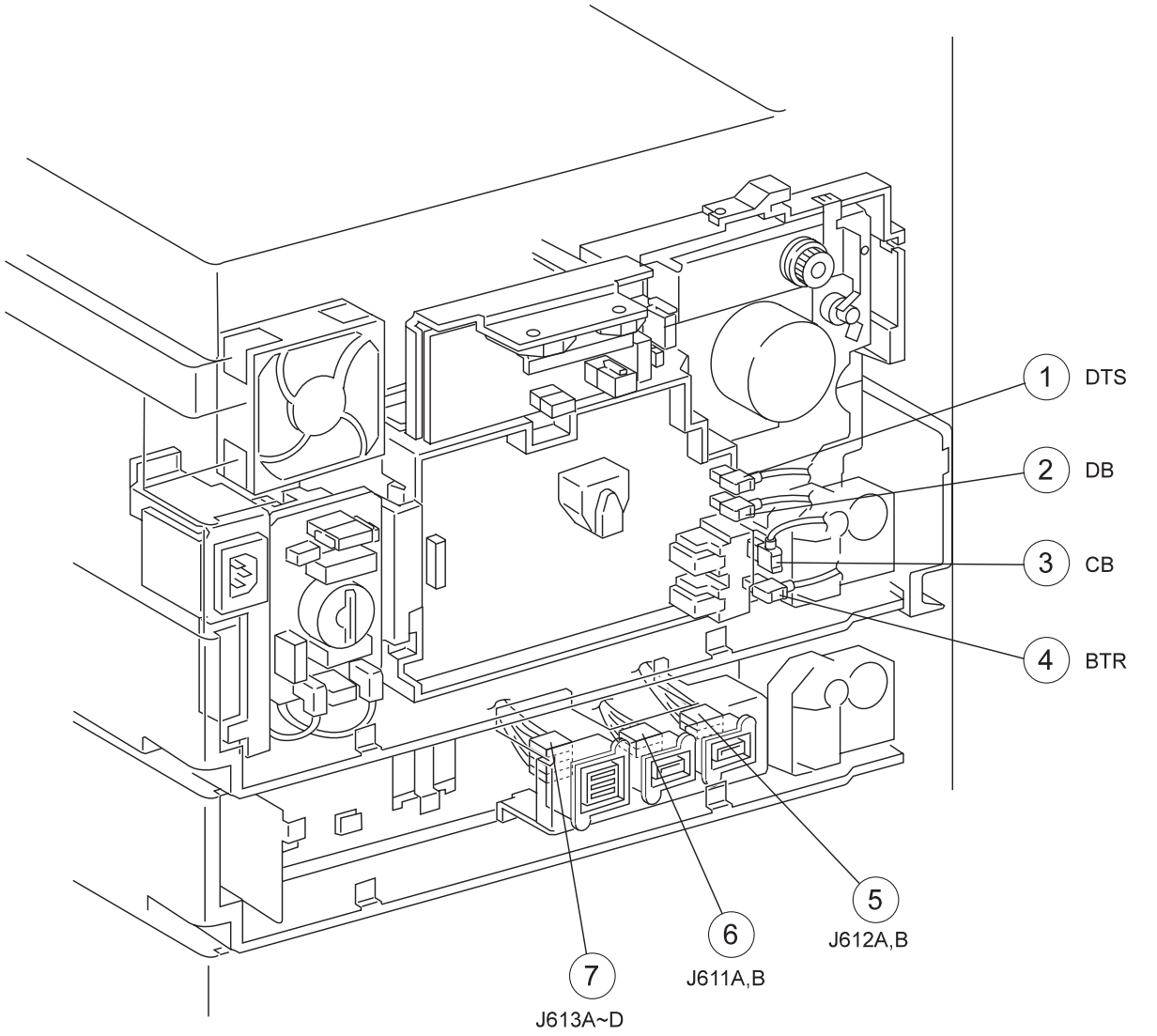
P/J Location Map 8



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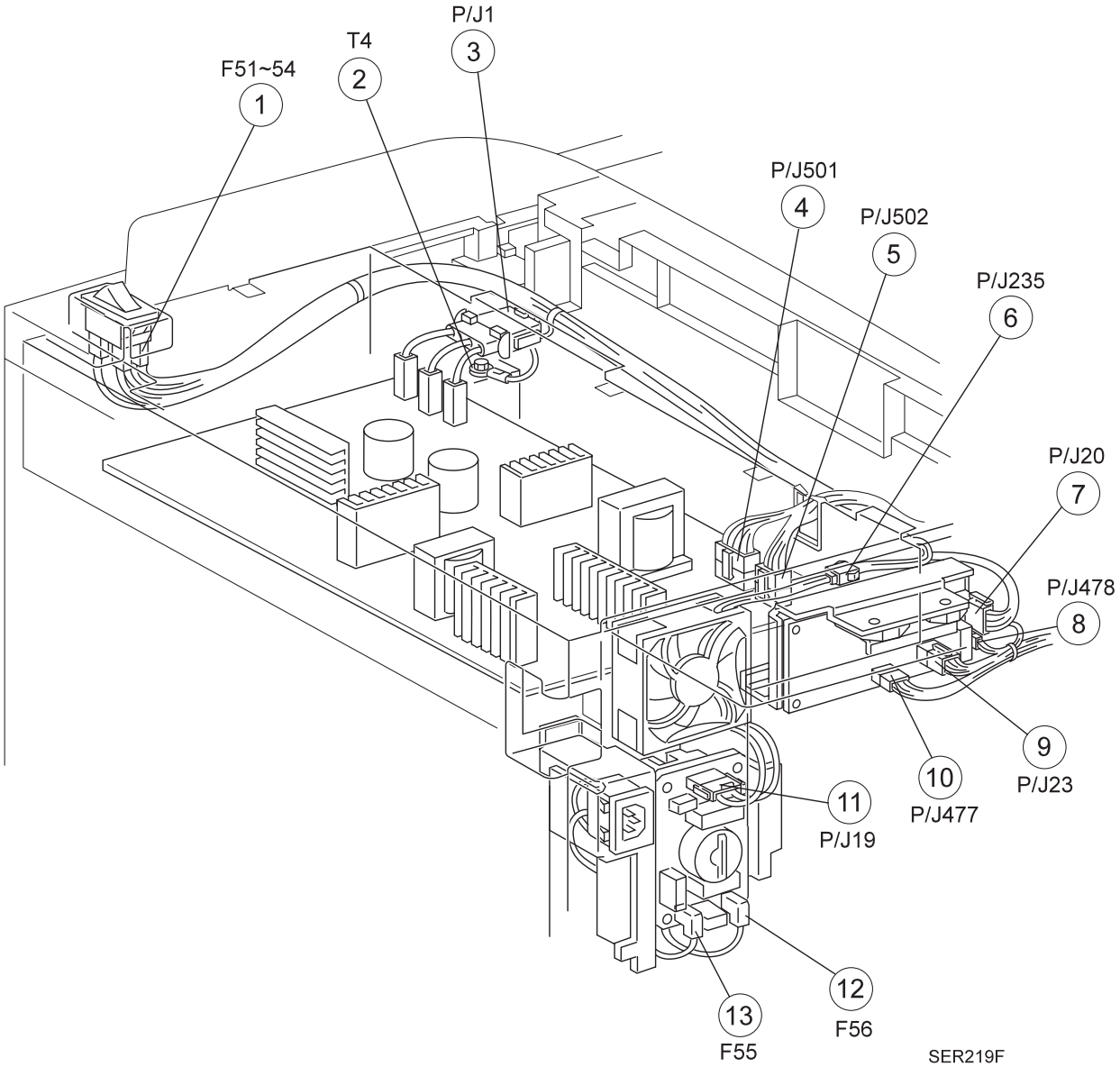
P/J Location Map 9



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Section 12 - Parts List

Contents

Section 12 - Parts List

Using the Parts List

1. The numbers shown in each illustration correspond to the parts list number for that illustration.
2. Throughout this manual, parts are identified by the prefix “PL”, followed by a number, a decimal point, and another number. For example, PL3.12 means the part is item 12 of parts list 3.
3. The capital letters “C”, “E”, "KL", and “S” shown in an illustration stand for C-ring, E-ring, Clamp, and Screw, respectively.
4. A shaded triangle ▼ in an illustration indicates the item is part of an assembly.
5. The notation “**with X~Y**” following an part name indicates an assembly that is made up of components X through Y. For example, “1 (with 2~4)” means part 1 consists of part 2, part 3, and part 4.
6. The symbol **$** following a part name indicates the part is an FX Recommended Part and is constantly stocked and readily available. Other parts may be stocked according to the needs of each individual OEM client.
7. An asterisk ***** following a part name indicates the page contains a note about this part.
8. The notation “**J1<>J2 and P2**” is attached to a wire harness. It indicates that connector jack 1 is attached to one end of the wire harness and connector jack 2 is attached to the other end that is plugged into plug 2.
9. An RRP number appears at the end of a part line if the technical manual contains a removal and replacement procedure for that part or module.

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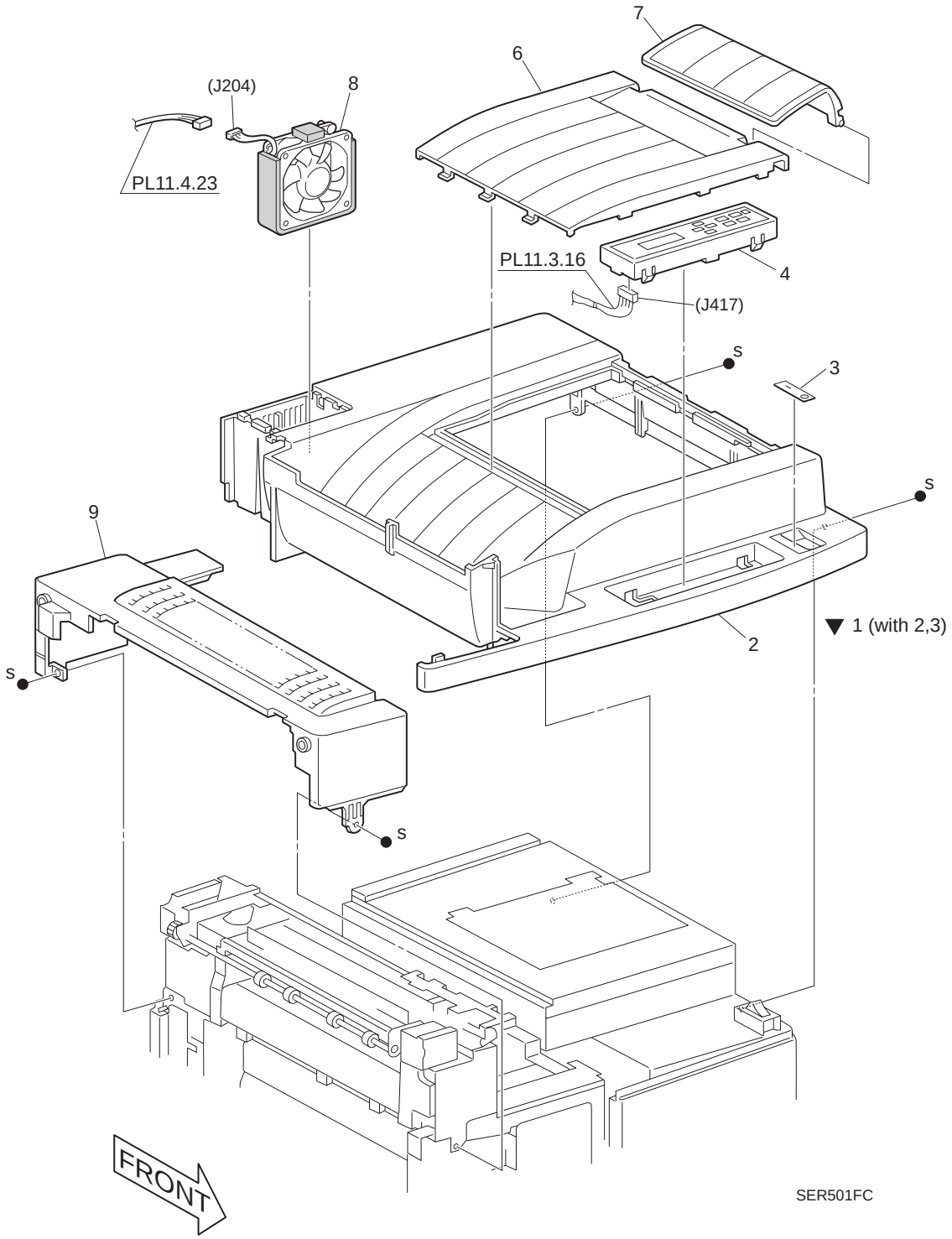
PL1.1 Top Cover Assembly

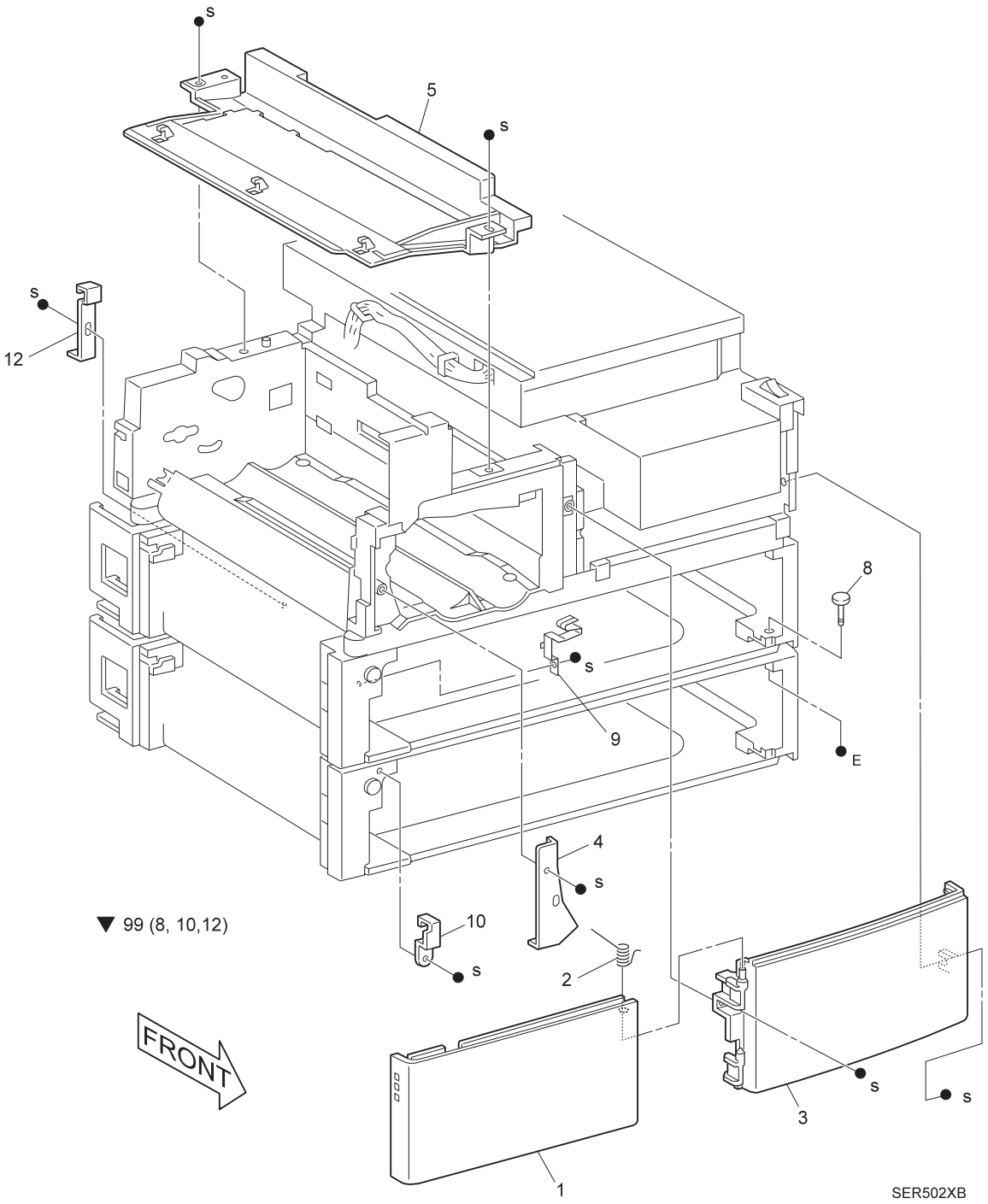


SER501FC

PL1.1 Top Cover Assembly

1. COVER ASSEMBLY (with 2 and 3)
2. TOP COVER
3. LABEL SWITCH
4. CONSOLE PANEL
5. - -
6. COVER ESS
7. STOPPER
8. FAN ASSEMBLY FUSER
9. COVER-FUSER FULL

PL1.2 Front Cover



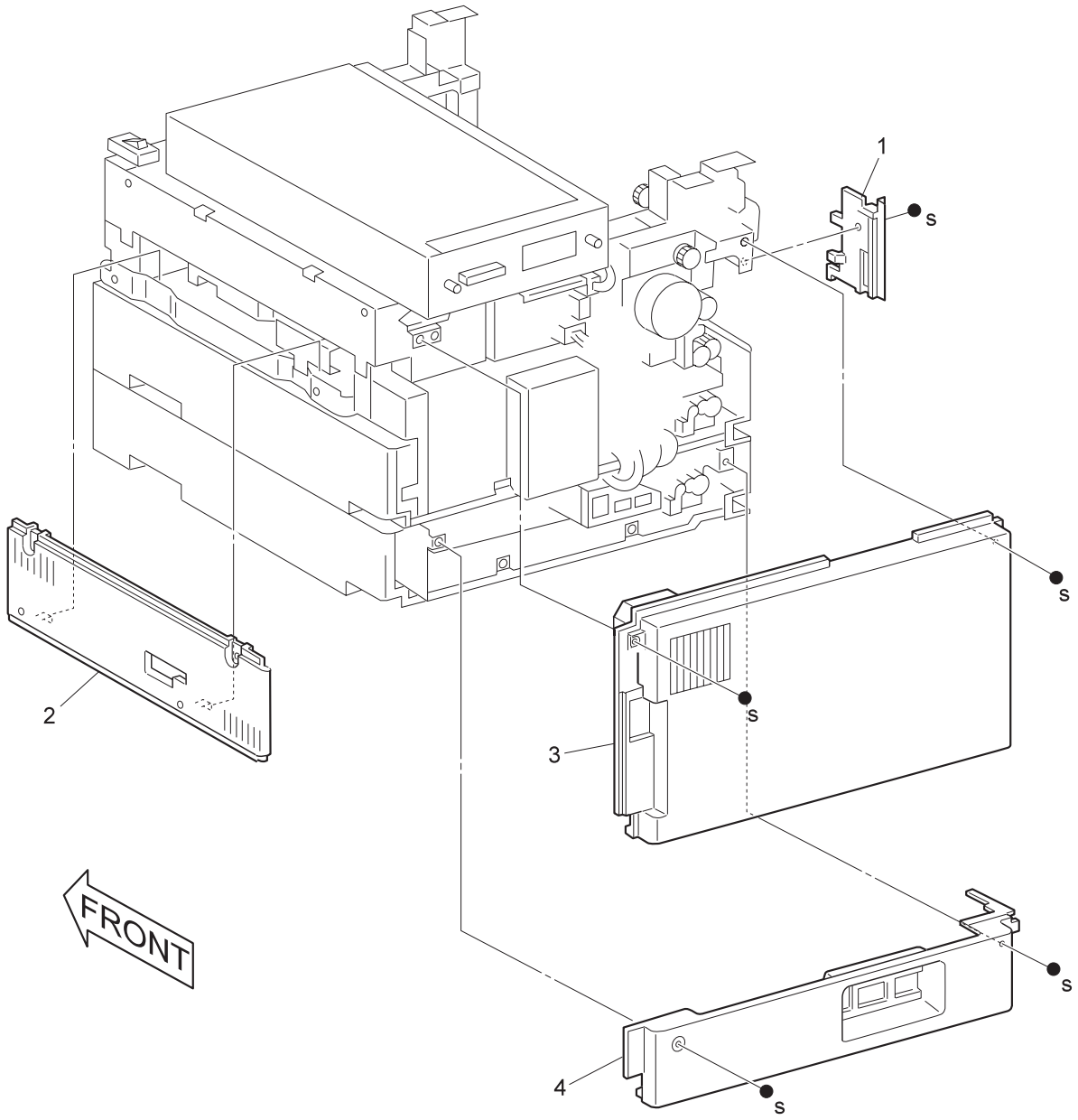
SER502XB

PL1.2 Front Cover

1. COVER ASSEMBLY FL
2. SPRING TORSION
3. COVER F/R
4. PLATE MAGNET
5. DUCT BOTTOM
6. - -
7. - -
8. STUD DOCKING
9. SPRING EME FRONT
10. BRACKET DOCKING LEFT
11. - -
12. BRACKET DOCKING REAR

99. KIT TRAY 2 MOUNTING (8, 10, 12)

PL1.3 Rear, Left, and Right Covers

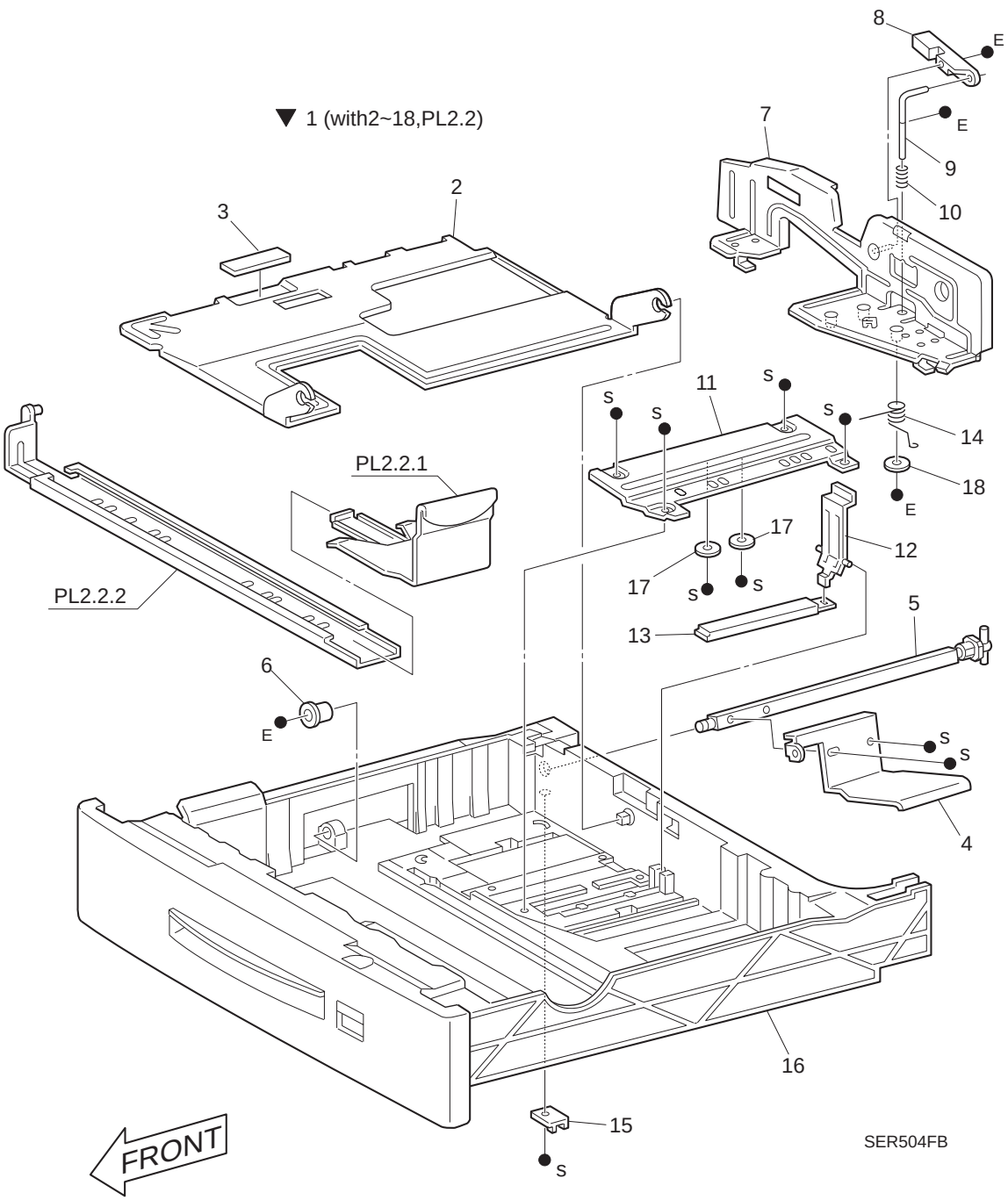


SER503XB

PL1.3 Rear, Left, and Right Covers

1. COVER INNER, LH
2. COVER RH
3. COVER ASSEMBLY, REAR OEM
4. COVER REAR 1TM, OEM

PL2.1 Tray Unit - Paper Stack

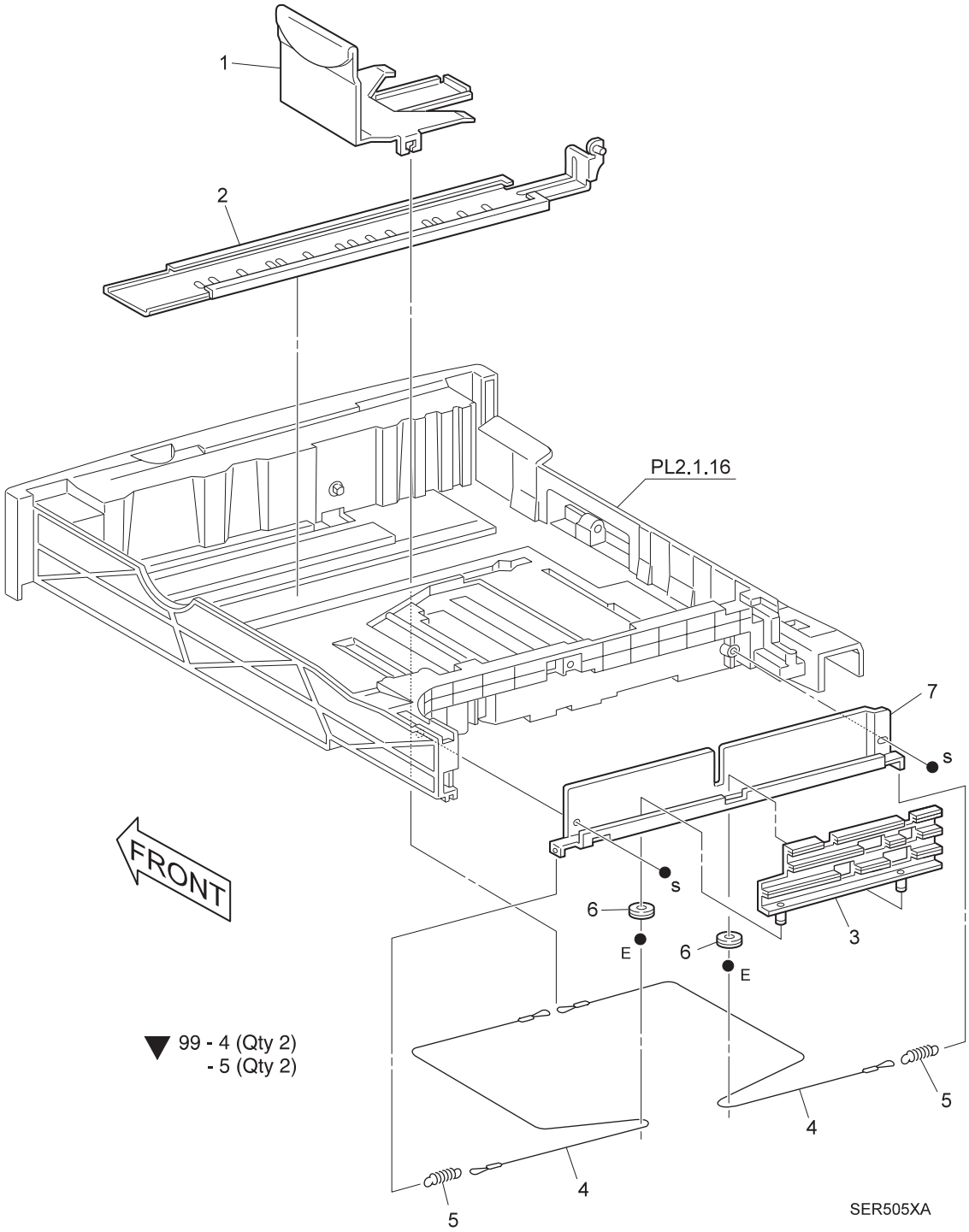


SER504FB

PL2.1 Tray Unit - Paper Stack

1. TRAY ASSEMBLY (with 2 ~ 18 and PL2.2)
2. PLATE BOTTOM
3. PAD BOTTOM
4. PLATE TONGUE
5. SHAFT ASSEMBLY - TONGUE
6. BEARING
7. GUIDE ASSEMBLY - SIDE
8. LEVER
9. SHAFT
10. SPRING - COMP
11. PLATE SIDE
12. ACTUATOR
13. LINK
14. SPRING - TORSION
15. STOPPER L/H
16. HOUSING - TRAY
17. WASHER
18. WASHER - SIDE GUIDE

PL2.2 Tray Unit - End Guide



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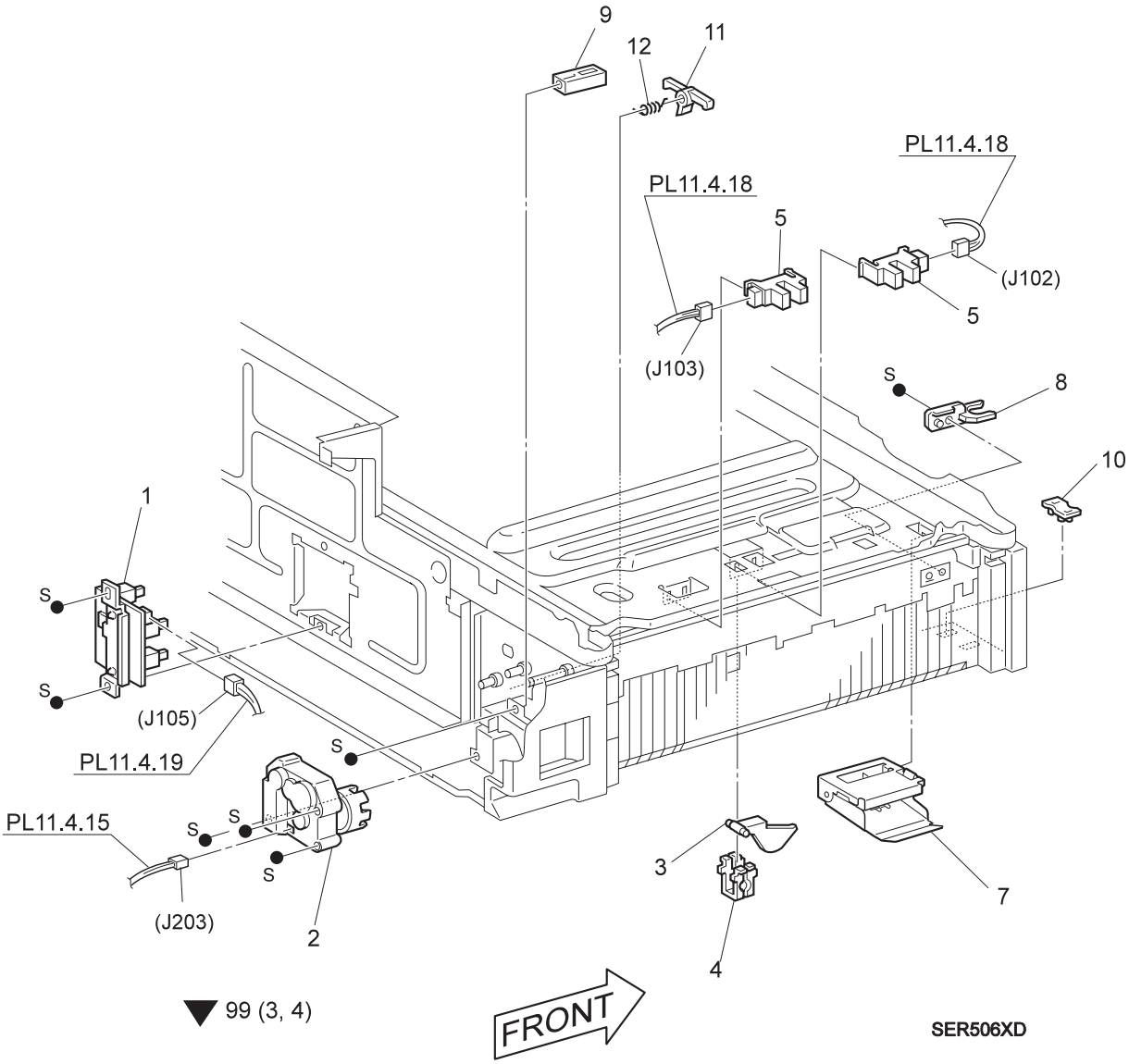
PL2.2 Tray Unit - End Guide

1. GUIDE ASSEMBLY - END
2. PLATE ASSEMBLY - END
3. ACTUATOR ASSEMBLY
4. CABLE ASSEMBLY
5. SPRING - EXTENSION
6. PULLEY
7. GUIDE ACTUATOR

99. KIT CASSETTE CABLES (with 4 (Qty 2) and 5 (Qty 2)

PL3.1 Tray Interface - Tray 1



SER506XD

PL3.1 Tray Interface - Tray 1

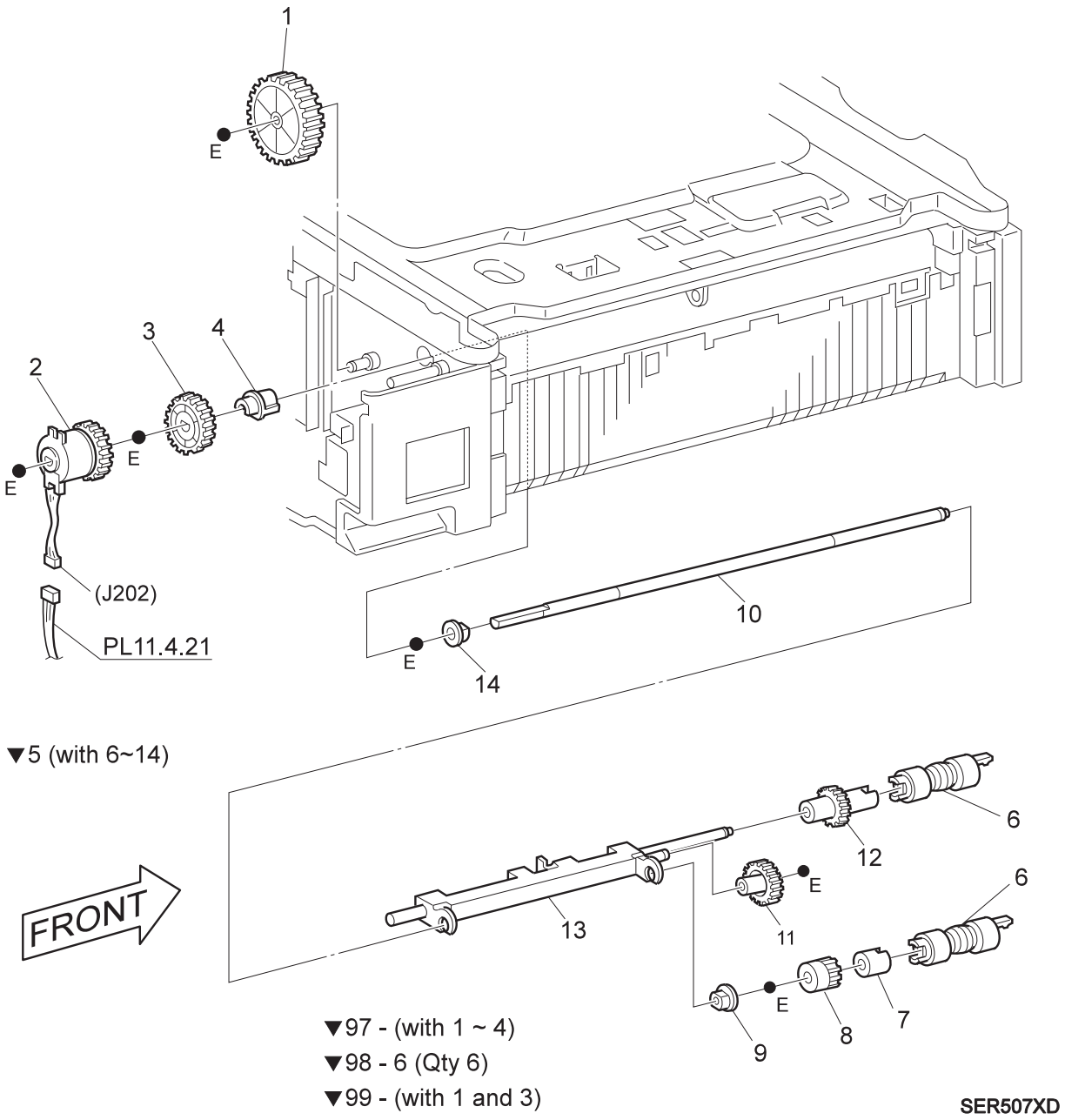
NOTE

All items, except item 7, in this list can be used with both Tray 1 and Tray 2. Item 7 can be used only with Tray 1.

1. SW ASSEMBLY - PS
2. MOTOR ASSEMBLY
3. ACTUATOR - SNR
4. SUPPORT ACTUATOR
5. PHOTO INTERRUPTER
6. --
7. CHUTE ASSEMBLY FRONT, 1T (for Tray 1 only)
8. STOPPER TRAY, F
9. STOPPER TRAY, R
10. SPACER, L
11. LINK STOPPER
12. SPRING TORSION

99. KIT ACTUATOR SENSOR ASSY (with 3 and 4)

PL3.2 Paper Pick Up - Tray 1



SER507XD

PL3.2 Paper Pick Up - Tray 1

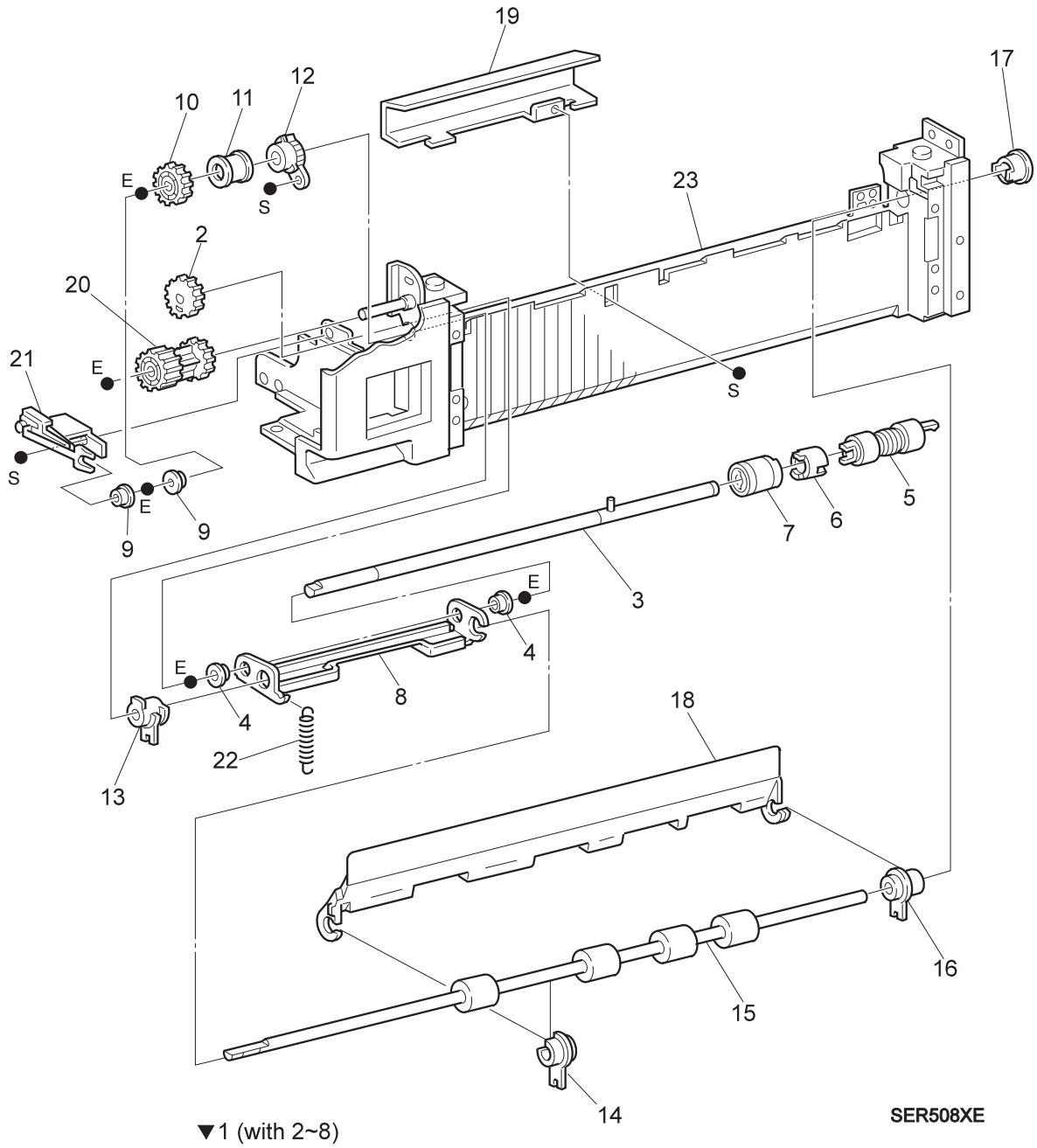
NOTE

All items, except items 3 and 4, in this list can be used with both Tray 1 and Tray 2. Items 3 and 4 can be used only with Tray 1.

1. GEAR - 46T M/N
2. CLUTCH ASSEMBLY
3. GEAR ASSEMBLY 28T M/N (for Tray 1 only)
4. CLUTCH ONE-WAY (for Tray 1 only)
5. FEEDER ASSEMBLY M/N, (with 6 ~ 14)
6. ROLL ASSEMBLY
7. CLUTCH ASSEMBLY O.W.
8. CLUTCH GEAR 25T
9. BEARING
10. SHAFT FEED M/N
11. GEAR 31T
12. GEAR 25T
13. SUPPORT ASSEMBLY NUDGER
14. BEARING

97. KIT TRAY 1 CLUTCH (1 ~ 4)
98. KIT FEED ROLL (with 6, Qty 6)
99. KIT PICK UP GEAR TRAY 1 (with 1 and 3)

PL3.3 Retard and Take Away- Tray 1



▼1 (with 2~8)

▼98 (1, with 9~23)

▼99 (2,10,20)

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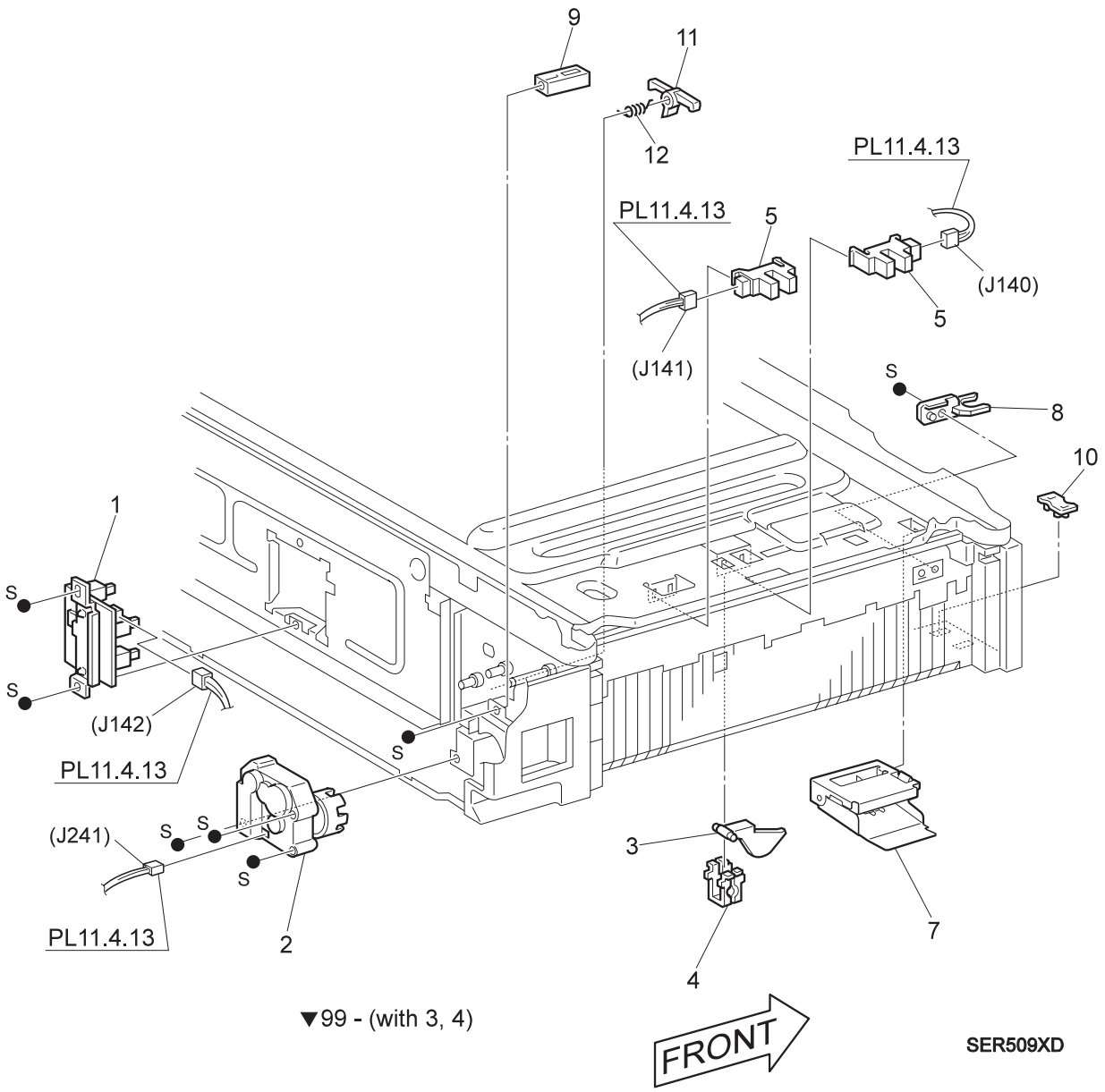
PL3.3 Retard and Take Away- Tray 1

1. RETARD ASSEMBLY, 4 (with 2 ~8)
2. GEAR 22T
3. SHAFT ASSEMBLY RET
4. BEARING
5. ROLL ASSEMBLY
6. SPACER
7. CLUTCH ASSEMBLY - FRICTION
8. SUPPORT RETARD
9. BEARING
10. GEAR 22
11. SPACER
12. GEAR STOPPER
13. BEARING, R
14. BEARING, C
15. ROLLER ASSEMBLY S/F
16. BEARING
17. BEARING
18. CHUTE ASSEMBLY FEED, OUT
19. CHUTE ASSEMBLY FEED, IN
20. GEAR 22/20, IOT H/N
21. SUPPORT ASSEMBLY, SPRING
22. SPRING
23. RETARD FRAME
98. RETARD ASSEMBLY TRAY 1 HIGH (with 1 and 9 ~ 23)
99. KIT TAKE AWAY GEAR TRAY 1 (with 2, 10, and 20)

PL3.4 Tray Interface - Tray 2



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PL3.4 Tray Interface - Tray 2

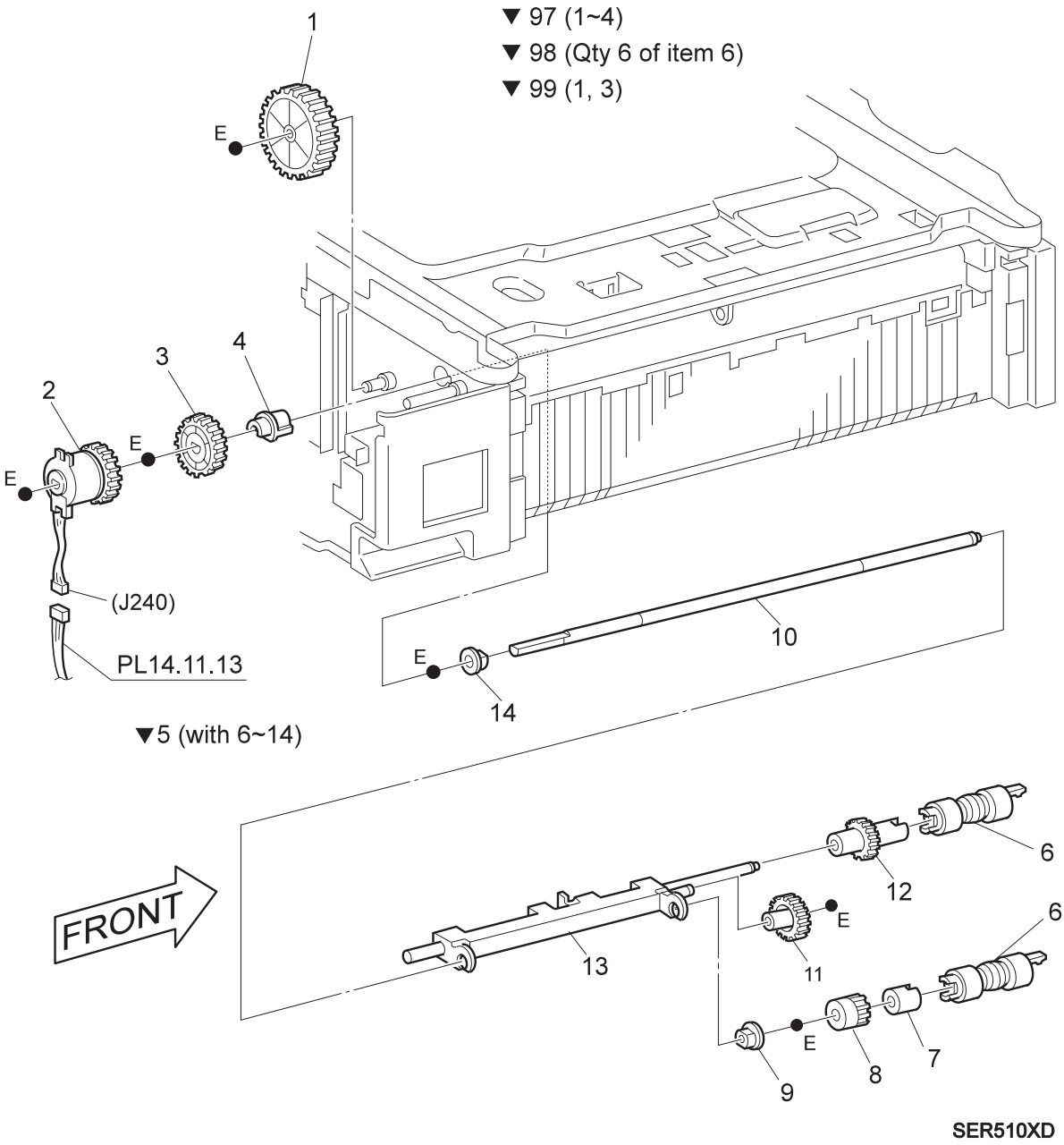
NOTE

All items, except item 7, in this list can be used with both Tray 1 and Tray 2. Item 7 can be used only with Tray 2.

1. SW ASSEMBLY PS
2. MOTOR ASSEMBLY
3. ACTUATOR - SNR
4. SUPPORT ACTUATOR
5. PHOTO INTERRUPTER
6. --
7. CHUTE ASSEMBLY FRONT, 2T (for Tray 2 only)
8. STOPPER, TRAY F
9. STOPPER, TRAY R
10. SPACER, L
11. LINK STOPPER
12. SPRING TORSION

99. KIT ACTUATOR SENSOR ASSY (with 3 and 4)

PL3.5 Paper Pick Up - Tray 2



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PL3.5 Paper Pick Up - Tray 2

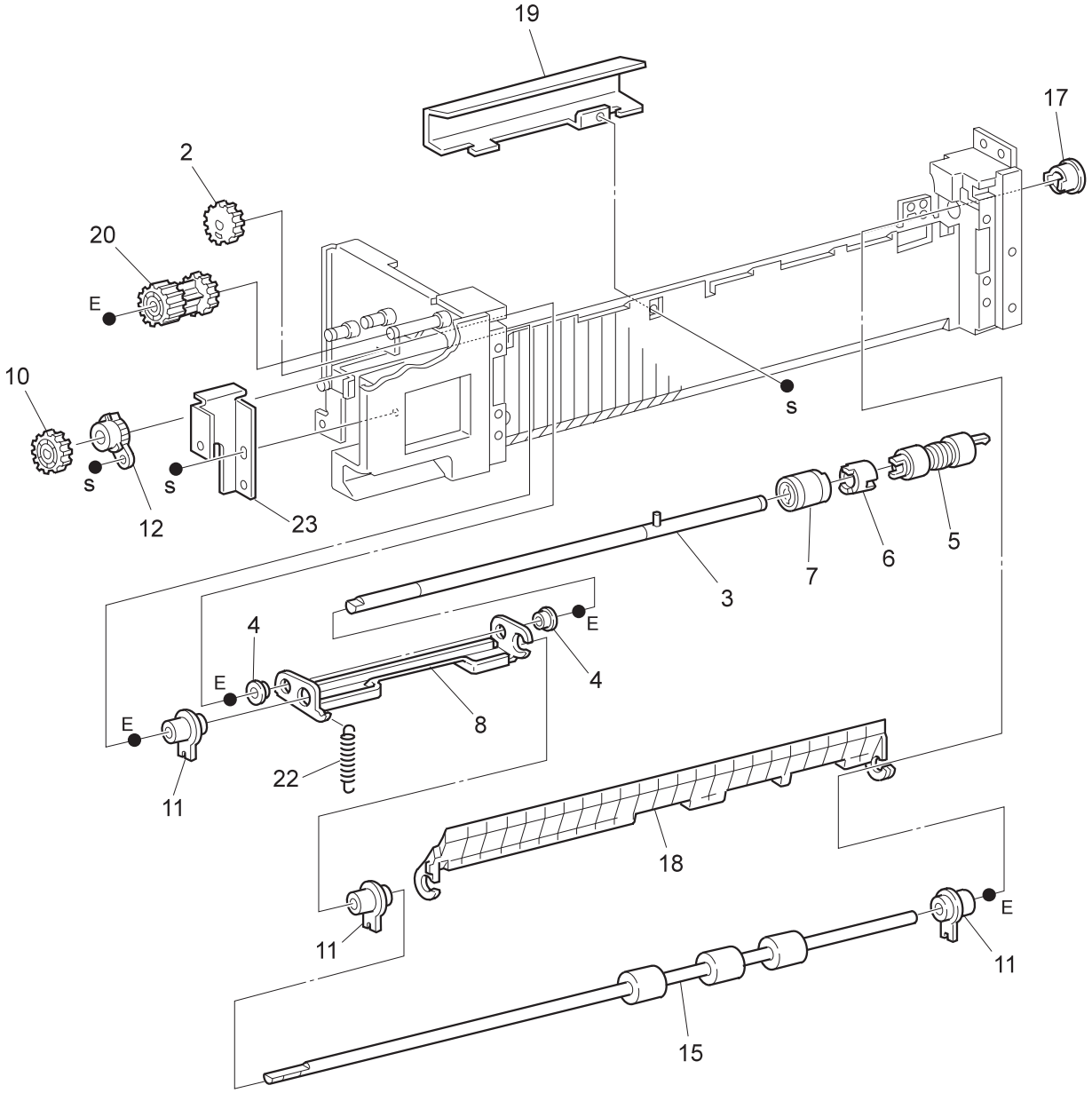
NOTE

All items, except items 3 and 4, in this list can be used with both Tray 1 and Tray 2. Items 3 and 4 can be used only with Tray 2 and the High Capacity Feeder.

1. GEAR 46T M/N
2. CLUTCH ASSEMBLY
3. GEAR 28T M/N (for Tray 2 and High Capacity Feeder only)
4. BEARING FEED (for Tray 2 and High Capacity Feeder only)
5. FEEDER ASSEMBLY M/N, (with 6 ~ 14)
6. ROLL ASSEMBLY
7. CLUTCH ASSEMBLY OW
8. CLUTCH GEAR 25T
9. BEARING
10. SHAFT FEED M/N
11. GEAR 31T
12. GEAR 25T
13. SUPPORT ASSEMBLY NUDGER
14. BEARING

97. KIT TRAY 2 CLUTCH (with 1 ~ 4)
98. KIT FEED ROLL (Qty 6 of item 6)
99. KIT PICKUP GEAR TRAY 2 (with 1 and 3)

PL3.6 Retard and Take Away - Tray 2



▼1 (with 2~8)
▼98 (1, 10~23)
▼99 (2, 10, 20)

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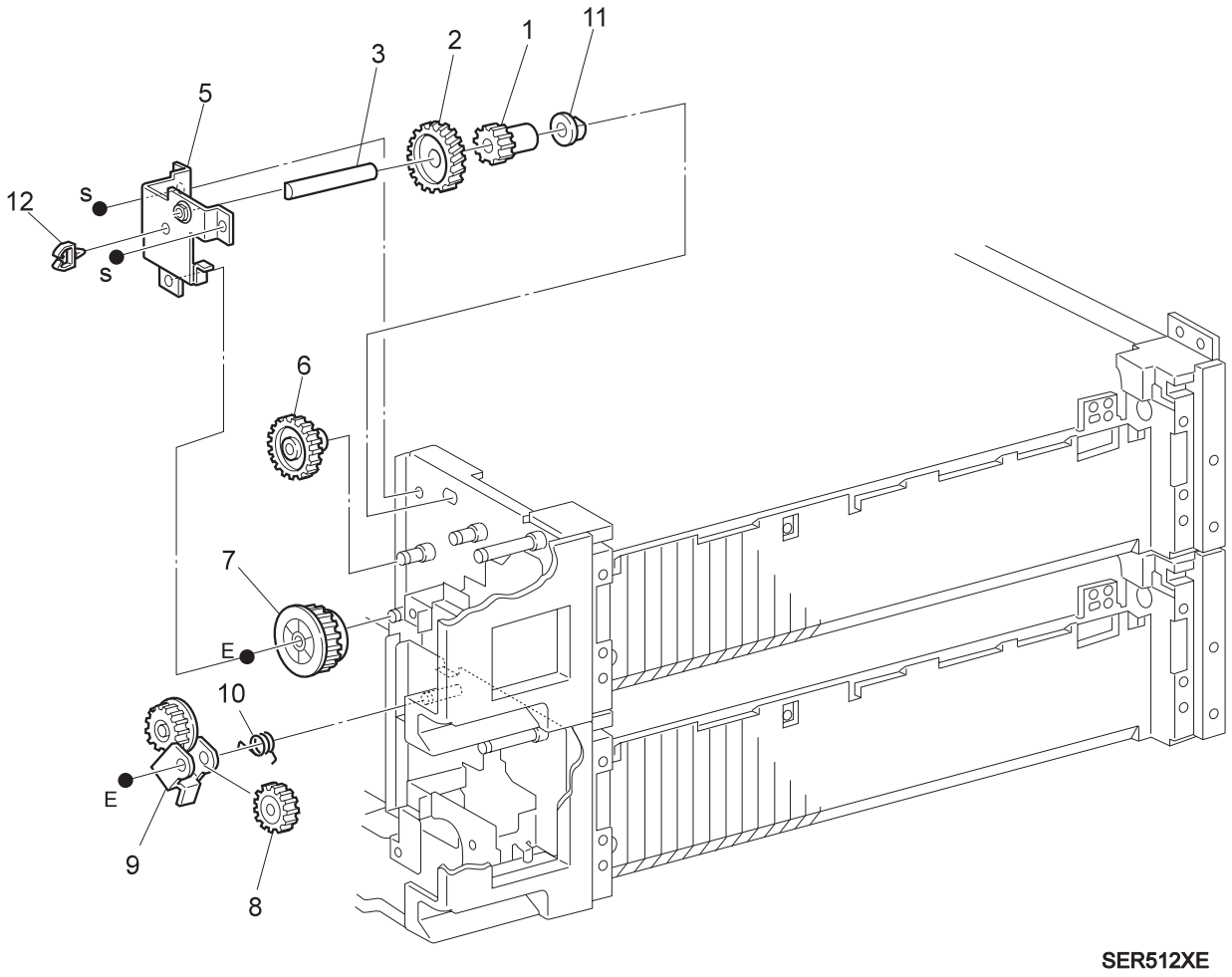
PL3.6 Retard and Take Away - Tray 2

1. RETARD ASSEMBLY, (with 2 ~ 8)
2. GEAR 22T
3. SHAFT ASSEMBLY RET
4. BEARING
5. ROLL ASSEMBLY
6. SPACER
7. CLUTCH ASSEMBLY - FRICTION
8. SUPPORT RETARD
9. - -
10. GEAR 22
11. BEARING
12. GEAR STOPPER
13. --
14. --
15. ROLL ASSEMBLY, T/A
16. --
17. BEARING
18. CHUTE - F/O, 1TM,E
19. CHUTE FEED IN
20. GEAR 22/20, C M/N
21. --
22. SPRING
23. BRACKET

98. KIT RETARD TAKEAWAY TRAY 2 (with 1, and 10~23)
99. KIT TAKE AWAY GEAR TRAY 2 (with 2, 10, and 20)

PL3.7 Feed Drive Transmission



▼ 99 (1, 2, 6~11)

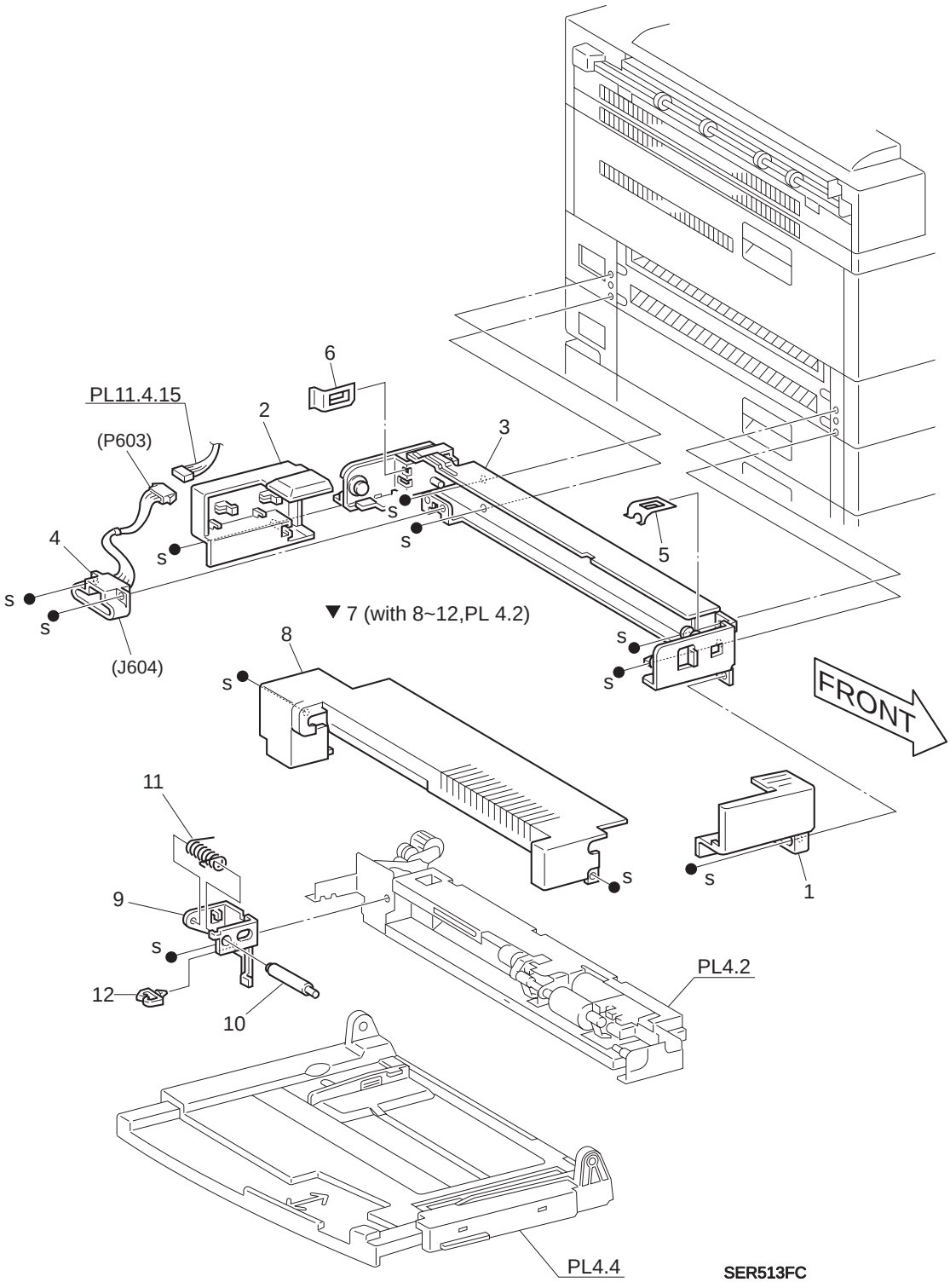
SER512XE

PL3.7 Feed Drive Transmission

1. GEAR 16T
2. GEAR 30T
3. SHAFT C/L T/A
4. - -
5. SUPPORT C/L T/A
6. GEAR 31T
7. GEAR 33T
8. GEAR 16/22
9. LINK ASSEMBLY
10. SPRING TORSION
11. BEARING
12. HARNESS CLAMP

99. KIT FEED DRIVE REPAIR (with 1, 2, and 6 ~ 11)

PL4.1 Multi Sheet Inserter and MSI/Duplex Support

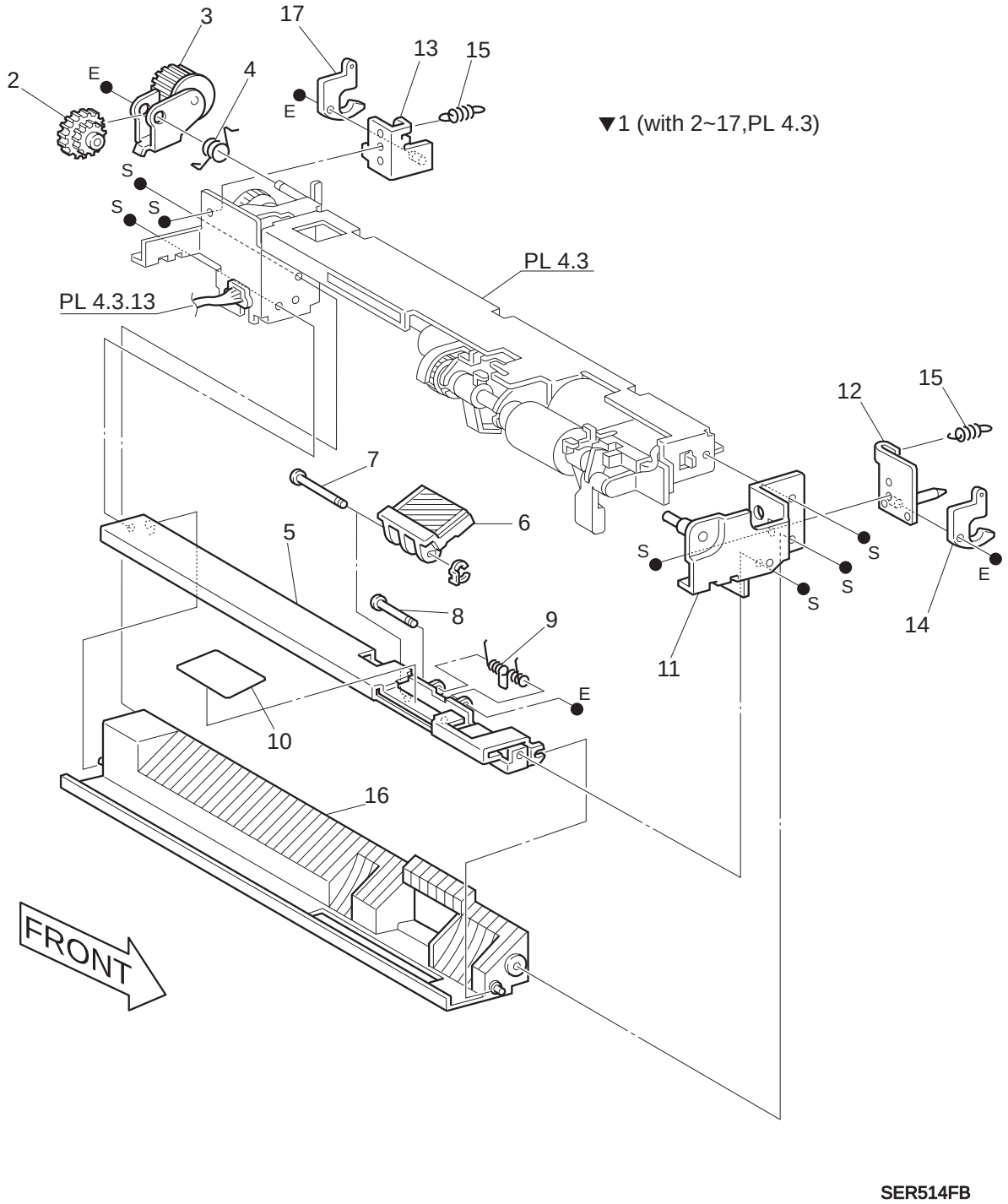


SER513FC

PL4.1 Multi Sheet Inserter and MSI/Duplex Support

1. SUPPORT FRONT COVER
2. SUPPORT REAR COVER
3. MSI/DUPLEX SUPPORT ASSEMBLY
4. HARNESS ASSEMBLY DRAWER (J603 <> J604)
5. SPRING, DAMPER F
6. SPRING DAMPER R
7. MULTI SHEET INSERTER ASSEMBLY (with 8 ~ 12 and PL4.2)
8. MSI TOP COVER
9. MULTI SHEET TRAY SUPPORT
10. MULTI SHEET INSERTER HINGE STUD
11. MULTI SHEET TRAY SPRING
12. MSI HARNESS CLAMP

PL4.2 MSI Feeder Assembly

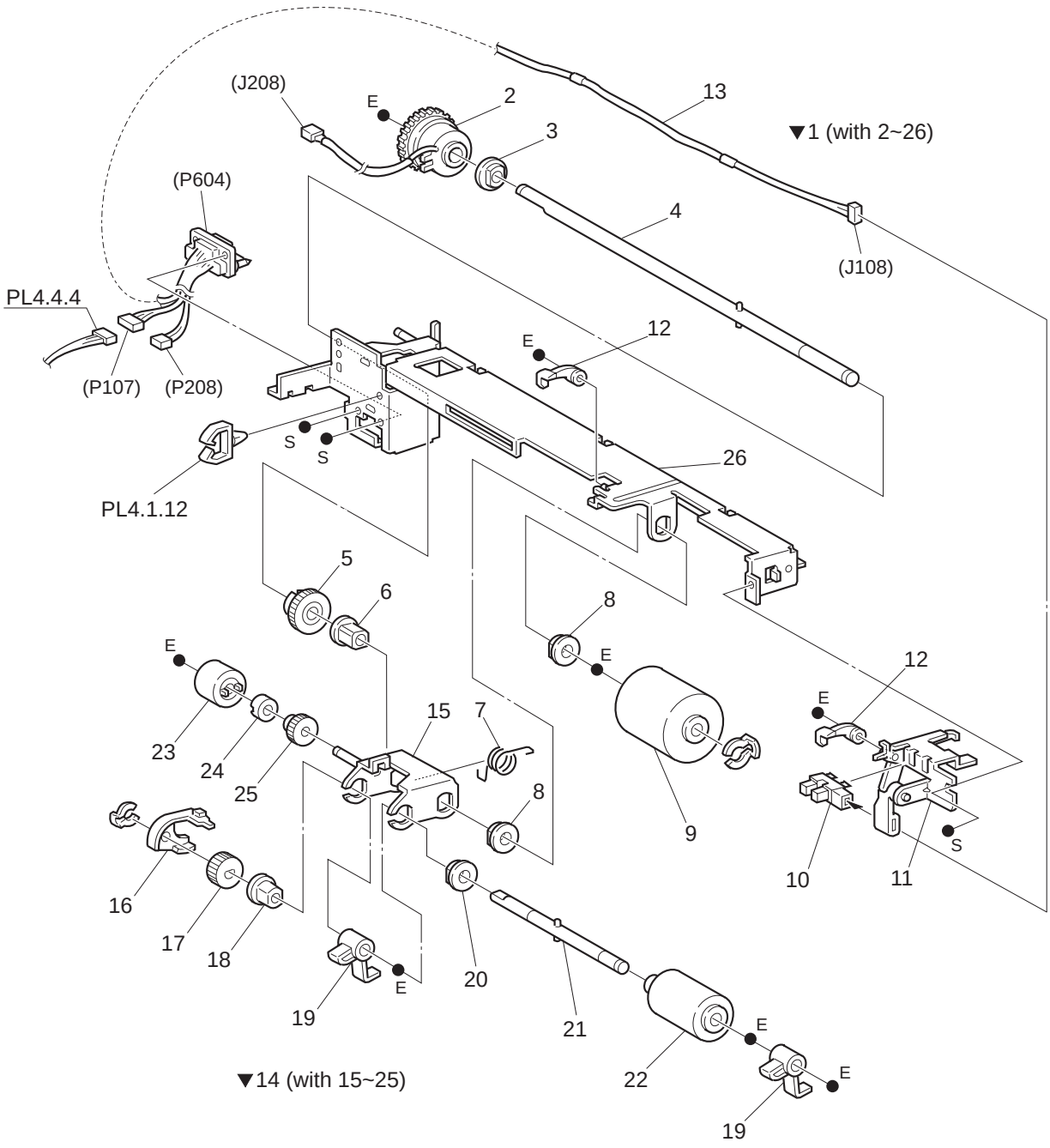


SER514FB

PL4.2 MSI Feeder Assembly

1. MSI FEEDER ASSEMBLY
2. MSI LINK GEAR
3. MSI DRIVE GEAR ASSEMBLY
4. MSI DRIVE LINK SPRING
5. MSI TIE PLATE
6. MSI PAD
7. MSI PAD PIN
8. MSI PAD SHAFT
9. MSI PAD SPRING
10. MSI PAPER GUIDE
11. MSI BRACKET
12. MSI HOOK BRACKET FRONT
13. MSI HOOK BRACKET REAR
14. LATCH - FRONT
15. MULTI SHEET INSERTER HOOK SPRING
16. MSI LOWER CHUTE
17. LATCH - REAR

PL4.3 Upper Feeder Assembly



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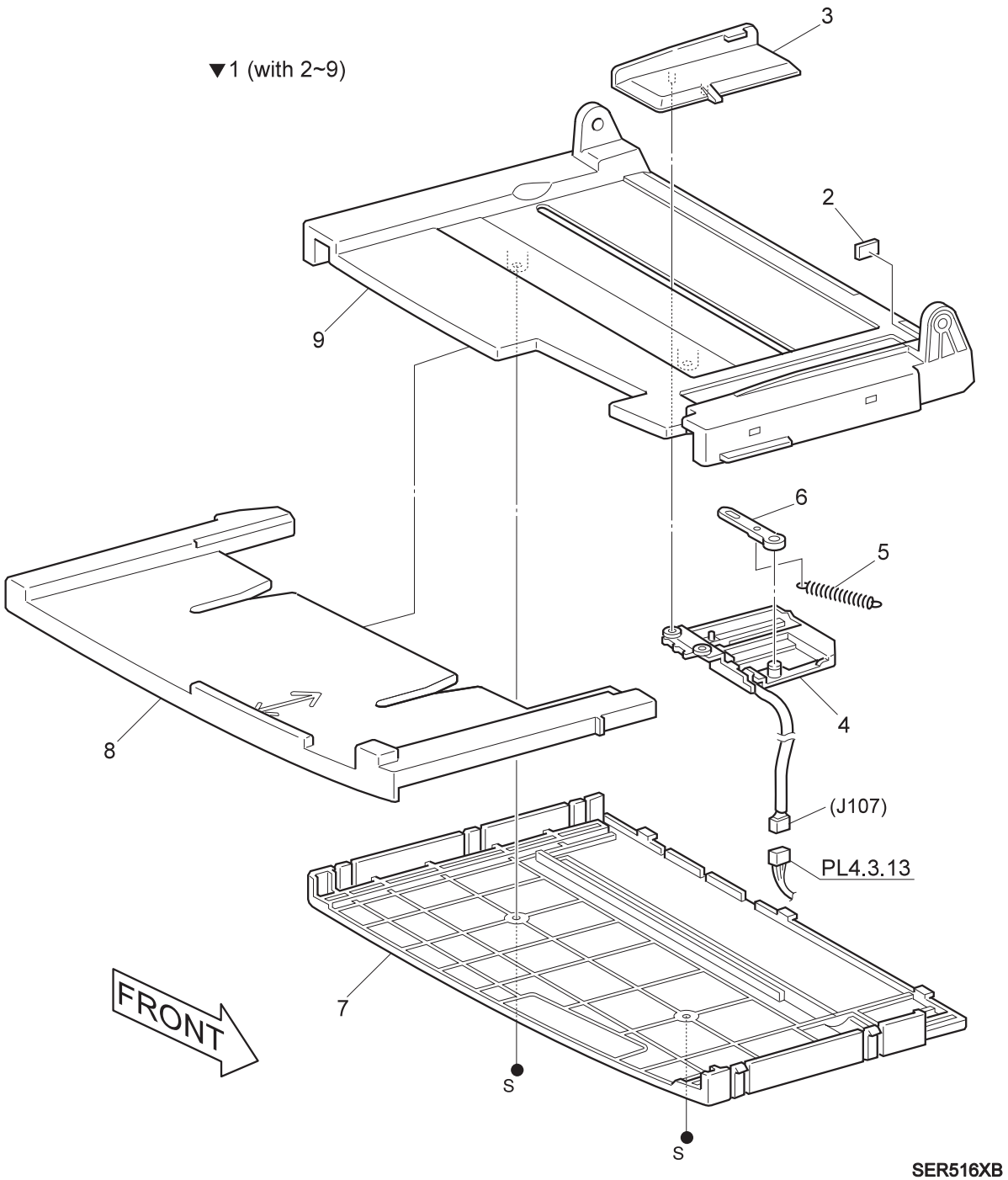
PL4.3 Upper Feeder Assembly

1. UPPER FEEDER ASSEMBLY (with 2 ~ 26)
2. MSI FEED CLUTCH
3. MSI FEED BEARING REAR 1
4. MSI FEED SHAFT
5. MSI FEED GEAR
6. MSI FEED BEARING REAR 2
7. MSI FEED SPRING
8. MSI FEED BEARING FRONT
9. MSI FEED ROLLER
10. MSI NO PAPER SENSOR
11. MSI NO PAPER SENSOR BRACKET
12. MSI STOPPER
13. MSI WIRE HARNESS (P604 < > J108/P107/P208)
14. MSI NUDGER ROLLER ASSEMBLY (with 15 ~ 25)
15. MSI NUDGER ROLLER SUPPORT
16. MSI NUDGER GEAR COVER
17. MSI NUDGER GEAR
18. MSI NUDGER BEARING REAR
19. MSI GATE
20. MSI NUDGER ROLLER BEARING FRONT
21. MSI NUDGER ROLLER SHAFT
22. MSI NUDGER ROLLER
23. MSI FRICTION CLUTCH
24. MSI FRICTION CLUTCH SPACER
25. MSI FRICTION CLUTCH GEAR
26. UPPER FEEDER FRAME

PL4.4 MSI Tray Assembly



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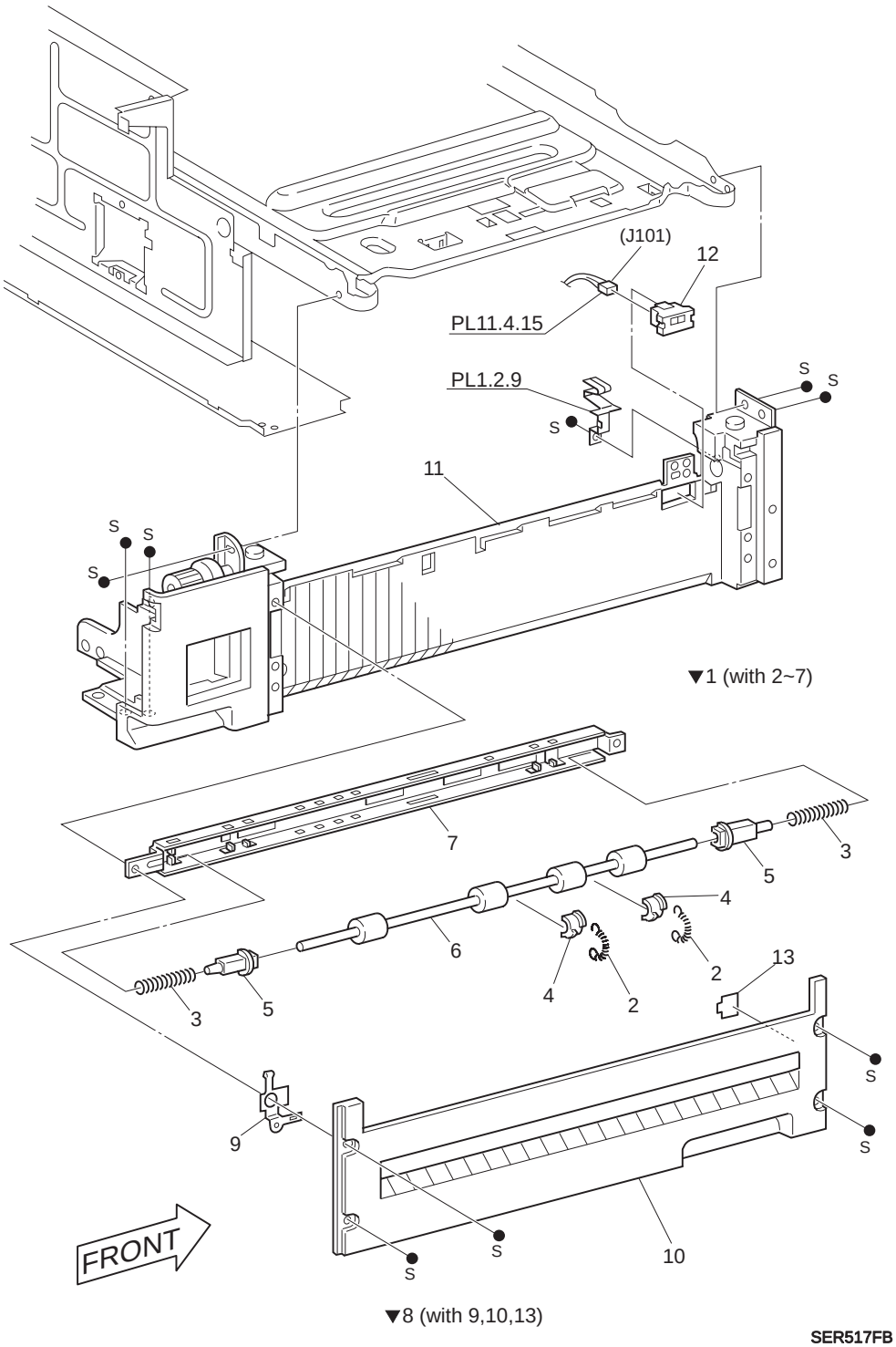
PL4.4 MSI Tray Assembly

1. MSI TRAY ASSEMBLY (with 2 ~ 9)
2. MSI PAD
3. MSI SIDE GUIDE
4. MSI SIZE SENSOR ASSEMBLY
5. MSI SIZE GUIDE SPRING
6. MSI SIZE GUIDE LINK
7. MSI TRAY LOWER COVER
8. MSI TRAY
9. MSI TRAY UPPER COVER

PL5.1 Tray 1 Frame and Left Cover



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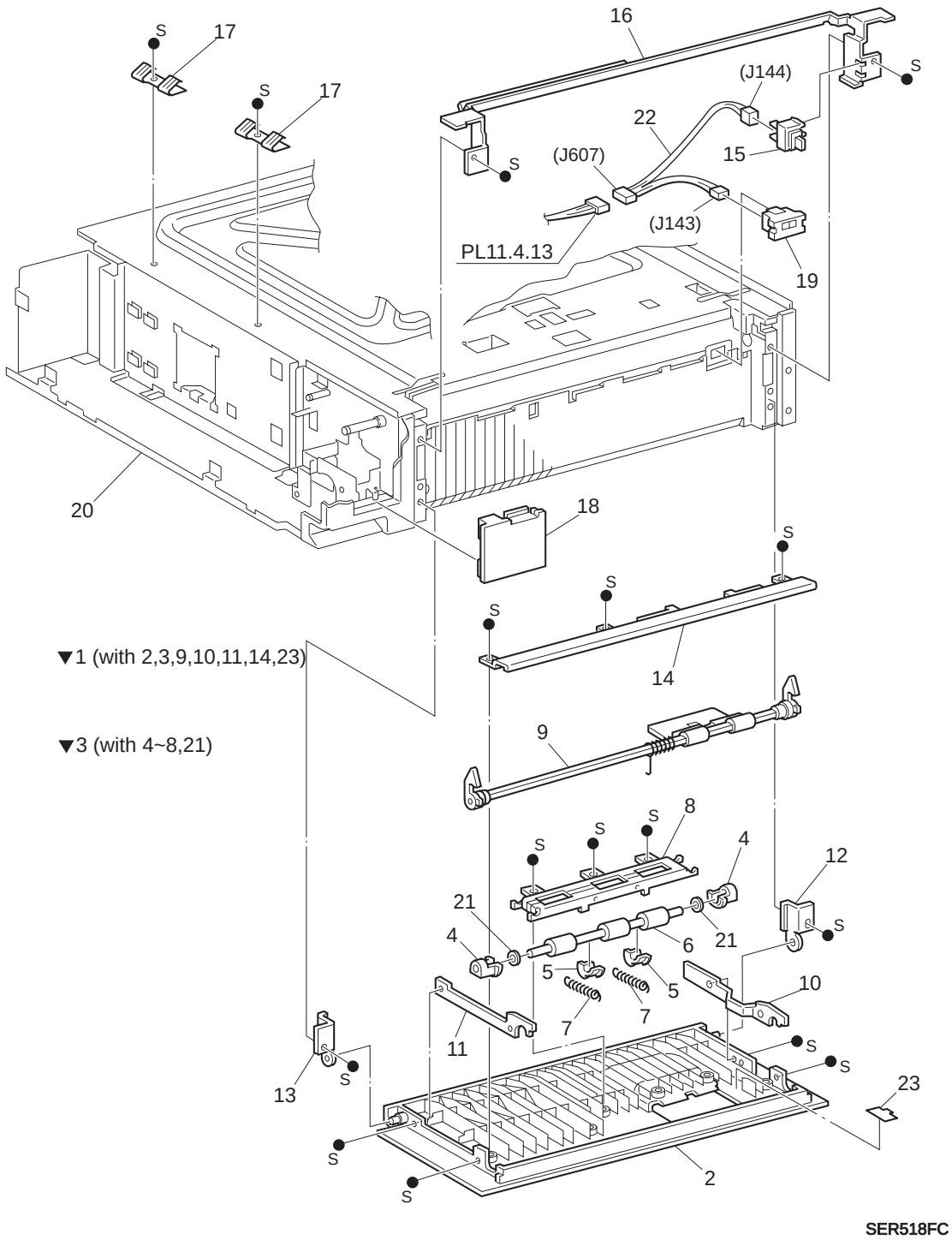
PL5.1 Tray 1 Frame and Left Cover

1. PINCH ROLL ASSEMBLY (with 2 ~ 7)
2. HOLDING SPRING
3. SHAFT SPRING
4. CENTER BEARING
5. END BEARING
6. PINCH ROLLER
7. PINCH ROLLER BRACKET
8. COVER ASSEMBLY L/H, LOW (with 9, 10, and 13)
9. GROUNDING METAL
10. LEFT MIDDLE COVER
11. FRAME LH
12. TAKE AWAY SENSOR 1
13. TAKE AWAY SENSOR SHIELD

PL5.2 Tray 2 Frame and Left Cover



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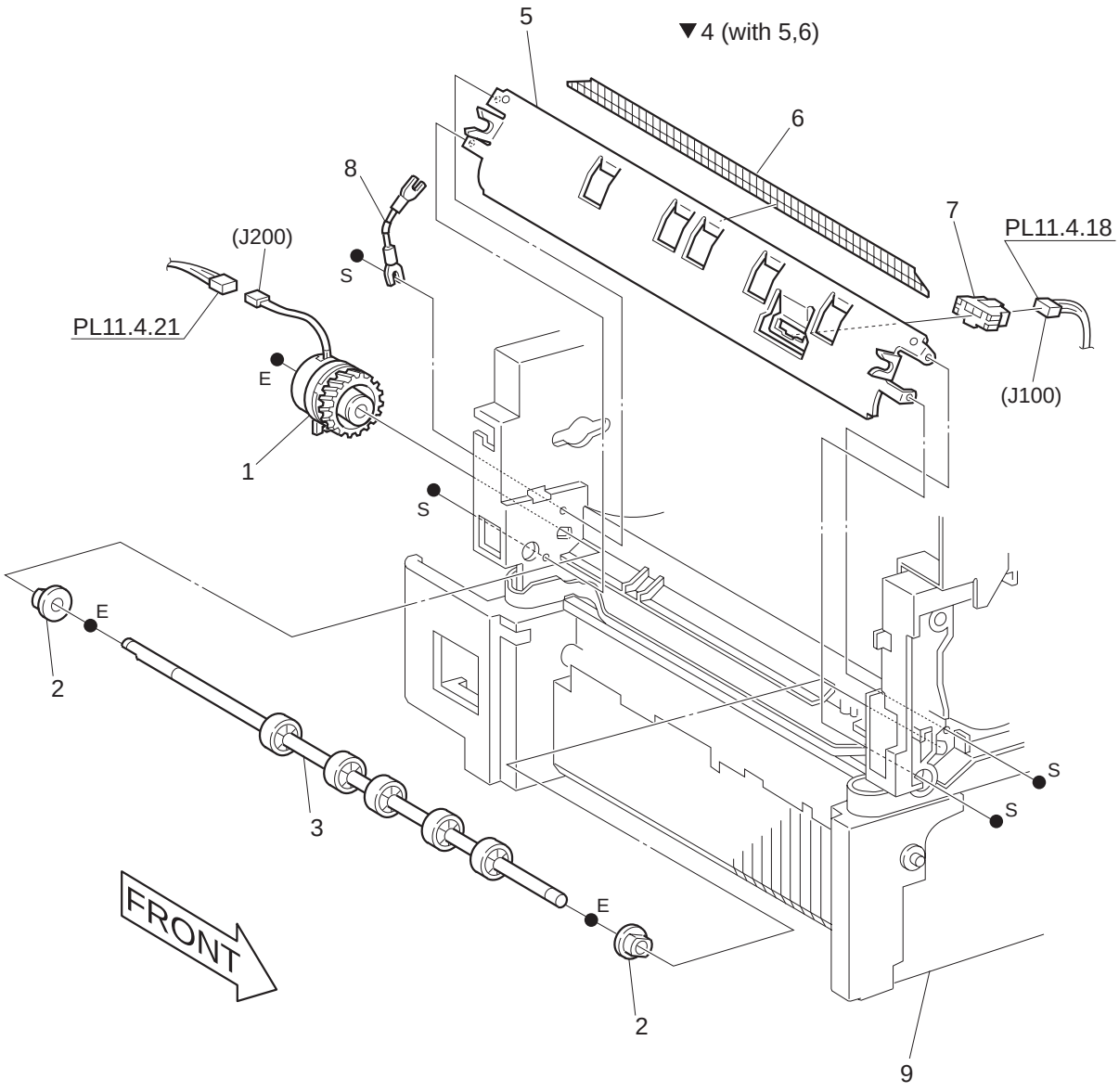
PL5.2 Tray 2 Frame and Left Cover

1. LEFT LOWER COVER ASSEMBLY (with 2, 3, 9 ~11, 14, and 23)
2. LEFT LOWER COVER
3. PINCH ROLL ASSEMBLY (with 4 ~ 8, and 21)
4. PINCH ROLL END BEARING
5. PINCH ROLL CENTER BEARING
6. PINCH ROLLER
7. PINCH ROLL SPRING
8. PINCH ROLL BRACKET
9. LEFT LOWER COVER HANDLE ASSEMBLY
10. FRONT FRAME
11. REAR FRAME
12. FRONT HINGE
13. REAR HINGE
14. FEED OUT CHUTE
15. LEFT LOWER COVER INTERLOCK SWITCH
16. TRAY 2 WELL TIE PLATE
17. SPRING - EME
18. CAP
19. TAKE AWAY SENSOR
20. SUPPORT - REAR
21. WASHER
22. INTERLOCK/SENSOR HARNESS (J607 < > J143/J144)
23. TAKE AWAY SENSOR SHIELD

PL6.1 Registration



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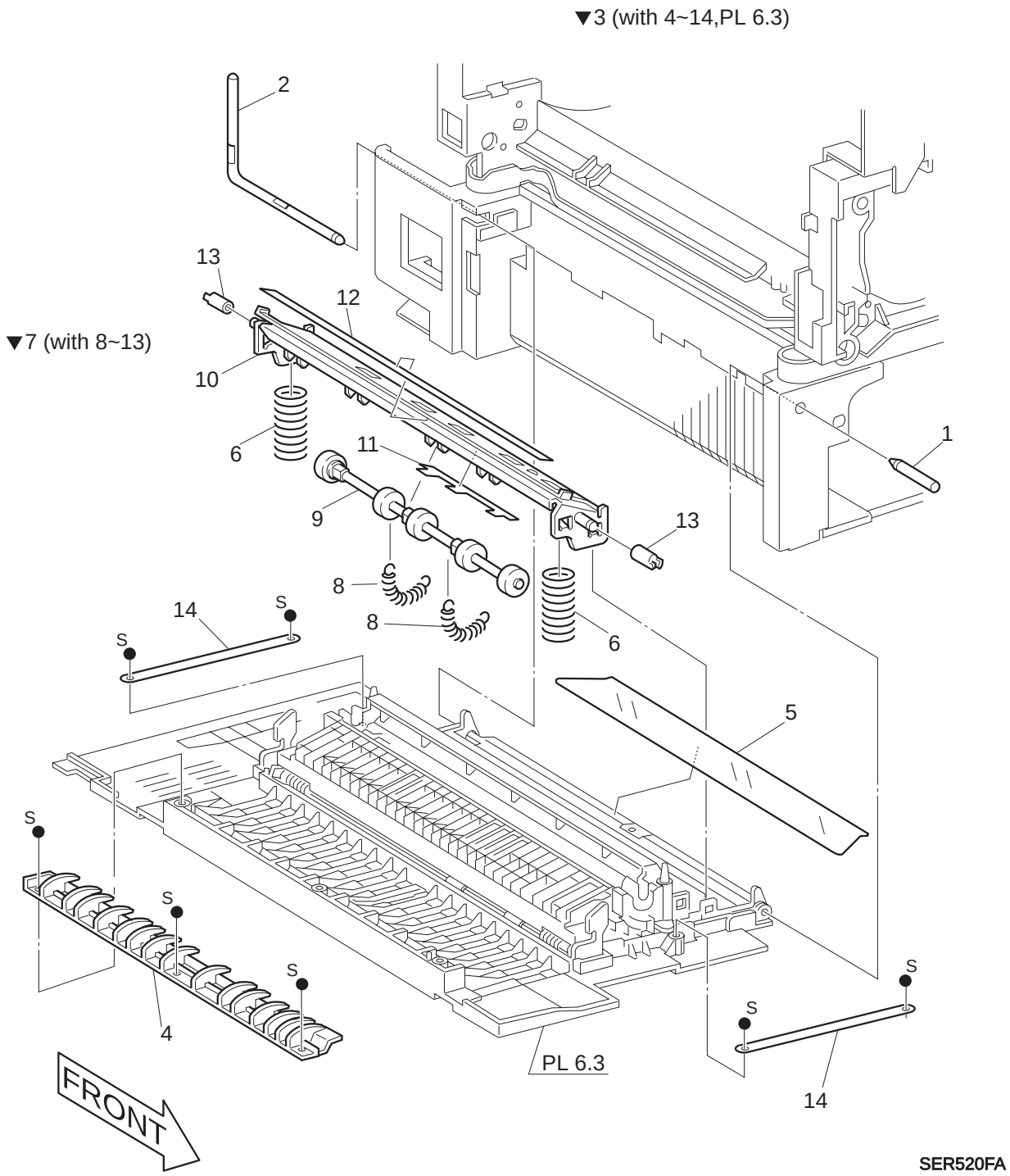
PL6.1 Registration

1. CLUTCH ASSEMBLY REGISTRATION
2. BEARING
3. ROLLER ASSEMBLY REGISTRATION
4. CHUTE ASSEMBLY REGISTRATION (5 and 6)
5. CHUTE REGISTRATION
6. ELIMINATOR
7. SENSOR
8. RESISTOR ASSEMBLY
9. FRAME - L/H

PL6.2 Left Upper Cover Assembly



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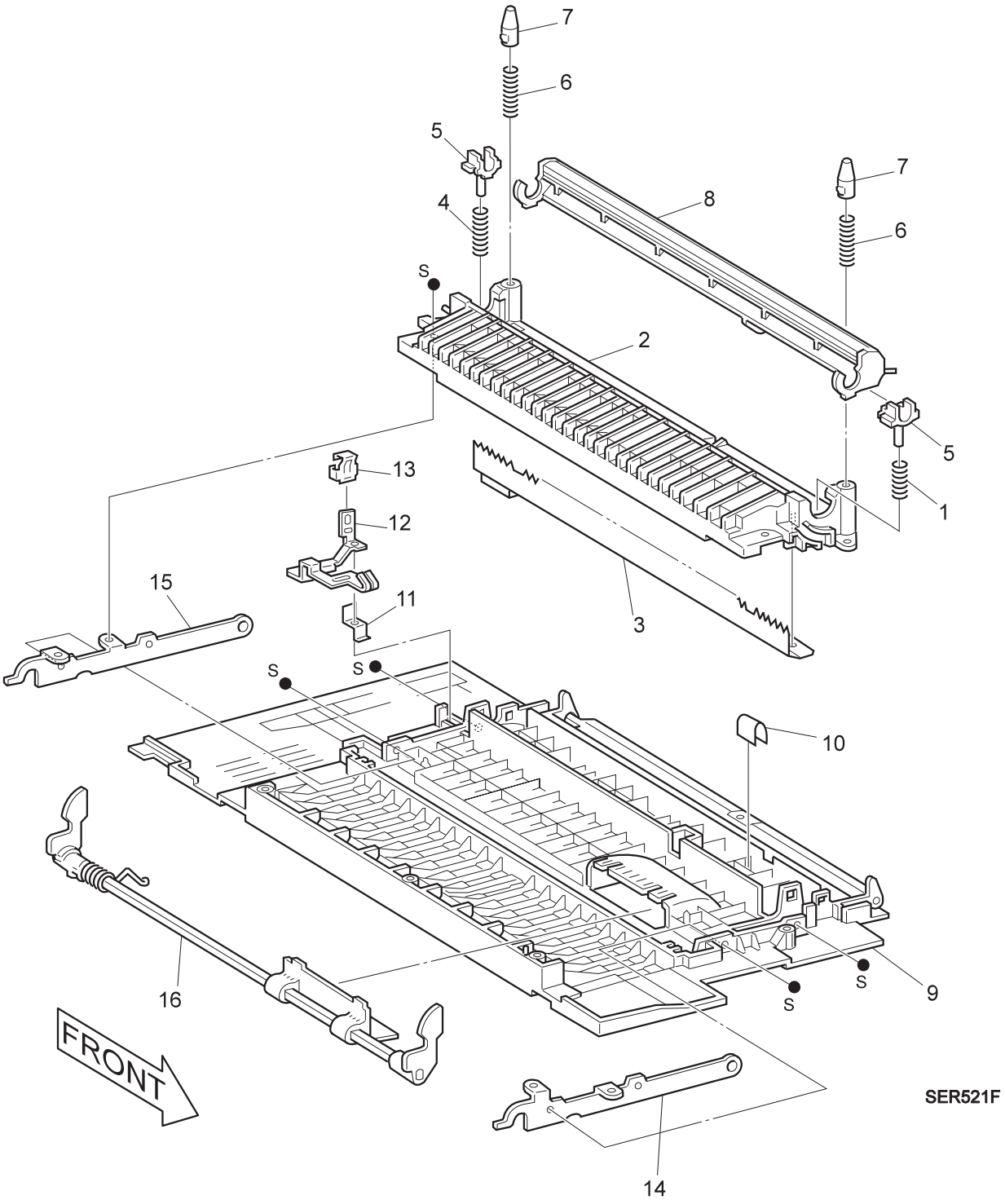
PL6.2 Left Upper Cover Assembly

1. SHAFT - HINGE
2. SHAFT - HINGE REAR M/N
3. COVER ASSEMBLY L/H, (with 4 ~ 14, PL 6.3)
4. CHUTE LOWER
5. GUIDE PAPER
6. SPRING COMP
7. CHUTE ASSEMBLY L/H (with 8 ~ 13)
8. SPRING EXTENSION
9. ROLLER ASSEMBLY - REGISTRATION L/H
10. CHUTE ASSEMBLY - REGISTRATION L/H
11. GUIDE PAPER
12. GUIDE PAPER
13. PULLEY
14. SUPPORT - L/H COVER

PL6.3 Transport Chute Assembly



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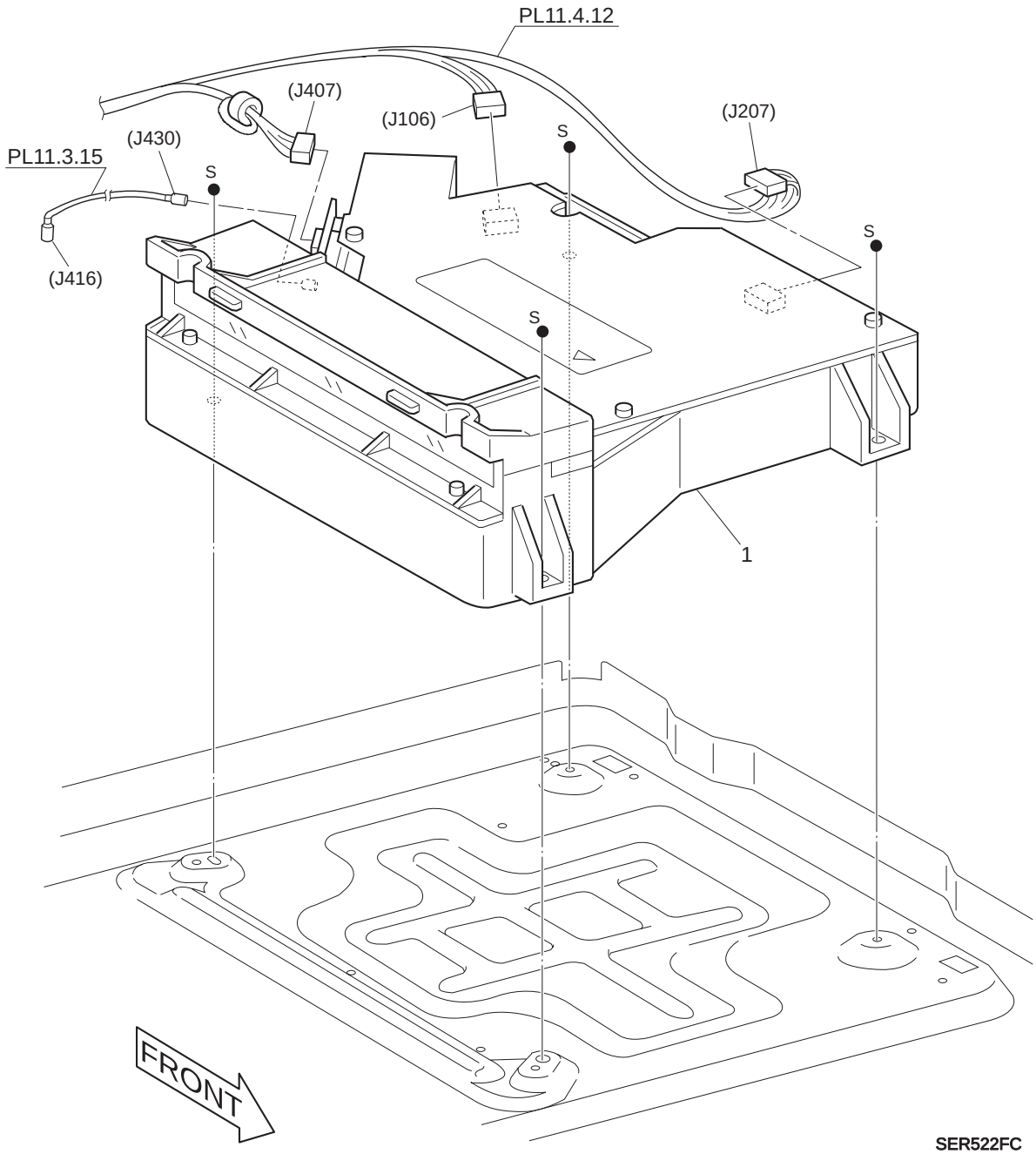
PL6.3 Transport Chute Assembly

1. BTR SLEEVE SPRING IN
2. TRANSPORT CHUTE
3. PLATE ELIMINATOR
4. BTR SLEEVE SPRING OUT
5. BTR SLEEVE
6. TRANSPORT CHUTE SPRING
7. TRANSPORT CHUTE ROD
8. TRANSPORT CHUTE INLET
9. COVER ASSEMBLY L/H,
10. PAD - 1
11. BRACKET - L/H
12. PLATE - CONTACT, L/H
13. PLATE - CONTACT - L/H, C
14. FRAME - L/H, F
15. FRAME - L/H, R
16. HANDLE ASSEMBLY - L/H

PL7.1 ROS Assembly



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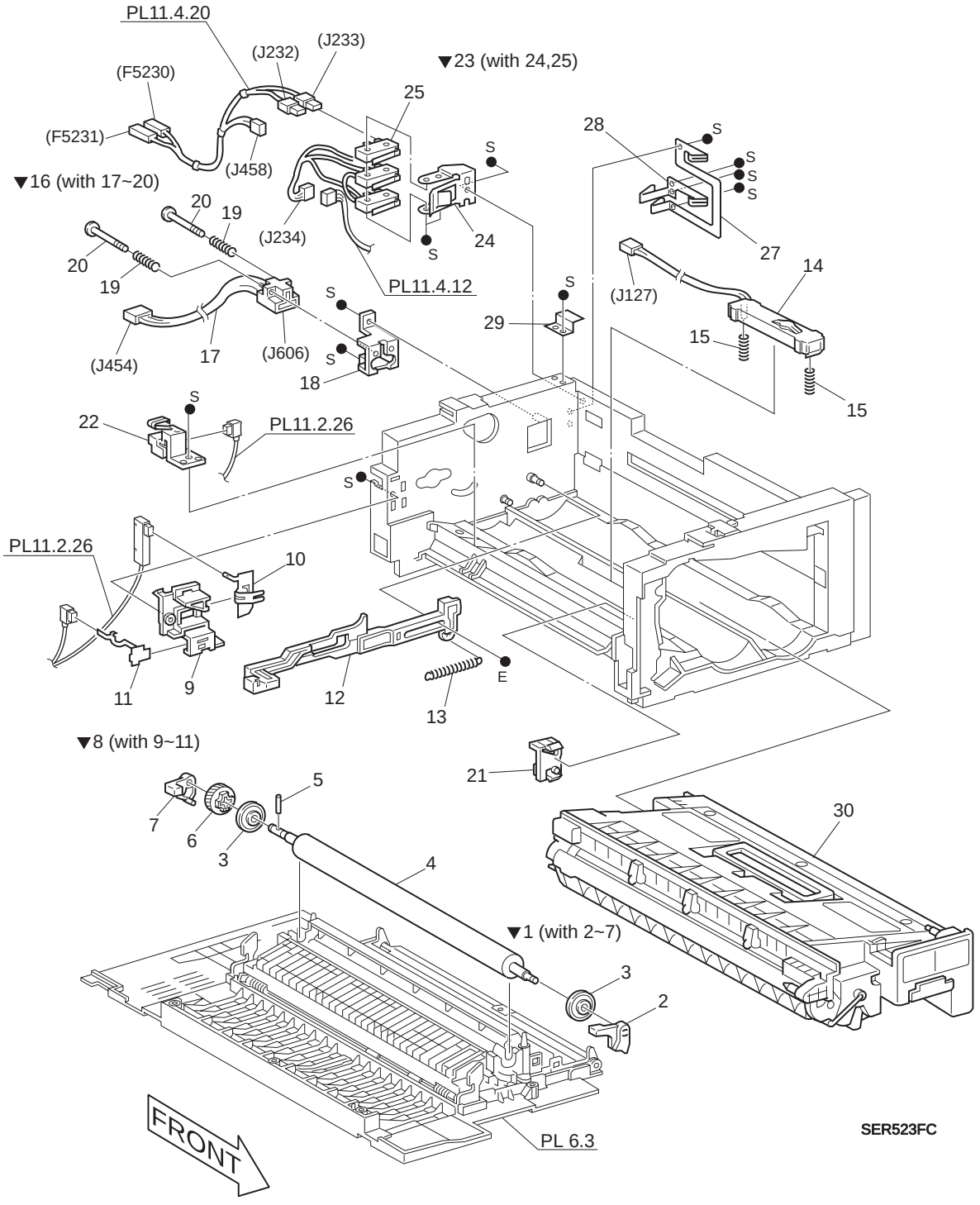
PL7.1 ROS Assembly

1. ROS ASSEMBLY

PL7.2 Xerography and Development



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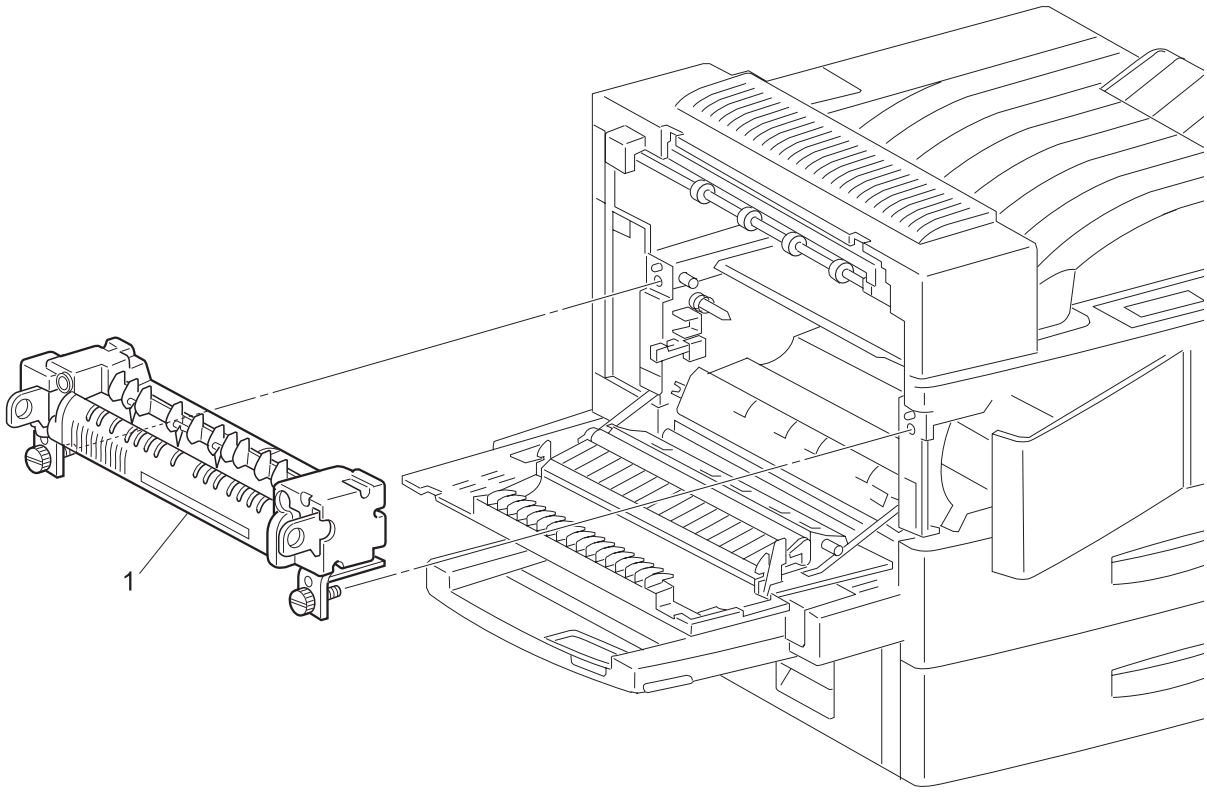
PL7.2 Xerography and Development

1. BTR ASSEMBLY (with 2 ~ 7)
2. BTR FRONT LEVER
3. BTR ROLL
4. BTR
5. BTR POSITIONING PIN
6. BTR GEAR
7. BTR GEAR LEVER
8. BTR/DTS GUIDE ASSEMBLY (with 9 ~ 11)
9. BTR/DTS GUIDE BRACKET
10. BTR LEAD PLATE
11. DTS LEAD PLATE
12. DTS LINK ROD
13. DTS LINK SPRING
14. TONER EMPTY SENSOR
15. TONER SENSOR SPRING
16. CRU CONNECTOR ASSEMBLY (with 17 ~ 20)
17. CRU CONNECTOR (J454 < > J606)
18. CRU CONNECTOR BRACKET
19. CRU CONNECTOR SPRING
20. STUD SCREW
21. BTR GUIDE
22. CB ASSEMBLY
23. CRU INTERLOCK SWITCH ASSEMBLY (with 24 and 25)
24. CRU INTERLOCK SWITCH BRACKET
25. CRU INTERLOCK SWITCH ASSEMBLY
26. - -
27. PLATE CONTACT C
28. PLATE CONTACT D
29. PWB STUD
30. EP CARTRIDGE (Customer Replaceable Unit - CRU)

PL8.1 Fuser Assembly



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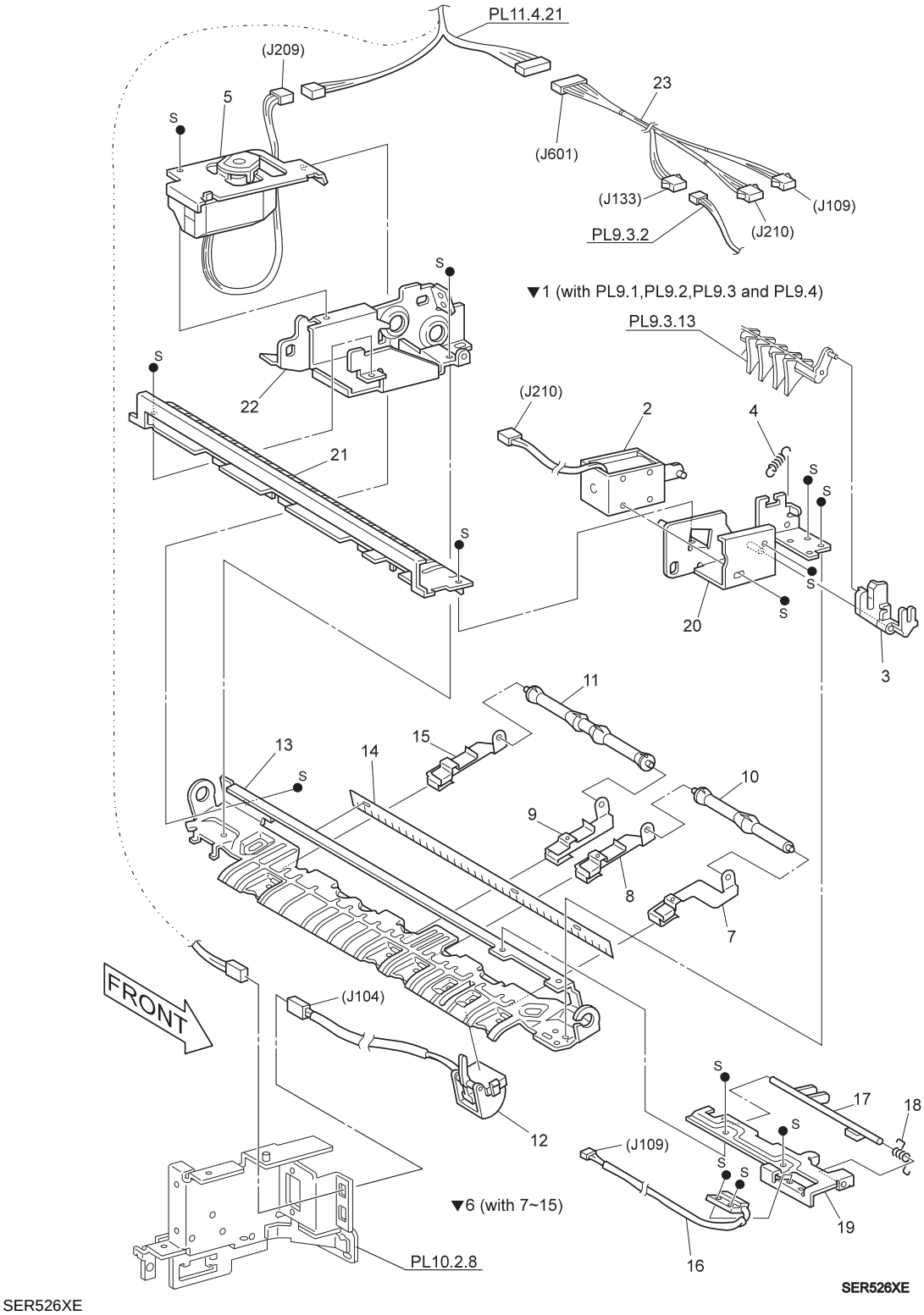
PL8.1 Fuser Assembly

1. FUSER ASSEMBLY - 115V (Customer Replaceable Unit - CRU)
   FUSER ASSEMBLY - 220V (Customer Replaceable Unit - CRU)

PL9.1 Exit Lower Chute



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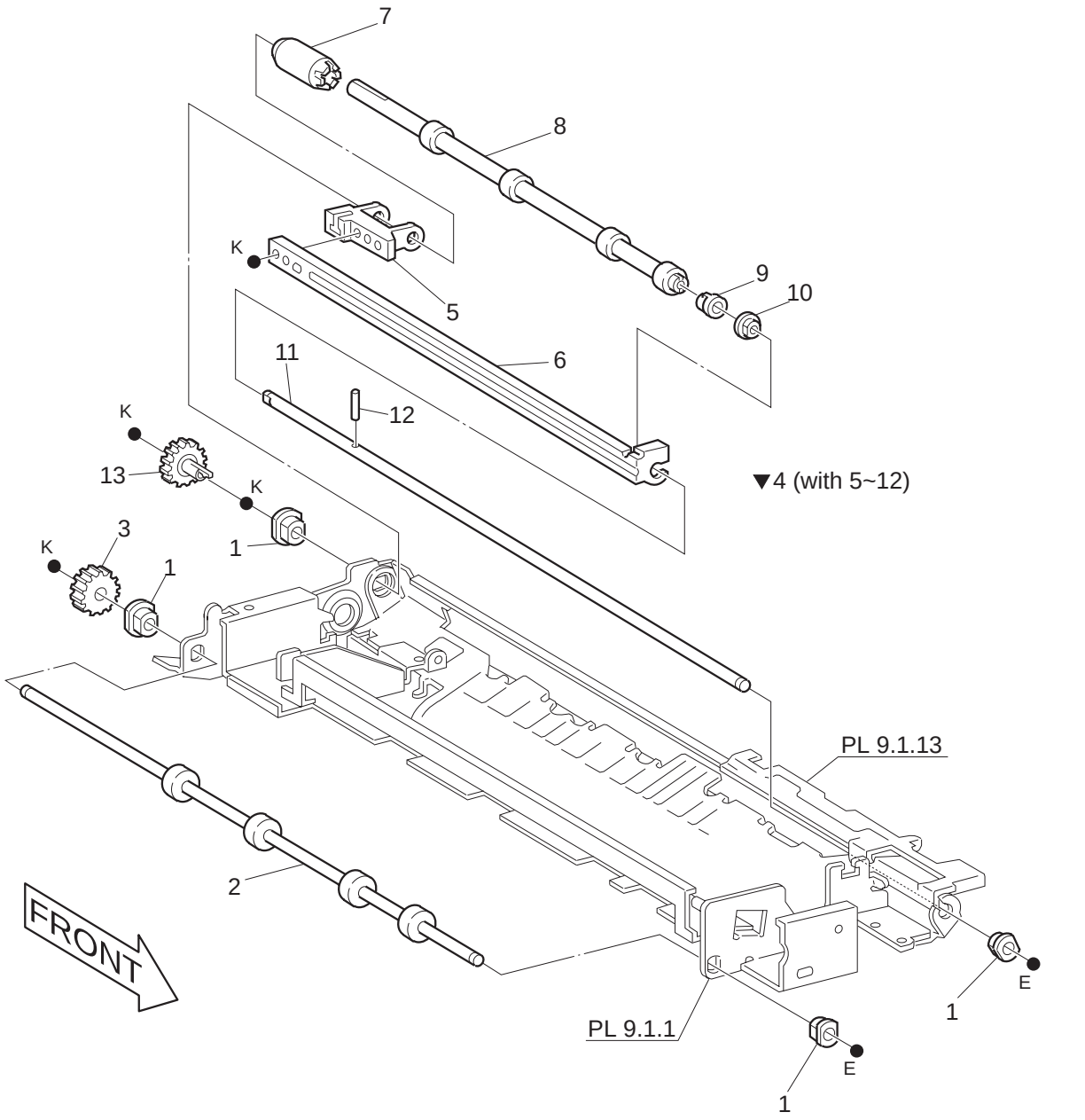
PL9.1 Exit Lower Chute

1. TRANSPORT ASSEMBLY FULL (with PL9.1, PL9.2, PL9.3, and PL9.4)
2. SOLENOID ASSEMBLY
3. LINK - SOLENOID
4. SPRING
5. OFFSET MOTOR
6. LOWER CHUTE ASSEMBLY (with 7 ~ 15)
7. PINCH ROLLER SPRING FRONT 1
8. PINCH ROLLER SPRING REAR 1
9. PINCH ROLLER SPRING FRONT 2
10. PINCH ROLLER FRONT
11. PINCH ROLLER REAR
12. FUSER EXIT SENSOR
13. LOWER CHUTE
14. ELIMINATOR
15. PINCH ROLL SPRING REAR 2
16. EXIT SENSOR
17. EXIT ACTUATOR
18. EXIT SENSOR SPRING
19. EXIT SENSOR BRACKET
20. BRACKET ASSEMBLY - FRONT
21. LOWER CHUTE - FACE UP
22. FRAME ASSEMBLY - REAR
23. EXIT HARNESS (J601 < > J109/J133/J210)

PL9.2 Offset Roller



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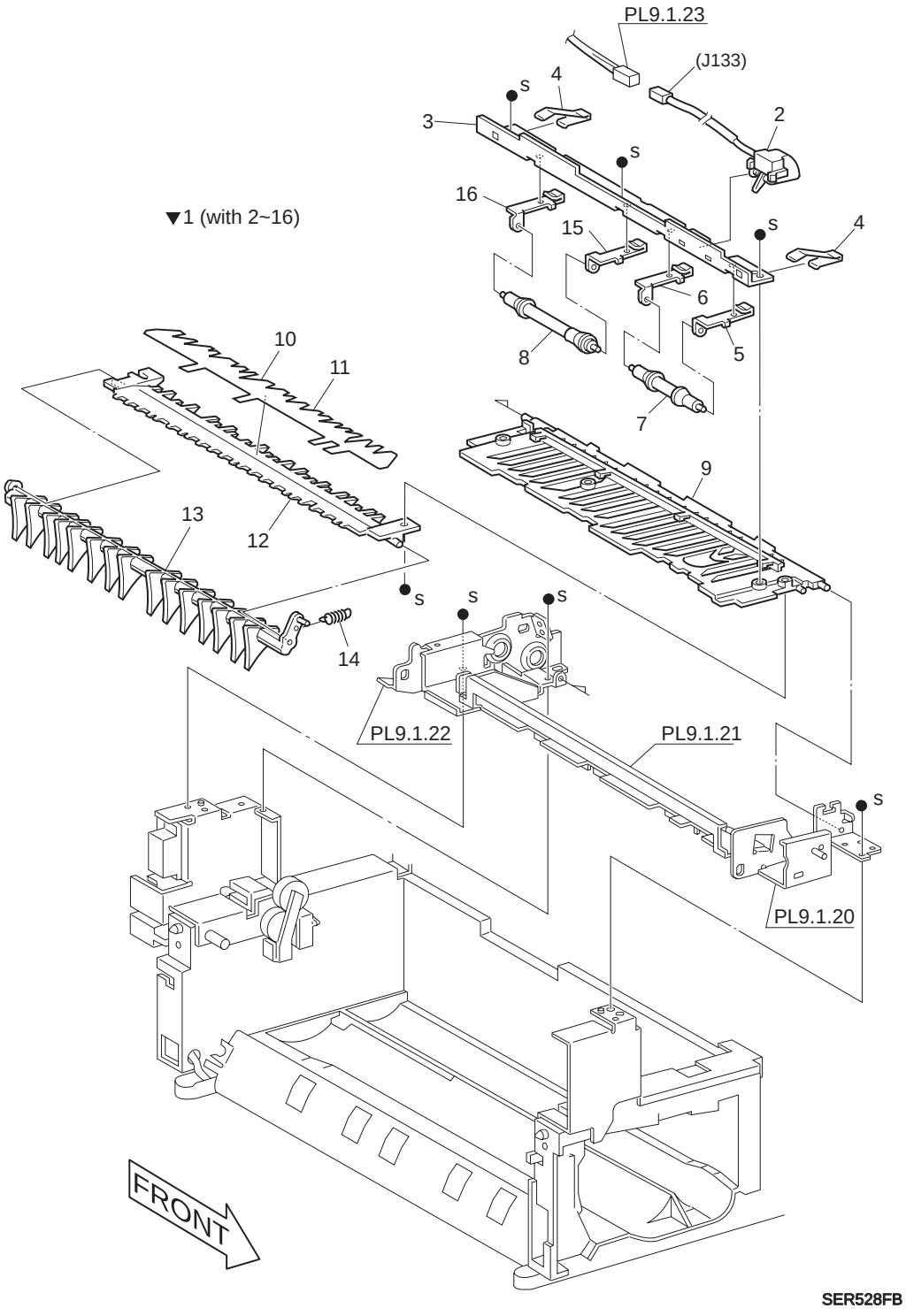
PL9.2 Offset Roller

1. BEARING
2. ROLLER ASSEMBLY - EXIT FUT
3. GEAR - 19 ASSEMBLY
4. OFFSET ROLLER ASSEMBLY (with 5 ~ 12)
5. OFFSET RACK
6. OFFSET BRACKET
7. OFFSET ROLLER SLEEVE
8. OFFSET ROLLER
9. OFFSET ROLLER BEARING REAR
10. OFFSET ROLLER BEARING FRONT
11. OFFSET SHAFT
12. OFFSET SHAFT PIN
13. GEAR - 19

PL9.3 Exit Upper Chute Assembly



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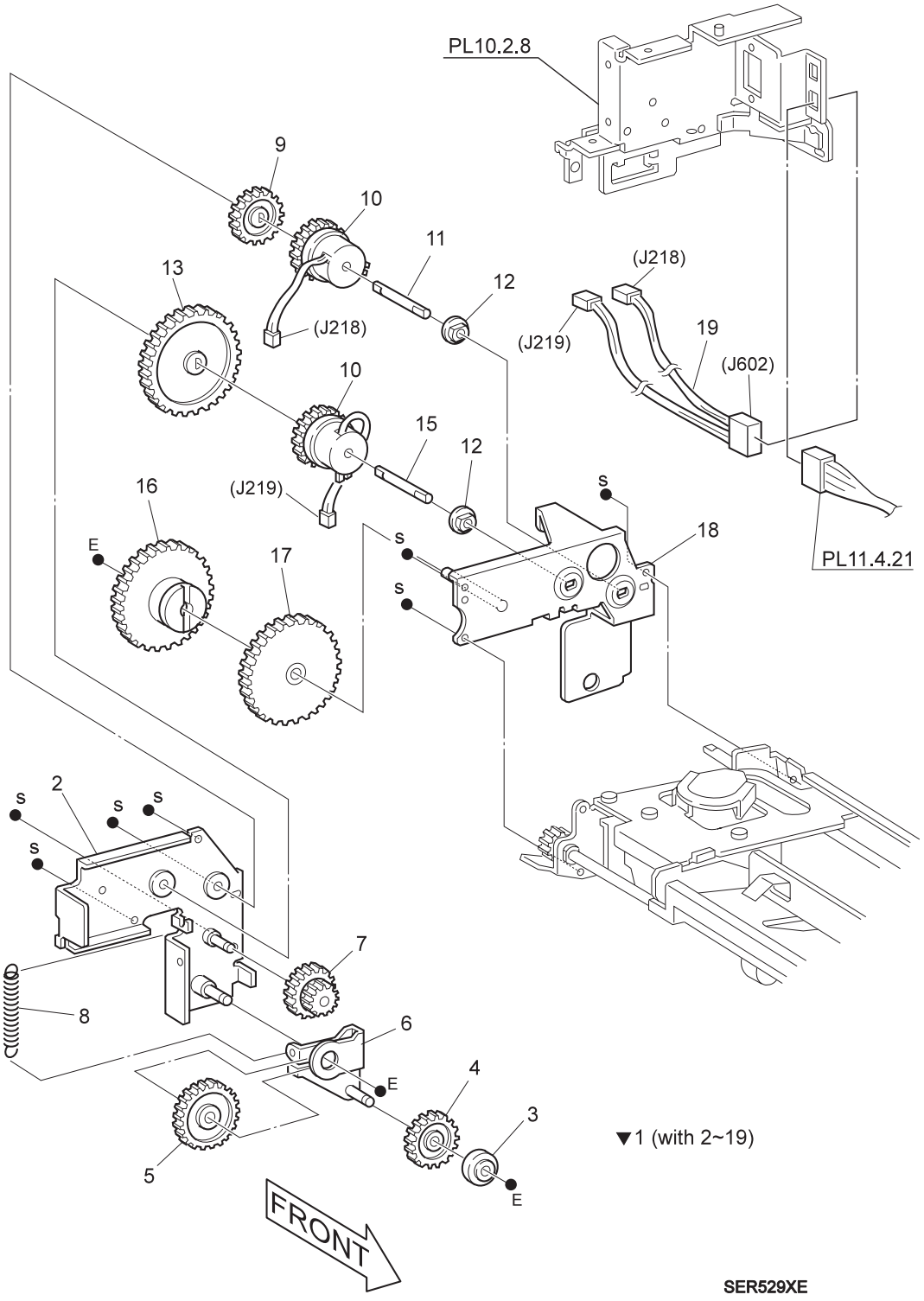
PL9.3 Exit Upper Chute Assembly

1. CHUTE ASSEMBLY - UPPER (with 2 ~ 16)
2. SWITCH ASSEMBLY
3. PLATE - TIE
4. SPRING PLATE
5. SPRING ASSEMBLY - PINCH, H
6. SPRING ASSEMBLY - PINCH, I
7. PINCH ROLLER, FRONT
8. PINCH ROLLER, REAR
9. EXIT UPPER CHUTE
10. GUIDE PAPER
11. GUIDE PAPER
12. EXIT MIDDLE CHUTE
13. EXIT GATE
14. EXIT GATE SPRING
15. SPRING ASSEMBLY - PINCH, J
16. SPRING ASSEMBLY - PINCH, K

PL9.4 Exit Drive Assembly



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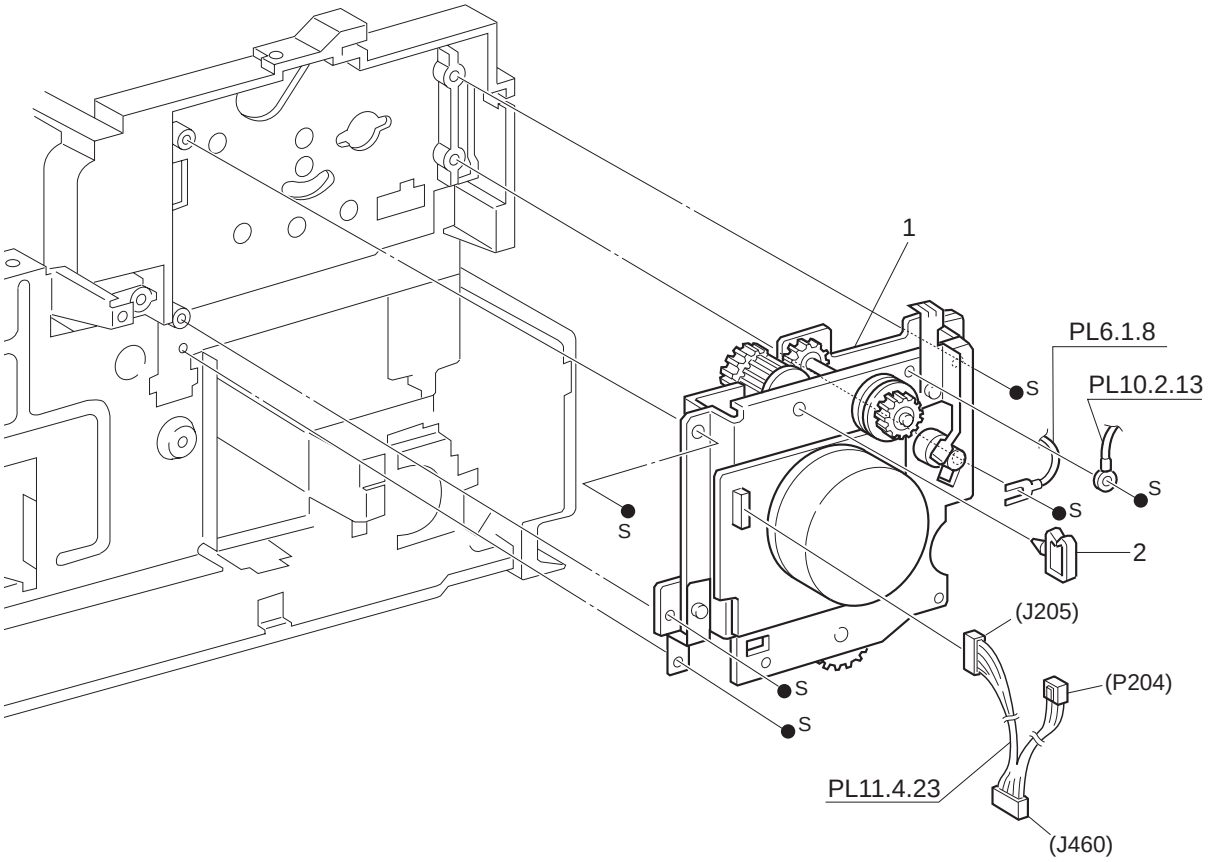
PL9.4 Exit Drive Assembly

1. EXIT DRIVE ASSEMBLY (with 2 ~ 19)
2. EXIT DRIVE SUPPORT
3. EXIT DRIVE IDLER PULLEY
4. EXIT GEAR 1
5. EXIT GEAR 2
6. EXIT GEAR 2 BRACKET
7. EXIT IDLER GEAR
8. EXIT RATCHET SPRING
9. INVERTER CCW GEAR
10. INVERTER CLUTCH
11. INVERTER CCW SHAFT
12. BEARING
13. INVERTER CW GEAR
14. - -
15. INVERTER CW SHAFT
16. INVERTER EXIT GEAR REAR
17. INVERTER EXIT GEAR FRONT
18. INVERTER BRACKET
19. EXIT WIRE HARNESS (J602 < > J218/J219)

PL10.1 Main Drive Assembly



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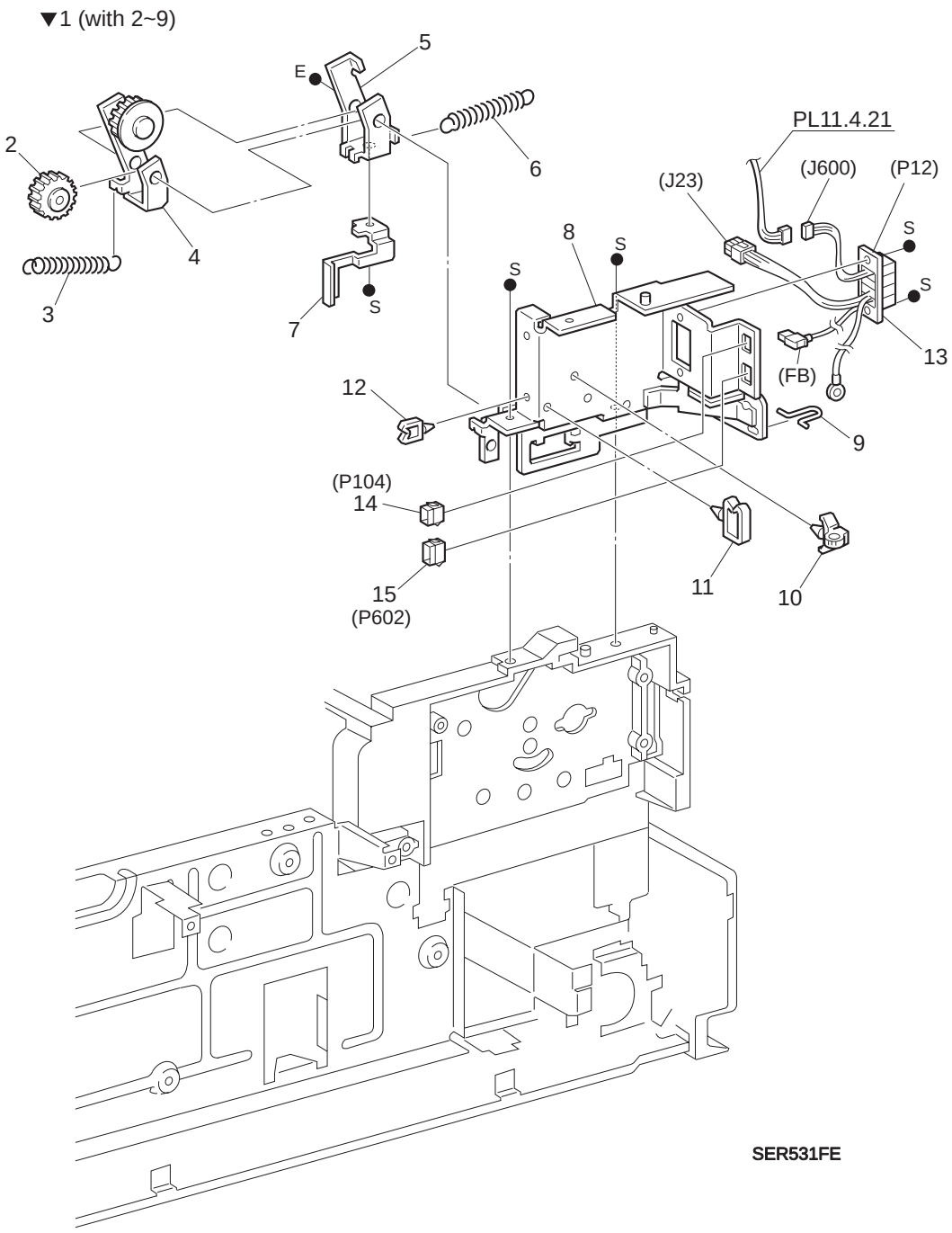
PL10.1 Main Drive Assembly

1. MAIN DRIVE ASSEMBLY
2. HARNESS CLAMP

PL10.2 Fuser Drive Assembly



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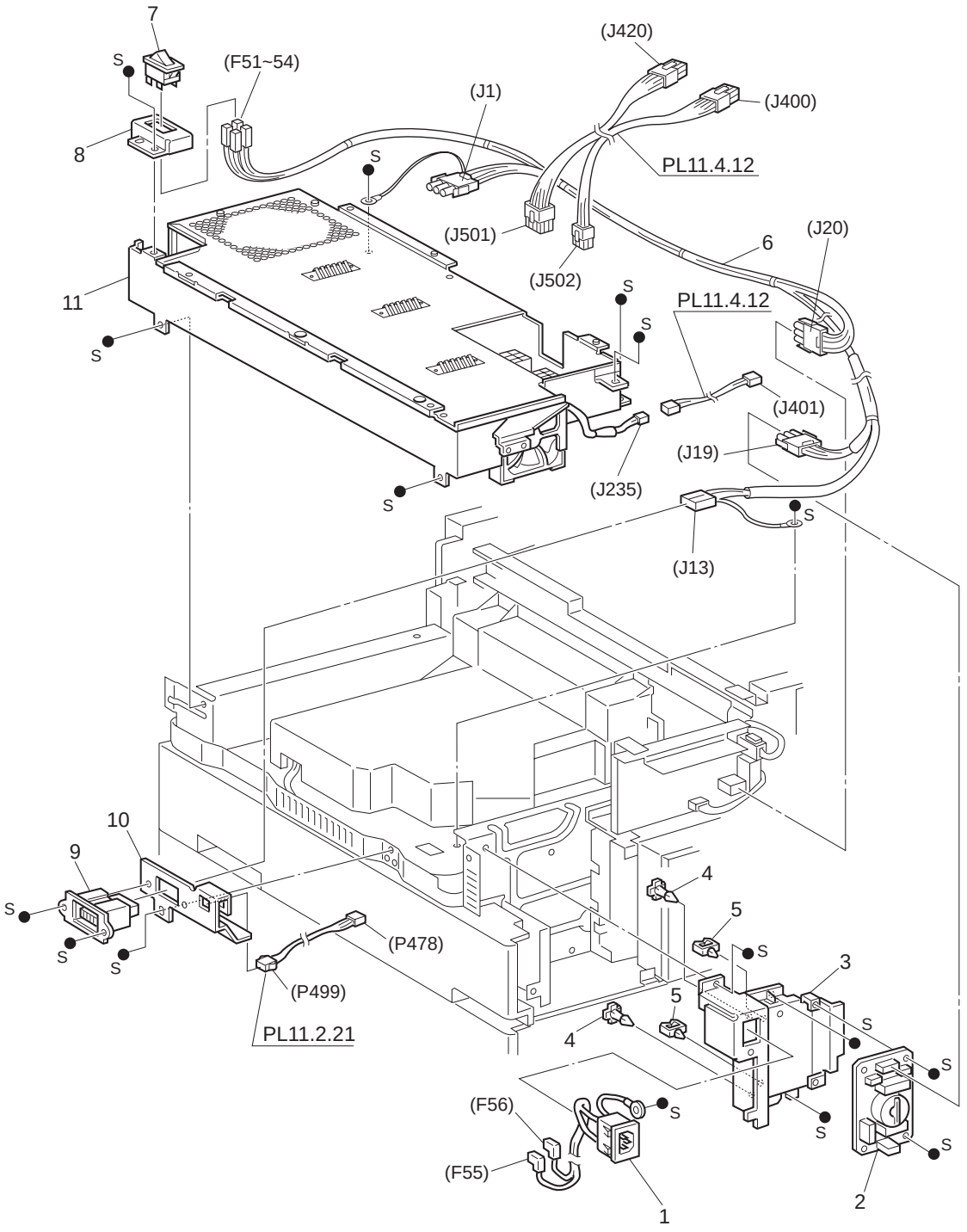
PL10.2 Fuser Drive Assembly

1. FRAME ASSEMBLY EXIT REAR (with 2 ~ 9)
2. GEAR 22T
3. SPRING
4. BRACKET ASSEMBLY
5. BRACKET
6. SPRING - EXIT
7. BRACKET
8. FRAME ASSEMBLY - EXIT, REAR
9. STOPPER HOOK
10. HARNESS CLAMP 1
11. HARNESS CLAMP 2
12. HARNESS CLAMP 3
13. DRAWER CONNECTOR (P12 < > J23/J600)
14. CONNECTOR P104
15. CONNECTOR P602

PL11.1 Power Inlet and LVPS



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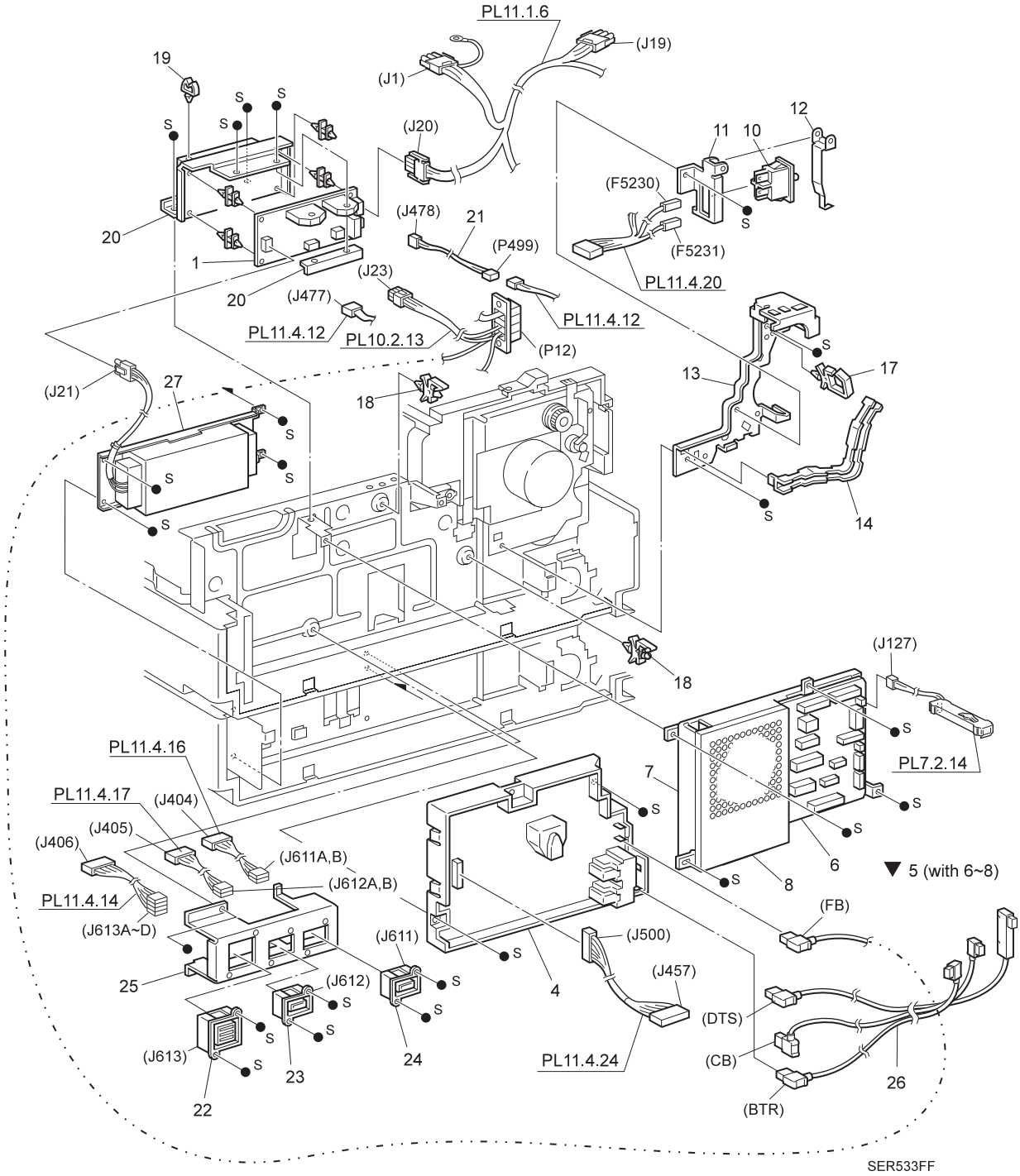
PL11.1 Power Inlet and LVPS

1. POWER INLET CONNECTOR
2. NOISE FILTER PWB 120
   - NOISE FILTER PWB 220
3. BRACKET - N/F
4. PWB STUD
5. HARNESS CLAMP
6. MAIN POWER HARNESS (F51~F54 / J1 < > J13/J19/J20)
7. MAIN SWITCH
8. BRACKET ASSEMBLY SWITCH
9. OUTLET
10. BRACKET FINISHER
11. PS ASSEMBLY -M4 120V
    - PS ASSEMBLY -M4 220V

PL11.2 HVPS and MCU PWB



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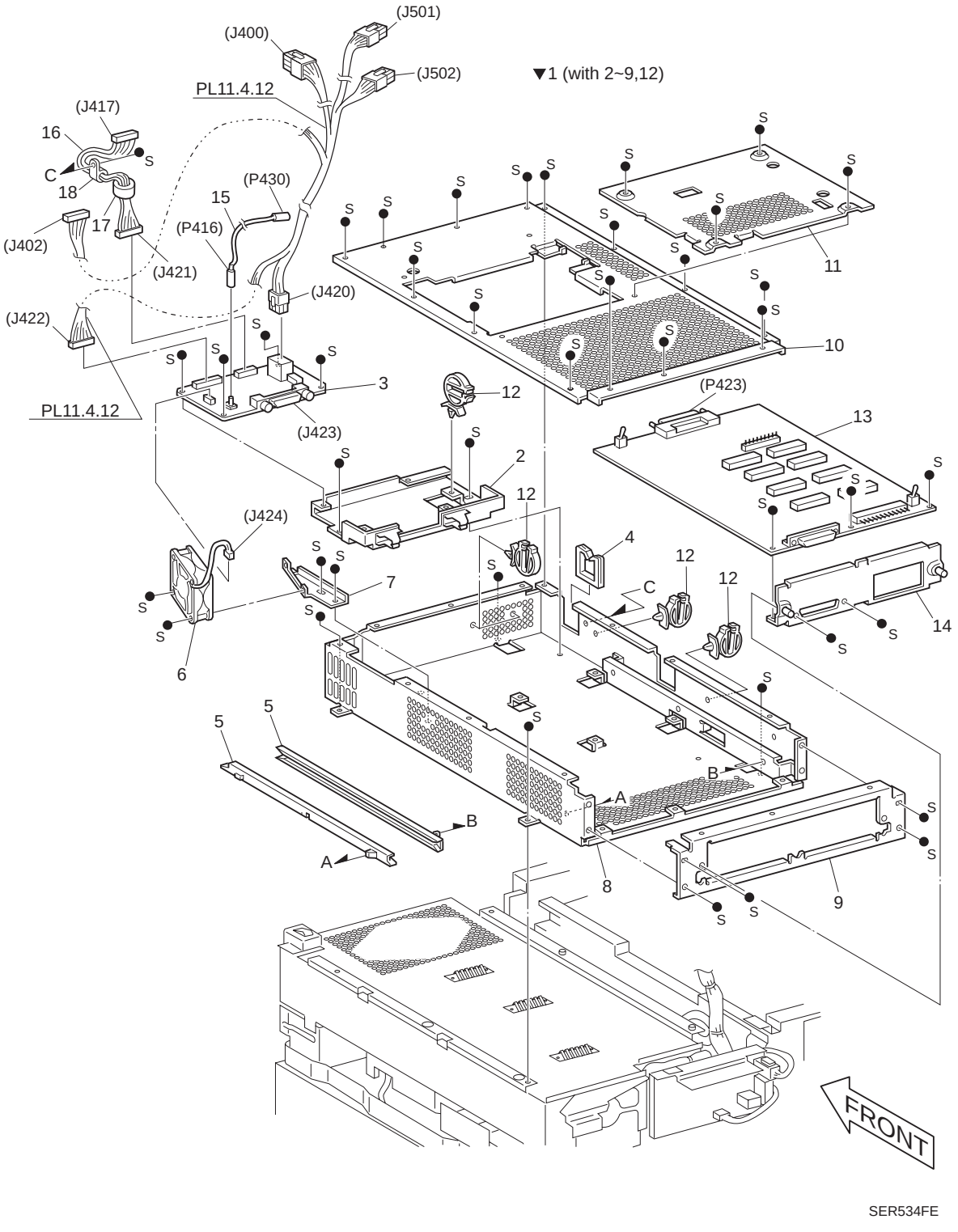
PL11.2 HVPS and MCU PWB

1. AC DRIVER PWB 120
- AC DRIVER PWB 220
2. - -
3. - -
4. HVPS
5. MCU ASSEMBLY (with 6 ~ 8)
6. MCU PWB
7. BRACKET MCU
8. COVER MCU
9. - -
10. LEFT COVER INTERLOCK SWITCH
11. INTERLOCK SWITCH BRACKET
12. INTERLOCK SWITCH LEVER
13. SUPPORT HARNESS
14. HARNESS CHANNEL
15. - -
16. - -
17. HARNESS CLAMP 2
18. PWB SUPPORT
19. HARNESS CLAMP 4
20. BRACKET AC - DRIVE
21. AC DRIVE HARNESS (J478 < > P499)
22. HCF CONNECTOR
23. DUPLEX UNIT CONNECTOR
24. MAIL BOX CONNECTOR
25. OPTION CONNECTOR BRACKET
26. HARNESS - ASSEMBLY, EXIT
27. TRANSFORMER 220V

PL11.3 ESS Assembly



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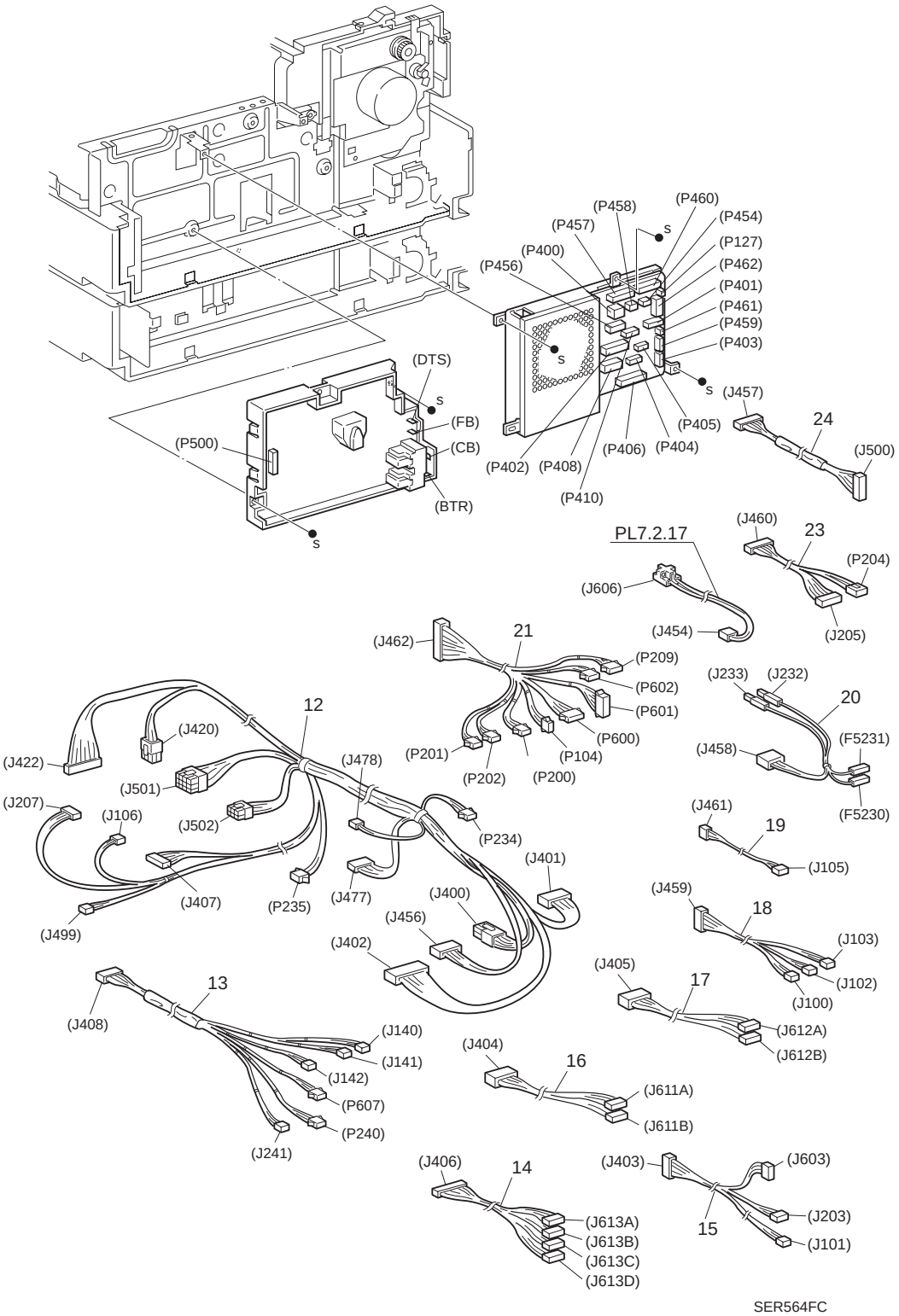
PL11.3 ESS Assembly

1. ESS ASSEMBLY - (with 2 ~ 9, and 12)
2. BRACKET ASSEMBLY - PWB MOTHER
3. ESS MOTHER PWB
4. BUSH SADDLE
5. GUIDE
6. FAN ASSEMBLY
7. BRACKET - FAN
8. BOX ASSEMBLY - ESS
9. PANEL - REAR
10. COVER - ESS
11. COVER - SIMM
12. CLAMP (4)
13. QMS Video Controller
14. ESS DRAWER PANEL
15. HARNESS ASSEMBLY ROS V (P416 < > P430)
16. HARNESS ASSEMBLY CONSOLE
17. CORE
18. CLAMP+

PL11.4 Harness



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PL11.4 Harness

1. - -
2. - -
3. - -
4. - -
5. - -
6. - -
7. - -
8. - -
9. - -
10. - -
11. - -
12. HARNESS ASSEMBLY - DC MAIN (LVPS: J400/J420< >J501/J502, FUSER; J401< >J477/P235, ESS MOTOR; J402< >J422, ROS; J456< >J106/J207/P234/J407, TEST; J478< >P499)
13. HARNESS ASSEMBLY - OEM 1TM REAR (J408< >J140/J141/J142/P607/P240/J241)
14. HARNESS ASSEMBLY - I/F, TRAY (J406< >J613A/B/C/D)
15. HARNESS ASSEMBLY - BOTTOM (J403< > J101/J203/J603)
16. HARNESS ASSEMBLY - I/F, DUPLEX (J404< >J611A/B)
17. HARNESS ASSEMBLY - I/F, OUTPUT (J405< >J612A/B)
18. HARNESS ASSEMBLY - REGISTRATION SENSOR (J459< >J100/J102/J103)
19. HARNESS ASSEMBLY - SIZE, EXIT (J461< >J105)
20. HARNESS ASSEMBLY - INTERLOCK SWITCH (J458< >J232/J233/F5230/F5231)
21. HARNESS ASSEMBLY - DC REAR, EXIT (J462< >P104/P200/P201/P202/P209/P600/P601/P602)
22. - -
23. HARNESS ASSEMBLY - MAIN MOTOR (J460< >P204/J205)
24. HARNESS ASSEMBLY - HVPS (J457< >J500)

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QMS 3260/4032 Laser Printer

Technical Reference Section

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Section 13 - Principles of Operation Contents

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1- Printer Power

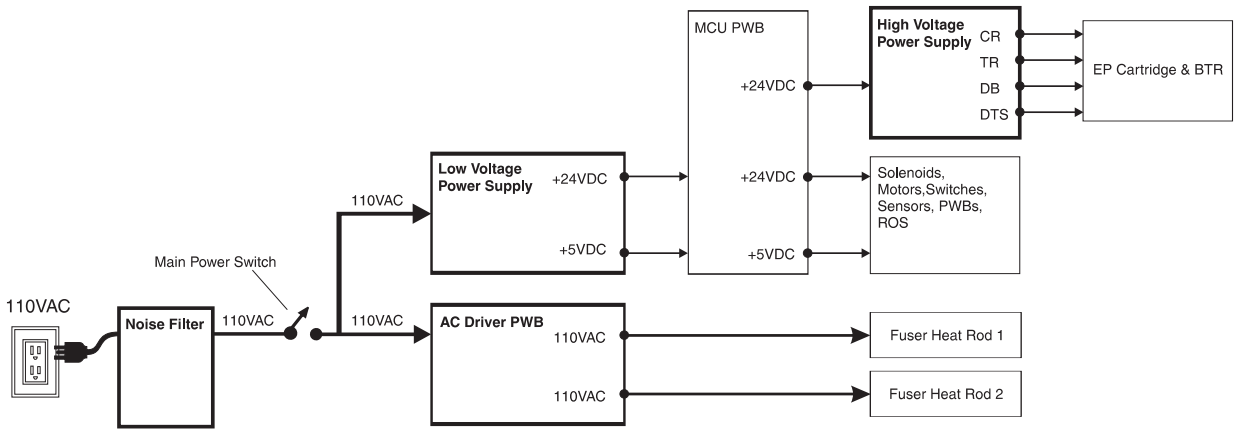
The power supplies in QMS 3260/4032 provide the voltages that the printer requires to operate. The various printer functions require 110VAC, +5VDC, +24VDC, and several high voltage DC and AC values that are used by xerographics.

The printer AC power cord plugs into a grounded AC wall outlet. The cord carries AC line voltage to the **Noise Filter PWB**. The Noise Filter smooths the AC voltage and sends it to the Main Power Switch. Switching on the Main Power Switch applies AC voltage to the AC Driver PWB and to the Low Voltage Power Supply (LVPS) PWB.

The **AC Driver PWB** is the interface between printer control (MCU) and the Fuser. Fuser sensors connected to the AC Driver PWB send Fuser status information to the Driver PWB, which the PWB routes to the MCU PWB. The MCU processes the information and sends commands back to the AC Driver PWB to tell the AC Driver whether or not to switch on the Fuser Heat Rods.

The **Low Voltage Power Supply PWB**, or LVPS, converts the 110VAC to regulated +24VDC and +5VDC voltages. The LVPS sends these voltages to the MCU PWB. The MCU uses the voltages for internal processing and for printer component operation. The MCU also sends +24VDC to the High Voltage Power Supply PWB.

The **High Voltage Power Supply PWB**, or HVPS, converts the +24VDC received from the MCU PWB to the high voltages that are required by the xerographic system of the printer. The HVPS produces the Charge (CR), Transfer (TR), Developer Bias (DB), and Detack (DTS) voltages, and sends them on to the EP Cartridge and to the Bias Transfer Roll (BTR).



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Power Supply Components

The QMS 3260/4032 Power Supply is made up of five main components and a number of subcomponents.

1. **Noise Filter PWB**

   Smooths and removes any fluctuation or hum from the AC line voltage.

   Main Power Switch: Used to switch AC voltage on and off (switches the printer on and off).

2. **AC Driver PWB**

   Receives smoothed AC voltage from the Noise Filter. The AC Driver PWB receives Fuser temperature information from Fuser sensors and passes that information on to the MCU for processing. The MCU PWB commands the AC Driver to switch on or switch off AC voltage to the Fuser Heat Rods.

3. **Low Voltage Power Supply (LVPS)**

   Takes filtered AC voltage and converts it into regulated +24VDC and +5VDC.

   The LVPS contains **overcurrent protection circuits**. If an excessive current begins to flow through any of the components supplied by the LVPS, the LVPS immediately shuts down all low voltage output. To reset the LVPS after an overcurrent shutdown; switch off the printer, wait a few minutes, then switch on the printer.

   The LVPS contains **open circuit protection circuits**. If the LVPS detects that a circuit is open for longer than one minute, the LVPS slowly decreases the LVPS output until the output is zero. To reset the LVPS after an open circuit shutdown; switch off the printer, wait a few minutes, then switch on the printer.

   The LVPS contains a low +24VDC output protection circuit. If the LVPS detects the +24VDC output dropping below +15VDC, the LVPS slowly decreases the +24VDC LVPS output until the output is zero.

   LVPS Fan: A +24VDC fan that cools the LVPS PWB.

4. **Machine Control Unit (MCU PWB)**

   Takes the +24VDC and +5VDC generated by the LVPS and distributes them to the various components through out the printer, including +24VDC to the High Voltage Power Supply (HVPS).

   Interlock Switches SW1 and SW2: Used as a safety measure. The main interlock circuit for QMS 3260/4032 is actually two separated switches wired in series with the MCU PWB. When the EP Cartridge is in place, Interlock Switch SW1 is closed. When the Left Front Cover is closed, Interlock Switch SW2 is closed. With both switches closed, the circuit is complete and the MCU PWB sends +24VDC to the HVPS and other printer components. If either SW1 is open (the EP Cartridge removed) or SW2 is open (the Left Front Cover is open) the MCU PWB cuts all +24VDC output from the MCU PWB.

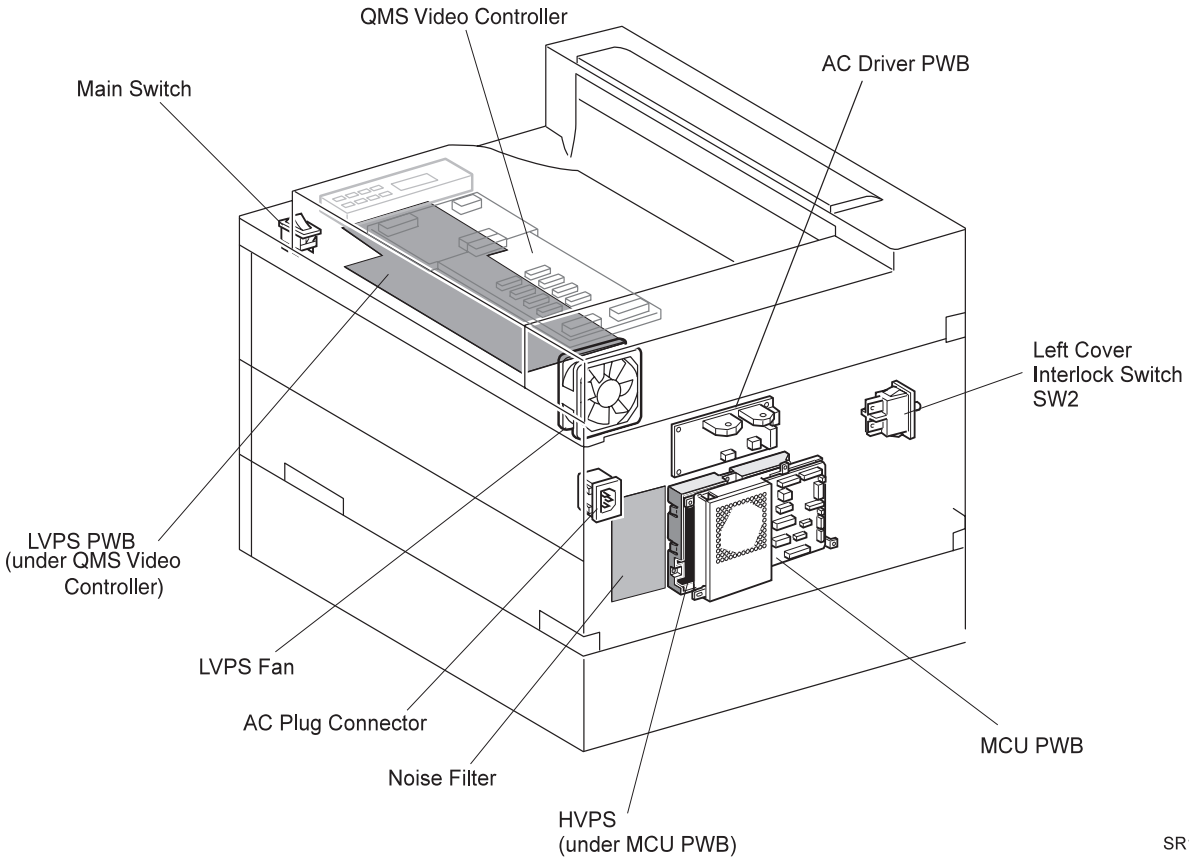
   Even though the interlock switches cut the +24VDC output from the MCU PWB, +24VDC output from the LVPS is still present throughout the printer as well as 110VAC line voltage along the AC paths in the printer.

5. **High Voltage Power Supply (HVPS)**

   Takes the +24VDC received from the MCU PWB and converts it to the high voltages that are required by the printer xerographic components.

   The HVPS contains overcurrent protection circuits. If an excessive current begins to flow through any of the xerographic components, the HVPS immediately shuts down all high voltage output. To reset the HVPS after an overcurrent shutdown; switch off the printer, wait a few minutes, then switch on the printer.

Power Supply Components



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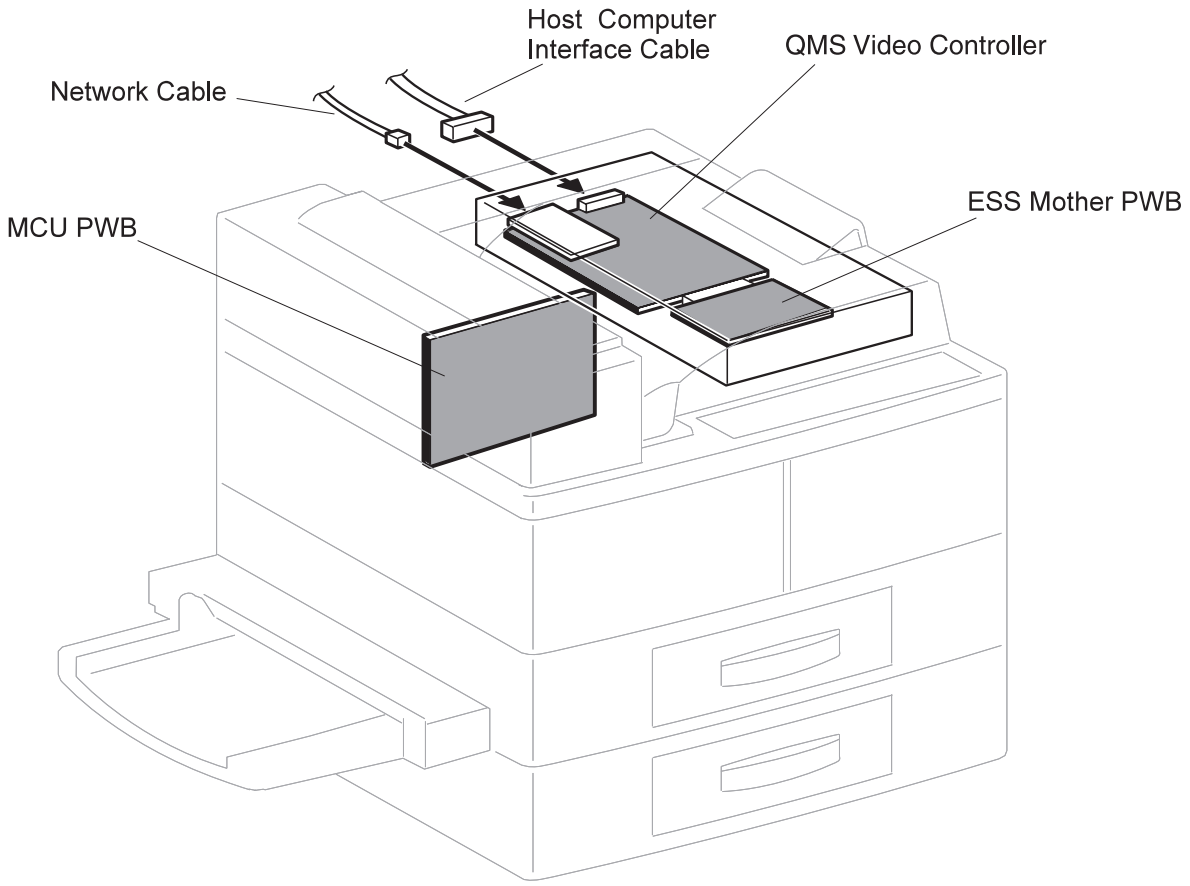
2- Printer Control

Printer Control is a broad term that is used to describe the printer resources that monitor and control the actions and operations of the QMS 3260/4032 printer; from warm-up, through the print cycle, to machine error detection.

The center of printer control for the QMS 3260/4032 base engine is the Machine Control Unit PWB, or MCU PWB. The MCU contains an 8 bit microcomputer. The MCU contains ASICs (Application Specific Integrated Circuits) for image data transfer and communication control, ROM, RAM, a 16 bit integrated timer, programmable timing pattern control, a watch dog timer, serial communications interfaces, an A/D converter, a D/A converter, I/O ports, and a DMA controller.

The MCU PWB provides the logic and information processing that is necessary for the printer to function. Every electrical component within the printer is connected either directly or indirectly to the MCU PWB. Sensors in the printer send printer status information to the MCU. The MCU processes that information and compares it to timing tables that are stored in onboard ROM. Acting on the results of the processing, the MCU sends commands to various printer components; switching on motors, switching off voltages, signaling statuses. Non-Volatile RAM on the MCU PWB stores adjustable operation parameters, such as Fuser temperature and laser strength, that are used as reference during printer operation.

The ESS Mother PWB is connected to the MCU PWB. The QMS Video Controller is connected to the ESS Mother PWB, so the QMS Video Controller is **indirectly** connected to the MCU PWB. Video data travels from the QMS Video Controller, through the ESS Mother PWB to the Laser Diode PWB.



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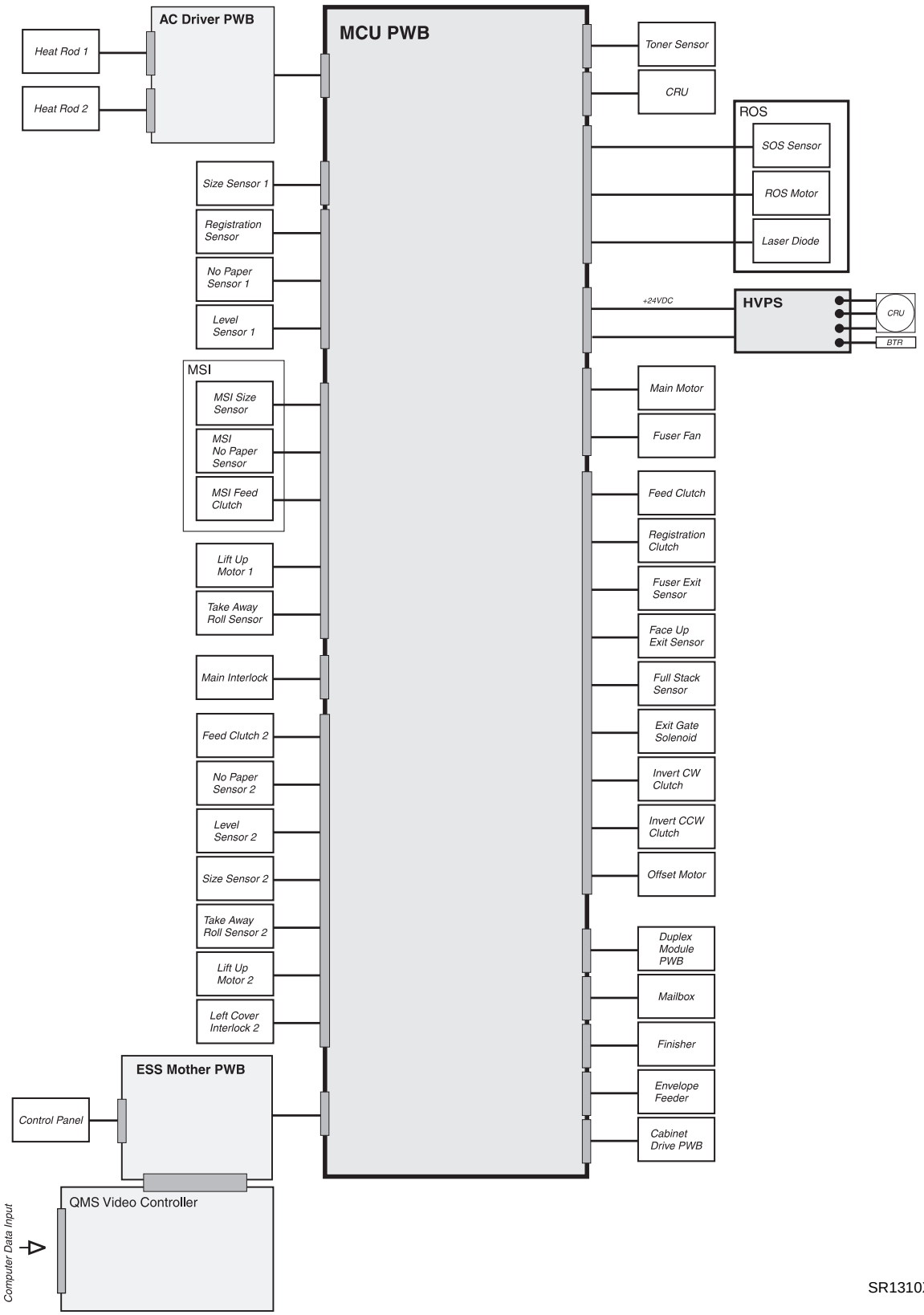
QMS 3260/4032 Printer Control



Printer Control Components

The QMS 3260/4032 Printer Control is make up of the MCU PWB and numerous connected components.

Machine Control Unit PWB (MCU PWB)

Receives status and command information from sensors and from the QMS Video Controller. Controls most printer operations. The MCU PWB performs nine major functions:

1- Communicates with the Printer Controller (ESS).
2- Maintains the system clock.
3- Controls the printing process.
4- Controls the ROS, the Fuser, and the drive assemblies.
5- Distributes +5VDC and +24VDC to various printer components.
6- Monitors printer status.
7- Maintains a running print count.
8- Maintains NVRAM settings.
9- Controls printer options.

Components attached to or associated with the MCU PWB:

1. **Low Voltage Power Supply**

   Converts 110VAC to +5VDC and +24VDC.

2. **QMS Video Controller**

   Connected to the MCU PWB through the ESS Mother PWB. The interface between the print engine and the host computer. The ESS processes the raw video data sent by the host computer.

3. **ESS Mother PWB**

   Connected to the QMS Video Controller, to the MCU PWB, and to the Control Panel. The ESS Mother PWB receives video data from the QMS Video Controller and sends it on to the ROS Laser Diode.

4. **Control Panel**

   Connected to the ESS Mother PWB, the Control Panel displays status information send from the MCU PWB and QMS Video Controller.

5. **AC Driver PWB**

   Switches 110VAC to the two Fuser Heat Rods. Fuser temperature sensors are connected to the AC Drive PWB. The AC Drive PWB sends the temperature information to the MCU PWB.

6. **High Voltage Power Supply**

   Converts +24VDC received from the MCU PWB to several high voltages that are required by printer xerographics.

7. **Toner Sensor**

   Magnetic sensor that monitors the CRU toner level.

8. **CRU**

   Drum usage information that is stored in the CRU.

9. **ROS**

   The SOS (Start of Scan) Sensor, the ROS Motor, and the Laser Diode.

10. **Main Motor**

    Provides most of the mechanical drive for the printer.

11. **Fuser Fan**

    Cools the Fuser area.

12. **Feed Clutch**

    Transmits Main Motor drive to the Tray 1 Feed Rolls.

13. **Registration Gate Clutch**

    Transmits Main Motor drive to the Registration Rolls.

14. **Fuser Exit Sensor**

    Monitors paper travel out of the Fuser.

15. **Face Up Exit Sensor**

    Monitors paper travel out of the Offset Unit.

16. **Full Stack Sensor**

    Monitors the paper level in the Output Tray.

17. **Exit Gate Solenoid**

    Toggles the Exit Gate.

18. **Inverter CW Clutch**

    Transmits Main Motor drive, forward, to the Offset Rolls.

19. **Inverter CCW Clutch**

    Transmits Main Motor drive, reverse, to the Offset Rolls.

20. **Offset Motor**

    Provides mechanical drive for the Offset Unit.

21. **Duplex Module PWB**

    Provides +5VDC, +24VDC, and command and status lines to the Duplex PWB option.

22. **Mailbox**

    Provides +5VDC, +24VDC, and command and status lines to the Mailbox option.

23. **Finisher**

    Provides +5VDC, +24VDC, and command and status lines to the Finisher option.

24. **Envelope Feeder**

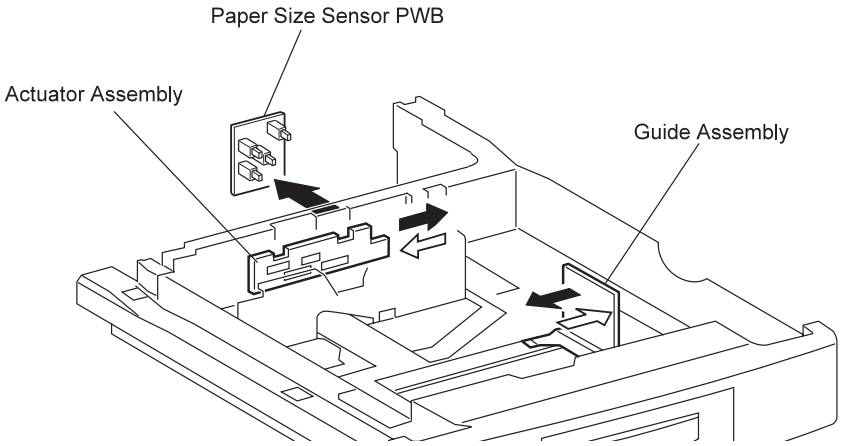
    Provides +5VDC, +24VDC, and command and status lines to the Envelope Feeder option.

25. **Cabinet Drive PWB**

    Provides +5VDC, +24VDC, and command and status lines to the High Capacity Feeder option.

26. Size Sensor 1

Monitors the size of the paper that is loaded in Feeder 1. The Actuator Assembly located at the rear of the Paper Tray has series of cams that face the Size Sensor PWB. Pushing the Paper Guide against the paper stack slides the Actuator Assembly along a track. When the Tray is inserted into the Feeder, the cams on the Actuator press the switches on the Size Sensor PWB in a pattern that is unique to the position of the Paper Guide. The MCU PWB interprets this pattern as a specific paper size.



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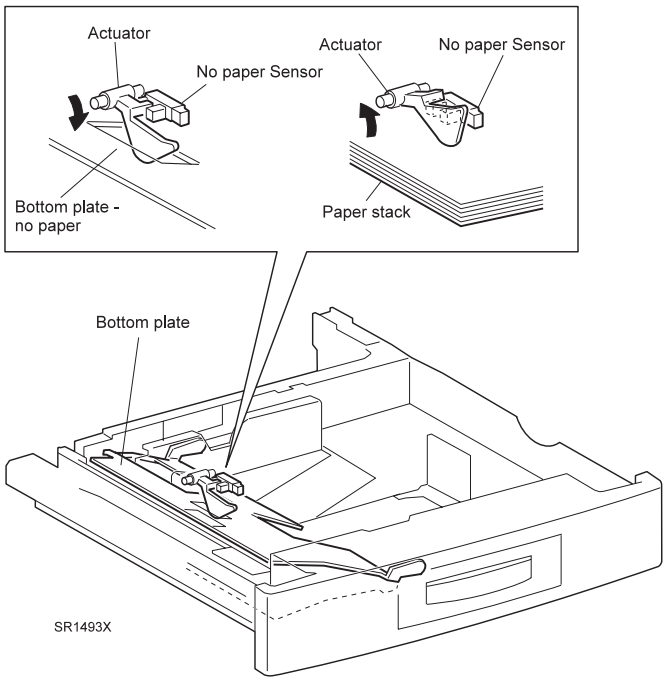
27. Registration Sensor

Monitors paper travel out of the paper tray.

28. No Paper Sensor 1

Monitors the paper level in Feeder 1. When the Lift Motor raise the Bottom Plate, the Plate raises the paper stack, the stack pushes the No Paper Actuator up and away from the No Paper Sensor. The Sensor sends a *paper present* signal to the MCU PWB. When the last sheet of paper is fed out of the Paper Tray, the No Paper Actuator drops through a cutout in the Bottom Plate. The Actuator then blocks the Sensor, and the Sensor sends a no paper signal to the MCU PWB.



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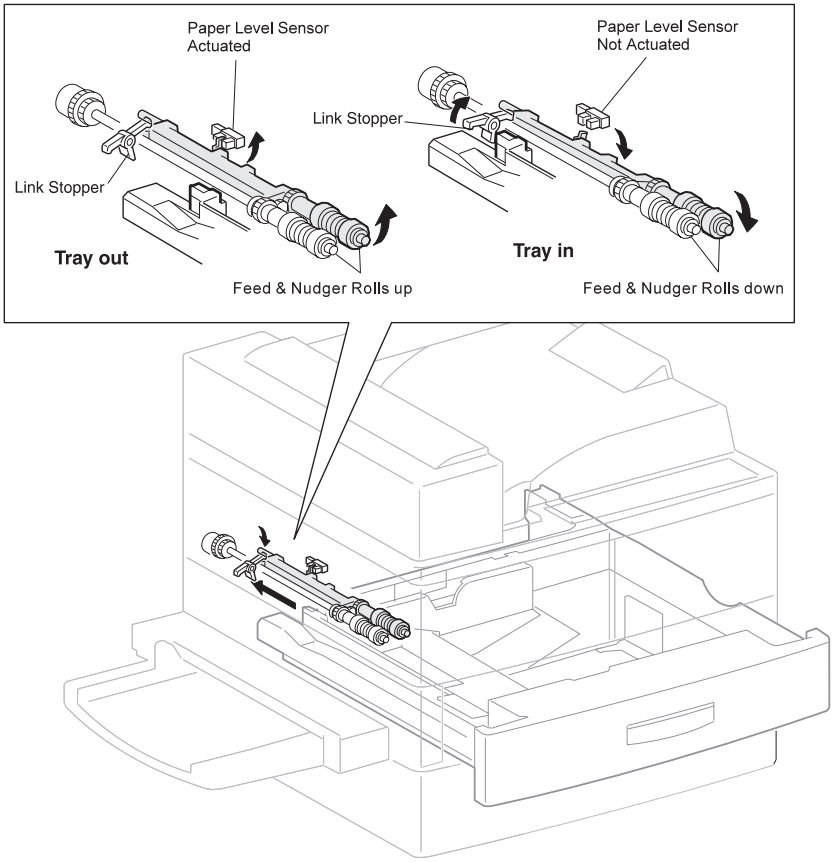
29. Level 1 Sensor

Monitors whether or not Tray 1 is installed. Installing the Tray pushes the Link Stopper out, which in turn lowers the Feed Roll and moves the Level 1 Sensor Actuator tab away from the Sensor window.



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30. MSI Size Sensor

Monitors the size of paper that is loaded in the MSI.

31. MSI No Paper Sensor

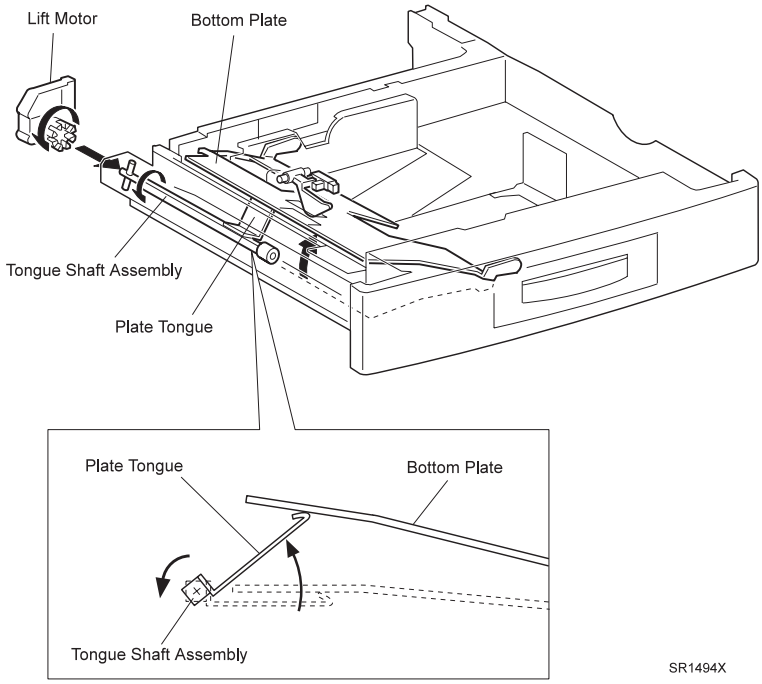
Monitors the paper level in the MSI.

32. MSI Feed Clutch

Transmits Main Motor drive to the MSI Feed Rolls.

33. Lift Up Motor 1

Raises the paper tray in Feeder 1. The MCU PWB switches on the Lift Motor. The Motor rotates a square, metal shaft that is located inside the Paper Tray. The Shaft raises the Tongue, which in turn raises the Bottom Plate, and the paper stack, up to the Feed Rolls.



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34. Take Away Roll Sensor

Monitors the paper travel at the Take Away Roll.

35. Interlock Switches 1 and 2

Monitors the CRU position Switch 1 and Left Cover Interlock Switch 2 on Feeder 1.

36. Feed Clutch 2

Transmits Main Motor drive to the Tray 2 Feed Rolls.

37. No Paper Sensor 2

Monitors the paper level in Feeder 2. Functions identical to No Paper Sensor 1.

38. Level 2 Sensor

Monitors whether or not Tray 2 is installed.

39. Size Sensor 2

Monitors the size of the paper that is loaded in Feeder 2.

40. Take Away Roll Sensor 2

Monitors the paper travel at the Take Away Roll 2.

41. Lift Up Motor 2

Raises the paper tray in Feeder 2.

42. Left Cover Interlock 2

Monitors the Left Cover Interlock Switch on Feeder 2.

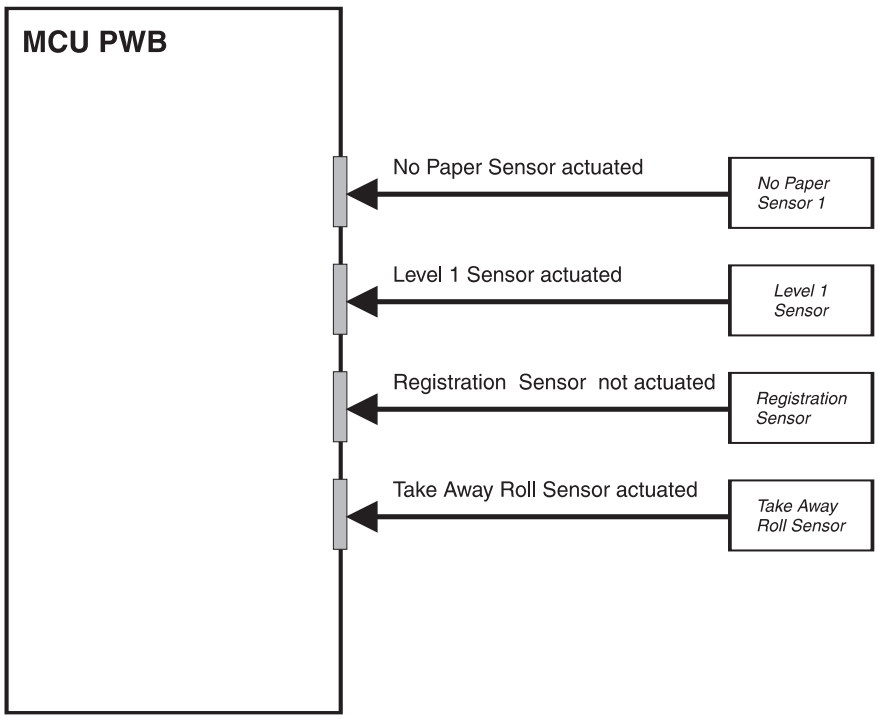
Function of the MCU during printer control

1. Input from sensors

Sensors tell the MCU what is going on within the printer and what is happening to the sheet of paper during a print cycle.

Example below:

Printer sensors send their status to the MCU PWB. The sensor status signals tell the MCU whether they are actuated or not actuated (on or off, high or low). If measured with a voltmeter, some sensor signals to the MCU would be +5VDC when on and 0VDC when off, while other sensors may be 0VDC when on and +5VDC when off. This high/low decision is determined when the printer is designed.



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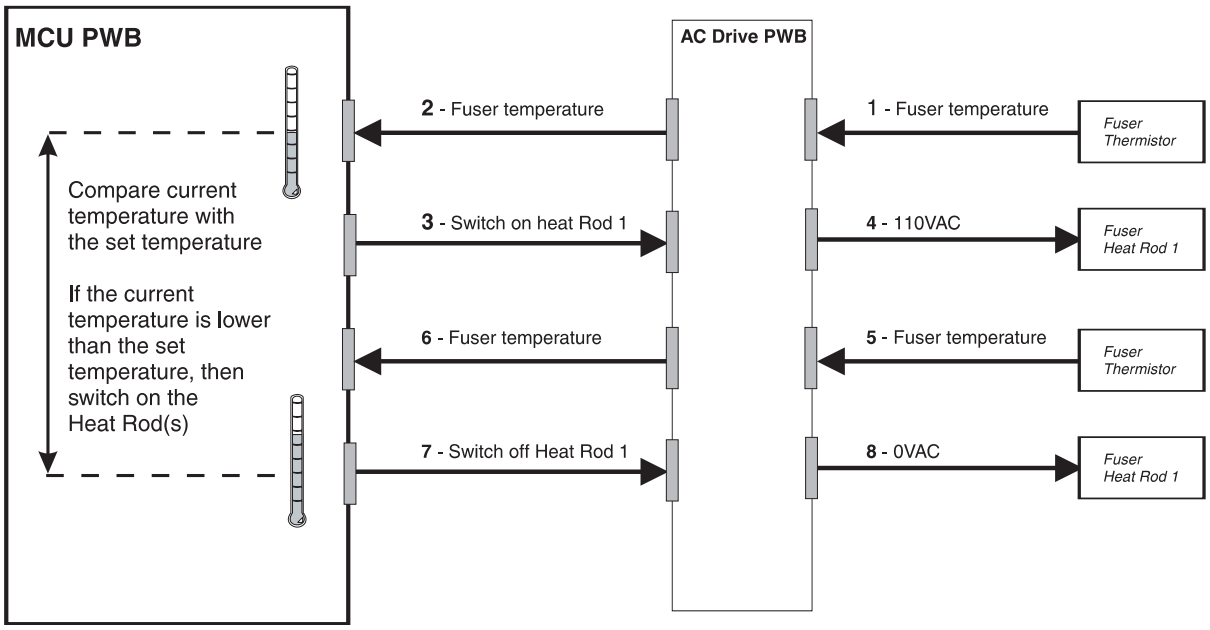
2. Processing input information

Logic on the MCU compares the input information with the timing and reference values that are stored in ROM and NVRAM on the PWB.

Example below:

The Fuser Thermistor monitors the temperature of the Fuser Heat Roll and sends the current temperature value to the AC Drive PWB. The AC Drive PWB relays the temperature data to the MCU PWB. The MCU compares the current temperature with the set (or expected) temperature that is stored in NVRAM on the MCU PWB. If the current temperature is lower than the set temperature, the MCU sends a signal to the AC Drive PWB to switch on the Fuser Heat Rod until the current temperature reaches the set temperature.



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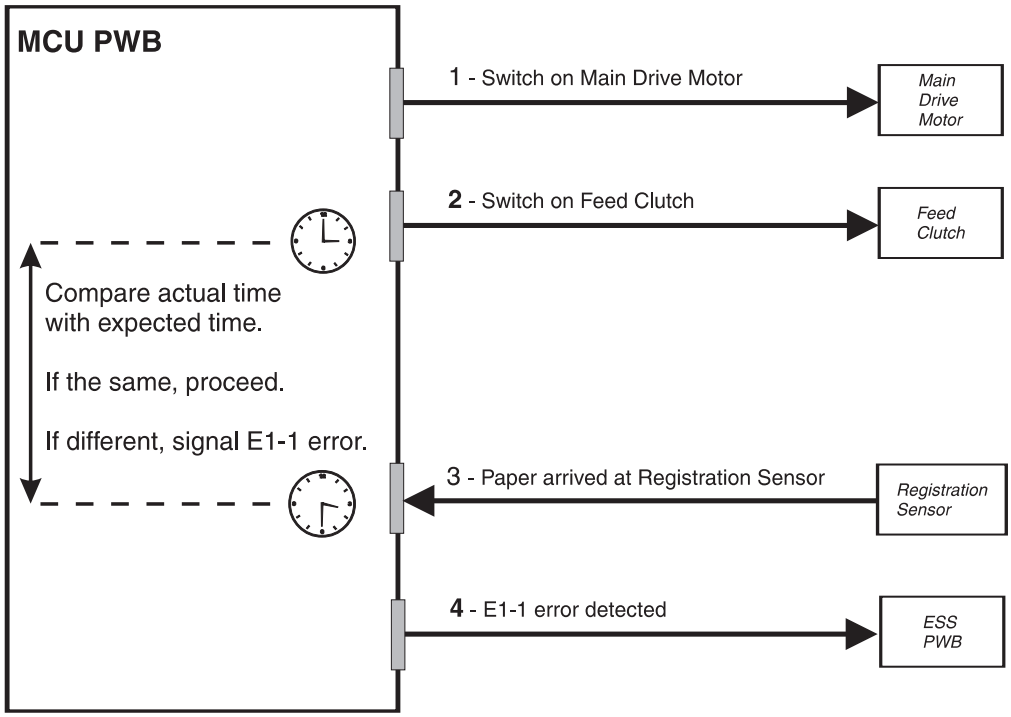
3. Output to motors, solenoids, and other components.

After comparing input values with timing and reference values, the MCU makes a decision on the current status of the printer, and responds appropriately. The MCU may switch on or off motors, solenoids, or other components. The MCU may also signal that an error occurred. (There is a table of QMS 3260/4032 Error Codes located at the end of this section *2 - Printer Control*).

Example below:

A the start of a print cycle, the MCU switches on the Main Drive Motor, and then the Feed Clutch. The MCU uses the Feed Clutch actuation as a timing marker. The Feed Rolls attached to the Feed Clutch drive a sheet of paper out of the paper tray and down the paper path. As the sheet of paper travels down the paper path it strikes the Registration Sensor. The Sensor sends a signal to the MCU PWB telling it that the paper has arrived. The MCU takes the elapsed time from when it actuated the Feed Clutch to the time it received the signal from the Registration Sensor and compares that time with the set time (or expected time) that is stored in ROM on the MCU PWB. If the time elapsed is within range, the print cycle continues. If the time elapsed is slower than the set time or if there was no signal from the Registration Sensor within the set time, the MCU interprets that as an error and sends an E1-1 Misfeed Jam status to the QMS Video Controller.



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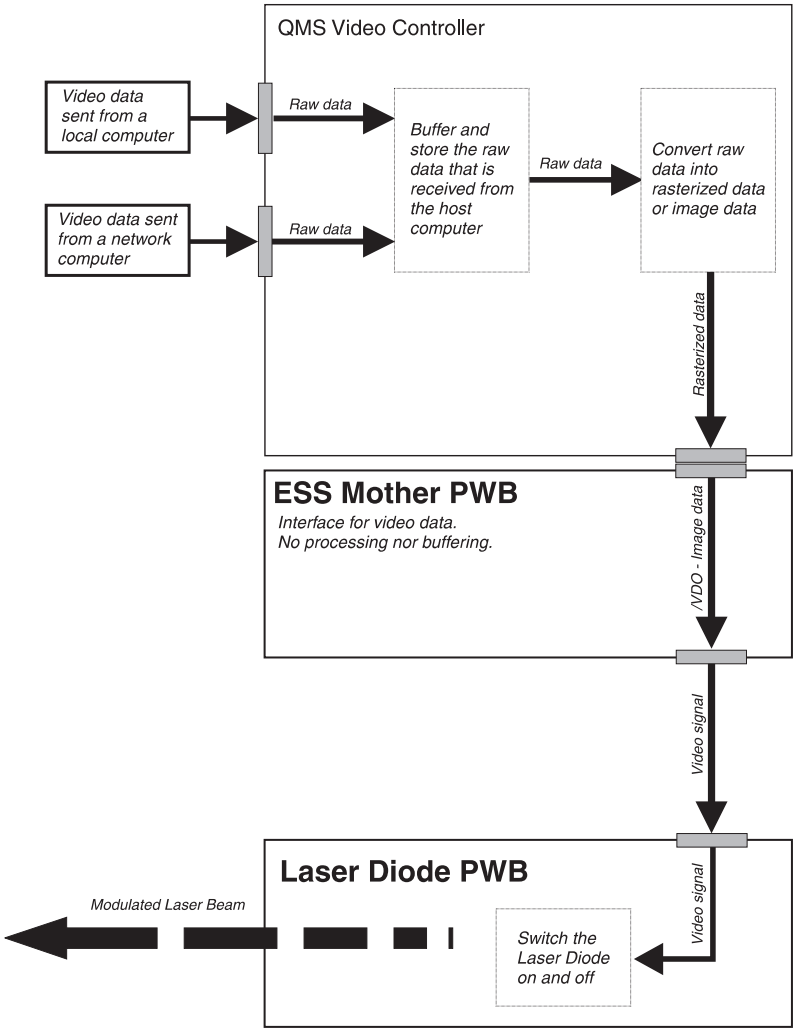
4. Processing image data

Although the MCU PWB does control and monitor the operation of the ROS, the actual video data sent by a host computer bypasses the MCU PWB on its way to the Laser Diode PWB.

Example below:

Video data originating from either a local computer or a network computer enters the printer through the ports in the QMS Video Controller. The QMS Video Controller stores and buffers the **raw data** and then converts it to **rasterized data** that controls the Laser Diode. The rasterized data leaves the QMS Video Controller and enters the ESS Mother PWB. The ESS Mother PWB is an interface for the data. The ESS Mother PWB does not buffer nor process the data, it simply passes it along as a **video signal** to the Laser Diode PWB. The video signal switches the Laser Diode on and off according to the image information sent in the raw data.



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QMS 3260/4032 Error Code Table

This table lists all of the printer Error Codes that the QMS 3260/4032 MCU can generate. The Error Codes are listed by displayed priority, starting with the highest priority code. If multiple errors should occur, the printer displays the code with the highest priority. Actual messages displayed on the printer Control Panel may vary somewhat from the text shown in the *Display Message* column.

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----------** **Methods to clear the Error Code**
U1-1: MAIN MOTOR FAIL PWR OFF THEN ON	Logic control on the MCU PWB detected a problem with the Main Motor	Stops immediately **----------** Switch off printer power, then switch on printer power
U1-3: LVPS FAN FAIL PWR OFF THEN ON	Logic control on the MCU PWB detected a problem with the LVPS Fan	Stops immediately **----------** Switch off printer power, then switch on printer power
U3-1: ROS FAIL PWR OFF THEN ON	Logic control on the MCU PWB received a constant HIGH signal from the SOS Sensor	Stops immediately **----------** Switch off printer power, then switch on printer power
U3-3: LD CONTROL FAIL PWR OFF THEN ON	Logic control on the MCU PWB detected that the time between signals from the SOS Sensor was longer than specified	Stops immediately **----------** Switch off printer power, then switch on printer power
U3-4: LD CONTROL FAIL	Logic control on the MCU PWB detected that the time between signals from the SOS Sensor was shorter than specified	Stops immediately **----------** Switch off printer power, then switch on printer power
U3-5: ROS MOTOR FAIL PWR OFF THEN ON	Logic control on the MCU PWB detected that the ROS Motor has not come up to full speed within the specified time	Stops immediately **----------** Switch off printer power, then switch on printer power
U4-1: FUSER FAIL PWR OFF THEN ON	Logic control on the MCU PWB detected that the Thermistor remained on for longer than specified	Stops immediately **----------** Switch off printer power, then switch on printer power

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
U4-2: FUSER FAIL OVERHEAT	Logic control on the MCU PWB detected that the Fuser temperature exceeded the temperature set for Fuser overheat	If during a print cycle; stops immediately If during standby; inhibits start of print cycle Logs error in system data *Clear FUSER OVER TEMP* **----------** Run Diagnostics 50-20, and write a zero. Switch off printer power, then switch on printer power
U4-3: THERMISTOR FAIL PWR OFF THEN ON	Logic control on the MCU PWB detected that the Fuser Thermistor opened	If during a print cycle; stops immediately. If during standby; inhibits start of print cycle **----------** Switch off printer power, then switch on printer power
U4-9: FAN FAIL PWR OFF THEN ON	Logic control on the MCU PWB received a Fan Alarm signal from the Fuser Fan	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Switch off printer power, then switch on printer power
U6-1: MEMORY ERROR PWR OFF THEN ON	Logic control on the MCU PWB had an unidentified problem with printer control	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Switch off printer power, then switch on printer power
U6-2: MEMORY ERROR PWR OFF THEN ON	Logic control on the MCU PWB had a problem reading information from RAM	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Switch off printer power, then switch on printer power

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
U6-3: MEMORY ERROR PWR OFF THEN ON	Logic control on the MCU PWB had an unidentified problem with NVRAM	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Switch off printer power, then switch on printer power
U6-4: MEMORY ERROR PWR OFF THEN ON	Logic control on the MCU PWB had a problem reading information from NVRAM	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Switch off printer power, then switch on printer power
E1-1: PAPER JAM REGISTRATION	Logic control on the MCU PWB sensed the Registration Sensor was not actuated within the specified time since the Feed Clutch was actuated	Stops immediately **----------** Open Left Cover and remove jammed sheet of paper
E1-2: PAPER JAM REGISTRATION	Logic control on the MCU PWB sensed the Fuser Exit Switch was not actuated within the specified time since the Registration Clutch was actuated	Stops immediately **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover
E1-3: PAPER JAM REGISTRATION	Logic control on the MCU PWB sensed the Face Up Exit Sensor was not actuated within the specified time since the Fuser Exit Switch was actuated	Stops immediately **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover
E1-6: PAPER JAM REGISTRATION	Logic control on the MCU PWB sensed the Registration Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover
E3-1: PAPER JAM FUSER	Logic control on the MCU PWB sensed the Fuser Exit Switch did not deactuate within the specified time after the Switch actuated	Stops immediately **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
E3-6: PAPER JAM FUSER	Logic control on the MCU PWB sensed the Fuser Exit Switch was on while the printer was in standby	Inhibits start of print cycle **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover
E4-1: PAPER JAM FACE UP EXIT	Logic control on the MCU PWB sensed that during the Face Down Mode, the Face Up Exit Sensor did not deactuate within the specified time after the Sensor actuated	Stops immediately **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover
E4-2: PAPER JAM FACE UP EXIT	Logic control on the Duplex PWB sensed the Duplex Module Exit Sensor did no actuate within the specified time after the Face Up Exit Sensor was actuated	Stops immediately **----------** With Duplex Module: Open Duplex Module and remove jammed sheet of paper, then open Left Cover and remove jammed sheet of paper. Without Duplex Module: Open Left Cover and remove the jammed sheet of paper
E4-3: PAPER JAM FACE UP EXIT	Logic control on the Duplex PWB sensed that during Duplex Mode, the Face Up Exit Sensor did not deactuate within the specified time after the Sensor actuated.	Stops immediately **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover
E4-5: PAPER JAM FACE UP EXIT	Logic control on the MCU PWB sensed the Face Up Exit Sensor did not actuate within the specified time during the second feed from the Duplex Module.	Stops immediately **----------** With Duplex Module: Open Duplex Module and remove jammed sheet of paper, then open Left Cover and remove jammed sheet of paper. Without Duplex Module: Open Left Cover and remove the jammed sheet of paper

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
E4-6: PAPER JAM FACE UP EXIT	Logic control on the MCU PWB sensed the Face Up Exit Sensor was on while the printer was in standby.	Inhibits start of print cycle **----------** With Duplex Module: Open Duplex Module and remove jammed sheet of paper, then open Left Cover and remove jammed sheet of paper. Without Duplex Module: Open Left Cover and remove the jammed sheet of paper
E5-1: L/H CVR OPEN PLEASE CLOSE CVR	Logic control on the MCU PWB sensed the Left Cover is open	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Close the Left Cover
E5-2: 1TM CVR OPEN PLEASE CLOSE CVR	Logic control on the MCU PWB sensed the Left Lower Cover (Transport Chute) is open	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Close the Left Lower Cover
E6-1: CABNT CVR OPEN PLEASE CLOSE CVR	Logic control on the MCU PWB sensed the High Capacity Feeder Cabinet Cover is open	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Close the Cabinet Cover
E7-3: DUP OPEN PLEASE CLOSE CVR	Logic control on the Duplex PWB sensed the Duplex Module is open	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Close the Duplex Module

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
E8-1: JAM DUPLEX PLEASE CLEAR JAM	Logic control on the Duplex PWB sensed the Duplex Module Exit Sensor did not deactuate within the specified time after the Sensor was actuated	Stops immediately **----------** Open Duplex Module, remove jammed sheet of paper, close Duplex Module
E8-2: JAM DUPLEX PLEASE CLEAR JAM	Logic control on the Duplex PWB sensed the Duplex Module Exit Sensor did not actuate within the specified time after the Face Up Sensor was actuated	Stops immediately **----------** Open Duplex Module, remove jammed sheet of paper, close Duplex Module
E8-6: JAM DUPLEX PLEASE CLEAR JAM	Logic control on the Duplex PWB sensed the Duplex Module Exit Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open Duplex Module, remove jammed sheet of paper, close Duplex Module
C1-3: PAPER JAM MISFEED TRAY 1	Logic control on the MCU PWB sensed that the Registration Sensor did not actuate within the specified time after the Tray 1 Feed Clutch was actuated	Stops after previous sheets of paper have exited printer **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover
C2-3: PAPER JAM MISFEED TRAY 2	Logic control on the MCU PWB sensed that the Registration Sensor did not actuate within the specified time after the Tray 2 Feed Clutch was actuated	Stops immediately **----------** Open Left Cover, remove jammed sheet of paper, close Left Cover
C3-2: PAPER JAM MISFEED TRAY 3	Logic control on the MCU PWB sensed that when paper was fed from Tray 3, the Tray 2 Take Away Sensor did not actuate within the specified time after the Tray 3 Feed Clutch was actuated	Stops after previous sheets of paper have exited printer **----------** Open the Left Cover, remove jammed sheet of paper, close the left Cover

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
C3-3: PAPER JAM MISFEED TRAY 3	Logic control on the MCU PWB sensed that when paper was fed from Tray 3, the Registration Sensor did not actuate within the specified time after the Tray 2 Take Away Sensor actuated	Stops immediately **----------** Open the Left Cover, remove jammed sheet of paper, close the Left Cover
C4-1: PAPER JAM MISFEED TRAY 4	Logic control on the MCU PWB sensed that when paper was fed from Tray 4, the Tray 3 Take Away Sensor did not actuate within the specified time after the Tray 4 Feed Clutch was actuated	Stops after previous sheets of paper have exited printer **----------** Open the HCF Left Cover, remove jammed sheet of paper, close the Left Cover
C4-2: PAPER JAM MISFEED TRAY 4	Logic control on the MCU PWB sensed that when paper was fed from Tray 4, the Tray 2 Take Away Sensor did not actuate within the specified time after the Tray 3 Take Away Sensor was actuated	Stops after previous sheets of paper have exited printer **----------** Open the HCF Left Cover, remove jammed sheet of paper, close the Left Cover
C4-3: PAPER JAM MISFEED TRAY 4	Logic control on the MCU PWB sensed that when paper was fed from Tray 4, the Registration Sensor was not actuated within the specified time after the Tray 2 Take Away Sensor was actuated	Stops immediately **----------** Open the HCF Left Cover, remove jammed sheet of paper, close the Left Cover

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
C5-0: PAPER JAM MISFEED TRAY 5	Logic control on the MCU PWB sensed that when paper was fed from Tray 5, the Tray 4 Take Away Sensor did not actuate within the specified time after the Tray 5 Feed Clutch was actuated	Stops after previous sheets of paper have exited printer **----------** Open the HCF Left Cover, remove jammed sheet of paper, close the Left Cover
C5-1: PAPER JAM MISFEED TRAY 5	Logic control on the MCU PWB sensed that when paper was fed from Tray 5, the Tray 3 Take Away Sensor did not actuate within the specified time after the Tray 4 Take Away Sensor was actuated	Stops after previous sheets of paper have exited printer **----------** Open the HCF Left Cover, remove jammed sheet of paper, close the Left Cover
C5-2: PAPER JAM MISFEED TRAY 5	Logic control on the MCU PWB sensed that when paper was fed from Tray 5, the Tray 2 Take Away Sensor did not actuate within the specified time after the Tray 3 Take Away Sensor was actuated	Stops after previous sheets of paper have exited printer **----------** Open the HCF Left Cover, remove jammed sheet of paper, close the Left Cover
C5-3: PAPER JAM MISFEED TRAY 5	Logic control on the MCU PWB sensed that when paper was fed from Tray 5, the Registration Sensor did not actuate within the specified time after the Tray 2 Take Away Sensor was actuated	Stops immediately **----------** Open the HCF Left Cover, remove jammed sheet of paper, close the Left Cover
C6-1: PAPER JAM MISFEED DUP	Logic control on the MCU PWB sensed that the Registration Sensor did not actuate within the specified time after the Duplex Wait Clutch was actuated	Stops after previous sheets of paper have exited printer **----------** Open the Duplex Module, remove jammed sheet of paper, close the Duplex Module
C8-1: PAPER JAM ENV	Logic control on the MCU PWB sensed that the Envelope Feed Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open Envelope Feeder, remove jammed envelope, close the Envelope Feeder

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
C8-2: PAPER JAM TAKE AWAY	Logic control on the MCU PWB sensed that the Tray 2 Take Away Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Remove Tray 2 or open Left Cover, remove jammed paper, and close cover
C8-3: PAPER JAM TAKE AWAY	Logic control on the MCU PWB sensed that the Tray 3 Take Away Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Remove Tray 3 or open Left Cover, remove jammed paper, close cover
C8-4: PAPER JAM TAKE AWAY	Logic control on the MCU PWB sensed that the Tray 4 Take Away Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Remove Tray 4 or open Left Cover, remove jammed paper, close cover
C8-6: PAPER JAM DUP	Logic control on the Duplex PWB sensed that the Duplex Wait Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open Duplex Module, remove jammed paper, close Duplex Module
C9-1: PAPER JAM MISFEED MSI/ENV	Logic control on the MCU PWB sensed that the Envelope Feed Sensor did not actuate within the specified time after the Envelope Feed Clutch was actuated	Stops after previous sheets of paper have exited printer **----------** Open the Envelope Feeder, remove jammed sheet of paper, close Envelope Feeder
C9-2: PAPER JAM MISFEED MSI/ENV	Logic control on the MCU PWB sensed that the Tray 2 Take Away Sensor did not actuate within the specified time after the MSI/Envelope Feed Clutch was actuated	Stops after previous sheets of paper have exited printer **----------** Open the Envelope Feeder, remove jammed sheet of paper, close Envelope Feeder

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
C9-3: PAPER JAM MISFEED MSI/ENV	Logic control on the MCU PWB sensed that when paper was fed from the MSI or Envelope Feeder, that the Registration Sensor did not actuate within the specified time after the MSI/ Envelope Feed Clutch was actuated	Stops immediately **----------** Open the Envelope Feeder, remove jammed sheet of paper, close the Envelope Feeder
F2-1: PAPER JAM MAILBOX IN SENSOR	Logic control on the MCU PWB sensed that the Mailbox Entrance Sensor did not actuate within the specified time after the Fuser Exit Sensor was actuated	Stops immediately **----------** Open the Mailbox Left Cover, remove jammed sheet of paper, and close the Left Cover
F2-2: PAPER JAM MAILBOX IN SENSOR	Logic control on the MCU PWB sensed that the Mailbox Entrance Sensor did not deactuate within the specified time after the Sensor was actuated	Stops immediately **----------** Open the Mailbox Left Cover, remove jammed sheet of paper, and close the Left Cover
F2-3: PAPER JAM MAILBOX IN SENSOR	Logic control on the MCU PWB sensed that the Mailbox Entrance Sensor was actuated while the printer was not in Mailbox mode	Stops immediately **----------** Open the Mailbox Left Cover, remove jammed sheet of paper, and close the Left Cover
F2-6: PAPER JAM MAILBOX IN SENSOR	Logic control on the MCU PWB sensed that the Mailbox Entrance Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open the Mailbox Left Cover, remove jammed sheet of paper, and close the Left Cover

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
F3-1: PAPER JAM MAILBOX VERTICAL SENSOR	Logic control on the MCU PWB sensed that either the Mailbox Vertical Sensor did not actuate within the specified time after the Mailbox Entrance Sensor was actuated or that BIN 1 Jam Sensor did not actuate within the specified time after the Mailbox Entrance Sensor was actuated	Stops immediately **----------** Open the Mailbox Left Cover, remove jammed sheet of paper, and close the Left Cover
F3-2: PAPER JAM MAILBOX VERTICAL SENSOR	Logic control on the MCU PWB sensed that either the Mailbox Vertical Sensor did not actuate within the specified time after the Mailbox Entrance Sensor was actuated or that BIN 1 Jam Sensor did not deactuate within the specified time after the BIN1 Jam Sensor was actuated	Stops immediately **----------** Open the Mailbox Left Cover, remove jammed sheet of paper, and close the Left Cover
F3-6: PAPER JAM MAILBOX SENSOR	Logic control on the MCU PWB sensed that either the Mailbox Vertical Sensor or the BIN 1 Jam Sensor did not deactuated within the specified time after they were actuated	If during a print cycle; stops immediately If during standby; inhibits start of print cycle **----------** Open the Mailbox Left Cover, remove jammed sheet of paper, and close the Left Cover
F4-11: PAPER JAM FINISHER TRANSPORT	Logic control on the MCU PWB sensed that the Transport Entrance Sensor did not deactuate within the specified time after the Sensor was actuated	Stops immediately **----------** Open the Transport Gate In Cover, remove jammed sheet of paper, and close the Cover
F4-12: PAPER JAM FINISHER TRANSPORT	Logic control on the MCU PWB sensed that the Transport Entrance Sensor did not actuate within the specified time after the Fuser Exit Sensor was deactuated	Stops after previous sheets of paper have exited printer **----------** Open the Transport Gate In Cover, remove jammed sheet of paper, and close the Cover

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
F4-13: PAPER JAM FINISHER TRANSPORT	Logic Control on the MCU PWB sensed that the Transport Entrance Sensor was actuated during HCS initialization.	Stops after previous sheets of paper have exited printer **----------** Open the Transport Gate In Cover, remove jammed sheet of paper, and close the Cover
F4-16: PAPER JAM FINISHER TRANSPORT	Logic control on the MCU PWB sensed that the Transport Entrance Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open the Transport Gate In Cover, remove jammed sheet of paper, and close the Cover
F4-21: PAPER JAM FINISHER EXIT	Logic control on the MCU PWB sensed that the Transport Exit Sensor did not deactuate within the specified time after the Transport Exit Sensor was actuated	Stops after previous sheets of paper have exited printer **----------** Open the Transport Gate In Cover, remove jammed sheet of paper, and close the Cover
F4-22: PAPER JAM FINISHER EXIT	Logic control on the MCU PWB sensed that the Transport Exit Sensor did not actuate within the specified time after the Transport Entrance Sensor was actuated	Stops after previous sheets of paper have exited printer **----------** Open the Transport Gate In Cover, remove jammed sheet of paper, and close the Cover
F4-23: PAPER JAM FINISHER EXIT	Logic control on the MCU PWB sensed that during Finisher initialization, the Transport Exit Sensor actuated	Stops after previous sheets of paper have exited printer **----------** Open the Transport Gate In Cover, remove jammed sheet of paper, and close the Cover
F4-26: PAPER JAM FINISHER EXIT	Logic control on the MCU PWB sensed that the Transport Exit Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open the Transport Gate In Cover, remove jammed sheet of paper, and close the Cover

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
F4-31: PAPER JAM COMPILE TRAY EXIT	Logic control on the MCU PWB sensed that the Compiler Tray Exit Sensor did not deactuate within the specified time after the Complier Tray Exit Sensor was actuated	Stops immediately ---------- Open the Complier Cover, remove jammed sheet of paper, and close the Cover
F4-32: PAPER JAM COMPILE TRAY EXIT	Logic control on the MCU PWB sensed that the Compiler Tray Exit Sensor did not actuate within the specified time after the Transport Exit Sensor was deactuated	Stops immediately ---------- Open the Complier Cover, remove jammed sheet of paper, and close the Cover
F4-36: PAPER JAM COMPILE TRAY EXIT	Logic control on the MCU PWB sensed that the Complier Tray Exit Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open the Complier Cover, remove jammed sheet of paper, and close the Cover
F4-41: PAPER JAM COMPILE TRAY EXIT	Logic control on the MCU PWB sensed that the Complier Paper Sensor neither actuated nor deactuated within the specified time after the Eject Motor was switched on	Stops immediately ---------- Open the Complier Cover, remove jammed sheet of paper, and close the Cover
F4-46: PAPER JAM COMPILE TRAY EXIT	Logic control on the MCU PWB sensed that the Complier Paper Sensor was on while the printer was in standby	Inhibits start of print cycle **----------** Open the Complier Cover, remove jammed sheet of paper, and close the Cover
F5-1: INTERLOCK OPEN MAILBOX	Logic control on the MCU PWB sensed that the Mailbox Left Cover is open	Inhibits start of print cycle **----------** Close the cover
F6-1: INTERLOCK OPEN GATE IN CVR	Logic control on the MCU PWB sensed that the In Gate Cover is open	Stops after previous sheets of paper have exited printer and inhibits start of the print cycle ---------- Close the Gate In Cover
F6-2: INTERLOCK OPEN TRANSPORT CVR	Logic control on the MCU PWB sensed that the upper Transport Cover is open	Stops after previous sheets of paper have exited printer and inhibits start of the print cycle ---------- Close the Transport Cover

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
F7-1: INTERLOCK OPEN FRONT CVR	Logic control on the MCU PWB sensed that the Front Cover is open	Stops after previous sheets of paper have exited printer and inhibits start of the next print cycle ---------- Close the Front Cover
F7-2: INTERLOCK OPEN TOP CVR	Logic control on the MCU PWB sensed that the Top Cover is open	If during a print cycle; stops immediately If during standby; inhibits start of print cycle ---------- Close the Complier Cover
F7-3: SAFETY SWITCH OPEN COMPLIER CVR	Logic control on the MCU PWB sensed that the Complier Cover is open and the Complier Cover Safety Switch is not actuated	If during a print cycle; stops immediately If during standby; inhibits start of print cycle ---------- Close the Complier Cover Safety Switch
F7-4: INTERLOCK OPEN COMPLIER CVR	Logic control on the MCU PWB sensed that the Complier Cover is open	If during a print cycle; stops immediately If during standby; inhibits start of print cycle ---------- Close the Complier Cover
F8-1: INTERLOCK OPEN FINISHER CVR	Logic control on the MCU PWB sensed that the Finisher Cover is open	If during a print cycle; stops immediately If during standby; inhibits start of print cycle ---------- Close the Finisher Cover
H1-1: TRAY FAIL TRAY 1	Logic control on the MCU PWB sensed that the Tray 1 Paper Level Sensor did not actuate within the specified time after the Tray 1 Lift Up Motor was actuated	Inhibits use of Tray 1 **----------** Reinsert Tray 1 or switch power off, then on

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
H1-2: TRAY FAIL TRAY 2	Logic control on the MCU PWB sensed that the Tray 2 Paper Level Sensor did not actuate within the specified time after the Tray 2 Lift Up Motor was actuated	Inhibits use of Tray 2 **----------** Reinsert Tray 2 or switch power off, then on
H1-3: TRAY FAIL TRAY 3	Logic control on the MCU PWB sensed that the Tray 3 Paper Level Sensor did not actuate within the specified time after the Tray 3 Lift Up Motor was actuated	Inhibits use of Tray 3 **----------** Reinsert Tray 3 or switch power off, then on
H1-4: TRAY FAIL TRAY 4	Logic control on the MCU PWB sensed that the Tray 4 Paper Level Sensor did not actuate within the specified time after the Tray 4 Lift Up Motor was actuated	Inhibits use of Tray 4 **----------** Reinsert Tray 4 or switch power off, then on
H1-5: TRAY FAIL TRAY 5	Logic control on the MCU PWB sensed that the Tray 5 Paper Level Sensor did not actuate within the specified time after the Tray 5 Lift Up Motor was actuated	Inhibits use of Tray 5 **----------** Reinsert Tray 5 or switch power off, then on
H2-7: COMMUNICATION ERROR DUP	Logic control on the MCU PWB could not initialize the Duplex Module within the specified time	During a Duplex or a Face Up output print cycle; stops immediately During standby; inhibits start of a Duplex or of a Face Up output print cycle ---------- Switch power off, then on
H4-1: WRONG PAPER	Logic control on the MCU PWB sensed a problem with the paper loaded in Tray 1	Inhibits use of Tray 1 **----------** Replace the paper in Tray 1 with a different size of paper
H4-2: SHORT PAPER	Logic control on the MCU PWB sensed a problem with the paper loaded in Tray 2	Inhibits use of Tray 2 **----------** Replace the paper in Tray 2 with a different size of paper
H4-3: SHORT PAPER	Logic control on the MCU PWB sensed a problem with the paper loaded in Tray 3	Inhibits use of Tray 3 **----------** Replace the paper in Tray 3 with a different size of paper

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
H4-4: SHORT PAPER	Logic control on the MCU PWB sensed a problem with the paper loaded in Tray 4	Inhibits use of Tray 4 **----------** Replace the paper in Tray 4 with a different size of paper
H4-5: SHORT PAPER	Logic control on the MCU PWB sensed a problem with the paper loaded in Tray 5	Inhibits use of Tray 5 **----------** Replace the paper in Tray 5 with a different size of paper
H5-7: COMMUNICATION FAIL MAILBOX	Logic control on the MCU PWB could not initialize the Mailbox within the specified time	During Mailbox mode print cycle; stops immediately During standby; inhibits start of a Mailbox Mode print cycle ---------- Switch power off, then on
H5-11: STACKER TRAY 1 FAILURE	Logic control on the MCU PWB sensed the Stack Height Sensor either did not actuate within the specified time after the Stacker Tray 1 Motor switched on to raise Tray 1 or did not deactuate within the specified time after the Stacker Tray 1 Motor switch on to lower Tray 1	Stops immediately ---------- Switch power off, then on
H5-12: STACKER TRAY 2 FAILURE	Logic control on the MCU PWB sensed the Stack Height Sensor either did not actuate within the specified time after the Stacker Tray 2 Motor switched on to raise Tray 2 or did not deactuate within the specified time after the Stacker Tray 2 Motor switch on to lower Tray 2	Stops immediately ---------- Switch power off, then on
H5-13: STACKER TRAY 3 FAILURE	Logic control on the MCU PWB sensed the Stack Height Sensor either did not actuate within the specified time after the Stacker Tray 3 Motor switched on to raise Tray 3 or did not deactuate within the specified time after the Stacker Tray 3 Motor switch on to lower Tray 3	Stops immediately ---------- Switch power off, then on

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	Meaning of, or possible reason for the Error Code	Printer response to the error ---- Methods to clear the Error Code
H5-21: STACKER TRAY 1 UPPER LIMIT FAILURE	Logic control on the MCU PWB sensed the Stack Tray 1 Upper Limit Sensor is actuated	Stops immediately ---------- Switch power off, then on
H5-22: STACKER TRAY 2 UPPER LIMIT FAILURE	Logic control on the MCU PWB sensed the Stack Tray 2 Upper Limit Sensor is actuated	Stops immediately ---------- Switch power off, then on
H5-23: STACKER TRAY 3 UPPER LIMIT FAILURE	Logic control on the MCU PWB sensed the Stack Tray 3 Upper Limit Sensor is actuated	Stops immediately ---------- Switch power off, then on
H5-31: STACKER TRAY 1 LOWER LIMIT FAILURE	Logic control on the MCU PWB sensed the Stack Tray 1 Lower Limit Sensor is actuated	Stops immediately ---------- Switch power off, then on
H5-32: STACKER TRAY 2 LOWER LIMIT FAILURE	Logic control on the MCU PWB sensed the Stack Tray 2 Lower Limit Sensor is actuated	Stops immediately ---------- Switch power off, then on
H5-33: STACKER TRAY 3 LOWER LIMIT FAILURE	Logic control on the MCU PWB sensed the Stack Tray 3 Lower Limit Sensor is actuated	Stops immediately ---------- Switch power off, then on
H5-81: FINISHER FAIL EJECT CLAMP	Logic control on the MCU PWB sensed that the Finisher Eject Clamp either does not go from actuated to deactuated or from deactuated to actuated within the specified time	During Finisher mode print cycle; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-82: FINISHER FAIL TAMPER SENSOR	Logic control on the MCU PWB sensed that the Tamper Sensor either did not actuate within the specified time after Tamper begins moving to the Rear position, or that the Tamper Sensor did not deactuate within the specified time after the Tamper begins moving to the Front position	During Finisher mode print cycle stops after all sheets of paper have exited printer During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-83: FINISHER FAIL STACKER SENSOR	Logic control on the MCU PWB sensed that the Stacker Offset Home Sensor either does not go from actuated to deactuated or from deactuated to actuated within the specified time	During Finisher mode print cycle stops after all sheets of paper have exited printer During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	Meaning of, or possible reason for the Error Code	Printer response to the error ---- Methods to clear the Error Code
H5-84: FINISHER FAIL STACKER TRAY ID	Logic control on the MCU PWB sensed that the Stacker Tray ID Sensor either does not go from actuated to deactuated or from deactuated to actuated within the specified time after the Stacker Tray Unit Elevator Motor is switched on	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-85: FINISHER FAIL STACKER SWITCH	Logic control on the MCU PWB sensed that the Stacker Upper Limit Switch is actuated	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-86: FINISHER FAIL STACKER SWITCH	Logic control on the MCU PWB sensed that the Stacker Lower Limit Switch is actuated	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-91: FINISHER FAIL STAPLER HEAD	Logic control on the MCU PWB sensed that the Stapler Home Sensor remains deactuated after the Stapler Head started return	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-92: FINISHER FAIL STAPLER HEAD	Logic control on the MCU PWB sensed that the Home Sensor does not actuate within the specified time after the Stapler Motor was switched on	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-93: FINISHER FAIL STAPLER PRINT CORNER	Logic control on the MCU PWB sensed that the Stapler Front Corner Sensor does not actuate within the specified time after the Stapler Move Motor is switched on	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on

QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
H5-94: FINISHER FAIL STAPLER FRONT STRAIGHT	Logic control on the MCU PWB sensed that the Stapler Front Straight Sensor does not actuate within the specified time after the Stapler Move Motor is switched on	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-95: FINISHER FAIL STAPLER REAR STRAIGHT	Logic control on the MCU PWB sensed that the Stapler Rear Straight Sensor does not actuate within the specified time after the Stapler Move Motor is switched on	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-96: FINISHER FAIL STAPLER READY SENSOR	Logic control on the MCU PWB sensed that the Set Clamp Home Sensor does not actuate nor deactuate within the specified time after the Set Clamp Motor is switched on	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H5-97: FINISHER FAIL STAPLER WALL SENSOR	Logic control on the MCU PWB sensed that the Stapler End Wall Sensor either does not go from actuated to deactuated or from deactuated to actuated within the specified time	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
H6-7: COMMUNICATION FAIL FINISHER	Logic control on the MCU PWB could not initialize the Finisher within the specified time	During Finisher mode; stops immediately During standby; inhibits start of a Finisher print cycle ---------- Switch power off, then on
J1-2: TONER EMPTY	Logic control on the MCU PWB sensed that the Toner Empty Sensor was on for longer than 9 seconds	If code 50-01 is set to zero, the printer does nothing If code 50-01 is set to 1, then stops after all sheets of paper have exited printer ---------- Either Open and close the Left Cover, or Switch power off, then on, or replace the EP Cartridge

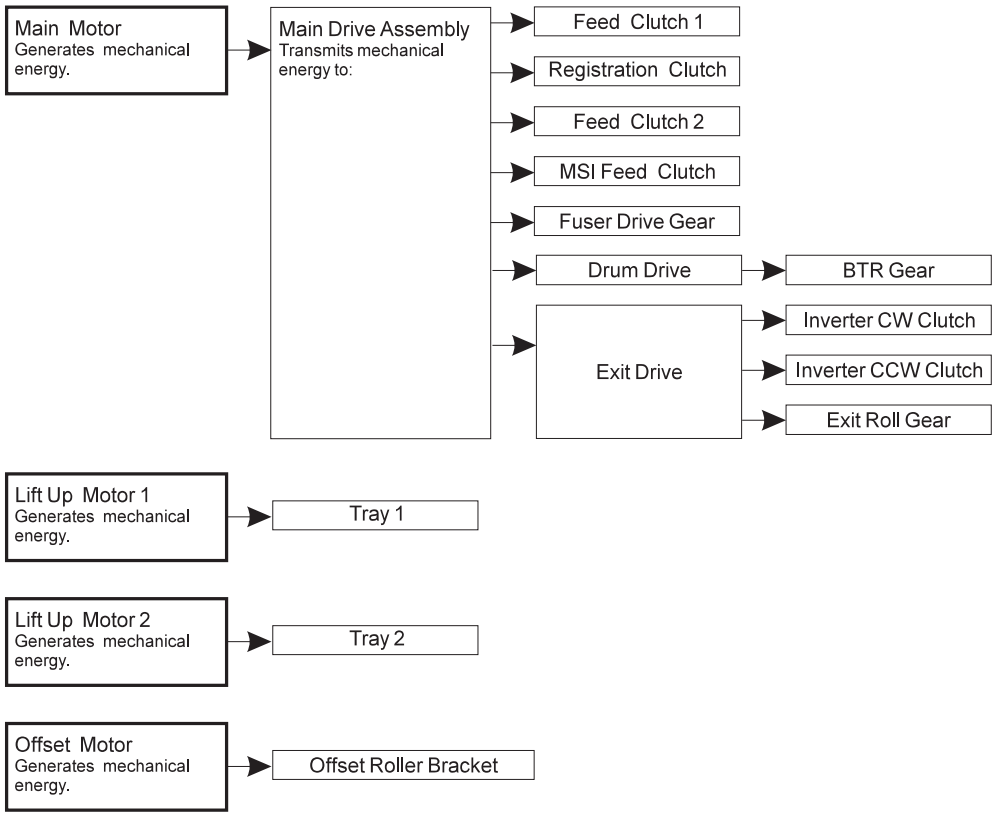
QMS 3260/4032 Error Code Table continued

Error Code and Displayed Message	**Meaning of, or possible reason for the Error Code**	**Printer response to the error** **----** **Methods to clear the Error Code**
J3-1: EP CARTRIDGE NOT IN POSITION (alternates at 4 second intervals with the message) INSTALL/RESEAT PRINT CARTRIDGE	Logic control on the MCU PWB sensed that the CRU Sensor was deactuated (the Left Cover must be closed and the Left Cover Interlock actuated before the MCU PWB can sense the state of the CRU Sensor)	Stops immediately During standby; inhibits start of print cycle --- Reinstall or reseat the EP Cartridge
J6-1: EP CARTRIDGE END OF LIFE	Logic control on the MCU PWB sensed that either the CRUM was nearing EP Cartridge end-of-life, or the CRU Check Area on the CRUM was out of range	Stops after all sheets of paper have exited printer During standby; inhibits start of print cycle --- Replace the EP Cartridge
J8-1: WRONG EP CARTRIDGE	Logic control on the MCU PWB sensed that the CRU installed is not compatible with the printer	Inhibits start of print cycle --- Replace the EP Cartridge with the correct type
J8-3: CRUM READ ERROR	Logic control on the MCU PWB could not read CRU Memory data	If during a print cycle; stops immediately If during standby; inhibits start of print cycle --- Reseat or replace the EP Cartridge
J8-4: CRUM READ ERROR	Logic control on the MCU PWB could not access CRU Memory data	If during a print cycle; stops immediately If during standby; inhibits start of print cycle --- Reseat or replace the EP Cartridge

3- Mechanical Drive

Mechanical Drive is a term that is used to describe both the rotation of the printer motors and the action of the gear clusters and clutches that are used to transmit and control motor rotation to the various components throughout the printer. The primary purpose of Mechanical Drive within the QMS 3260/4032 base printer is to drive a sheet of paper out of a selected paper tray, through the printer and into an output tray. The ROS Motor is not considered part of Mechanical Drive.

The Main Drive Motor turns the Main Drive Assembly gears. The Drive Assembly provides drive to the Feed Clutches, the Registration Clutch, the Fuser, the Drum and BTR, and the Exit Clutches. Lift Up Motors supply drive to each paper tray; raising the Bottom Plate of each tray so the paper stack contacts the Feed Rolls. The Offset Motor provides drive to the Offset Rolls.



SR1314X

Mechanical Drive Components

The QMS 3260/4032 Mechanical Drive is make up of 4 major components.

1. **Offset Motor**

   A +24VDC motor.

2. **Main Drive Assembly**

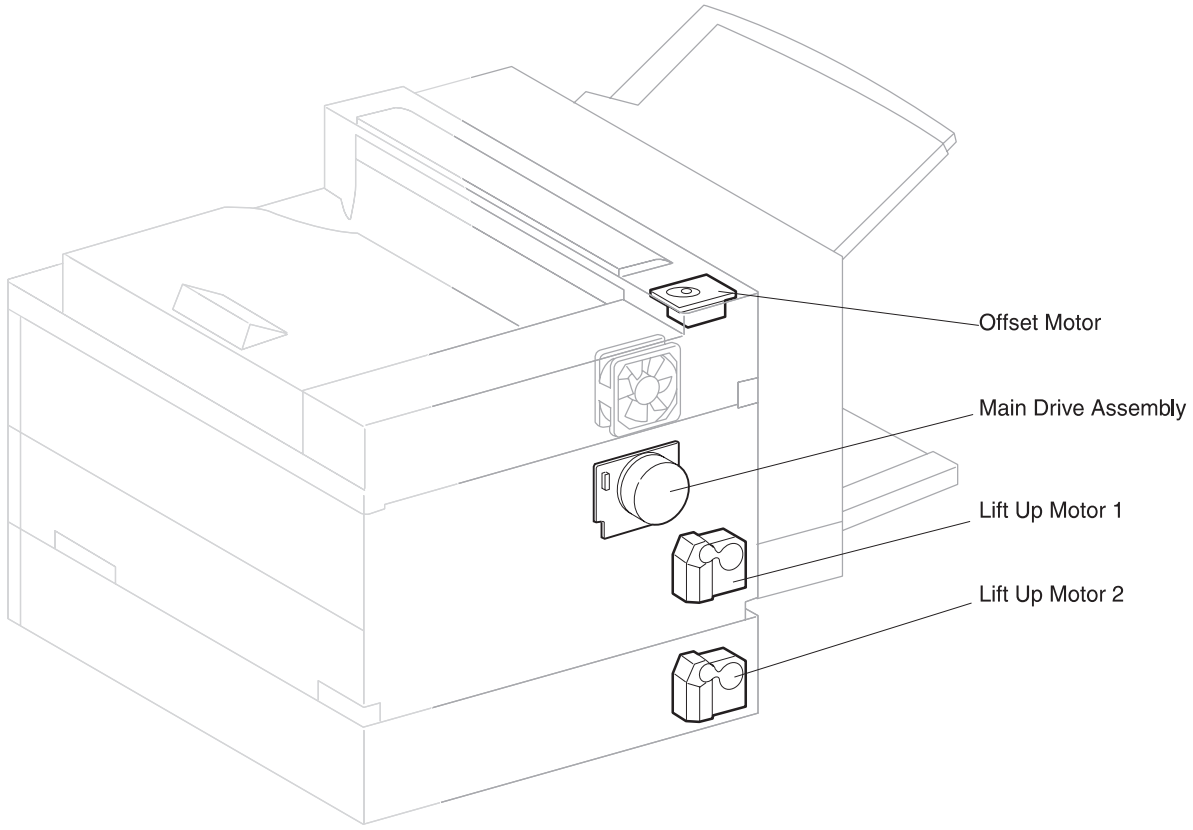
   Contains the +24VDC Main Drive Motor and the Main Drive Assembly gears. The Main Motor is attached to the Main Drive Assembly.

3. **Lift Up Motor 1**

   A +24VDC motor.

4. **Lift Up Motor 2**

   A +24VDC motor.



SR1345X

Offset Motor

The MCU PWB switches the Offset Motor on and off. The Offset Motor transmits drive to the Offset Bracket. During Offset Mode, the MCU switches on the Offset Motor. The Motor drives the Bracket toward the front of the printer, pushing the Offset Roll along with it, until the Bracket reaches the end of travel, where it stops. The MCU again switches on the Offset Motor, which drives the Bracket toward the rear of the printer, carrying the Offset Roll along with it.

Main Motor and Main Drive Assembly

The MCU PWB switches the Main Motor on and off. The rotation of the Main Motor creates mechanical drive.

The Main Drive Assembly gears transmit the motor drive to Feed Clutch 1, Feed Clutch 2, and the MSI Feed Clutch. At paper feed, the MCU PWB actuates a Feed Clutch, which in turn transmits drive to the appropriate Feed Rolls.

The Main Drive Assembly gears transmit the motor drive to the Registration Clutch. At a specific point in each print cycle, the MCU PWB actuates the Registration Clutch, which in turn transmits drive to the Registration Roll.

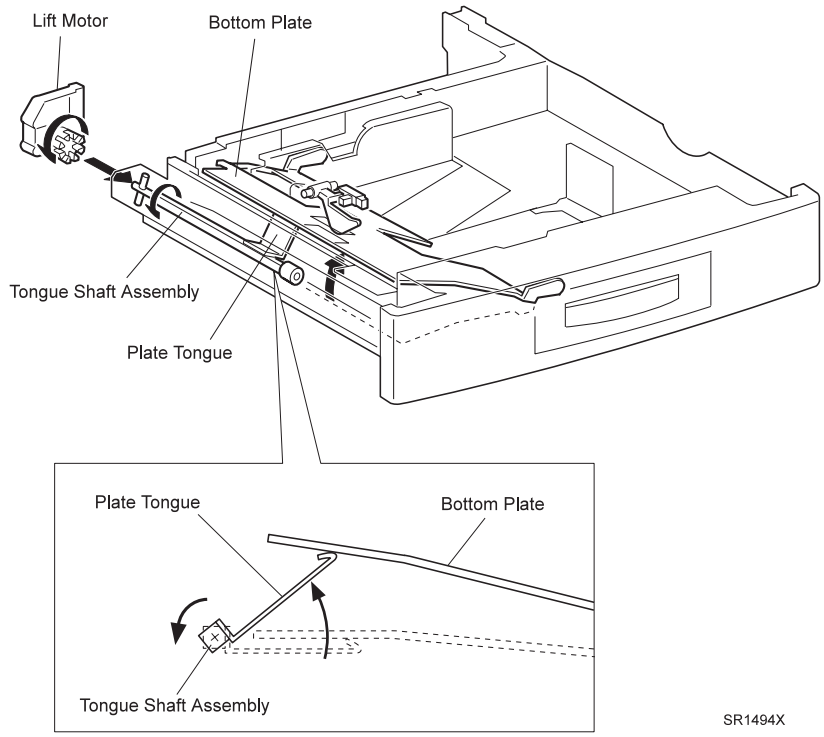
The Main Drive Assembly gears transmit the motor drive to the Fuser Drive Gear. When the Left Upper Cover is closed, the DTS Link Rod pushes the Fuser Drive Assembly into contact with the Fuser Drive Gear, which transmits drive to the Fuser Rolls.

The Main Drive Assembly gears transmit the motor drive to the Drum. When the Main Motor is on, the Drum rotates. When the Left Upper Cover is closed, the BTR gear contacts the Drum gear, which in turn rotates the BTR.

The Main Drive Assembly gears transmit the motor drive to the Exit Drive, which transmits drive to the two Inverter Clutches. At a specific point in each print cycle, the MCU PWB actuates either the CW Clutch or the CCW Clutch which drive the Exit Roll and the Offset Roll.

Lift Up Motors 1 and 2

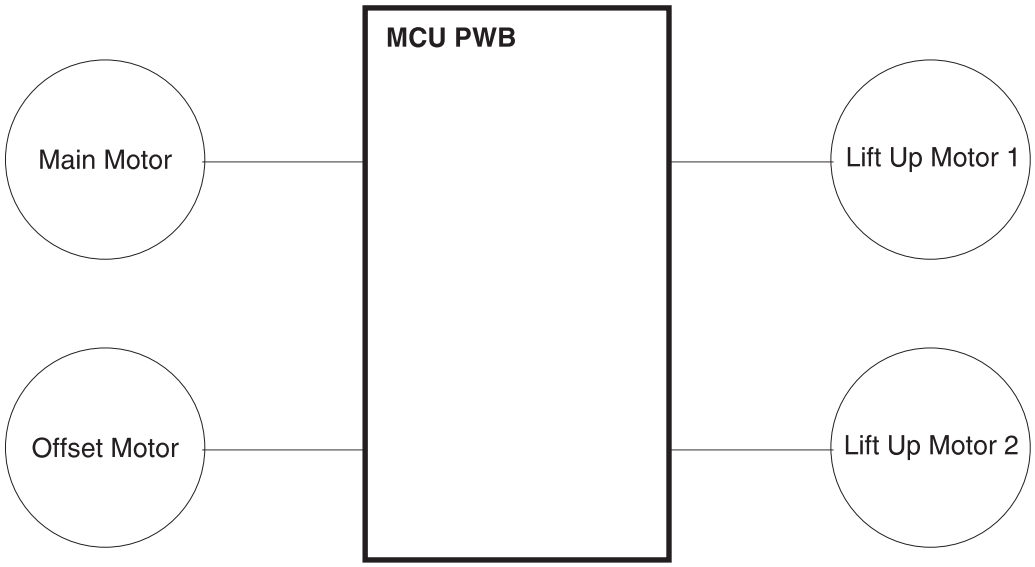
When a Paper Tray is installed in the printer, the MCU PWB switches on the Lift Up Motor. Each tray has a square metal shaft running along one side of the tray. Attached to the shaft is an L shaped metal tongue. When the tray is inserted into the paper feeder, a pin at the end of the shaft engages the Lift Up Motor gear. When the MCU PWB switches on the Lift Up Motor, the motor rotates the square shaft. The square shaft shifts the attached metal tongue, which in turn raises the tray Bottom Plate which raises the paper stack. As the paper stack raises, it pushes up on the No Paper Actuator, which in turn switches the No Paper Sensor.



SR1494X

Motor Control

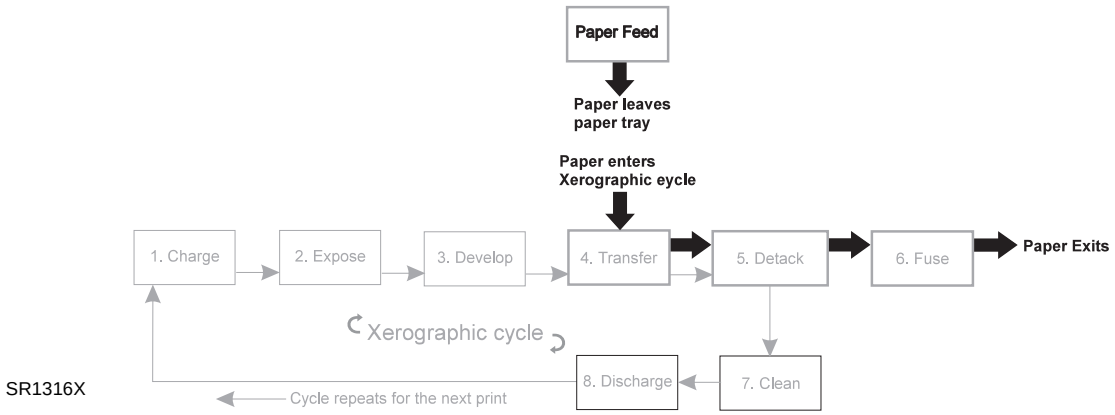
The MCU PWB provides power for and controls the operation of the Main Motor, the Lift Up Motors, and the Offset Motor. All motors are +24VDC motors. The Main Motor is a stepper motor. The MCU signals step the Main Motor through a 360° rotation. The MCU PWB provides both forward and reverse control of the Offset Motor.



SR1315XA

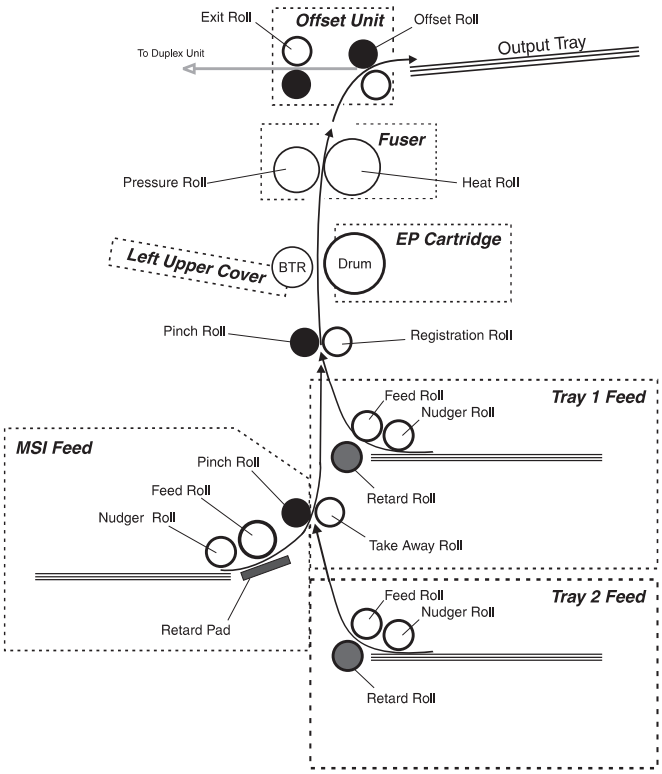
4 - The Paper Path

The Paper Path is the physical route that a sheet of paper takes through the printer during a print cycle; from leaving the Paper Cassette to arriving at the Output Tray. Rubber rollers and other components drive the paper along the Paper Path.



SR1316X

A sheet of paper may be fed from either Tray 1, Tray 2, or from the MSI. At the start of a print cycle the Nudger Roll moves a sheet of paper into the Feed Roll. The Feed Roll moves a single sheet of paper out of Tray 1/Tray 2/MSI and toward the Registration Roll. The Retard Rolls in Tray 1 and Tray 2 or the Retard Pad in the MSI made sure that only one sheet of paper is fed. If the paper was fed from Tray 2 or the MSI the Take Away Roll drives the paper to the Registration Roll. The Registration Roll aligns the lead edge of the paper with the lead edge of the image on the drum. The Registration Roll then drives the paper into the Drum/BTR area. The rotation of the Drum and BTR drive the paper into the Fuser where the Heat and Pressure Rolls drive the paper into the Offset/Pinch Roll. During simplex printing the Offset Roll drives the paper into the Output tray. During duplex printing, the Offset Roll rotation is reversed and the Offset and Exit Roll drives the paper into the Duplex Module.



SR1317X

Paper Path Components

The QMS 3260/4032 Paper Path is made up of a number of major components and subcomponents.

1. **Tray Assembly**

   Holds plain paper of various sizes. Slides into the Feeder.

2. **Feeder 1 and Feeder 2**

   Framework that is attached under the printer. A Tray Assembly slides into the Feeder. The Feeder includes a number of paper feed components.

   Lift Up Motor raises the Tray Bottom Plate so the paper contacts the Feed Roll.

   No Paper Sensor monitors the level of paper in the Tray.

   Paper Size Sensor monitors the size of paper in the Tray.

   Feed Clutch transmits drive to the Feed Roll and Nudger Roll.

   Nudger Roll drives the top sheet of paper into the Feed Roll.

   Feed Roll drives the top sheet of paper out of the Tray.

   Retard Roll prevents multiple sheet feed.

   Take Away Roll and Pinch Roll continue to drive the sheet of paper out of Tray 2 and toward the Registration Roll.

3. **MSI Feeder**

   Paper feed assembly that is attached to the outside of the printer. A small quantity or paper, or the optional Envelope Feeder, fit on the MSI Feeder foldout tray. The MSI Feeder includes a number of paper feed components.

   MSI No Paper Sensor monitors the level of paper in the MSI tray.

   MSI Paper Size Sensor monitors the size of paper in the Tray.

   MSI Feed Clutch transmits drive to the Feed Roll and Nudger Roll.

   Nudger Roll drives the top sheet of paper into the Feed Roll.

   Feed Roll drives the top sheet of paper out of the MSI tray.

   Retard Pad prevents multiple sheet feed.

   Take Away Roll and Pinch Roll continue to drive the sheet of paper out of the MSI Tray and toward the Registration Roll.

4. **Registration Roll and Pinch Roll**

   The Registration Roll is a driven roll. The Pinch Roll is an idler that rides on the surface of the Registration Roll. The Registration Roll and Pinch Roll register a sheet of paper with the toner image on the surface of the Drum.

5. **Registration Sensor**

   Monitors the movement of paper at the Registration Roll.

6. **Drum and BTR (Bias Transfer Roll)**

   In addition to xerographic functions, the Drum and BTR drive the paper out of the Xerographic area and into the Fuser area.

7. **Heat Roll and Pressure Roll**

   In addition to fusing functions, the Heat Roll and Pressure Roll drive the sheet of paper out of the Fuser and into the Offset Unit.

8. **Fuser Exit Sensor**

   Monitors the movement of paper out of the Fuser.

9. **Offset and Exit Unit**

   The assembly located above the Fuser. The Offset Unit drives paper to either the standard Face Down Output Tray, to the optional Face Up Output Tray, or to the Duplex Module. The Offset Unit includes a number of components.

   Inverter CW and CCW Clutches transmit Main Motor drive, forward and reverse, to the Offset Rolls.

   Offset Roll and Pinch Roll drive the sheet of paper either forward into the Output Tray or in reverse to the Exit Roll and on to the Duplex Module.

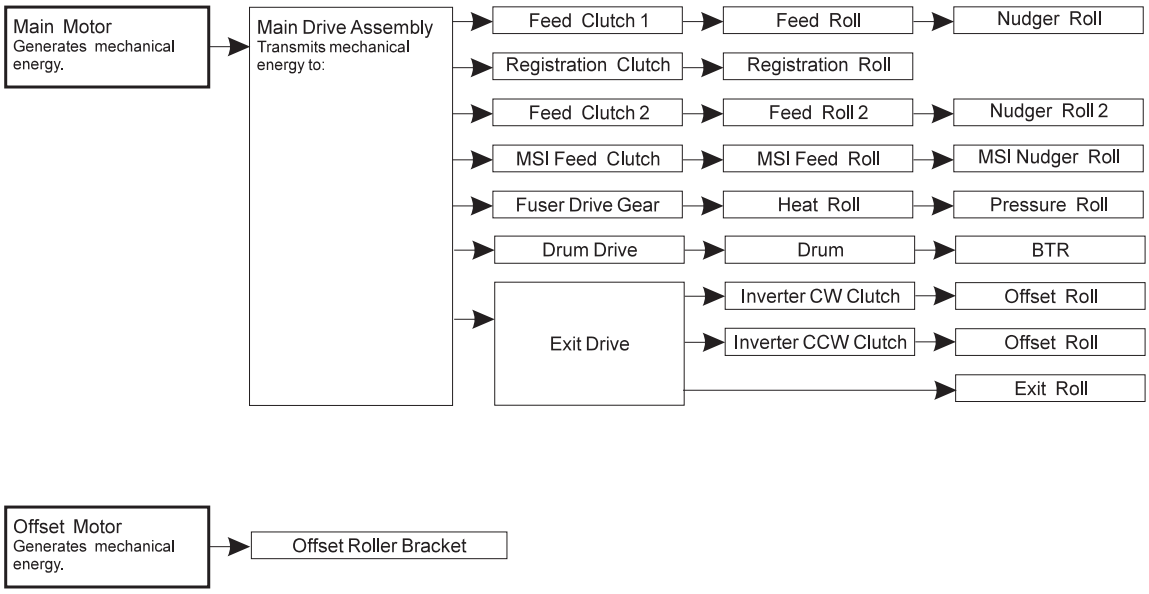
   Exit Gate Solenoid controls the Exit Gate to toggle the paper path between the Output Tray or the Exit Roll and on to the Face Up Tray or Duplex Module.

   Offset Motor and Offset Bracket moves the Offset Roll back and forth so paper delivered to the Output Tray will stack offset.

   Exit Roll and Pinch Roll drive the sheet of paper to either the Face Up Output Tray or to the Duplex Module.

Paper Path Mechanical Drive

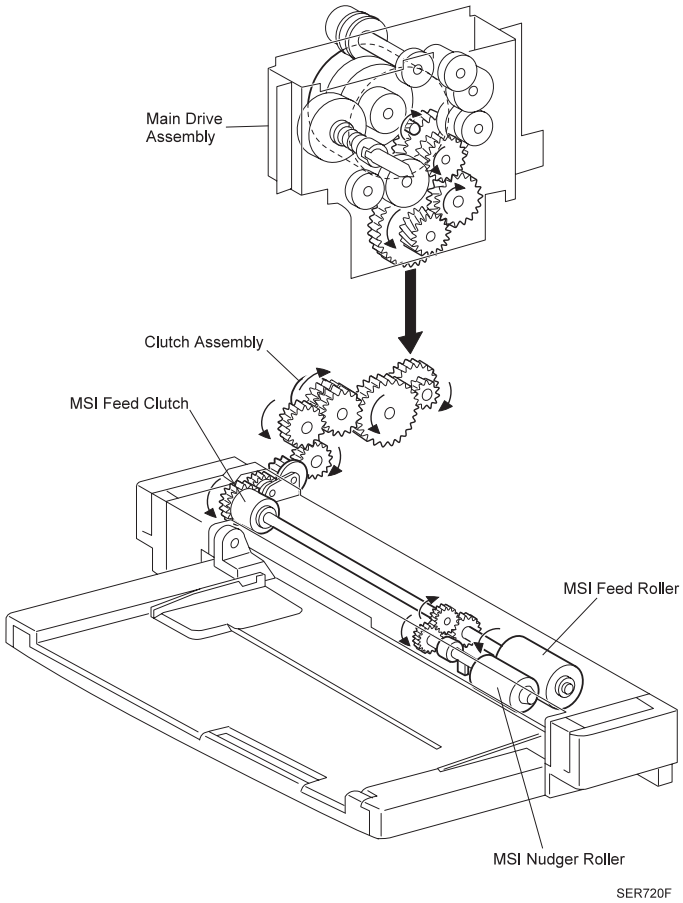
The Main Drive Assembly provides the mechanical drive for the majority of the Paper Path components. The Offset Motor provides the mechanical drive for the Offset Rolls.



SR1318X

Mechanical drive for paper fed from the MSI

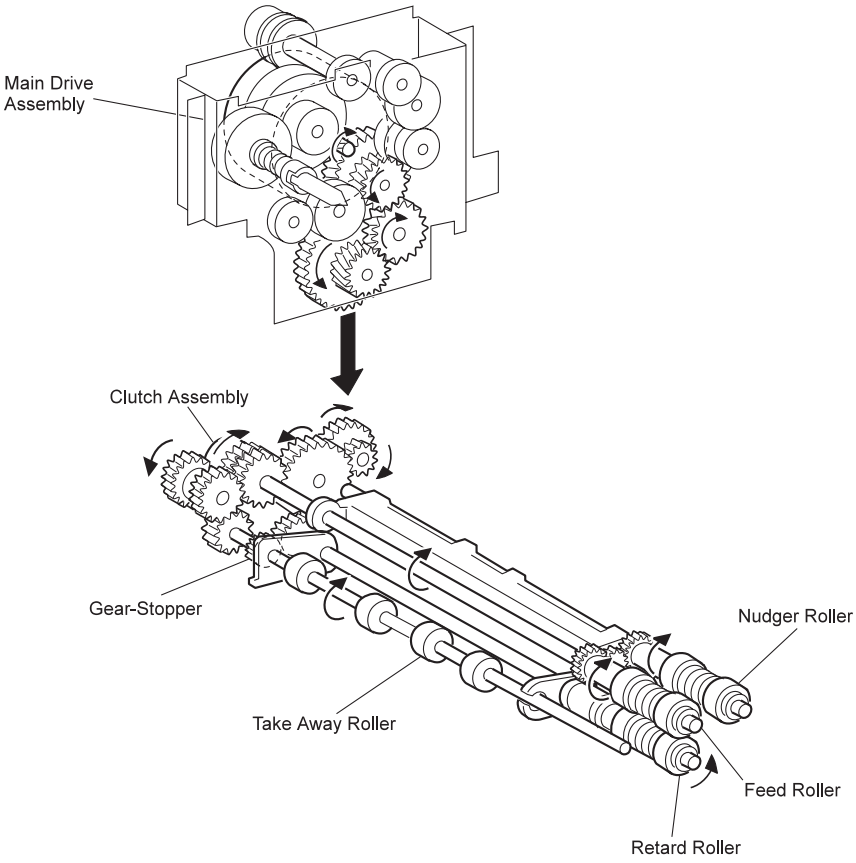
The Main Motor provides mechanical drive for MSI feed. The Drive Assembly transmits drive to the MSI Feed Clutch. The MSI Feed Roll and Nudger Roll are attached to the MSI Clutch. At paper feed, the MCU switches on the MSI Feed Clutch. The MSI Feed Clutch transmits drive to the Feed Roll, which rotates and begins feeding a single sheet of paper out of the MSI Tray. Tray 1 Feed Clutch transmits drive to the Take Away Roll. The Take Away Roll and Pinch Roll drive the sheet of paper into the Registration Roll.



SER720F

Mechanical Drive for Paper Fed from Tray 1

The Main Motor provides mechanical drive for Tray 1 feed. The Drive Assembly transmits drive to Tray 1 Feed Clutch. Tray 1 Feed Roll and Nudger Roll are attached to the Feed Clutch. At paper feed, the MCU switches on Tray 1 Feed Clutch. The Feed Clutch transmits drive to the Feed Roll, which rotates and begins feeding a single sheet of paper out of Tray 1.

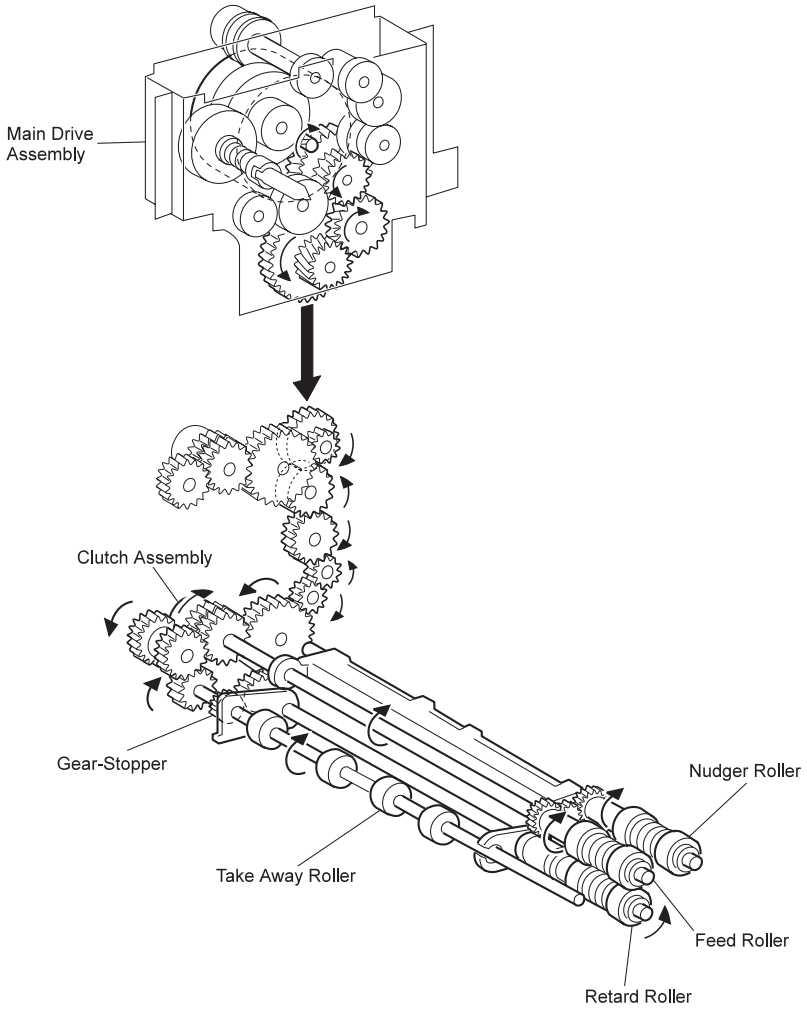


SER714F

SER714F

Mechanical Drive for Paper Fed from Tray 2

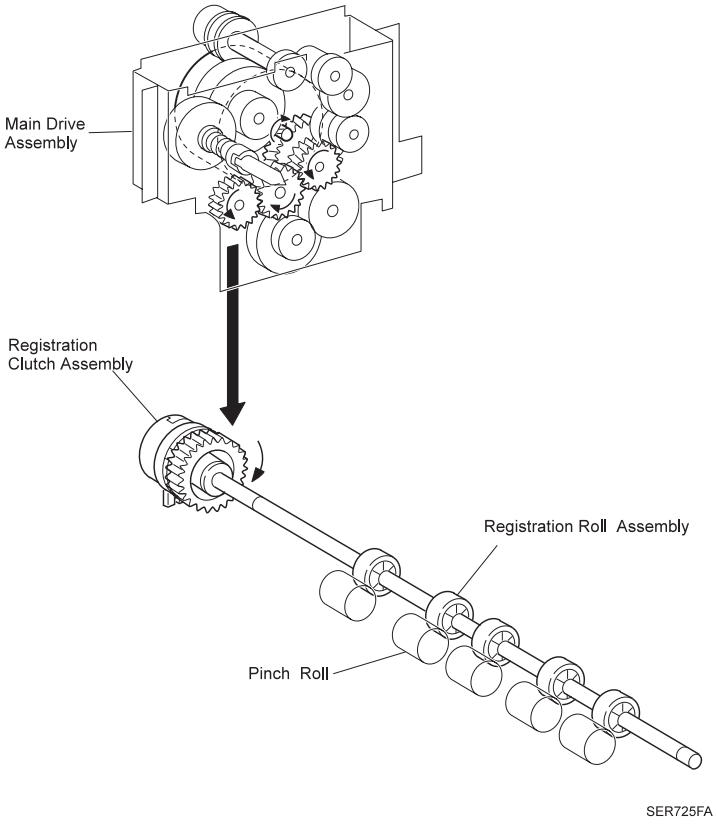
The Main Motor provides mechanical drive for Tray 2 feed. The Drive Assembly transmits drive to Tray 2 Feed Clutch. Tray 2 Feed Roll and Nudger Roll are attached to the Feed Clutch. At paper feed, the MCU switches on the Tray 2 Feed Clutch. The Feed Clutch transmits drive to the Feed Roll, which rotates and begins feeding a single sheet of paper out of Tray 2.



SER724F

Mechanical Drive for Registration

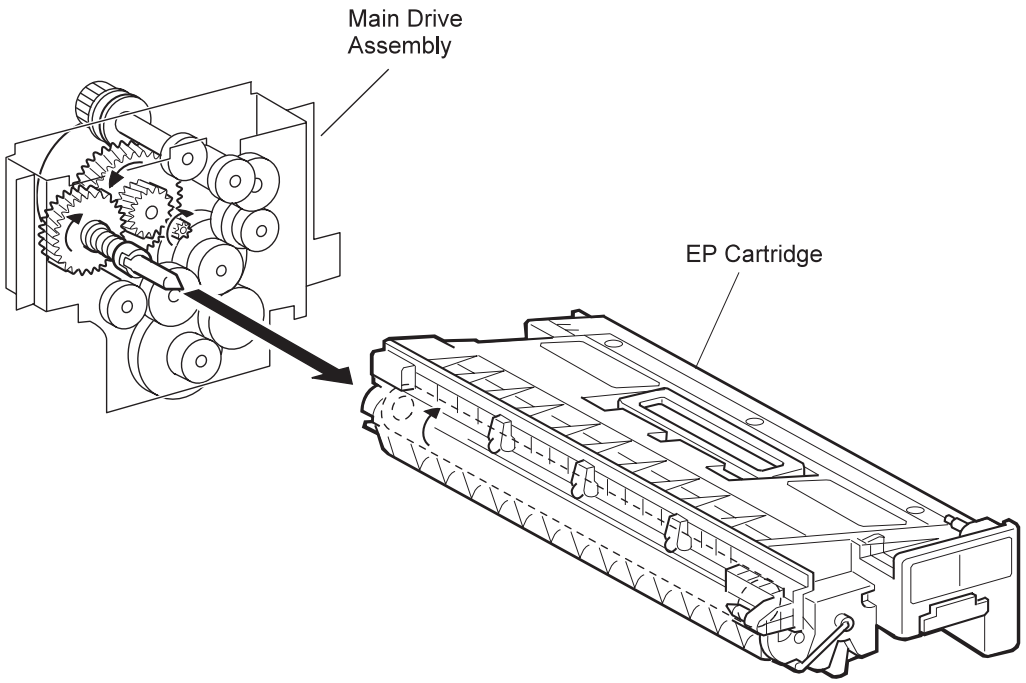
The Main Motor provides mechanical drive for the Registration Roll. The Main Drive Assembly transmits drive to the Registration Clutch. At a specific time in the print cycle the MCU switches on the Registration Clutch. The Registration Clutch transmits drive to the Registration Roll, which rotates and drives the sheet of paper into the Drum/BTR area.



SER725FA

Mechanical Drive for the Drum and BTR

The Main Motor provides mechanical drive for the Drum and BTR. The Main Drive Assembly transmits drive to the Drum. A shutter covers and protects the Drum surface. When the Left Cover is closed, a mechanical link opens the Shutter. When the Left Cover is open, the link closes the Shutter. A gear attached to the end of the Drum transmits drive to the BTR. Since the BTR is attached to the Left Cover Assembly, the BTR is driven only when the Left Cover is closed.

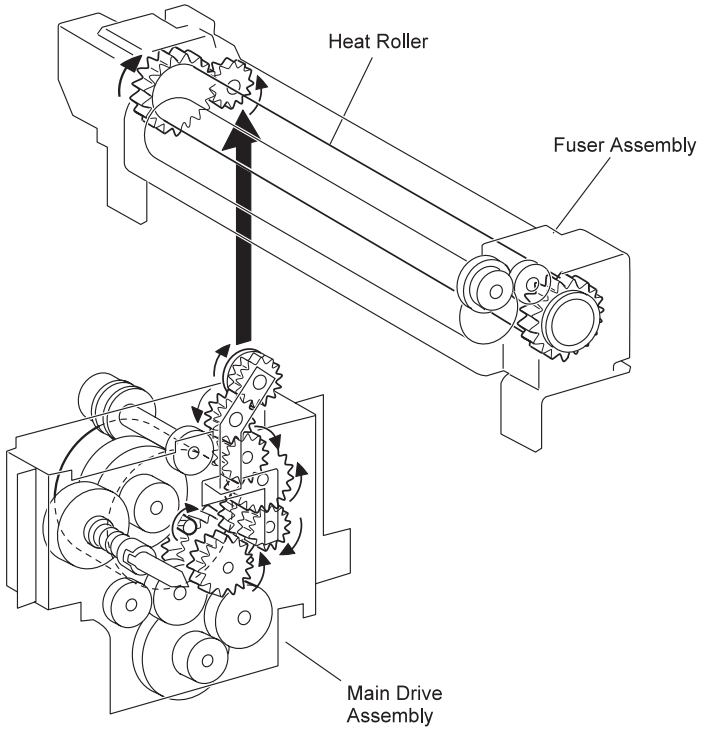


SER726F

SER726F

Mechanical Drive for the Fuser

The Main Motor provides mechanical drive for the Fuser Assembly. The Main Drive Assembly transmits drive to the Fuser Drive Assembly and on to the Fuser Heat Roll Gear. A gear at the end of the Heat Roll drives the Pressure Roll. The Heat and Pressure Rolls rotates continuously while the Main Motor is on and the Left Front Cover is closed. Part of the same mechanical link that opens and closes the Drum Shutter when the Left Cover is closed, pushes the Fuser Drive Gear against the Fuser Heat Roll intermediate gear, which transmits drive to the Fuser Heat Roll.

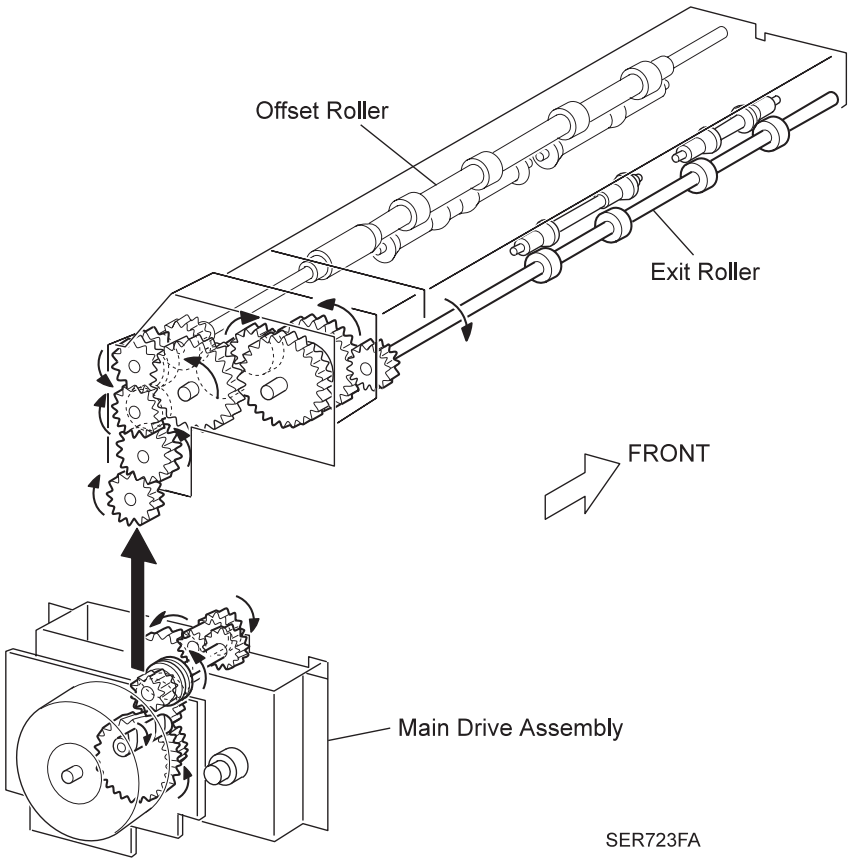


SER715F

SER715F

Mechanical Drive for Exit Drive

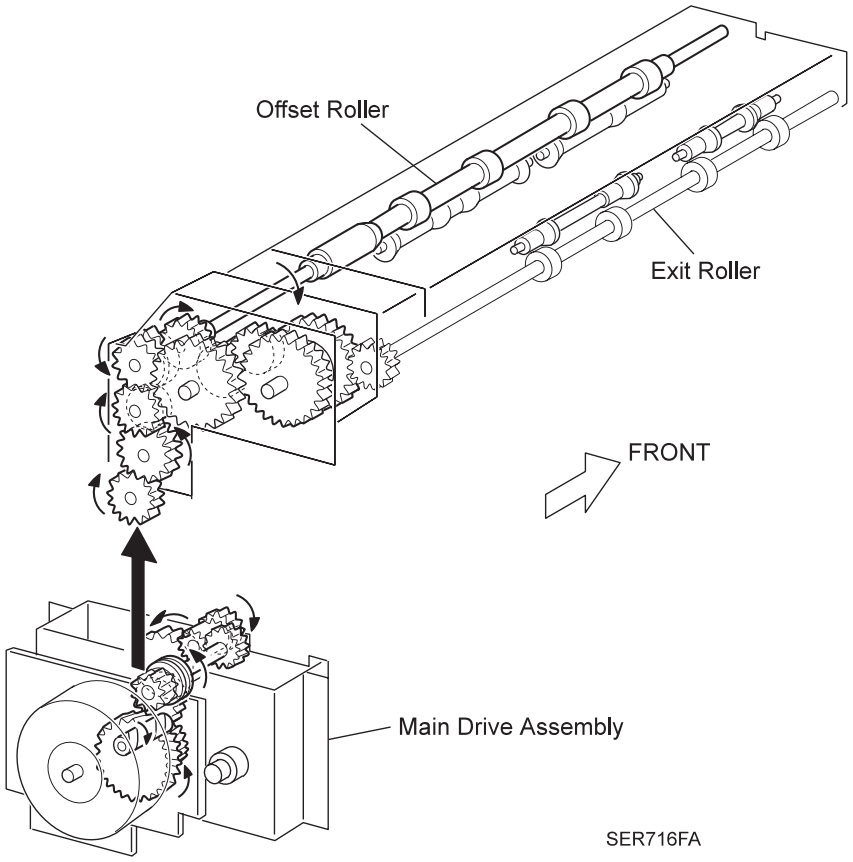
The Main Motor provides mechanical drive for the Offset and Exit Rolls. The Main Drive Assembly transmits drive to the Inverter CW Clutch and to the Inverter CCW Clutch. At a specific point in the print cycle the MCU switches on the CW Clutch. The CW Clutch transmits forward drive to the Offset Roll, which drives the sheet of paper into the Face Down Output Tray. If the printer is running in Duplex Mode, at a specific point in the forward drive, the MCU switches off the CW Clutch and switches on the CCW Clutch. The CCW Clutch transmits reverse drive to the Offset Roll and to the Exit Roll, which drive the paper back across the top of the Fuser Assembly and into the Duplex Module.



SER723FA

Mechanical Drive for Offset

The Offset Motor provides mechanical drive for the Offset Rolls. The Offset Motor transmits drive to the Offset Bracket. If the printer is running in Offset mode, the MCU switches on the Offset Motor. The Motor drives the Offset Bracket toward the front of the printer. The Bracket pushes the Offset Roll along with it. The Offset Rolls drive one sheet of paper into the Face Down Output Tray. The MCU switches the Offset Motor on again, and the Motor drives the Offset Bracket back to the rear of the printer, taking the Offset Roll with it. The Offset Rolls drive the next sheet of paper, slightly offset from the last sheet, into the Face Down Output Tray.

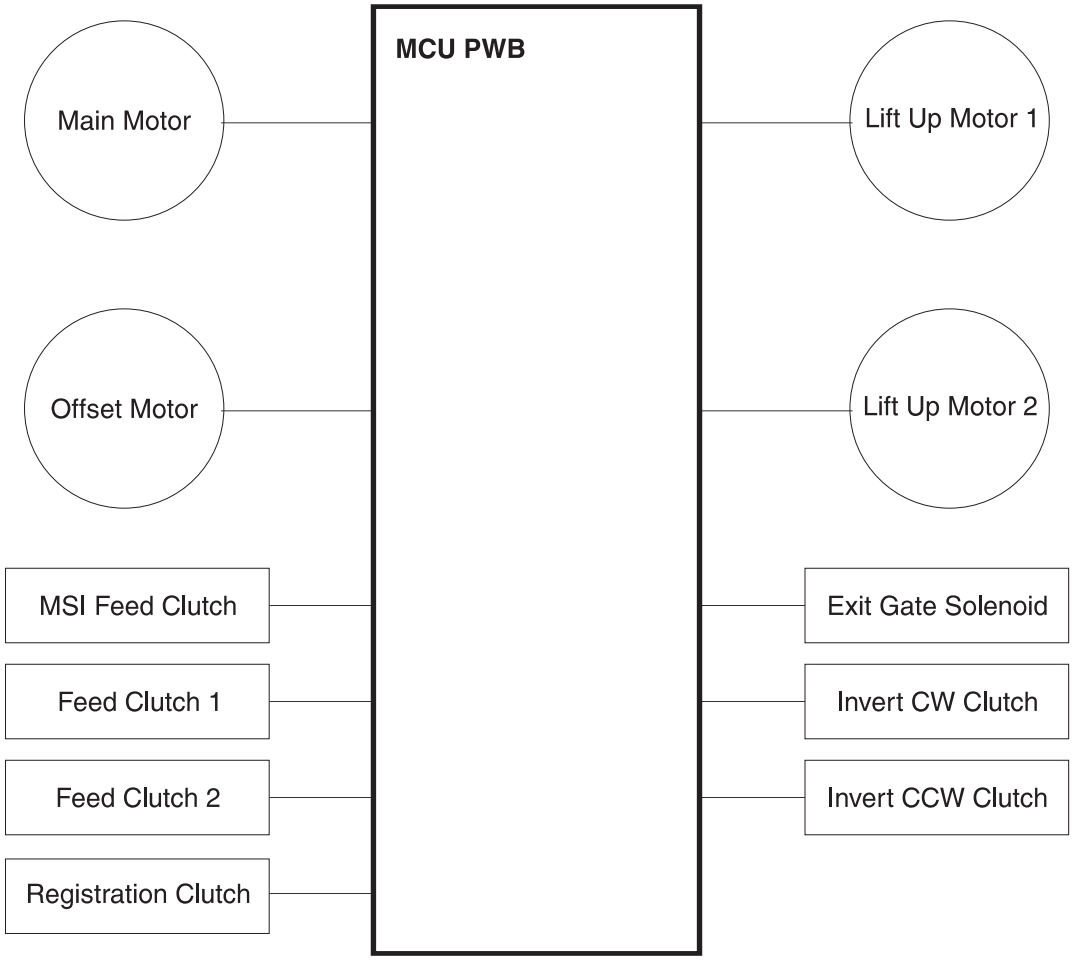


SER716FA

Paper Path Component Control

The logic on the MCU PWB controls the Paper Path components. Sensors along the paper path monitor the movement of each sheet of paper and send information back to the MCU. The MCU provides the timing and data processing necessary to actuate clutches and solenoids, switch motors on and off, and to identify paper jams.

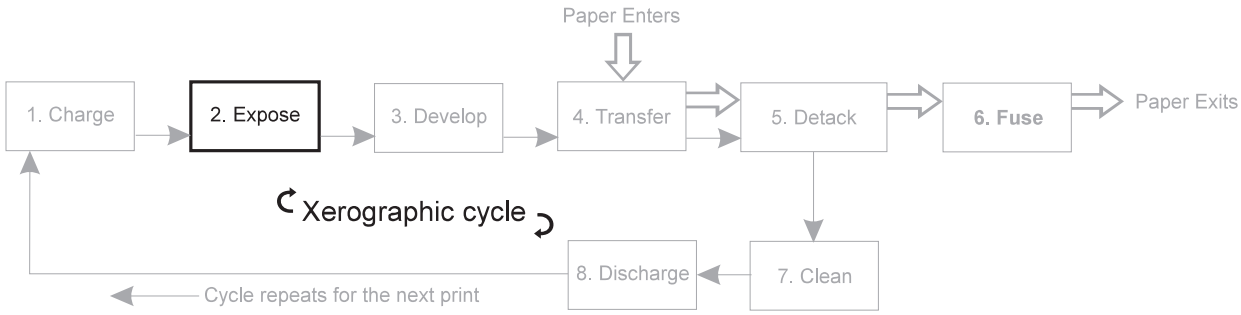
The MCU PWB provides the +24VDC drive signals for the Main Motor, the Offset Motor, and the assortment of clutches and solenoids within the printer. The MCU PWB also provides +5VDC to the paper path sensors.



SR1319XA

5 - The ROS

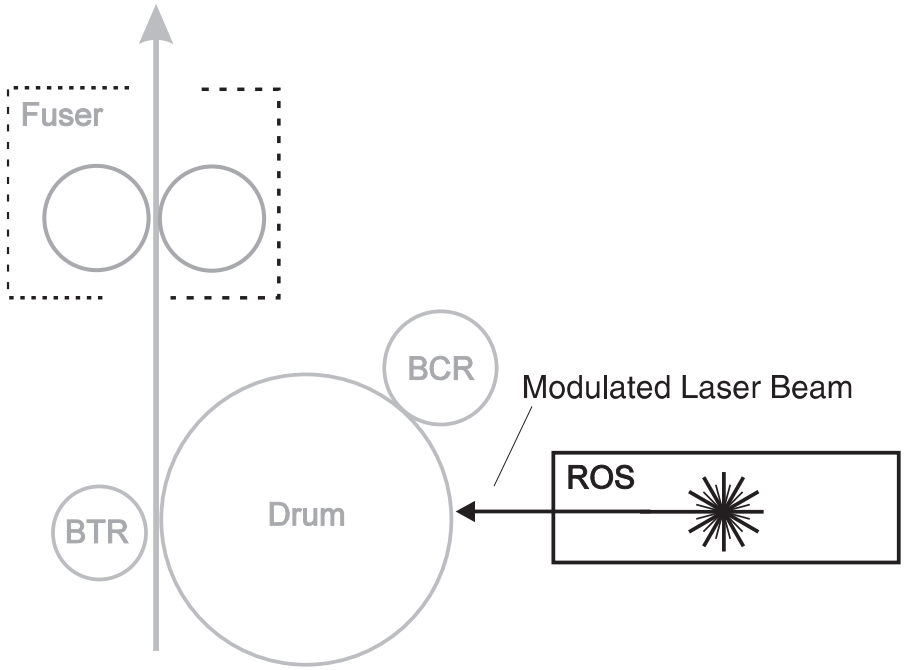
The ROS (**R**aster **O**utput **S**canner) is the mechanism that carries out **Step 2. Expose** of the print cycle.



SR1320X

A semiconductor within the ROS Assembly generates a beam of laser light. Image data received from the print controller modulates this beam, turning it on and off according to image information that is received from the host computer.

Through the use of a series of rotating and stationary mirrors within the ROS, the beam sweeps the negative charged drum surface. Whenever the print controller sends a command to print a black pixel, the laser switches on long enough to shine onto the drum at a single pixel point. That point on the drum is now discharged. You will learn more about this process in 6- *Xerographics*.



SR1321X

ROS Components

The QMS 3260/4032 ROS Assembly is made up of one major component housing a number of sub-components.

The ROS generates a laser beam. The laser beam is a very powerful and narrow beam of light that produces extreme heat at its focal point. The laser beam in the QMS 3260/4032 printer is invisible. Although you cannot see the beam, it can still cause severe eye injury. Direct eye exposure to the laser beam may cause blindness. Never place a mirror or a reflective tool or object in the laser beam path. Never run the printer with the covers removed or the ROS interlocks bypassed.

Housed inside the ROS Assembly:

1. **Laser Diode Assembly (LD)**

   A semiconductor Laser Diode that generates a 5 milliwatt class 3B laser beam. Circuity on the LD PWB maintains the laser output power at a constant level. The LD PWB is electrically connected to the MCU PWB and to the ESS Mother PWB. The MCU provides power and control circuitry. The ESS Mother PWB provides the video data input from the host computer

2. **Corrective Lenses and Angled Mirror**

   Four lenses, two small, one medium, and one wide, and an angled mirror focus the laser beam and direct it toward the Polygon Mirror.

3. **Polygon Mirror**

   A twelve-side rotating mirror that is attached to the Scanner Motor Assembly. The movement of the rotating Polygon Mirror reflects the laser beam in a sweeping motion, from side to side across and through the wide lens.

4. **Scanner Motor Assembly**

   The Scanner Motor Assembly is attached to the Scanner Motor Assembly PWB. The +24VDC Motor rotates at a constant speed. The Scanner Motor Assembly is electrically connected to the MCU.

5. **Wide Lens**

   A lens that focuses the beam coming from the Polygon Mirror and directs it onto the Angled Mirror.

6. **Drum Mirror**

   Angled so it reflects the laser beam coming from the Angled Mirror, down onto the surface of the drum.

7. **SOS PWB (Start Of Scan Sensor)**

   The SOS Sensor is in-line with the laser beam sweep. The laser beam strikes the SOS Sensor at the beginning of each sweep to let the printer control circuity know that a new scan has started. The SOS PWB is electrically connected to the MCU PWB.

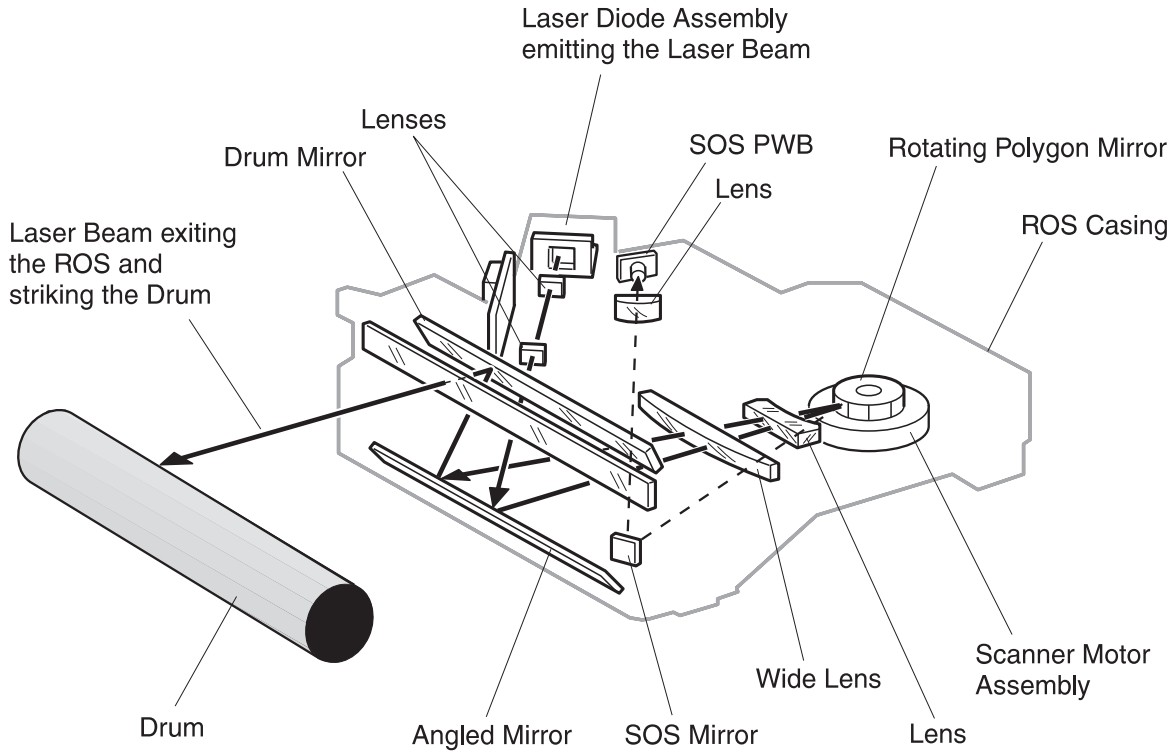
ROS Operation

The MCU PWB supplies +5VDC to drive the Laser Diode semiconductor. The semiconductor uses the +5VDC to generate a 5 milliwatt beam of invisible laser light.

As is characteristic of semiconductor devices, the Laser Diode can switch states very rapidly. A switching circuit on the Laser Diode PWB switches the Laser Diode on and off according to image data sent from the ESS Mother PWB.

Two lenses, an angled mirror, and another two lenses focus the laser beam onto the rotating Polygon Mirror. The Polygon Mirror has twelve mirrored sides and rotates at approximately 15,000 RPM. The Polygon Mirror reflects the laser beam back through the two lenses and onto the Angled Mirror. The movement of the Polygon Mirror reflects the laser beam in a sweeping motion, from side to side, across the Angled Mirror; with one complete sweep for each mirrored side.

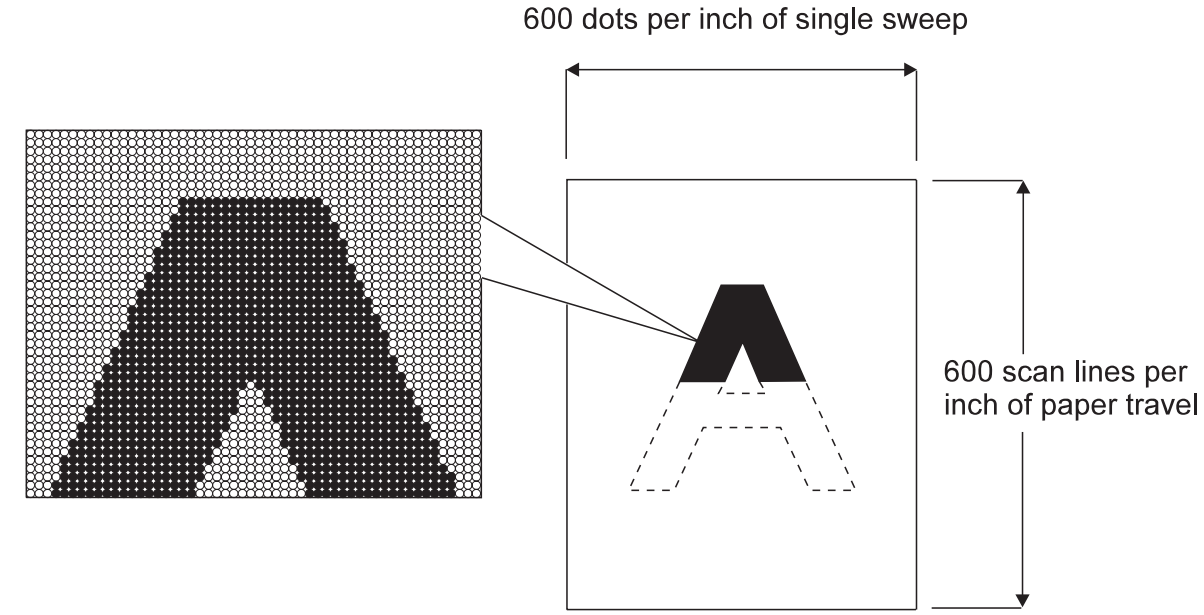
The Angled Mirror reflects the laser beam onto the Drum Mirror. The Drum Mirror is aligned at an angle so the mirror reflects the sweeping beam down onto the surface of the Drum. The combination of the rapid sweeping of the laser beam across the surface of the charged Drum and the rapid switching on and off of the laser beam creates, on the Drum, an invisible electrical image that corresponds to the screen image that was sent from the host computer. Located at one corner of the ROS, near the end of the Angled Mirror is the Start of Scan Sensor (SOS) Mirror. The Start of Scan Sensor is located at the opposite corner of the ROS Assembly. Each sweep of the laser beam begins by striking the SOS Mirror, reflecting the beam into the SOS Lens, which focuses the beam onto the SOS Sensor. The SOS Sensor is electrically connected to the MCU PWB. When the laser beam strikes the Sensor, the Sensor notifies the MCU that a new scan has started.



SR1323X

Image Resolution

The QMS 3260/4032 printer has an print image resolution of 600 dpi (dots per inch). Print image resolution is determined by the number of dots (or pixels) per inch of beam sweep and the number of sweeps per inch of paper travel.



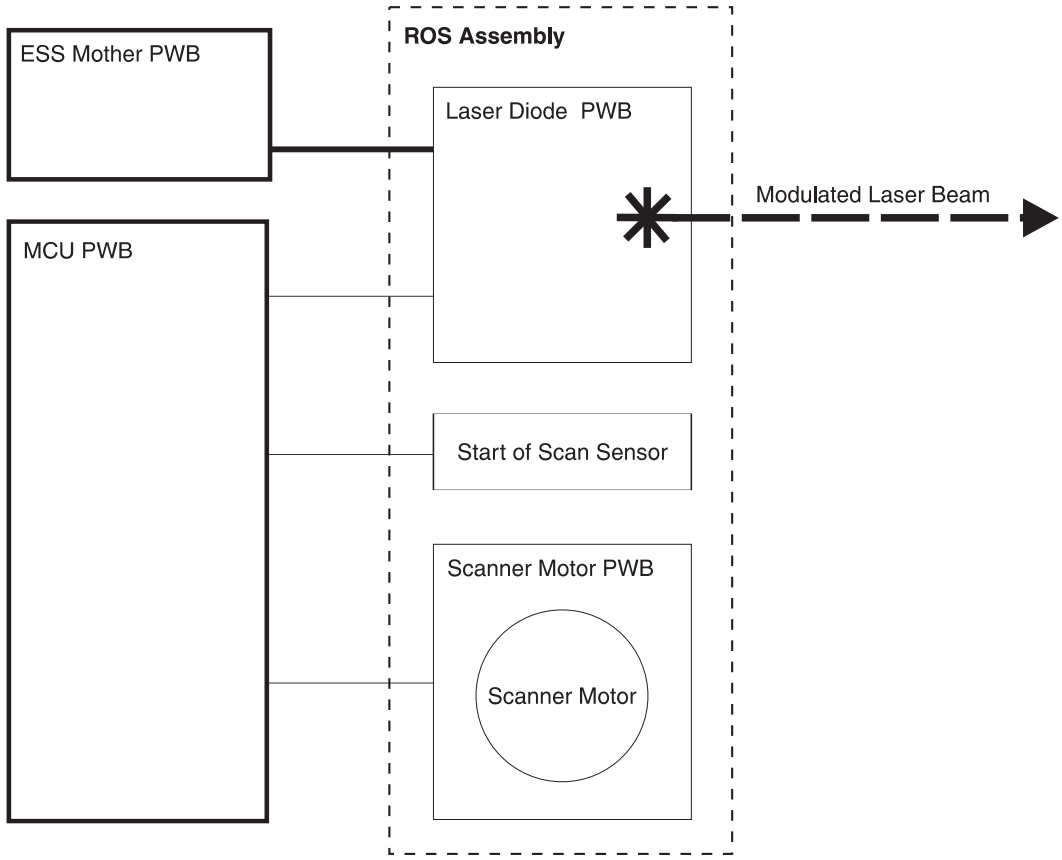
SR1324X

ROS Control

The Laser Diode PWB controls laser power monitoring and adjustment. The MCU PWB controls the rest of the ROS Assembly functions. The QMS Video Controller processes video data sent from a host computer. The QMS Video Controller then passes that data on to the ESS Mother PWB which controls the flow of video data to the Laser Diode PWB. The ESS Mother PWB switches the laser diode on and off according to the image data being sent from the QMS Video Controller. When the data signals for a black pixel, the ESS Mother PWB rapidly switches the Laser Diode on and off.

The MCU PWB provides the +5VDC needed to drive the Laser Diode. The CRU Interlock Switch cuts +5VDC to the Laser Diode when the EP Cartridge is not in place in the printer. The MCU PWB provides the +24VDC needed to run the ROS Motor. The MCU PWB also provides the signal (/RMOT ON) that switches the ROS Motor on and off. To reduce ROS Motor wear, the MCU switches off the ROS Motor after 15 minutes of printer inactivity.

The MCU PWB provides the +5VDC (signal 5V) needed by the SOS Sensor. The Sensor returns information about the start of each scan to the MCU through the /SOS signal.



SR1325XA

Laser Hazards

Lasers generate a very powerful beam of light that produces extreme heat at its focal point. The laser beam that the QMS 3260/4032 ROS generates is invisible. Although you cannot see the laser beam, direct eye contact with the beam will cause serious eye injury.

Always follow the laser service rules and use good judgement when working on the QMS 3260/4032 printer.

ROS Safeguards

There are two safety interlocks built into the CRU cavity.

A molded tab located at the end of the EP Cartridge actuates **Interlock SW1** which, along with **SW2** (the Left Cover Interlock), controls +24VDC out of the MCU PWB. When the Left Cover is open or the EP Cartridge is removed, SW1 and SW2 cut +24VDC out of the MCU PWB.

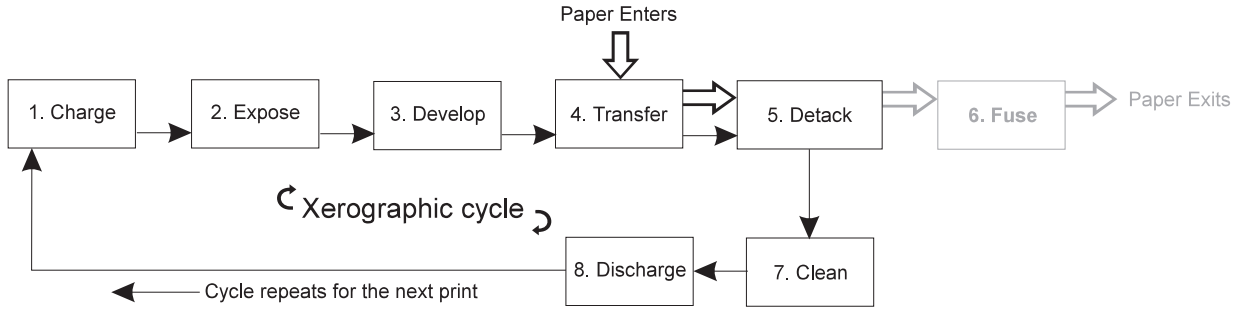
An electrical jack at the end of the EP Cartridge completes the +5VDC circuit for **CRU Interlock** switches **SW1** and **SW2**. When the EP Cartridge is removed, +5VDC to the Laser Diode is cut.

Never run the printer with the covers open or removed, the Main Interlock Switch actuated, and the CRU Interlock Switches bypassed. Direct eye exposure to the laser beam may cause serious eye injury or blindness.

6 - Xerographics

Xerographics and the Print Cycle

Xerographics within the QMS 3260/4032 printer is represented by steps 1 through 5, and steps 7 and 8 of the print cycle.



SR1326X

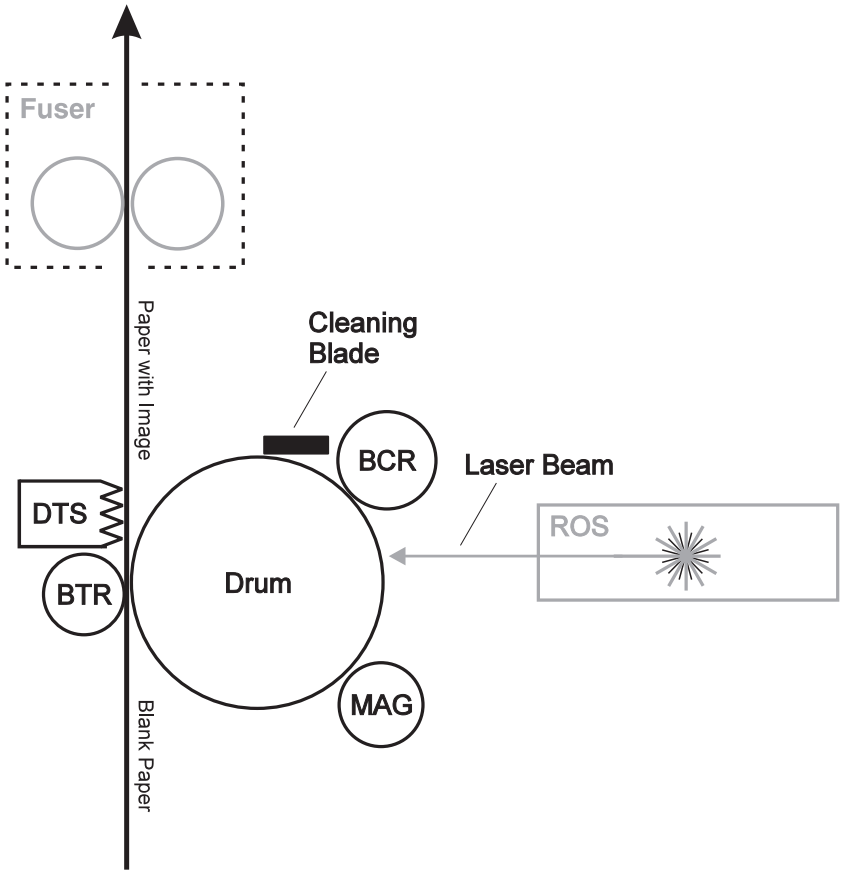
The seven Xerographic steps (Step 6 Fuse is not part of the Xerographic cycle) in the print cycle are:

1. **Charge**
   Places a uniform negative electrostatic charge on the surface of the drum.
2. **Expose**
   A data modulated laser beam scans the drum surface, converting select negative points to positive points.
3. **Develop**
   Attaches dry toner to the positive points of the drum.
4. **Transfer**
   Transfers the dry toner image from the drum to a piece of paper.
5. **Detack**
   Strips the piece of paper, along with the dry toner image on the paper surface, from the drum.
6. **Clean**
   Cleans any residual toner from the surface of the drum and prepares the drum for the next print cycle.
7. **Discharge**
   Cleans any residual electrical charge from the surface of the drum and prepares the drum for the next print cycle.

An Overview of Xerographics

Xerography is the process of using an electrically charged surface and a dry, powered ink to create an image on a sheet of plain paper. Xerography, in some form, is used in most of today's copiers and laser printers. The QMS 3260/4032 printer uses a number of components and AC and DC voltages in its xerographic process.

The surface of the **Drum** is made of a photoconductive material that retains an electrical charge as long as the material is not exposed to light. Exposure to light discharges the electrical charge. At the start of each print cycle the **BCR** (Bias Charge Roll) places a uniform electrical charge on the surface of the Drum. The modulated **Laser Beam** shines light onto the surface of the drum, discharging select areas, thus creating an invisible ***latent image.*** The latent image is made up of a pattern of negative and positive charges. The **Magnet Roll** applies dry toner to the latent image to create a visible ***developed image.*** A sheet of paper passes between the Drum and the **BTR** (Bias Transfer Roll) where the developed image on the drum is transferred to the paper. The **DTS** (Detack Saw) applies a voltage to the back of the paper to remove it from the Drum. The sheet of paper, now with a toner image on the surface, moves out of the Xerographic area and on to the Fuser. The **Cleaning Blade** scrapes any residual toner left on the Drum after transfer and deposits it in a sealed reservoir that is located inside the EP Cartridge.



SR1327X

Xerographic Components

Xerographics in the QMS 3260/4032 printer is made up of ten major components. Six of those components are housed inside the EP Cartridge. The EP Cartridge is a sealed unit that contains no field replaceable parts. The EP Cartridge is a CRU (Customer Replaceable Unit) with an estimated life of 23,000 prints; assuming 5% image coverage of a standard sheet of A4 paper.

Attached to the Transport Chute:

1. **BTR (Bias Transfer Roll)**

   The BTR transfers the toner image from the drum to the sheet of paper. The BTR rotates during the print cycle.

2. **DTS (Detack Saw)**

   The DTS helps strip the sheet of paper off of the Drum.

Support components:

3. **Toner Sensor**

   The Toner Sensor is a magnetic sensor that monitors the level of toner remaining inside the EP Cartridge. The Toner Sensor is attached to the printer frame, inside the EP Cartridge cavity, and is electrically connected to the MCU PWB.

4. **High Voltage Power Supply PWB**

   Supplies all of the voltages used by the Xerographic components.

Housed inside the EP Cartridge:

5. **Drum**

   The Drum is a hollow aluminum cylinder that has a surface coating of a photoconductive material. The Drum rotates during the print cycle.

6. **Bias Charge Roll (BCR)**

   The BCR places a uniform DC electrical charge on the surface of the drum. At the end of a print cycle, the BCR applies an AC voltage to the surface of the drum to neutralize any electrical patterns remaining from the previous print cycle. The BCR rotates during the print cycle.

7. **Magnet Roll**

   The Magnet Roll collects toner from the toner reservoir and distributes it to the drum. The Magnet Roll rotates during the print cycle.

8. **Charge Metal Blade (CM Blade)**

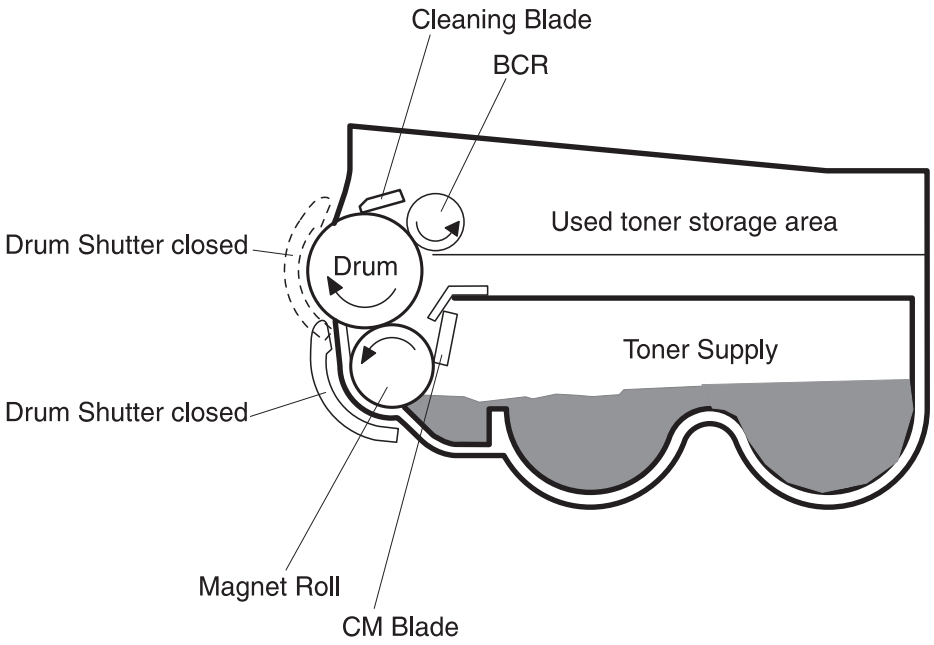
   The CM Blade spreads an even coating of toner across the Magnet Roll. The CM Blade also gives the Roll a static–electric charge.

9. **Cleaning Blade**

   The Cleaning Blade rides the surface of the rotating drum, removing any residual toner left from the previous print cycle.

10. **Drum Shutter**

    The Drum Shutter protects the drum from damage by light or contamination. When the EP Cartridge is in the printer and the Left Upper Cover is closed, the Drum Shutter opens to expose the drum surface. When the EP Cartridge is out of the printer or the Left Upper Cover is open, the Drum Shutter closes.



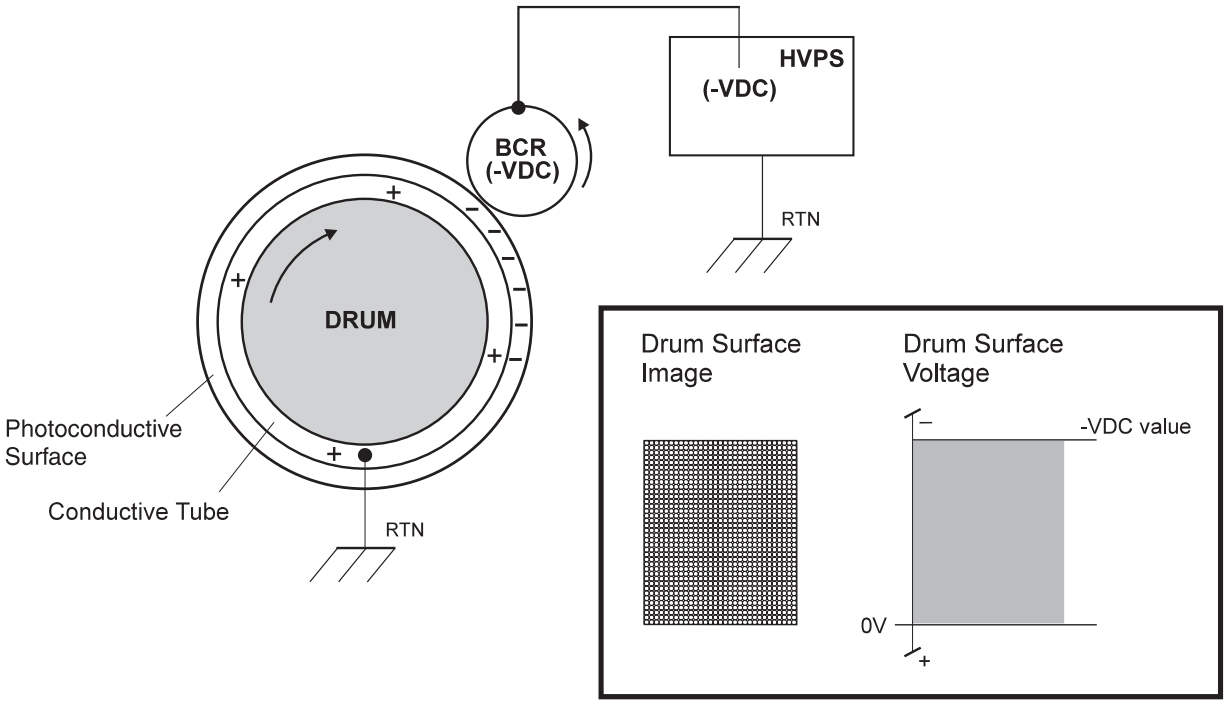
SR1353X

The Xerographic Process During a Print Cycle

1. Charge

The Bias Charge Roll (BCR) places a uniform negative electrostatic charge on the surface of the drum. The drum surface is made of a photoconductive material that holds an electrical charge as long as the drum remains in darkness. Light striking the drum discharges the surface charge.

The BCR is a conductive roll that is positioned slightly above the surface of the drum. The HVPS supplies the BCR with two voltages; a negative DC charge voltage and an AC discharge voltage that is used for electrically cleaning the drum (discussed in *Step 7. Clean*).



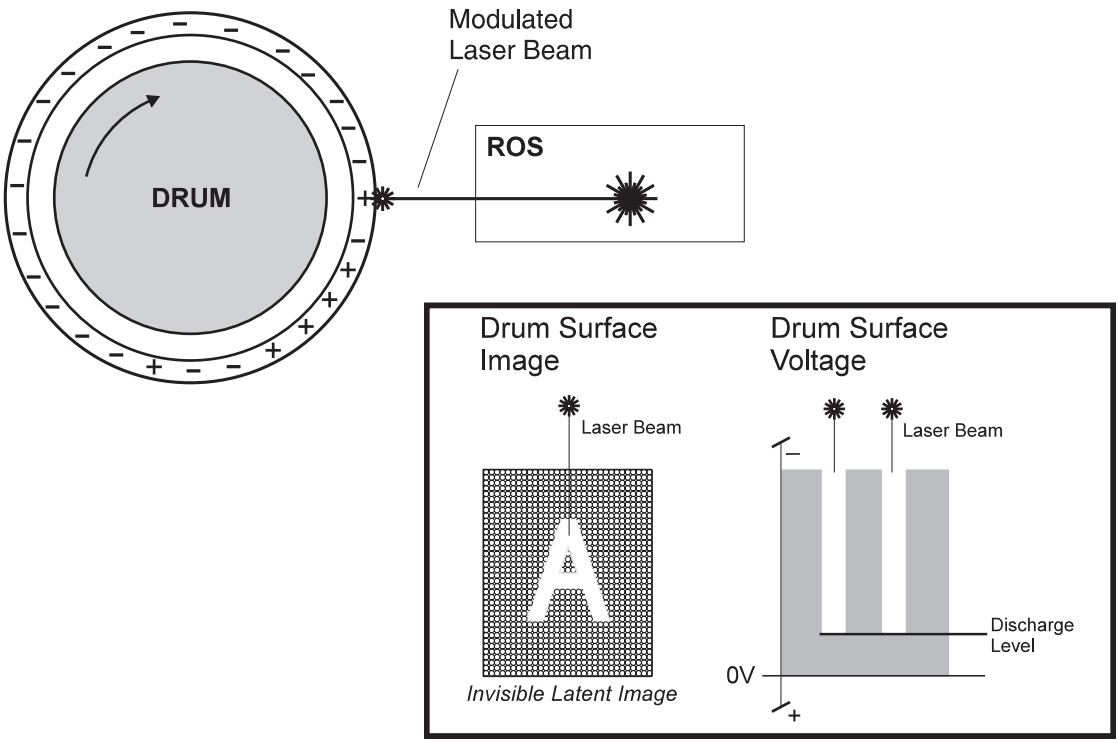
SR1328XA

2. Expose

The Raster Output Scanner (ROS) generates a beam of laser light. Image data received from the print controller modulates this beam, turning it on and off according to image information that is received from the host computer and software.

Through the use of a series of rotating and stationary mirrors within the ROS, the beam scans the negative charged drum surface. Whenever the print controller sends a command to print a black pixel, the laser switches on long enough to shine onto the drum at a single pixel point. That point is now discharged and slightly less negative than the surrounding negative charge. For the sake of simplicity, the less negative areas are considered "positive". This discharge/no discharge process creates an invisible, electrostatic image on the surface of the drum. This image is called a ***latent*** image.

The ROS also helps to clean and prepare the drum by scanning the surface of the drum at the beginning of each individual printer cycle. This action discharges an residual DC charge that may still remain on the Drum from the last print cycle.



SR1329X

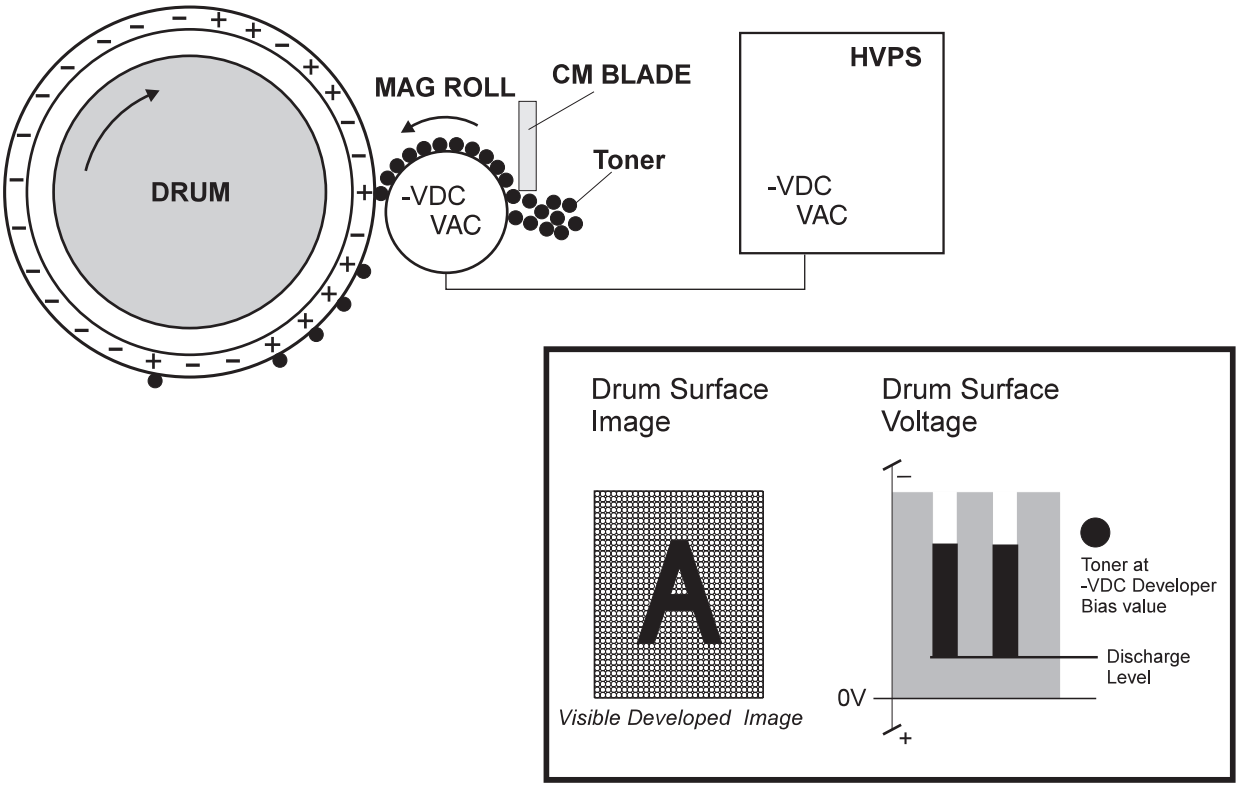
3. Develop

The toner contained within the EP Cartridge has a slight magnetic property that causes it to adhere to the Magnetic Roll. The Charge Metering Blade (CM Blade) spreads the toner into a very thin layer on the Magnetic Roll. Friction between the Magnetic Roll and the CM Blade generates a small electrical charge that is transferred to the toner.

The surface of the Magnetic Roll is made up of a thin sheet of conductive material. The HVPS supplies the Magnetic Roll with two voltages; a DC voltage and an AC voltage. The DC voltage is used to transfer toner from the Magnetic Roll to the surface of the drum. The AC voltage agitates the toner on the Magnetic Roll, making toner transfer easier.

The Magnetic Roll maintains a negative DC electrical potential. Negative charged areas of the drum have a lower electrical potential, or higher relative negative value than the Magnetic Roll. Discharged areas of the drum have a higher electrical potential, or lower relative negative value, than the Magnetic Roll. A discharged point on the surface of the drum now appears less negative, or positive, in relation to the negative charge on the Magnetic Roll.

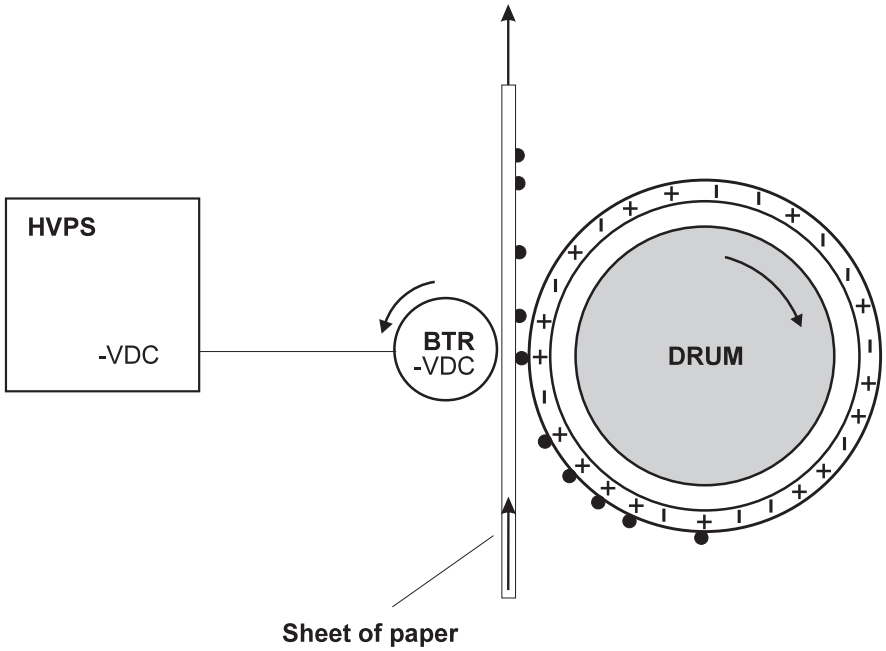
The toner adhering to the Magnet Roll is always in contact with the drum surface. When a less negative point on the drum (a discharged area) comes in contact with the more negative charged toner on the Magnet Roll, toner transfers from the Magnet Roll to that point on the drum. There is now a visible toner image on the drum surface. The image is called a ***developed*** image.



SR1330XA

4. Transfer

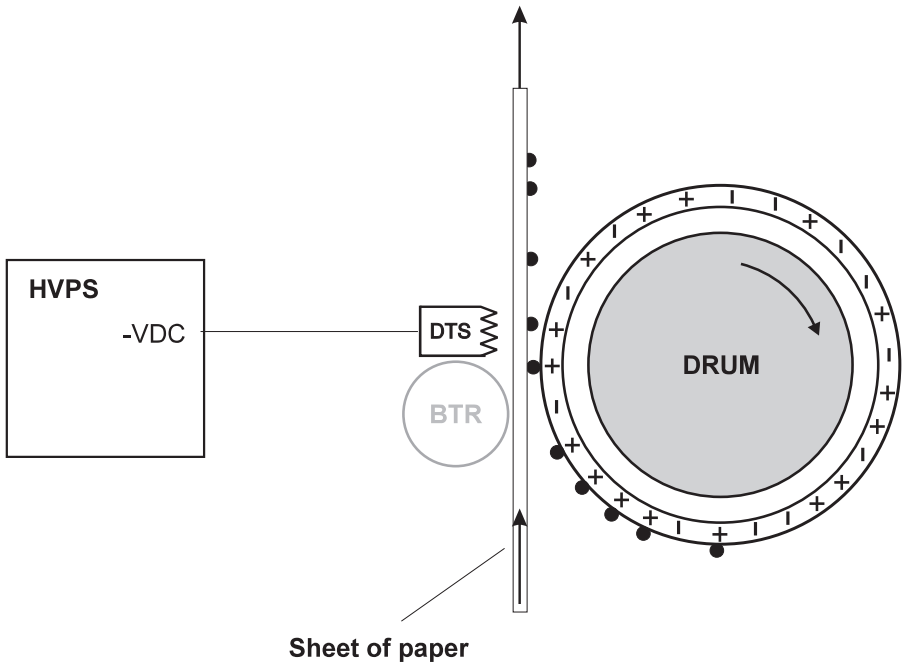
As the paper travels between the BTR and the drum surface, the Bias Transfer Roll (BTR) applies a positive charge to the back of the printing paper. This positive charge transfers the negative charged toner image from the drum surface to the top surface of the paper. The toner image is now on the paper and the paper is now stuck to the drum surface, due to the relative electrical differences between the negative electrical charge of the inner conductive layer of the drum and the positive electrical charge of the paper.



SR1331X

5. Detack

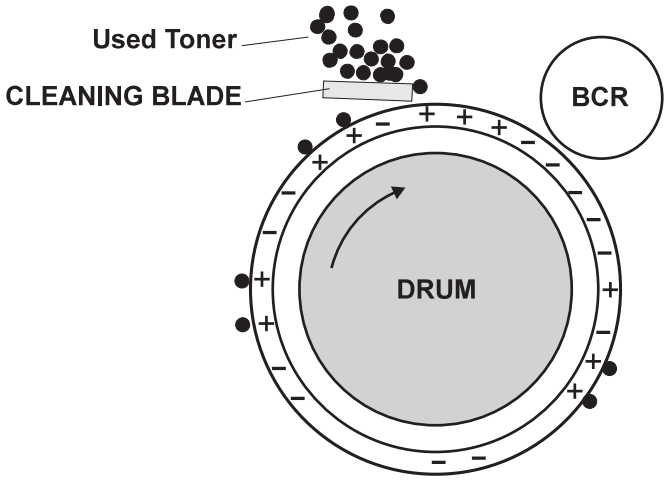
After the toner image transfers to the surface of the paper, the Detack Saw (a thin strip of metal that resembles a saw blade) applies a low voltage negative charge to the back of the paper to neutralize the positive voltage that was applied to it by the BTR. Once the positive voltage is neutralized, the paper strips releases easily from the drum surface and continues along the paper path to the Fuser.



SR1332X

7. Clean

The Cleaning Blade removes any toner that remains on the drum after the transfer process. The toner that the Cleaning Blade removes is collected inside the sealed EP Cartridge. Toner that is reclaimed from the drum is not reused by the EP Cartridge.

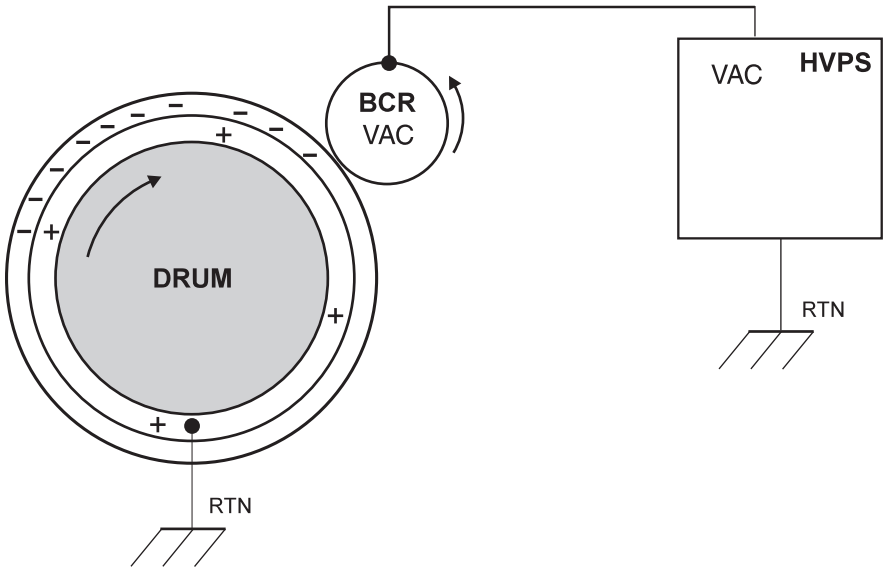


SR1334X

8. Discharge

At both the start and the end of each individual printer cycle the HVPS supplies the BCR with an AC voltage that is used to electrically clean the drum. The AC voltage removes any residual DC charge that was left from the previous print cycle.

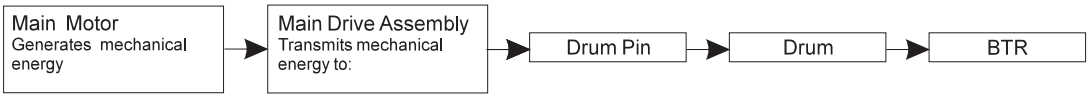
At the beginning of each individual printer cycle the ROS scans the surface of the drum, further discharging any residual DC charge that may be left on the drum.



SR1335X

Mechanical Drive for Xerographics

The Main Drive Motor and the Main Drive Assembly provide the mechanical drive for the Drum and the BTR.



SR1336X

The mechanical energy created by the Main Drive Motor is transmitted through the Main Drive Assembly to a drive pin that is located at the rear of the Assembly. When the EP Cartridge is in place, the Drum engages the pin. A gear attached to the end of the Drum drives the BTR.

Xerographic Control

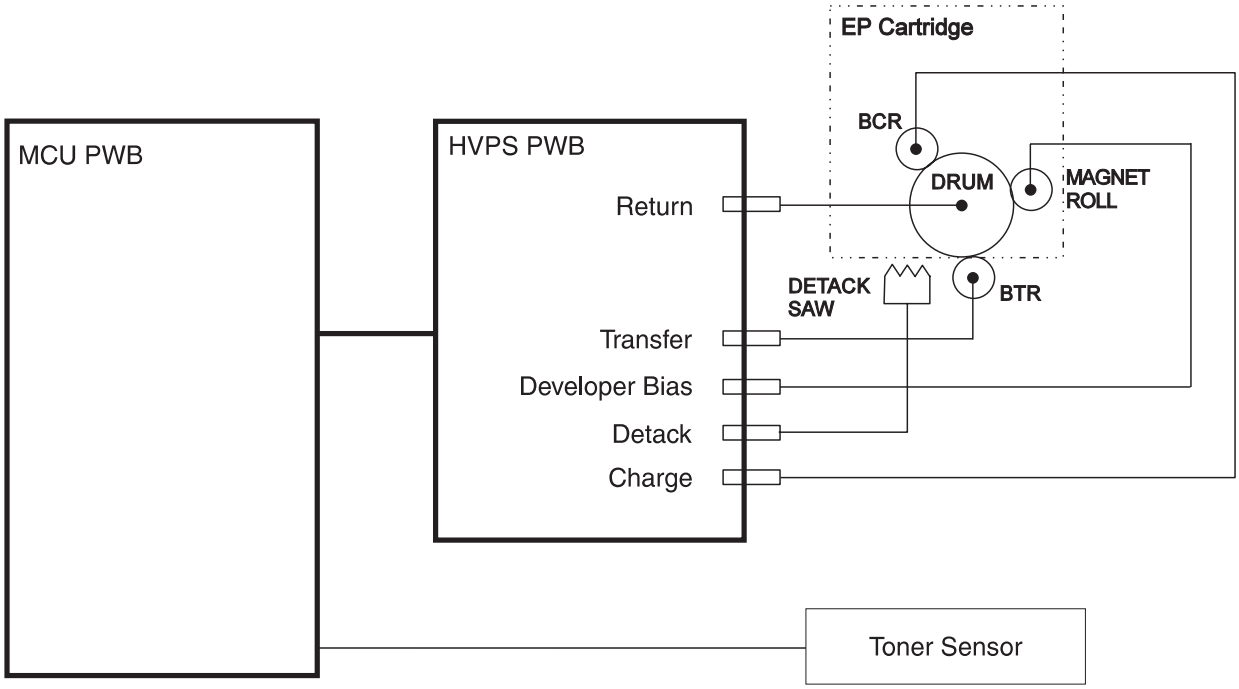
The logic on the MCU PWB controls all Xerographic functions. The High Voltage Power Supply (HVPS) provides all of the Xerographic voltages.

HVPS

The MCU PWB supplies +24VDC to the HVPS. The HVPS converts the +24VDC to the Xerographic voltages. The HVPS provides CR (Charge Voltages), DB (Developer Bias Voltages), TR (Transfer Voltage), DTS (Detack Saw Voltage), and RTN (Return). The logic on the MCU PWB uses a number of signals to the HVPS to switch on the various Xerographic components.

Toner Sensor

The Toner Sensor is electrically connected to the MCU PWB through P/J127. The logic on the MCU PWB uses the NO TONER signal to monitor the level of unused toner inside the EP Cartridge. When the NO TONER signal goes low, the MCU PWB logic waits for ten additional print cycles to complete, then it generates a ***J6-1: Replace the EP Cartridge*** error message.



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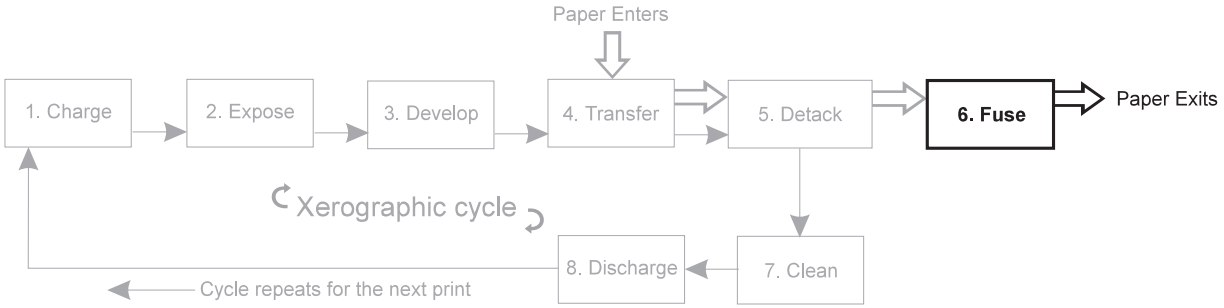
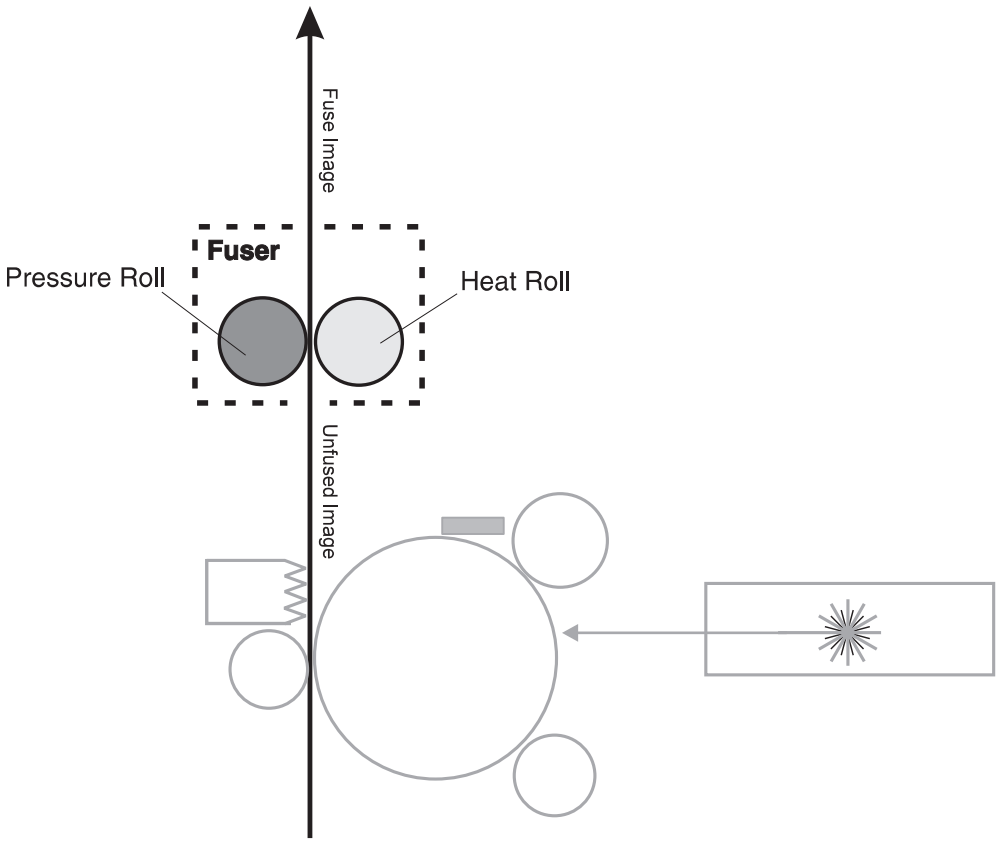
7 - Fusing

Image fusing is the sixth step of the print cycle.



SR1338X

When a sheet of paper leaves the transfer area, static electricity holds the unfused toner image to the surface of the paper. After transfer, the paper moves to the Fuser where it passes between the **Heat Roll** and the **Pressure Roll**. The combination of heat and pressure melts the toner image and bonds it permanently to the paper. The fused sheet of paper is then transported to the output tray.



SR1339X

Fuser Components

The Fuser Assembly is made up of seven major components:

The Fuser can be extremely hot. Be careful when working with or around the Fuser Assembly. Switch off the printer and wait until the Fuser has cooled before attempting to remove or disassemble it.

1. **Heat Rod 1 (Main)**

   Heat Rod 1 is a quartz lamp that is suspended inside the Heat Roll. When the AC Drive switches AC voltage to Heat Rod 1, the Rod heats up and in turn heats up the Heat Roll.

2. **Heat Rod 2 (Sub)**

   Heat Rod 2 is a quartz lamp that is suspended inside the Heat Roll. When the AC Drive switches AC voltage to Heat Rod 2, the Rod heats up and in turn heats up the Heat Roll. Heat Rod 2 switches on during a print cycle.

3. **The Heat Roll**

   The Heat Roll is a hollow aluminum tube that is coated with a non-stick surface. The Heat Rod heats the Heat Roll to a temperature sufficient enough to melt dry toner. There is a drive gear attached to one end of the Heat Roll. The Heat Roll rotates against the Pressure Roll.

4. **The Pressure Roll**

   The Pressure Roll is a metal shaft that is surrounded by a hard rubber roll. The ends of the shaft rest in spring-loaded bearings. The Heat Roll presses against the Pressure Roll. During the fusing step, paper passes between the rotating Heat Roll and the rotating Pressure Roll.

5. **The Temperature Sensor**

   The Temperature Sensor is a heat sensitive resistor [STS] that gently rides on the surface of the Heat Roll. The Temperature Sensor monitors the surface temperature of the Heat Rod and sends information back to the AC Drive PWB and on to the MCU PWB. According to the temperature information received, the MCU PWB either switches on or switches off the Heat Rod.

   If the Fuser begins to overheat, the Temperature Sensor functions as the first-stage overheat protection; signaling the MCU PWB to cut all AC power to the Heat Rod.

6. **The Fuser Fuse**

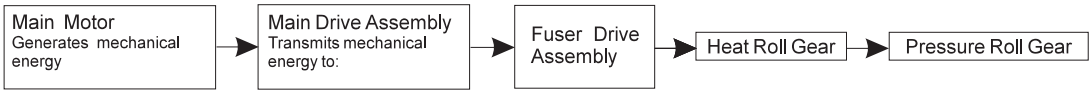
   The Fuser Fuse is connected in series with the Heat Rod AC circuit. The Fuse functions as the second-stage overheat protection. If the Temperature Sensor fails to shutdown AC power to the Fuser, at a specific temperature the Fuse opens the AC circuit between the Power Supply and the Heat Rod.

7. **The Fuser Thermostat**

   The Fuser Thermostat is connected in series with the Heat Rod AC circuit. The Thermostat functions as the third-stage overheat protection. If the Fuser Fuse fails to shutdown AC power to the Fuser, at a specific temperature the Fuser Thermostat opens the AC circuit between the Power Supply and the Heat Rod.

Mechanical Drive for the Fuser Assembly

The Main Drive Motor, the Main Drive Assembly, and the Fuser Drive Assembly provide the mechanical drive for the Fuser Assembly.



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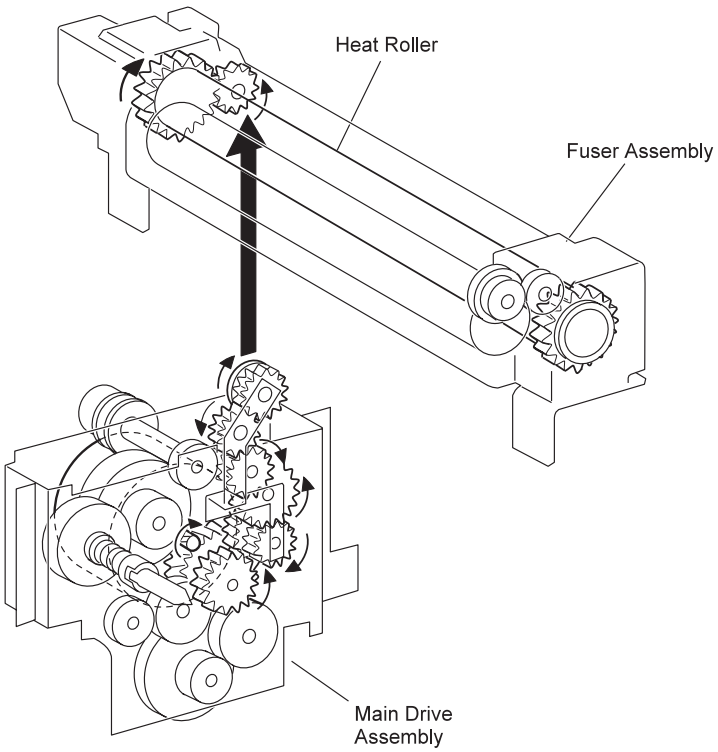
The Main Drive Assembly transmits drive to the Fuser Drive Gear.



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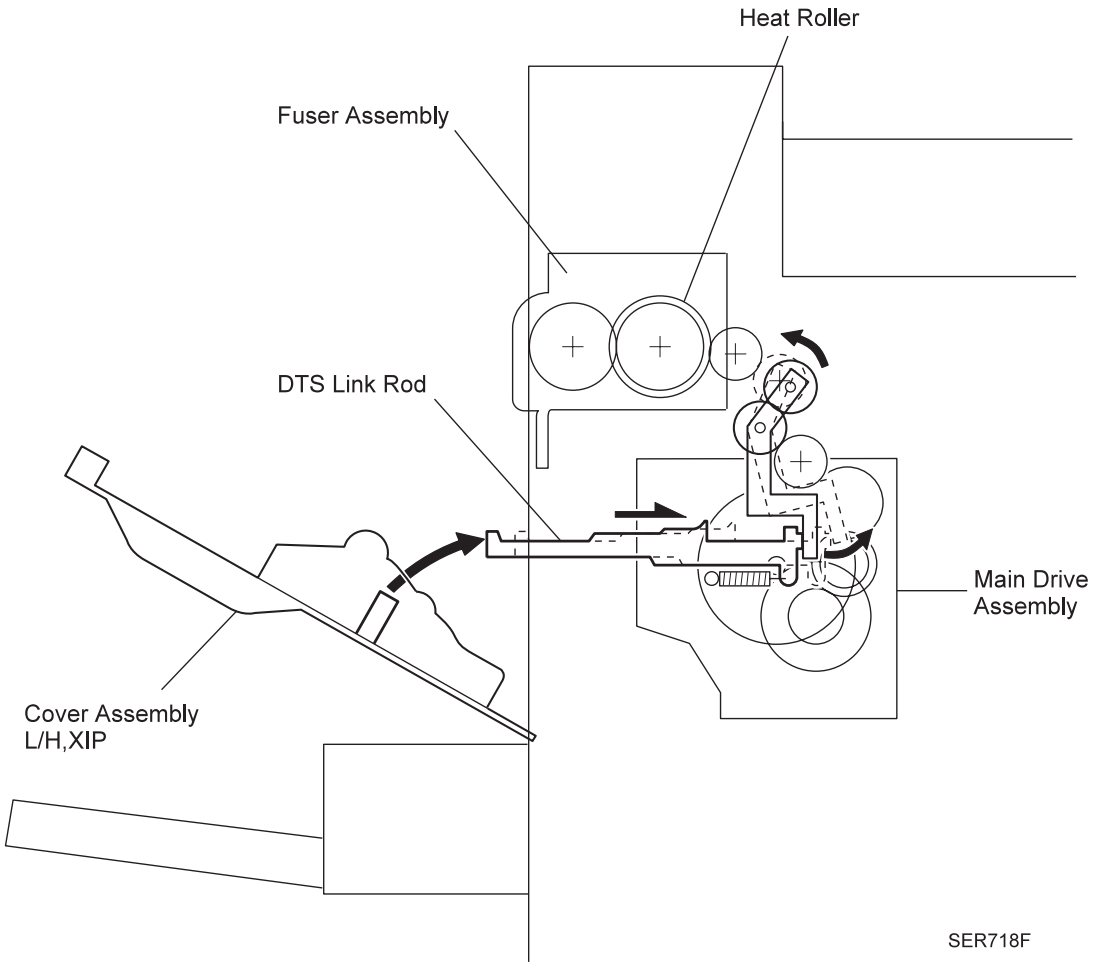
When the Left Upper Cover is closed, the DTS Link Rod pushes the Fuser Drive Assembly into contact with the Fuser Drive Gear, which transmits drive to the Heat Roll Gear. The Heat Roll rotates and transmits drive through a Pressure Roll Gear to the Pressure Roll.



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Fuser Control

Logic circuits on the MCU PWB and relays on the AC Drive PWB control all Fuser functions.

Temperature Sensor

The Temperature Sensor monitors the surface temperature of the Heat Roll and sends information back to the MCU PWB. According to the temperature information received, the MCU PWB commands the AC Driver PWB to either switch on or switch off the Heat Rods. The Temperature Sensor is marked STS on the circuit schematic.

Heat Rod Main

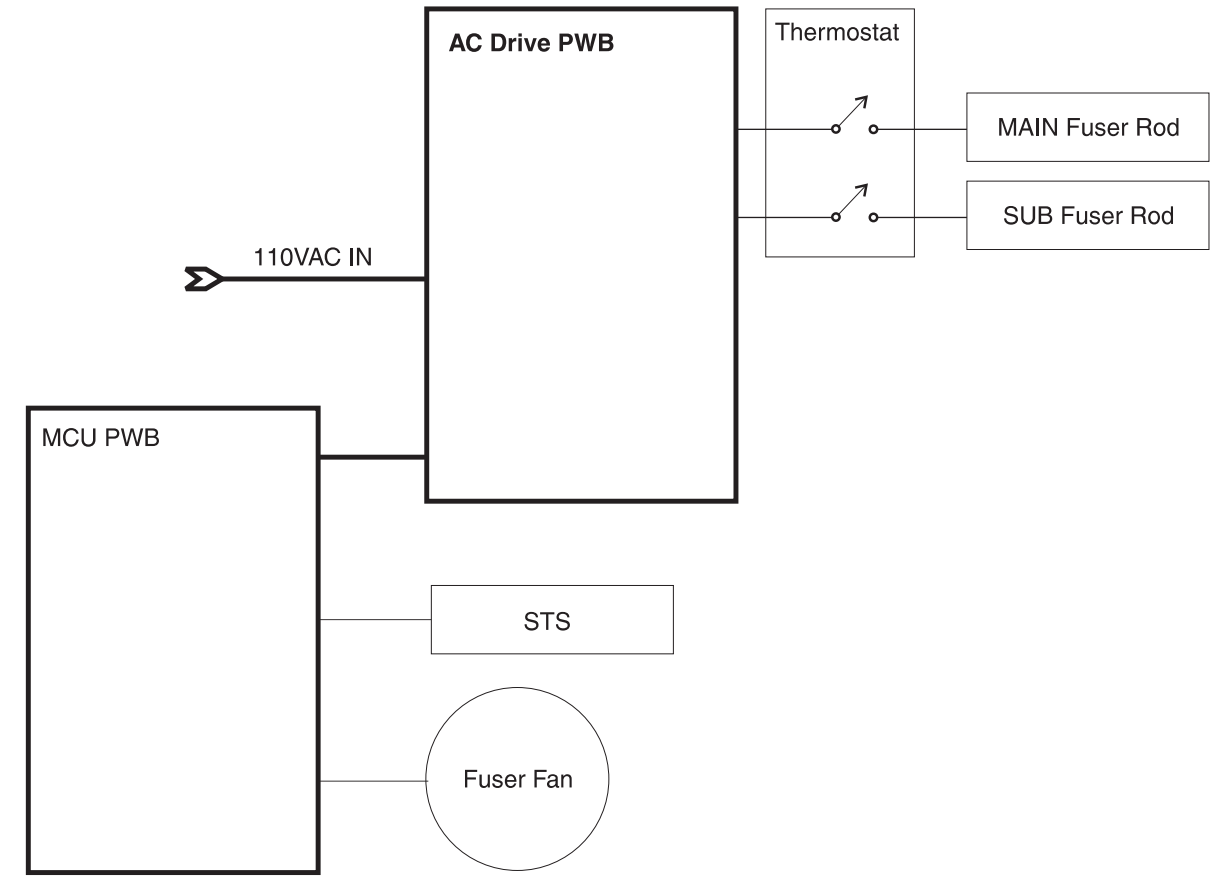
Logic on the MCU uses the /MAIN HEAT signal the AC Drive to apply 110VC to switch on the Main Heat Rod.

Heat Rod Sub

Logic on the MCU uses the /SUB HEAT signal the AC Drive to apply 110VC to switch on the Sub Heat Rod.

Fuser Fan

The MCU PWB controls the Fuser Fan and the alarm signal that indicates the Fan is not rotating.



SR1341XA

Section 14 - Wiring Diagrams and Signal Information Contents

This section of the manual contains a Master Wiring Diagram for the QMS 3260/4032 printer. The Master Wiring Diagram shows the interconnections of the major subsystems within the printer. The remainder of this section divides the Master Wiring Diagram into thirteen individual block diagrams (BD) to better illustrate the electrical relationships between components and assemblies within the printer. Each wire in the diagrams is tagged with a signal name, and each wire is terminated at both ends with a pin number.

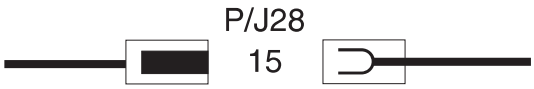
Wiring Diagram Notations

The wiring diagrams presented in this manual use the following circuit notations to describe components and signal paths within the printer.

A PLUG

A JACK

CONNECTION OF PIN 15 OF CONNECTORS P28 AND J28.



THE SIGNAL NAME OF A WIRE

THE VOLTAGE MEASURED WITH THE NEGATIVE PROBE OF THE METER ON SG

THE VOLTAGE VALUE OF A SIGNAL

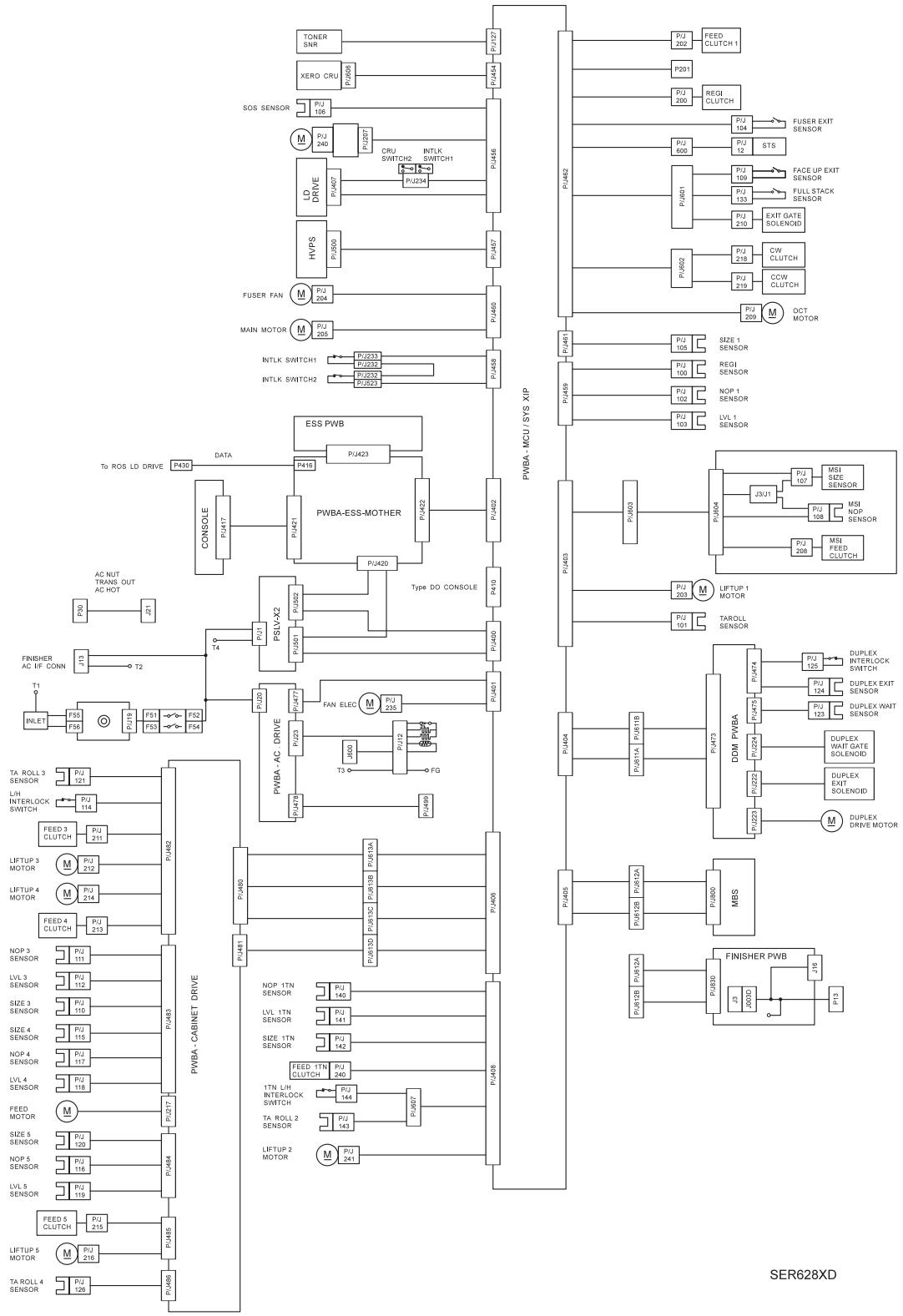
/ = The voltage goes LOW when the signal is ON.

In this case, the HEAT signal is ON, so the normal voltage of 4.2VDC drops to 0VDC.

SR1400X

SG	SIGNAL GROUND
FG	FRAME GROUND
RTN	RETURN
	There is continuity between SG and RTN. Continuity between FG and SG depends on circuit specifications.
$	$ in a signal name indicates the signal is coming from the MCU CPU.
#	# in a signal name indicates the signal is going to the MCU CPU.
TTL	TTL displayed in the HIGH level or LOW level columns of the signal tables indicate the signal is ECL_CMOS compatible.
	HIGH is 4 to 5 VDC
	LOW is 0 to 0.8 VDC

Master Wiring Diagram



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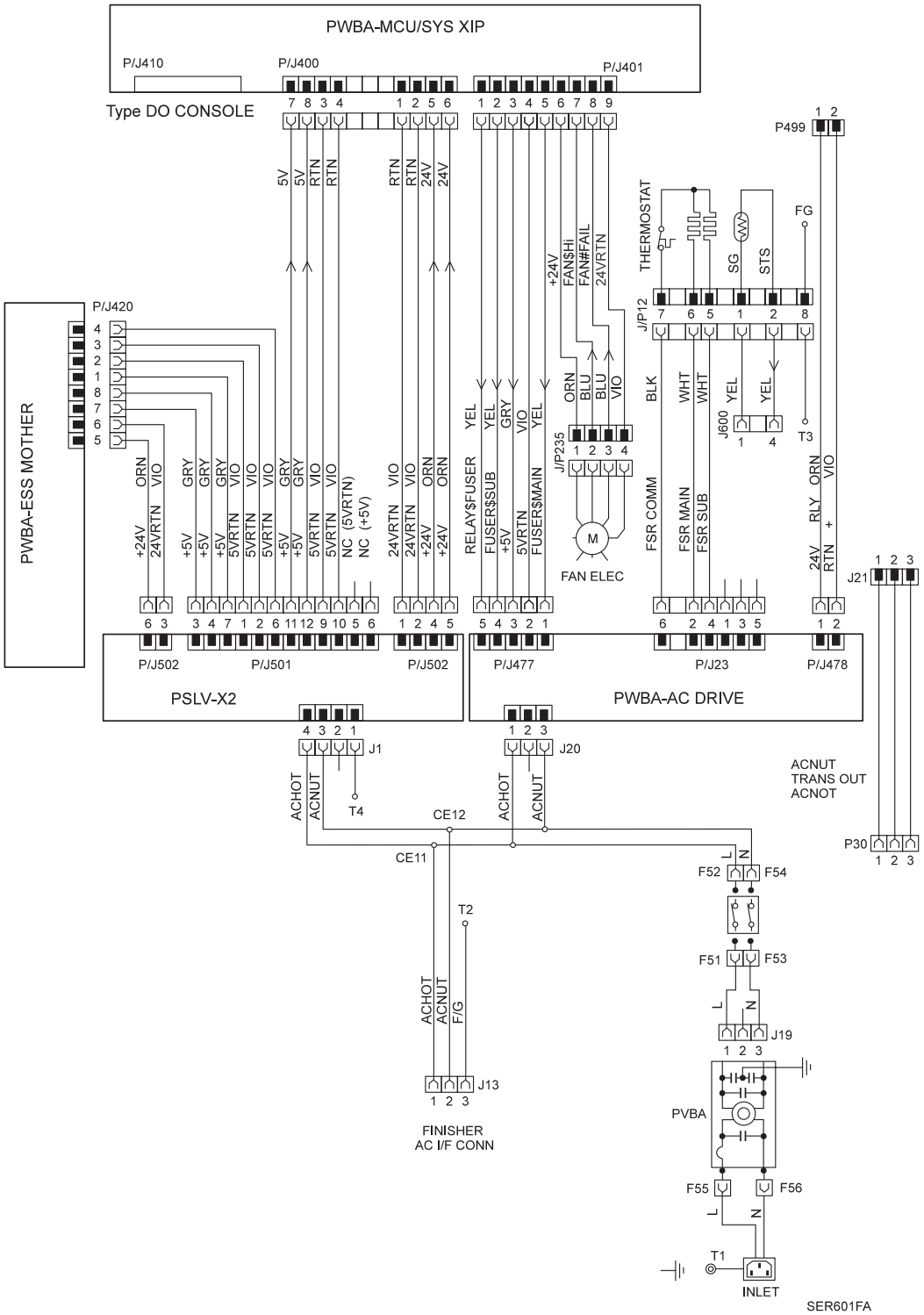
BD1 AC in↔Noise Filter↔LVPS↔ESS Mother PWB↔AC Drive PWB↔D0 Console



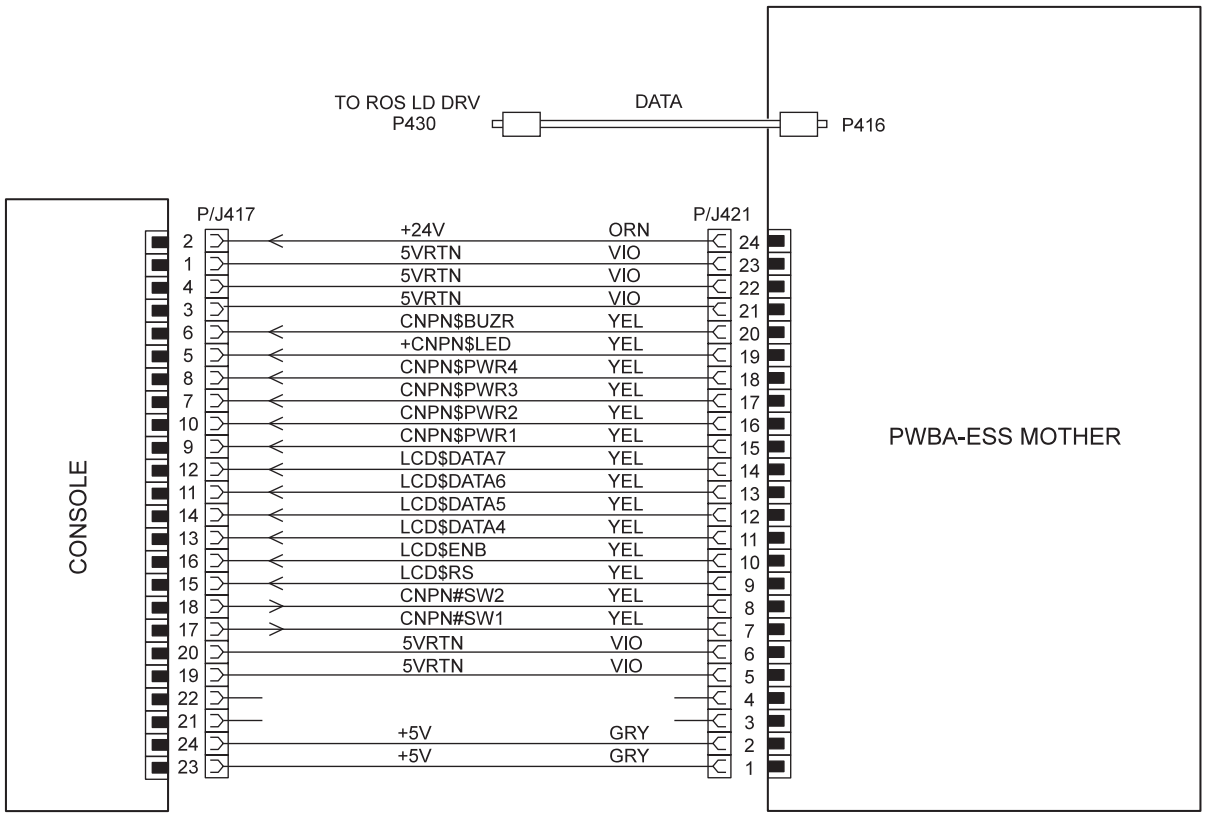
SER601FA

BD1 AC in↔Noise Filter↔LVPS↔ESS Mother PWB↔AC Drive PWB↔D0 Console

The following table shows the signal names for this BD:

Signal Name	Description
FUSER$MAIN	Switches Main Heat Rod. Low=On. High=Off
FUSER$SUB	Switches Heat Rod 2. Low=On. High=Off
RELAY$FUSER	Fuser relay control that switches AC to the Heat Rods. Low=On. High=Off
FAN$HI	Switches Fuser Fan speed. Low=High speed. High=Low speed
FAN#FAIL	Monitors Fuser Fan. Low=Operating correctly. High=Not operating correctly.

BD2 Console↔ESS Mother PWB



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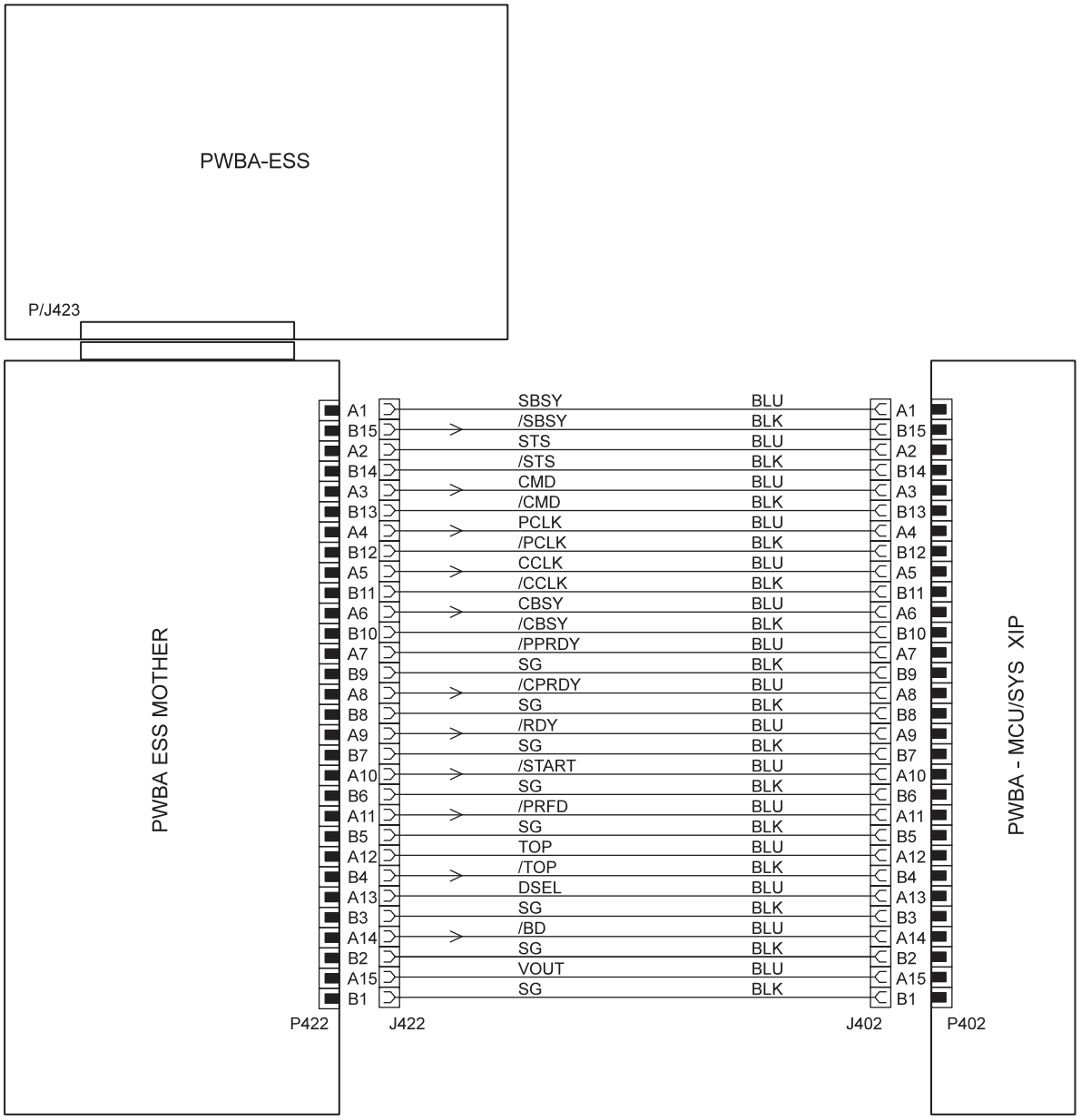
BD2 Console↔ESS Mother PWB

The following table shows the signal names for this BD:

Signal Name	Description
CNPN$BUZR	Control Panel buzzer
+CNPN$LED	LED synch. High=Off. Low=On
CNPN$PWR4	Key synch. High=Key pressed. Low=Key not pressed
CNPN$PWR3	Source for Key and LED. High=On. Low=Off
CNPN$PWR2	Source for Key and LED. High=On. Low=Off
CNPN$PWR1	Source for Key and LED. High=On. Low=Off
LCD$DATA7	Logic line for Controller LCD
LCD$DATA6	Logic line for Controller LCD
LCD$DATA5	Logic line for Controller LCD
LCD$DATA4	Logic line for Controller LCD
LCD$ENB	LCD Controller write signal.
LCD$RS	LCD Controller register select signal. High=Data register. Low=Instruction register
CNPN#SW1	Key synch. High=Key pressed. Low=Key not pressed
CNPN#SW2	Key synch. High=Key pressed. Low=Key not pressed

BD3 ESS Mother PWB↔QMS Video Controller↔MCU PWB



SER603XB

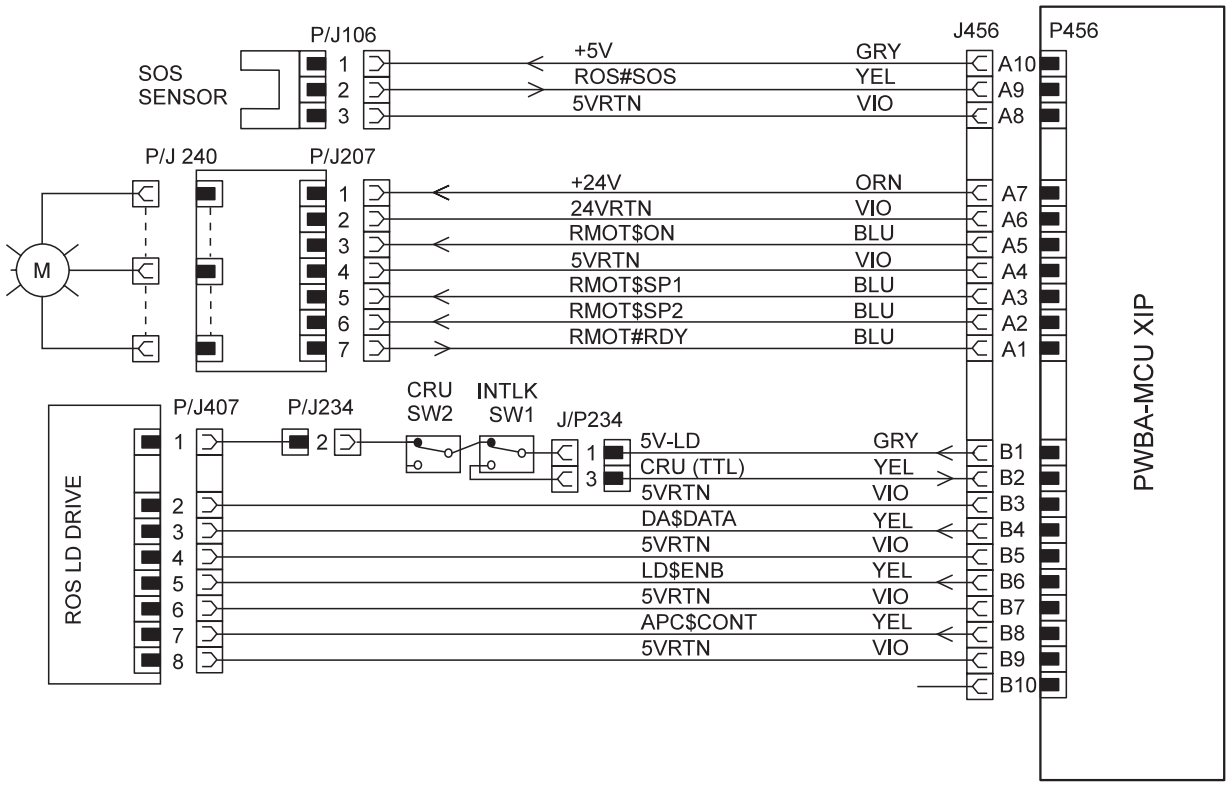
SER603XB

BD3 ESS Mother PWB↔QMS Video Controller↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
/SBSY	Status busy signal. Low=Transmitting signal. High=Not transmitting
/STA	Status from MCU to ESS
/CMD	Command from ESS to MCU
/PCLK	Clock signal. Clock speed is 9600 bps
/CCLK	Clock signal for status and command timing - ESS to MCU. Clock speed 9.6kHz ~ 500kHz
/CBSY	Command busy signal - ESS to MCU
/PPRDY	Status indicating MCU initialization is complete and printer is On-Line. Low=Printer initialization complete. High=Printer initialization not complete
/CPRDY	Status indicating ESS initialization is complete. Low=ESS initialization complete. High=ESS initialization not complete
/RDY	Status indicating that the MCU is ready to accept control commands. Low=Accept commands. High=Ignore commands
/START	Command from ESS to the MCU to begin a print cycle. Low=Start. High=Do not start. Starts print cycle only when /RDY is also Low.
/PRFD	Command from the ESS to the MCU to feed paper
/TOP	Video data synch signal from MCU to ESS
DSEL	Command to select the No Paper signal
/BD	Video data synch signal from MCU to ESS
VOUT	Video data signal from the ESS

BD4 ROS↔MCU PWB



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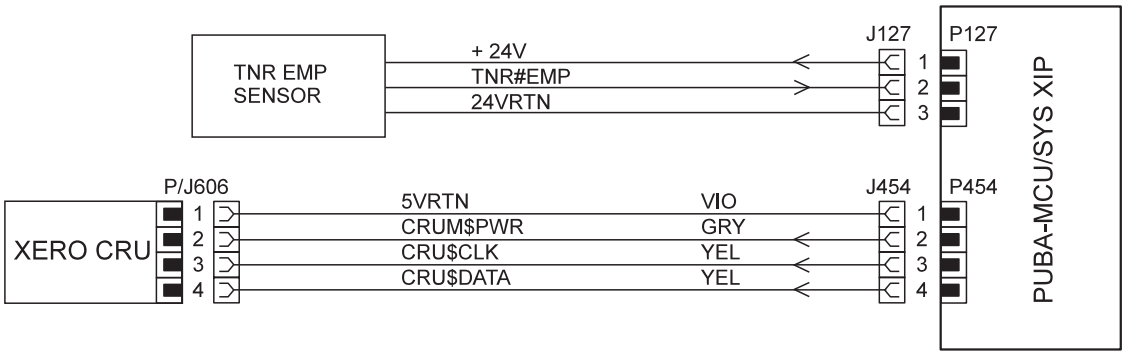
BD4 ROS↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
CRU#DET	Monitors CRU presence. High=CRU installed. Low=CRU not installed
DA$DATA	Data used to set laser
LD$ENB	Enables laser - MCU to the LD Drive. High=No enabled. Low=Enabled
APC$CNT	Monitors APC count
RMOT$ON	Controls Scanner Motor. High=Off. Low=On
RMOT$SP1	Controls Scanner Motor speed. SP3-1 -010=Standby. SP3-1-110=480dpi. SP3-1-011=600dpi.
RMOT$SP2	Controls Scanner Motor speed. SP3-1 -010=Standby. SP3-1-110=480dpi. SP3-1-011=600dpi.
RMOT#RDY	Monitors Scanner Motor speed. Low=Speed correct. High=Speed not correct.
ROS#SOS	Monitors start of scan. High=Off. Low=On

BD5 Toner Sensor↔Xerographic CRU↔MCU PWB



SER605FB

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BD5 Toner Sensor↔Xerographic CRU↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
CRUM$PWR	Switches CRUM power.
CRU$CLK	Clock signal for CRU Memory
CRU$DATA	CRU Memory data
TNR#EMP	Monitors level of toner in the EP Cartridge. Low=Toner at unacceptable level. High=Toner at acceptable level

BD6 HVPS↔MCU PWB

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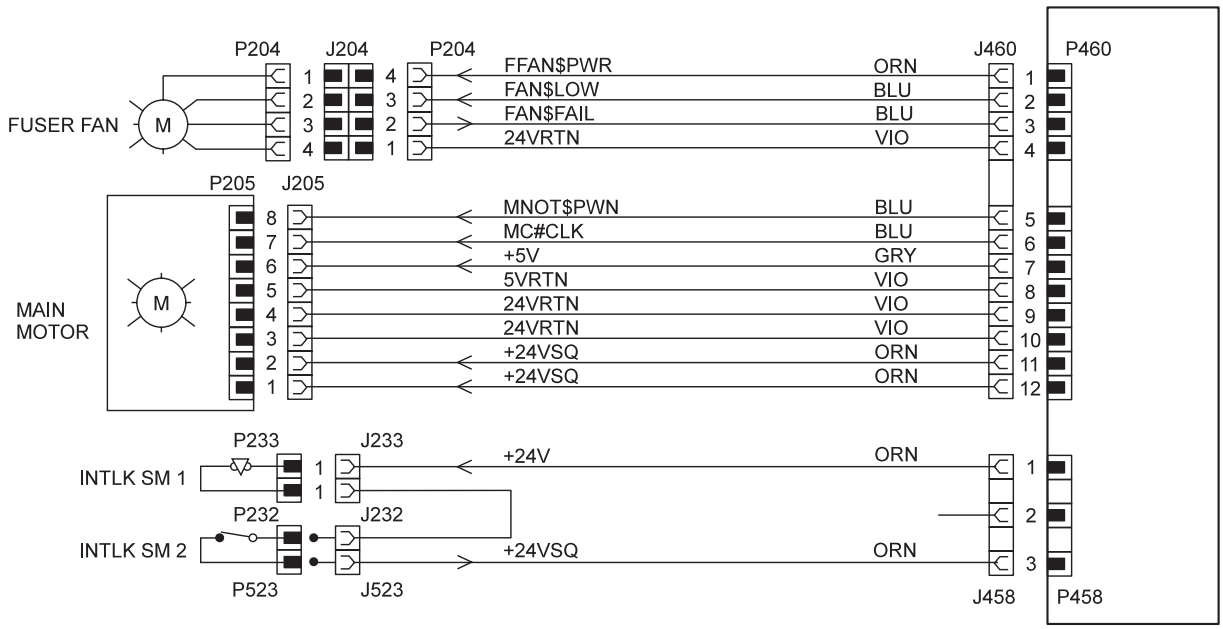
BD6 HVPS↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
BTR#MON	Monitors BTR current level
BTR$SEL	Switches BTR voltage. High=Positive voltage. Low=Negative voltage
BTR$RMT	Controls the current value to the BTR
DTS$ON	Switches Detack Saw and Chute Bias voltage. High=Off. Low=On
BCRAC$CLK	Controls the AC voltage value to the BCR. Negative logic
BCRDC$ON	Switches BCR voltage. High=Off. Low=On
DBAC$CLK	Controls the AC voltage value to the Magnet Roll. Negative logic
DB$ON	Switches DB voltage. Negative logic

BD7 Fuser Fan↔Main Motor↔Interlocks SM1 & SM2↔MCU PWB



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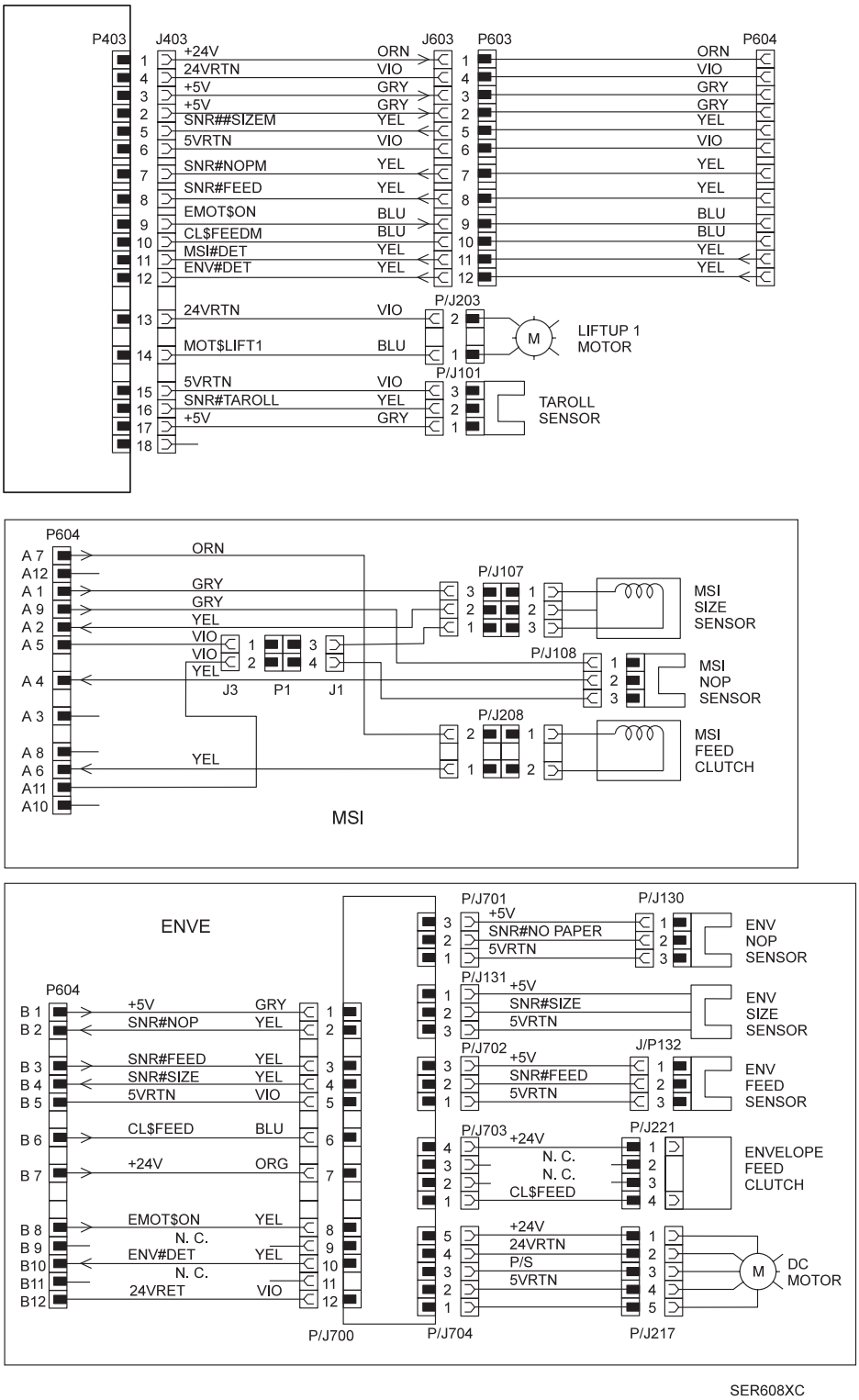
BD7 Fuser Fan↔Main Motor↔Interlocks SM1 & SM2↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
MMOT$PWM	Switches Main Motor. High=Off. Low=On.
MC#CLK	Monitors the speed of the Main Motor.
FFAN$PWR	Switches the Fuser Fan. High=On. Low =Off
FAN$LOW	Switches the speed of the Fuser Fan. High=Low speed. Low=High speed
FUSER$FAIL	Monitors the Fuser Fan. Low=Operation correct. High=Operation incorrect
INTLK#SW1	Monitors Left Cover interlock switch. High=Cover open. Low=Cover closed.

BD8 TRAY1↔MCU PWB - MSI↔MCU PWB - ENVELOPE FEEDER↔MCU PWB



SER608XC

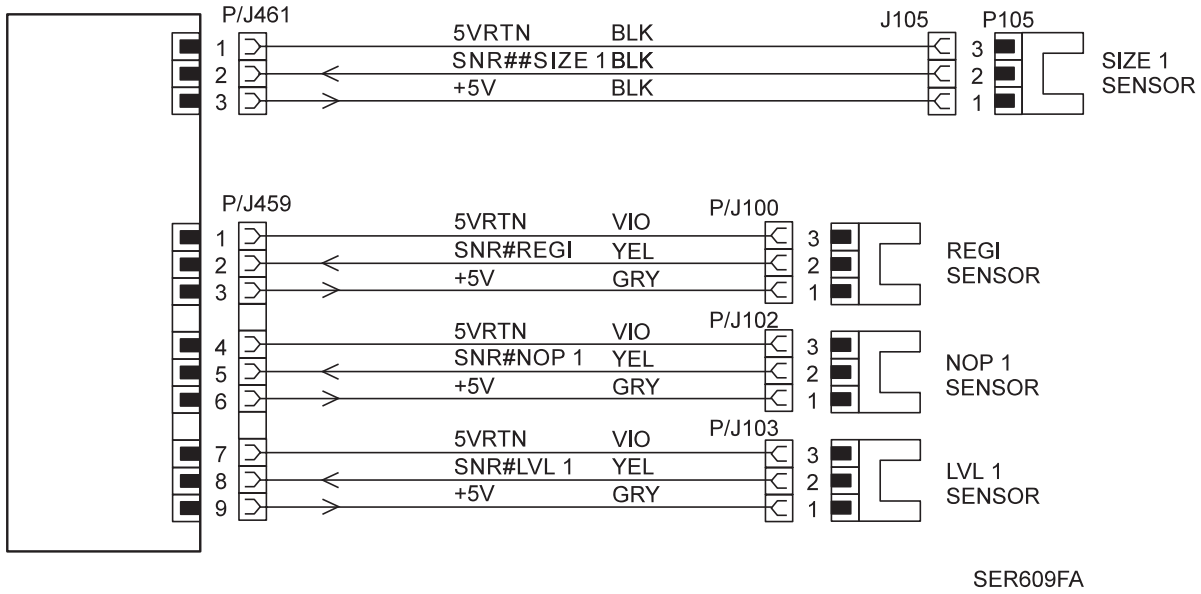
SER608XC

BD8 TRAY1↔MCU PWB - MSI↔MCU PWB - ENVELOPE FEEDER↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
SNR#SIZEM	Analog signal from the MSI Size Sensor. Voltage levels 0VDC~5VDC
SNR#SIZE	Analog signal from the Envelope Size Sensor. Voltage levels 0VDC~5VDC
SNR#NOPM	Monitors level of paper in the MSI. High=No paper present. Low=Paper present
SNR#NOP	Monitors level of paper in the Envelope Feeder
CL$FEEDM	Controls MSI paper feed. High=No feed. Low=Feed
CL$FEED	Controls Envelope feed. High=No feed. Low=Feed
MSI#DET	Monitors presence of MSI. High=MSI not present. Low=MSI present
ENV#DET	Monitors presence of Envelope Feeder. High=Envelope Feed not present. Low=Envelope Feeder present
EMOT$ON	Switches Envelope Feed Motor. High=Off. Low=On
SNR#FEED	Monitors paper between Envelope Feeder and base engine. High=Paper present Low=No paper
MOT$LIFT1(TTL)	Switches Tray 1 Lift Up Motor. High=On. Low=Off
SNR#TAROL1	Monitors paper between Tray 2 and Tray 1. High=Paper present. Low=No paper

BD9 Size 1 Sensor↔Registration Sensor↔No-Paper 1 Sensor↔Level 1 Sensor↔MCU PWB



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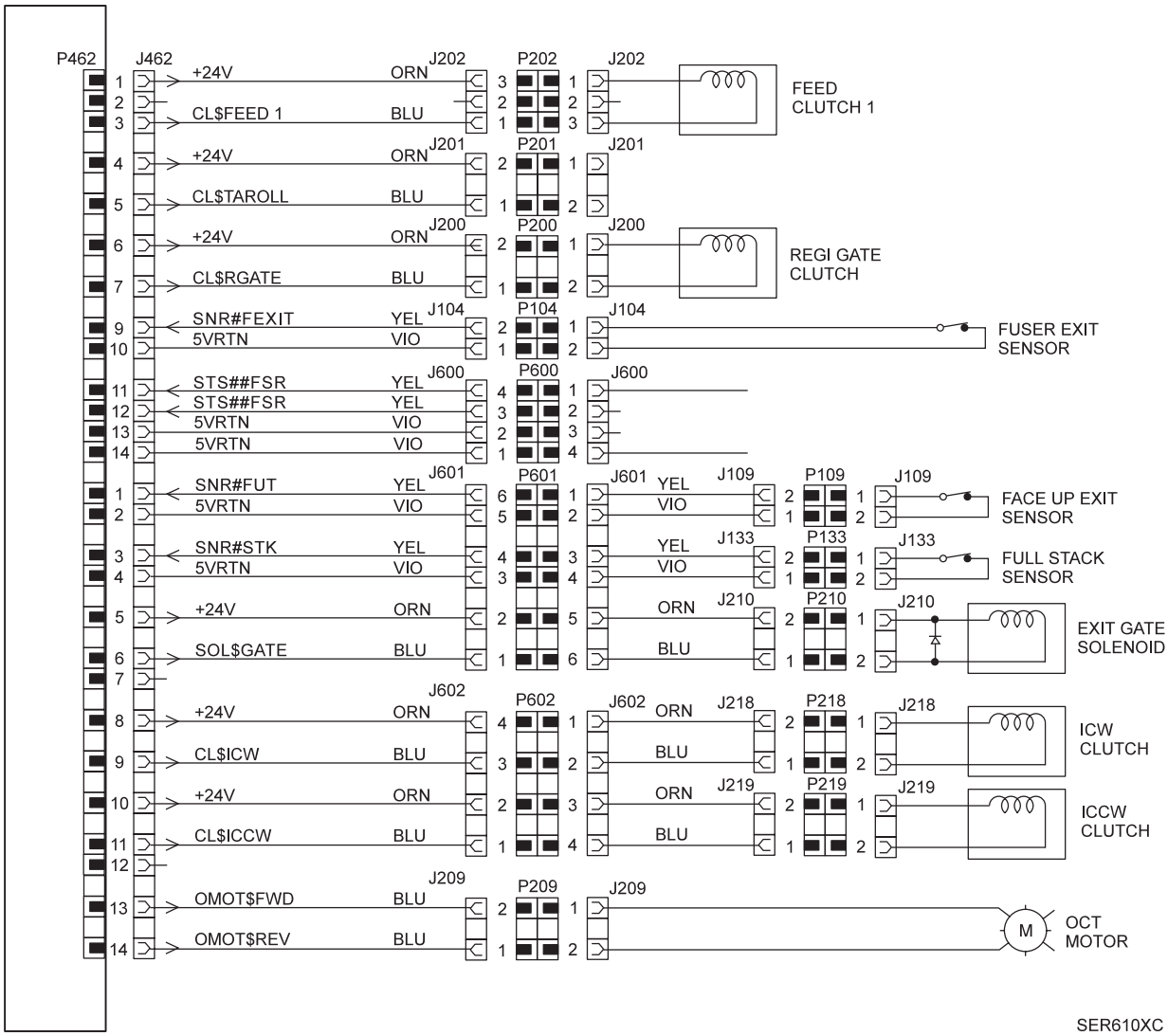
BD9 Size 1 Sensor↔Registration Sensor↔No-Paper 1 Sensor↔Level 1 Sensor↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
SNR#SIZE1	Analog signal from the Tray 1 Size Sensor. Voltage levels 0VDC~5VDC
SNR#REGI	Monitors paper flow at the Registration Sensor. High=Paper present. Low=No paper
SNR#NOP1	Monitors level of paper in Tray 1
SNR#LVL1	Monitors position of Tray 1. High=Not in position. Low=In position

BD10 Miscellaneous Clutches and Sensors, Offset Motor, Exit Gate Solenoid↔MCU PWB



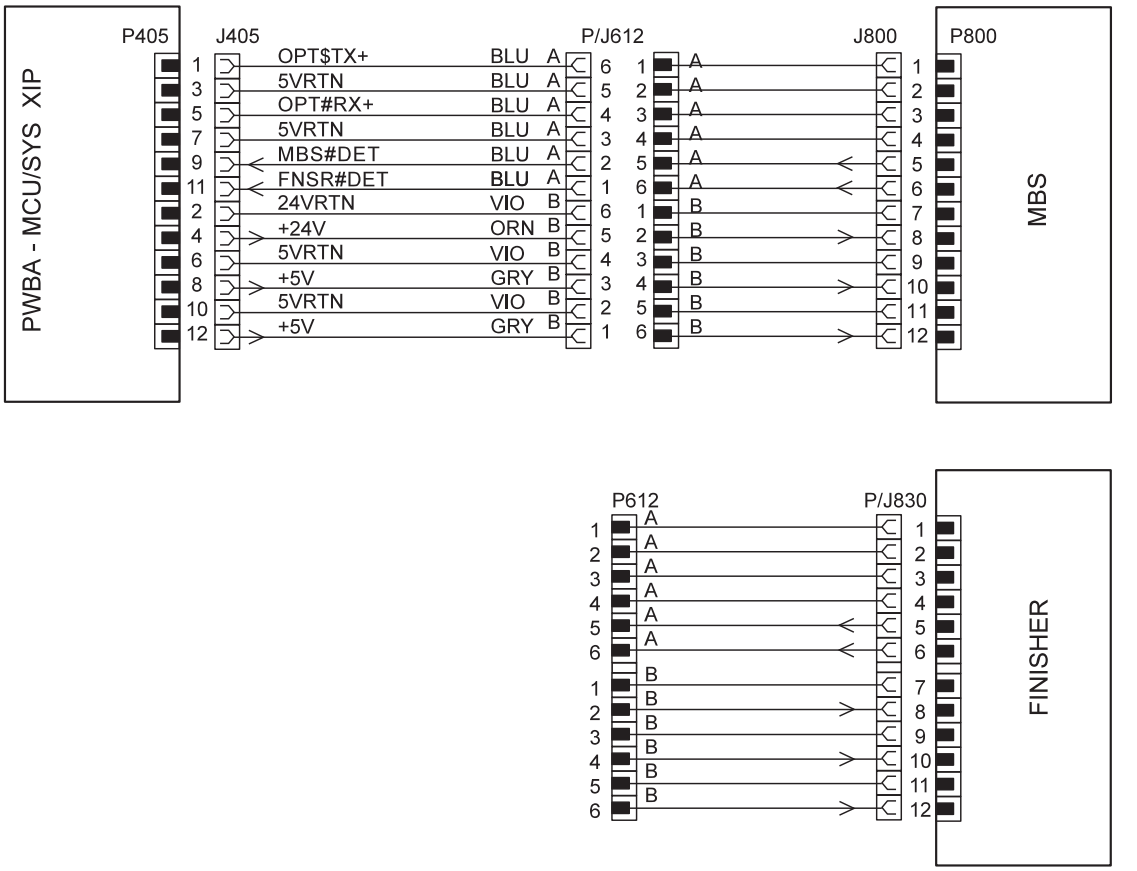
SER610XC

BD10 Miscellaneous Clutches and Sensors, Offset Motor, Exit Gate Solenoid↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
CL$FEED1	Controls Tray 1 paper feed. High=No feed. Low=Feed
CL$RGATE	Controls Registration Clutch. High=Clutch off. Low=Clutch on
STS#FSR	Fuser Heat Roll temperature. Analog signal.
SNR#FEXIT	Monitors paper leaving the Fuser. High=Paper present. Low=Paper not present
SNR#FUT	Monitors paper arriving at the Face Up output tray. High=Paper not present. Low=Pape present
SOL$GATE	Controls Gate Solenoid. High=Face Down output. Low=Face Up output.
CL$ICCW	Controls Inverter CCW Clutch. High=Off. Low=On
CLS$ICW	Controls Inverter CW Clutch. High=Off. Low=On
OMOT$FWD	Controls forward motion of the Offset Motor. High=On. Low=Off
OMOT$REV	Controls reverse motion of the Offset motor. High=On. Low=Off
SNR#STK	Monitors the Full Stack Sensor. High=Tray full. Low=Tray not full

BD11 Mailbox↔Finisher↔MCU PWB



SER611FA

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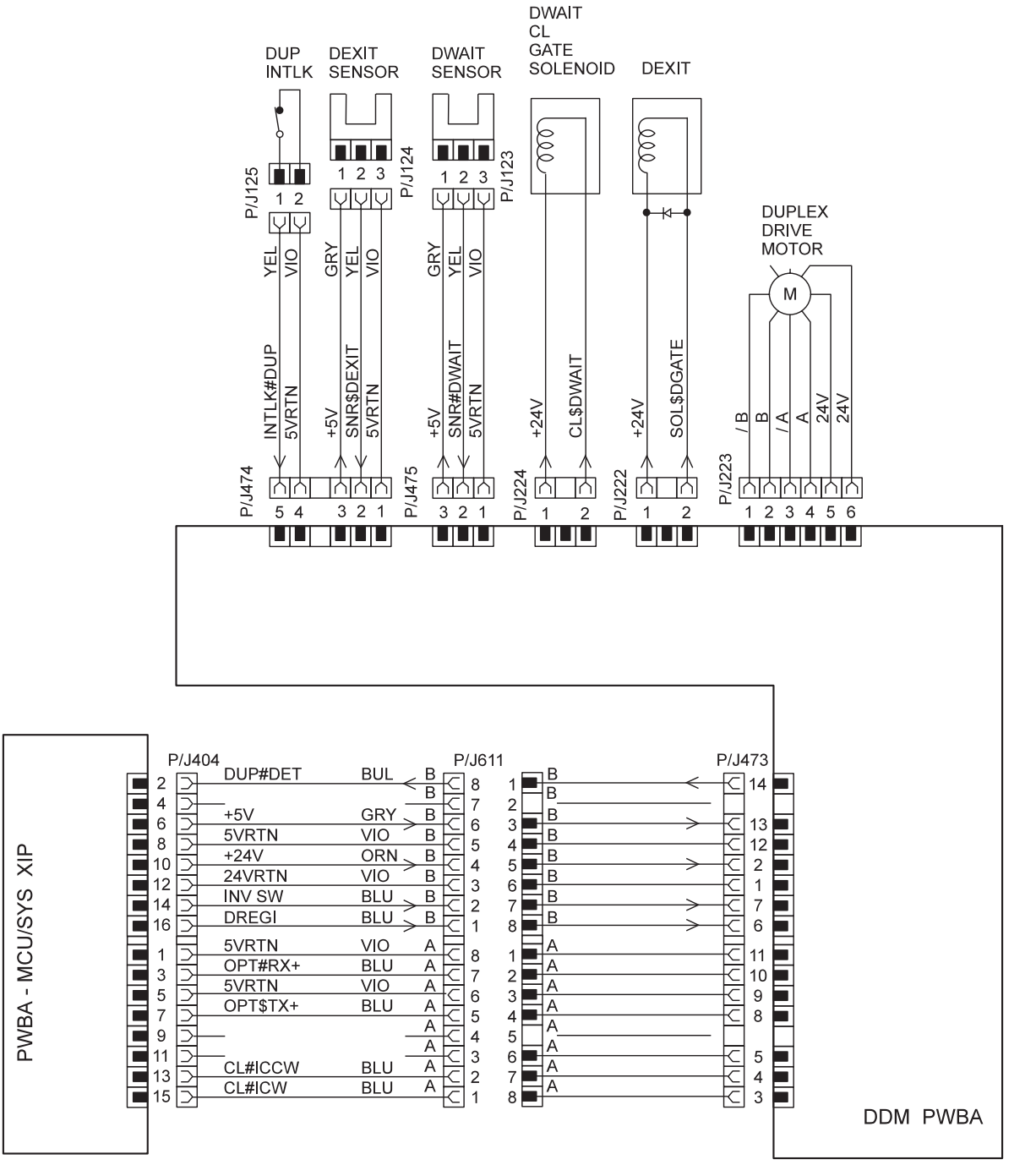
BD11 Mailbox↔Finisher↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
OPT$TX+	Status of Finisher or Mailbox sent to MCU. High=Mark. Low=No mark
OPT#RX+	Status of MCU sent to the Finisher or Mailbox. High=Mark. Low=No mark
MBS#DET	Monitors presence of Mailbox. High=Mailbox not installed. Low=Mailbox installed
FSNR#DET	Monitors presence of Finisher. High=Finisher not installed. Low=Finisher installed

BD12 Duplex PWB↔MCU PWB



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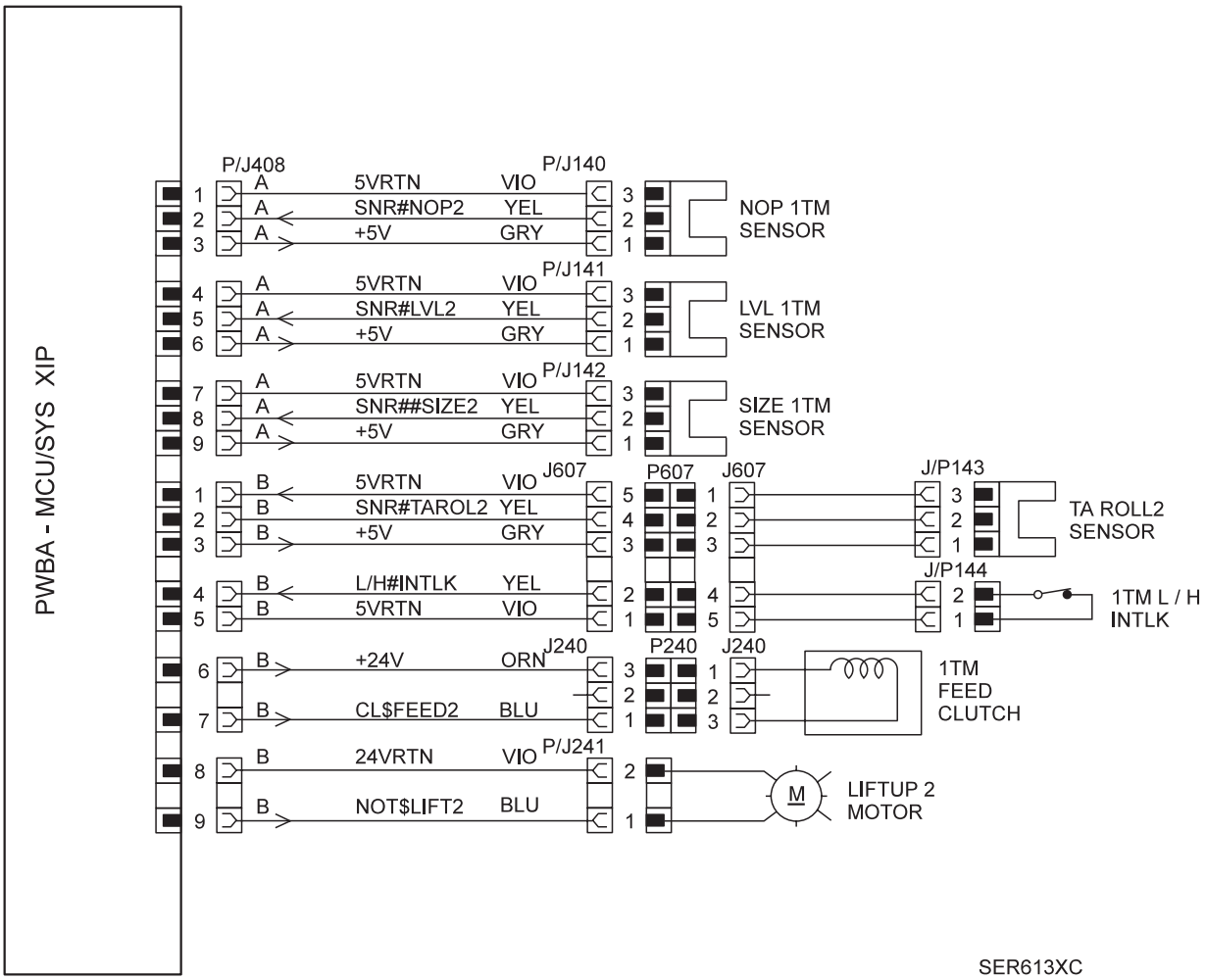
SER612XC

BD12 Duplex PWB↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
OPT$TX+	Status of Duplex Module sent to MCU. High=Mark. Low=No mark
OPT#RX+	Status of MCU sent to the Duplex Module. High=Mark. Low=No mark
DUP#DET	Monitors presence of a Duplex Module. High=Duplex Module installed. Low=Duplex Module not installed
DREGI	Monitors paper at the Registration Sensor. High=Paper present. Low=Paper not present
INV SW	Monitors paper at the Fuser Exit Sensor. High=Paper present. Low=Paper not present
CL$ICW	Switches the Inverter CW Clutch. High=Off. Low=On
CL$ICCW	Switches the Inverter CCW Clutch. High=Off. Low=On
INTLK#DUP	Monitors the Duplex Cover Interlock Switch. High=Cover open. Low=Cover closed.
SNR#DEXIT	Monitors paper at the Duplex Exit Sensor. High=Paper present. Low=Paper not present
SNR#DWAIT	Monitors paper at the Duplex Wait Sensor. High=Paper present. Low=Paper not present
SOL$DGATE	Switches the Duplex Exit Gate Solenoid. High=Off. Low=On
/A, A, /B, B	Pulse signals sent by the Duplex PWB to rotate the Duplex Motor

BD13 Tray 2 Components↔MCU PWB



SER613XC

BD13 Tray 2 Components↔MCU PWB

The following table shows the signal names for this BD:

Signal Name	Description
SNR#SIZE2	Analog signal from the Tray 2 Size Sensor. Voltage levels 0VDC~5VDC
SNR#NOP2	Monitors level of paper in Tray 2. High=No paper present. Low=Paper present
SNR#TAROL2	Monitors paper between Tray 2 and Tray 3. High=Paper present. Low=No paper
SNR#LVL2	Monitors position of Tray 2. High=Not in position. Low=In position
L/H#INTLK	Monitors the Left Cover Interlock Switch. High= Cover open (switch off). Low=Cover closed (switch on).
CL$FEED2	Controls Tray 2 paper feed. High=No feed. Low=Feed
MOT$LIFT2	Switches Tray 2 Lift Up Motor. High=On. Low=Off

Blank Page

Section 15 - Printer Specifications Contents

Blank Page

General Specifications

Category	Specification
Standard configuration	Print Engine Tray 1 (500 sheet) Tray 2 (500 sheet) MSI (50 sheet) Offset Unit EP Cartridge
Printing method	Xerography
Exposure method	Data modulated (off and on) laser beam scanning
Laser specifications	Class 3B, 5milliwatt semiconductor laser diode
Resolution of printed image	600 dpi (dots per inch)
Fusing method	Heat and pressure
Warm-up time	From sleep mode (with an ambient temperature of 22°C) to Ready to Print within 60 seconds.
Power supply	**110V printer** 110/115VAC (90~132VAC) @ 50/60 Hz (47~63 Hz) **220V printer** 220VAC (198 ~ 264VAC) @ 50/60 Hz (47 ~ 63 Hz)
Power consumption and input current of the IOT during a print cycle - assuming an QMS Video Controller current of 8.0 amperes and 5VDC.	**110VAC:** 900 watts / 9.0 amps **115VAC:** 900 watts / 7.8 amps **220VAC:** 900 watts / 4.3 amps
Size and weight	Height: 486mm Width: 642mm (with MSI installed) Depth: 523mm Weight: 45kg - 110V printer Weight: 47.5 kg - 220V printer
Minimum space requirements	Front: 460mm Back: 200mm Right: 200mm (800mm with HCS installed) Left: 364mm (640mm with Duplex Module installed)
Maximum paper size	Tray 1 and 2: 279.4mm x 431.8mm MSI: 279.4mm x 431.8mm
Maximum printable area	279.4mm x 431.8mm. Print quality may deteriorate in a 4mm margin around the sheet of paper
Maximum paper tray capacity (Xerox 4024 DP 20lb or equivalent)	MSI: 50 sheets Tray 1: 500 sheets Tray 2: 500 sheets Tray 3: 500 sheets HCF4: 1000 sheets HCF5: 1000 sheets

Category	Specification
Maximum output tray capacity (Xerox 4024 DP 20lb or equivalent, freshly opened package in 22°C/ 55~60% humidity environment)	Face Down Tray: 500 sheets
Operating environment with the Print Engine unpacked and the EP Cartridge installed	Operating 5 ~ 30°C / 15 ~ 85% RH with no condensation 0 ~ 8200 feet above sea level Maximum of 5mm difference side to side and front to back in horizontal surface Ambient light less than 3000 LUX (Avoid direct sunlight) Non-operating 5 ~ 35°C / 5 ~ 85% RH with no condensation 0 ~ 49200 feet above sea level Severe conditions (one week maximum) -20 ~ 40°C / 5 ~ 95% RH with no condensation
Storage environment of Print Engine still in the packing box	Normal conditions (12 month maximum) 0 ~ 35°C / 15 ~ 85% RH with no condensation 0 ~ 8200 feet above sea level 8200 ~ 49200 feet above sea level in a pressurized cargo hold Severe conditions (48 hours maximum) -20 ~ 40°C / 5 ~ 95% RH with no condensation 0 ~ 8200 feet above sea level 8200 ~ 49200 feet above sea level in a pressurized cargo hold
Storage environment of EP Cartridge still in the packing box	Normal conditions (24 months maximum from date of manufacture) 0 ~ 35°C / 15 ~ 85% RH with no condensation 0 ~ 8200 feet above sea level 8200 ~ 49200 feet above sea level in a pressurized cargo hold Severe conditions (1 month maximum for date of manufacture) -20 ~ 40°C / 5 ~ 95% RH with no condensation 0 ~ 8200 feet above sea level 8200 ~ 49200 feet above sea level in a pressurized cargo hold
Noise generated (excluding impulse noise) ISO 7779	Printing: 70.0 db Standby: 58.0 db
Dust generated (one hour test)	No more than 0.1 mg/m^3
EP Cartridge life	23,000 prints on standard 20lb letter-size paper with 5% image coverage and 4mm white borders.
Paper feeder life	Either 1.5 million simplex sheets of B5 size paper or 5 years - whichever comes first.
Print engine life	Either 1.5 million simplex sheets of B5 size paper or 5 years - whichever comes first.

Safety Standards

QMS 3260/4032 satisfies the following safety standards:

Category	Standard Satisfied
Laser Safety	100V and 115Vprinters: FDA 21 CFR Chapter 1, Subchapter J, Sections 1010 & 1040 for CDRH Class I Laser Product. 220V printer: IEC825 Class I Laser Product.
Ozone generation	Less than 0.02 ppm in Time Weighted Average (TWA). Measured according to ECMA 129
EMI	**100V printer:** VCCI Information Processing Equipment, Class II. FCC Part 15, subpart B, class B (ANSI C63.4/11.4D) **220V printer:** EN55022 (CISPR Publication 22) Class B
Other standards	100V printer: IEC 950 2nd edition with amendment 1 (1995) 115V printer: UL 1950 2nd edition 220V printer: IEC950 2nd edition with amendment 1 (1995). CE directive.

Printing Speed for First Sheet Out

Simplex Mode Paper Size	Maximum Time Needed for Initial Print (Times shown are from Start command to first sheet out to the Face Down Tray. Times assume the is in Ready to Print - with the printer motor idle)				
	Tray 1	Tray 2	Tray 3	HCF 4	HCF 5
A4 LEF	4.0 sec	4.7 sec	5.1 sec	6.0 sec	7.2 sec
8.5 x 11 LEF	4.0 sec	4.7 sec	5.1 sec	6.0 sec	7.2 sec

Duplex Mode Paper Size	Maximum Time Needed for Initial Print (Times shown are from Start command to first sheet out to the Face Down Tray. Times assume the is in Ready to Print - with the printer motor idle)				
	Tray 1	Tray 2	Tray 3	HCF 4	HCF 5
A4 LEF	8.6 sec	9.3 sec	9.7 sec	10.6 sec	11.8 sec
8.5 x 11 LEF	8.6 sec	9.3 sec	9.7 sec	10.6 sec	11.8 sec

Continuous Printing Speed After The First Sheet Out in Simplex Mode

Paper Type	Tray 1 and 2 (prints per minute)	Tray 3 (prints per minute)	HCF 4 & 5 (prints per minute)	MSI (prints per minute)
A4 LEF	32	32	32	26
LETTER LEF	32	32	32	26
A4 SEF	24	24	--	21
LETTER SEF	24	24	--	21
B4 SEF	20	20	--	19
Legal 13" SEF	20	20	--	19
Legal 14" SEF	20	20	--	19
A3 SEF	16	16	--	16
Ledger SEF	16	16	--	16

Continuous Printing Speed After The First Sheet Out in Duplex Mode

Paper Type	Tray 1 and 2 (prints per minute)	Tray 3 (prints per minute)	HCF 4 & 5 (prints per minute)	MSI (prints per minute)
A4 LEF	31	28	23	19
LETTER LEF	31	28	23	19
A4 SEF	17	17	--	--
LETTER SEF	17	17	--	--
B4 SEF	15	15	--	--
Legal 13" SEF	15	15	--	--
Legal 14" SEF	15	15	--	--
A3 SEF	14	13	--	--
Ledger SEF	14	13	--	--

Paper Feeder & Supported Paper Specifications

The printer uses the following paper feeder/paper size combinations:

Trays 1 and 2 for the 500 Sheet Feeder (standard)

Standard feeder for the QMS 3260/4032 printer. Each tray has paper size automatic sensing. Trays 1 and 2 can each hold up to 500 sheets (54mm stack height of 20lb paper) of the following paper.

Factory set Option 1	Factory set Option 2
Ledger SEF - 279.4mm x 431.8mm	Ledger SEF - 279.4mm x 431.8mm
A3 SEF - 297mm x 420mm	A3 SEF - 297mm x 420mm
B4 SEF - 257mm x 364mm	Legal 14" SEF - 215.9mm x 355.6mm
Letter SEF LEF - 215.9mm x 279.4mm	Letter SEF LEF - 215.9mm x 279.4mm
Legal 13" SEF - 215.9mm x 330.2mm	Legal 13" SEF - 215.9mm x 330.2mm
A4 SEF LEF - 210mm x 297mm	A4 SEF LEF - 210mm x 297mm
Executive LEF - 184.2mm x 266.7mm	B5 LEF - 182mm x 257mm
A5 LEF - 149mm x 210mm	A5 LEF - 149mm x 210mm
STATEMENT - 139.9mm x 215.9mm	STATEMENT - 139.9mm x 215.9mm

High Capacity Feeder - Tray 3 (option)

Top HCF tray for the QMS 3260/4032 printer. Tray 3 has paper size automatic sensing. Tray 3 can hold up to 500 sheets (54mm stack height of 20lb paper) of the following paper.

Factory set Option 1	Factory set Option 2
Ledger SEF - 279.4mm x 431.8mm	Ledger SEF - 279.4mm x 431.8mm
A3 SEF - 297mm x 420mm	A3 SEF - 297mm x 420mm
B4 SEF - 257mm x 364mm	Legal 14" SEF - 215.9mm x 355.6mm
Letter SEF LEF - 215.9mm x 279.4mm	Letter SEF LEF - 215.9mm x 279.4mm
Legal 13" SEF - 215.9mm x 330.2mm	Legal 13" SEF - 215.9mm x 330.2mm
A4 SEF LEF - 210mm x 297mm	A4 SEF LEF - 210mm x 297mm
Executive LEF - 184.2mm x 266.7mm	B5 LEF - 182mm x 257mm

High Capacity Feeder - Tray 4 and Tray 5 (option)

Optional feeder for the QMS 3260/4032 printer. Trays 4 and 5 can each hold up to 1000 sheets (54mm stack height of 20lb paper) of the following paper.

Factory set Option 1	Factory set Option 2
Letter SEF LEF - 215.9mm x 279.4mm	Letter SEF LEF - 215.9mm x 279.4mm
A4 SEF LEF - 210mm x 297mm	A4 SEF LEF - 210mm x 297mm
Executive LEF - 184.2mm x 266.7mm	B5 LEF - 182mm x 257mm

MSI (Multi Sheet Inserter) (standard)

Standard feeder for the QMS 3260/4032 printer. The MSI attaches to the left side of the printer. The MSI holds up to 50 sheets (5mm stack height of 64 ~ 105gsm paper or 190gsm postcard) of the following paper.

Factory set Option 1	Factory set Option 2
Ledger SEF - 279.4mm x 431.8mm	Ledger SEF - 279.4mm x 431.8mm
A3 SEF - 297mm x 420mm	A3 SEF - 297mm x 420mm
B4 SEF - 257mm x 364mm	Legal 14" SEF - 215.9mm x 355.6mm
Letter SEF LEF - 215.9mm x 279.4mm	Letter SEF LEF - 215.9mm x 279.4mm
Legal 13" SEF - 215.9mm x 330.2mm	Legal 13" SEF - 215.9mm x 330.2mm
A4 SEF LEF - 210mm x 297mm	A4 SEF LEF - 210mm x 297mm
Executive LEF - 184.2mm x 266.7mm	B5 LEF - 182mm x 257mm
Postcard - 100mm x 148mm	Postcard - 100mm x 148mm

Envelope Feeder (option)

Optional Envelope feeder for the QMS 3260/4032 printer. Replaces the MSI. The Envelope Feeder has a no paper sensor. The Envelope Feeder can hold the following envelopes (maximum of 100 envelopes between 64 ~ ‘05gsm).

Envelope type (100 maximum)
COM #10 (Monroe Brand) - 104.8mm x 241.3mm
Monarch (Monroe Brand) - 98.4mm x 190.5mm
C5 SEF (River series #02067/Gummed) - 162mm x 229mm
DL (River series #01029/Gummed) - 110mm x 220mm

Paper Output Devices & Supported Paper Specifications

The printer uses the following paper output/paper size combinations:

Face Down Tray (standard)

Standard output tray for the QMS 3260/4032 printer. Paper is transported out of the printer face down onto the printer Top Cover. This Tray holds up to 500 sheets of 20 lb paper, and comes equipped with Full Stack detection. When the HCS is installed on the printer, the maximum paper stack in the Face Down Tray is reduced to 300, and the HCS monitors Full Stack detection.

Offset Unit (Standard)

The Offset Unit is attached above the Fuser on the printer base engine. Each sheet of paper is transported out of the printer, offset 10mm from the last sheet, then placed in the Face Down Tray. Paper size supported by the Offset Unit:

Paper
Letter SEF (20lb) - 216mm x 279mm
Legal 13" SEF (20lb) - 216mm x 330mm
Legal 14" SEF (20lb) - 216mm x 356mm
A4 SEF (RX80) - 210mm x 297mm
Ledger - 297mm x 432mm
A3 - 297mm x 420mm

Duplex Module (option)

Optional Duplex Module for the QMS 3260/4032 printer. Provides duplex printing for 64gsm ~ 90gsm paper fed from Trays 1 through 5. The minimum paper size recommended for Duplex feed is B5 LEF or Executive. The maximum paper size recommended for Duplex feed is A3 SEF or 11" x 17" SEF.

Face Up Tray (option)

Optional Face Up Tray attaches to the left side of the QMS 3260/4032 printer. Paper is transported out of the printer face up onto the Face Up Tray. The Tray holds up to 200 sheets of 20 lb paper. There is no Full Stack detection for this tray.

Mailbox (option)

Optional Mailbox attaches to the QMS 3260/4032 printer. Paper is transported out of the printer and sorted and placed into designated mail bins. Each bin holds up to 100 sheets of 20lb paper. The Mailbox cannot be installed if the HCS is also installed.

High Capacity Stacker (HCS) (option)

Optional High Capacity Stacker attaches over and to the right of the QMS 3260/4032 printer. The HCS provides compiling, stapling, and stacking functions.

Printing Media Specifications for Use With QMS 3260/4032

Standard Paper

- FX L A4 (LEF)
- RX80 A4 (LEF)
- XEROX 4024 DP 20lb Letter (LEF)

Special Media Used with QMS 3260/4032 (depending on printer model)

Type	Size	Media Name	MSI	Tray 1 Tray 2	Tray 3 HCF Tray 4 Tray 5	Env
Transparency	Letter - 8.5" x 11"	Xerox P/3R2780 (US)	Y	N	N	N
Transparency	A4 - 210mm x 297mm	Xerox PN3R9600 (EU)	Y	N	N	N
Transparency	A4 - 210mm x 297mm	Xerox PNJE001 (Japan)	Y	N	N	N
Labels	Letter - 8.5" x 11"	Xerox PN3R4469 (US)	Y	N	N	N
Labels	A4 - 210mm x 297mm	Xerox P/3R97406 (EU)	Y	N	N	N
Labels	A4 - 210mm x 297mm	Xerox P/N V860 (Japan)	Y	N	N	N
Envelope	4 1/8" x 9 1/2"	Monroe Brand COM #10	N	N	N	Y
Envelope	3 7/8" x 7 1/2"	Monroe Brand Monarch	N	N	N	Y
Envelope	162mm x 229mm	C5 (Rivers series #02067/ Gummed	N	N	N	Y
Envelope	110mm x 220mm	DL (Rivers series #01029/ Gummed	N	N	N	Y
Postcard	A6 - 100mm x 148mm	Japanese Official Post-card	Y	N	N	N

Recommended Paper for Feed from QMS 3260/4032 Universal Trays

Weight	Product Name	A3	Ledger	B4	Legal 14"	Legal 13"	A4	Letter	Exec-utive	B5	A5	Half Let-ter
20lb	Xerox 4024		Y		Y	Y		LEF for HCF				
28lb	Xerox 4024							LEF for HCF				
20lb	Nekosa								LEF for HCF			
24lb	Nekosa		Y		Y	Y		LEF for HCF	LEF for HCF			
20lb	Xerox											MSI 3R2072
80gsm	RX80 (Black)	3R901 20		3R900 61			LEF for HCF 3R900 08				MSI 3R9000 0	
90gsm	RX90 3R90614						LEF for HCF 3R906 14					
64gsm	FX L	stan-dard		Y			MSI			LEF for HCF	LEF for HCF	

Image Reproduction and Registration Specifications

Environmental conditions during the test:1 ~ 500 imp @ 18 ~ 27°C / 20 ~ 65% RH

501 ~ 10,000 imp @ 10 ~ 32°C / 15 ~ 85% RH

Measurement	Measurement Accuracy	Measurement conditions
Lead Edge Registration	SIMPLEX: ±1.5mm DUPLEX: ±1.9mm MSI: ±2.1mm	--
Side Edge Registration	SIMPLEX: ±2.0mm DUPLEX: ±2.4mm MSI: ±2.9mm	--
Skew	SIMPLEX: ±1.54mm DUPLEX: ±2.0mm MSI: ±1.5mm	Viewed at a distance of 200mm
Perpendicularity	SIMPLEX: ±1.7mm DUPLEX: ±2.2mm MSI: ±2.1mm	Viewed at a distance of 390mm
Parallelism	SIMPLEX: ±2.0mm DUPLEX: ±2.0mm MSI: ±2.0mm	L=390mm
Vertical Magnification	SIMPLEX:100 ±0.8% DUPLEX: 100 ±0.8% MSI:100 ±0.8%	Viewed at a distance of 220mm
Horizontal Magnification	SIMPLEX:100 ±0.8% DUPLEX: 100 ±0.8% MSI:100 ±0.8%	View at a distance of 190mm
Vertical Linearity	SIMPLEX: ±0.4mm DUPLEX: ±0.4mm MSI: ±0.4mm	For 390mm straight line
Horizontal Linearity	SIMPLEX: ±0.4mm DUPLEX: ±0.4mm MSI: ±0.4mm	For 200mm straight line
Diagonal Linearity	SIMPLEX: ±0.4mm DUPLEX: ±0.4mm MSI: ±0.4mm	For 200mm straight line

Life Expectancy of Key Components

Component	Replace at...
Fuser Unit	300,000 prints (B5)
Bias Transfer Roll	300,000 prints (B5)
Feed Rolls (3)	300,000 prints (B5)

Printer Options

There are numerous customer installed options available for the QMS 3260/4032 printer. For detailed technical and service information on an option, refer to the individual service manual for that option.

Option	Description
HCF Unit	Tray 3 (500 sheets), Tray 4 (1,000 sheets), Tray 5 (1,000 sheets)
Envelope Feeder	100 envelopes
Face Up Tray	Feeds 200 sheets face up
Mailbox	Sorts 100 sheets into designated bins
HCS Unit	Stacks, staples, and offsets
Duplex Module	Allows printer to do duplex printing
Toner Sensor	**Factory installed option**. Senses the toner level in the EP Cartridge.
Full Stack Sensor	**Factory installed option.** Senses when the output tray is full.
Low Paper Sensor	**Factory installed option.** Senses the paper level in a feed tray.

Section 16 - Glossary of Terms, Acronyms, and Abbreviations

A-

AC	Alternating Current
Actuated	A device that is switched on
Actuator	Mechanical device used to toggle a switch or sensor
Aux	Auxiliary

B-

BCR	Bias Charge Roll
BTR	Bias Transfer Roll

C-

°C	Degrees Celsius
CCW	Counterclockwise
Charge	The negative voltage that the High Voltage Power Supply applies to the surface of the drum
Continuity	A resistance reading of approximately 0 ohms
Controller PWB	The electrical interface between the printer MCU and the host computer
CR	Signal name for the Charge voltage
CRU	Customer Replaceable Unit, such as the EP Cartridge
CW	Clockwise

D-

DC	Direct Current
DB	Signal name for the Developer Bias voltage
Deactuated	A device that is switch off
Develop	The process when toner adheres to the latent image on the drum
Developed image	The visible image on the drum after going through the development stage
Diagnostic Mode	The mode of operation that lets you check various components, such as sensors, solenoids, and motors
DPI	Dots Per Inch

Drum	The Xerographic photoreceptor
DTS	Signal name for the Detack Saw voltage
DUP	Duplex
Duplex	Printing on both sides of a single sheet of paper

E-

Earth	Electrical ground
Earth Plate	Electrical ground plate or ground strap
EP Cartridge	Electro-Photography Cartridge; sometimes referred to as the Print Cartridge or as the CRU
Error Code	A unique set of letters and numbers that the printer displays to indicate that a problem exists in a specific area of the printer
ESS	Electronic Subsystem; synonym for the Controller PWB
Exposure	The action of the laser beam striking and discharging select areas of the electrically charged surface of the drum

F-

°F	Degrees Fahrenheit
Face Down Tray	Standard output tray for the printer. Delivers paper face down.
Face Up Tray	Optional output tray for the printer. Delivers paper face up.
Factory default	An adjustment value that is set at the time of equipment manufacture
FG	Frame Ground
Finisher	Synonym for the High Capacity Stacker
FIP	Fault Isolation Procedure. Step by step procedures that you use to troubleshoot printer problems
Fuser	The printer subsystem that uses heat and pressure to permanently adhere, or fuse, a transferred toner image to a sheet of paper

G-

Ground	Electrical ground

H-

Harness	A bundle of wires that form a single unit and are generally terminated with connectors at both ends
HCF	High Capacity Feeder
HCS	High Capacity Stacker. See Finisher.
High *(signal)*	A signal voltage that is equal to or almost equal to the base voltage; such as +5VDC or +24VDC. *(see Low)*
H/R	Heat Rod. A component of the Fuser Assembly
HS	High Speed
HVPS	High Voltage Power Supply

I-

Input test	Diagnostic test used to test switches and sensors
Image density	The relative darkness of the toner image on a sheet of paper
Image development	Toner turning the latent image into a visible image. *(see Develop)*
Image fusing	Using heat and pressure to permanently adhere the toner image to a sheet of paper
Image transfer	Moving the developed image from the surface of the drum to the surface of a sheet of paper
Interlock	Interlock Switch. Used as a safety measure to remove voltage from circuits whenever the printer covers are open
IOT	Image Output Terminal. Acronym that is sometimes used in schematic diagrams to describe print engine

J-

J	Jack. A female electrical connector

L-

Laser Diode	Generates the laser beam that is used in the ROS
L	Left
Latent image	The invisible, electrical image remaining on the surface of the drum after exposure
L/H	Left hand
Laser	Refers to the Laser Diode or to the laser beam

Laser beam path	The path the laser beam takes, through lenses and mirrors, from the Laser Diode to the surface of the drum
LCD	Liquid Crystal Diode
LD	Laser Diode. *(see Laser Diode)*
LED	Light Emitting Diode
Low *(signal)*	A signal voltage that is significantly lower than the base voltage *(see High)*
LVPS	Low Voltage Power Supply
LS	Low Speed

M-

MCU	Machine Control Unit. The PWB that controls the operation of the IOT
MBF	Multi Bypass Feeder
MBX	Mailbox
MID	Middle
MOT	Motor
MSI	Multi Sheet Inserter (same as MBF)

N-

NC	No Connection
NVRAM	Non-Volatile Random Access Memory

O-

Output test	Diagnostic tests used to switch on motors, solenoids, and the HVPS

P-

Paper jam	A sheet of paper stops at a point along the paper path
Paper path	The path a sheet of paper takes from the paper feeder to the output tray
P/H	Paper Handling
PL	Parts List
PLL	Phase Locked Loop

P	Plug. A male electrical connector
P/J	Plug and Jack. Electrical connectors as a unit
PPM	Pages Per Minute or Prints Per Minute
Pre-Regi	Pre-Registration
Print surface	The side of a sheet of paper that receives the printed image
Primary FIP	The first level of troubleshooting. Primary FIPS ask you to make component checks, replace parts, or proceed to a specific Secondary FIP
PS	Power Supply
PWB	Printed Wiring Board. Synonym for PCB (Printed Circuit Board)

R-

Reg, or Regi	Registration
R	Right
R/H	Right Hand
ROS	Raster Output Scanner
RRP	Removal and Replacement Procedure. Step by step instructions on how to remove and replace select printer parts
RTN	Return

S-

Secondary FIP	The second level of troubleshooting. Secondary FIPS direct you to make component checks and to replace parts
Sensor	A device used to monitor a function or operation, such as paper travel along the paper path
SG	Signal Ground
Signal name	A name given to a wire indicating the purpose of the wire and/or the voltage carried by that wire
Simplex	Generally means printing on one side of a single sheet of paper. *(see Duplex)*
SNR	Sensor
SOL	Solenoid
SOS	Start Of Scan

STA	Status
STS	Soft Touch Sensor
SW	Switch

T-

Temp	Temperature
Test Print Mode	The mode of operation that lets you generate a test pattern
Test Pattern	A grid that is generated by the MCU
Toggle	To switch between two states, such as on and off or up and down
Toner	The dry ink that is used to create the visible image. Toner is stored in the EP Cartridge
TR	Signal name for Transfer current
Transfer	Moving the toner image from the surface of the drum to the surface of a sheet of paper
TTL	Transistor Transistor Logic

V-

V	Volts
VAC	Volts Alternating Current
VDC	Volts Direct Current

W-

Warm-up	The time it takes the printer to go from main power ON to Ready to Print
Wire Harness	A bundle of wires that form a single unit and are generally terminated with connectors at both ends.