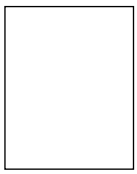
3-6-1 Image formation problems

<Contents>

(1) No image (entirely white).



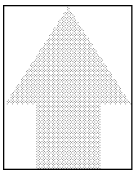
See page 3-6-3.

(2) No image (entirely black).



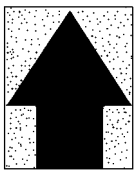
See page 3-6-4.

(3) Image too light.



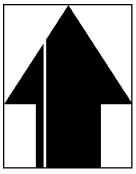
See page 3-6-5.

(4) Background is visible.



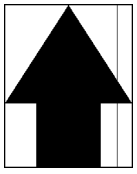
See page 3-6-5.

(5) A white line appears longitudinally.



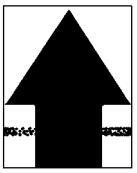
See page 3-6-6.

(6) A black line appears longitudinally.



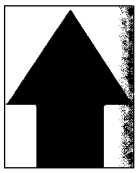
See page 3-6-6.

(7) A black line appears laterally.



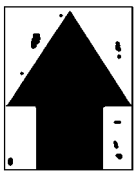
See page 3-6-7.

(8) One side of the copy image is darker than the other.



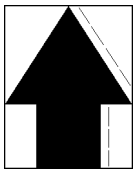
See page 3-6-8.

(9) Black dots appear on the image.



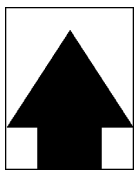
See page 3-6-8.

(10) Image is blurred.



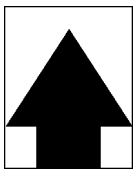
See page 3-6-9.

(11) The leading edge of the image is consistently misaligned with the original.



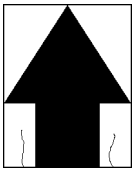
See page 3-6-9.

(12) The leading edge of the image is sporadically with the original.



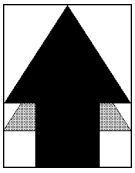
See page 3-6-10.

(13) Paper creases.



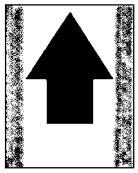
See page 3-6-10.

(14) Offset occurs.



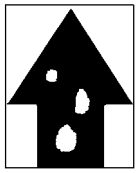
See page 3-6-11.

(15) Black lines appear on both sides of the image in reduction copies.



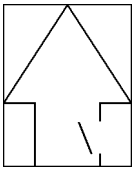
See page 3-6-12.

(16) Image is party missing.



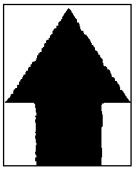
See page 3-6-12.

(17) Fixing is poor.



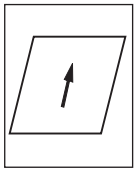
See page 3-6-13.

(18) Image is out of focus.



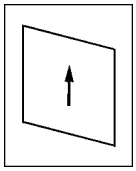
See page 3-6-13.

(19) Image is not squarelongitudinally.



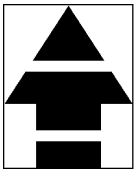
See page 3-6-13.

(20) Image is not square laterally.



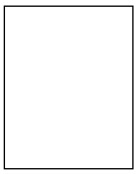
See page 3-6-14.

(21) Lateral bands of the image are missing.



See page 3-6-14.

(1) No image (entirely white).



Causes
1. No original present.
2. No main charging.
3. No transfer charging.
4. All blank lamps on.
5. Developing section not driven.

Causes	Check procedures/corrective measures
1. No original present.	Place an original in the correct position.
2. No main charging.	
A. Broken main charger wire.	Replace the main charger wire.
B. Leaking charger housing.	Clean the main charger housing.
C. The connector terminals of the HVTPCB make poor contact.	Check for continuity across the terminals; If none, replace them.
D. Defective MPCB.	Run simulation 32. If CN10-16 on the MPCB fails to go low or the correct control voltage is not output at CN10-17, replace the MPCB.
E. Defective HVTPCB.	Run simulation 32. If main charging fails while the MPCB is okay, replace the HVTPCB.
3. No transfer charging.	
A. The connector terminals of the TCBPCB make poor contact.	Check for continuity across the terminals; If none, replace them.
B. Defective MPCB.	*If CN6-17B on the MPCB fails to go low or the correct control voltage is not output at CN6-16B during conveying paper, replace the MPCB.*
C. Defective TCBCB.	Run simulation 31. If transfer charging fails while the MPCB is okay, replace the TCBPCB.
4. All blank lamps on.	Run simulation 42 and if the check pattern copy is not obtained, replace the MPCB.
5. Developing section not driven.	Check the gears driving the developing section and replace any broken gears.

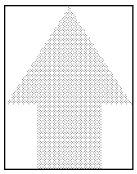
(2) No image (entirely black).



Causes
1. Broken halogen lamp filament.
2. Halogen lamp fails to light.

Causes	Check procedures/corrective measures
1. Broken halogen lamp filament.	Take the halogen lamp of the unit and check for continuity across the terminals. If none, replace it. (see page 3-3-43)
2. Halogen lamp fails to light.	Check for continuity.
A. The optical thermostat triggered.	Check for continuity across the optical thermostat. If none, after cleaning up the cause of the operation, press the button and recheck for continuity. If there is still no continuity, replace the thermostat.
B. The connector terminals of the CPCB make poor contact	Check for continuity across the terminals; If none, replace them.
C. Defective MPCB.	*Run simulation 20. If CN19-5 on the MPCB remains low, replace the MPCB.*
D. Defective CPCB.	Run simulation 20. If the halogen lamp fails to light while the MPCB is okay, replace the CPCB.

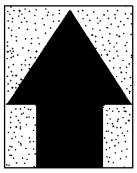
(3) Image is too light.



Causes
1. Insufficient toner.
2. Deteriorated developer.
3. Misadjusted developing section.
4. Dirty or deteriorated drum.
5. *Lowered drum surface potential.*

Causes	Check procedures/corrective measures
1. Insufficient toner.	If the add toner message is on the display, replace the toner cartridge.
2. Deteriorated developer.	If the maintenance level is reached, replace the developer.
3. Misadjusted developing section.	Readjust the developing section (see page 3-3-88)
4. Dirty or deteriorated drum.	Clean the drum or, if the maintenance level is reached. (see page 3-3-81)
5. Lowered drum surface potential.	*Readjust the drum surface potential if the potential sensor detects less than 1.5 V.*

(4) Background is visible.

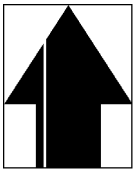


Causes
1. Dirty optical section.
2. Deteriorated developer.

Causes	Check procedures/corrective measures
1. Dirty optical section.	Clean the exposure adjusters, mirrors and other parts in the optical section.
2. Deteriorated developer.	If the maintenance level is reached, replace the developer.

(5) A white line appears longitudinally.

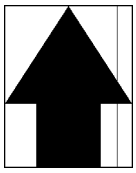
Causes
1. Dirty or flawed main charger wire.
2. Foreign matter in the developing section.
3. Flawed drum.



Causes	Check procedures/corrective measures
1. Dirty or flawed main charger wire.	Clean the main charger wire or, if it is flawed, replace.
2. Foreign matter in the developing section.	Check if the magnetic brash is formed uniformly. If not, replace the developer.
3. Flawed drum.	Check the drum visually. If it is flawed, replace. (see page 3-3-81)

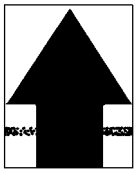
(6) A black line appears longitudinally.

Causes
1. Dirty optical section.
2. Dirty or flawed drum.
3. Deformed or worn cleaning blade.
4. Dirty or flowed main charger grid.



Causes	Check procedures/corrective measures
1. Dirty optical section.	Clean the mirrors, dust filter and other parts in the optical section.
2. Dirty or flawed drum.	Clean the drum or, if it is flawed, replace. (see page 3-3-81)
3. Deformed or worn cleaning blade.	Check visually if the cleaning blade is deformed or worn. If it is, replace. (see page 3-3-100)
4. Dirty or flowed main charger grid.	Replace the main charger grid. (see page 3-3-37)

(7) A black line appears laterally.

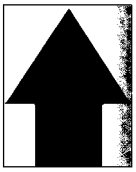


Causes
1. Flawed drum.
2. Poor developing bias wire contact.
3. Dirty developing section.
4. No developing bias output.

Causes	Check procedures/corrective measures
1. Flawed drum.	Check the drum visually. If it is flawed, replace. (see page 3-3-81)
2. Poor developing bias wire contact.	Check for poor developing bias wire contact.
3. Dirty developing section.	Check for part contaminated with toner or carrier in the developing section.
4. No developing bias output.	
A. The developing bias wire is shorted or makes poor contact.	Check the developing bias wire. If there is any problem, replace it.
B. Defective MPCB.	Run simulation 02 and check if CN10-21 on the MPCB fails to go low, replace the MPCB.
C. Defective HVTPCB.	Run simulation 02. If the developing bias is not output while the MPCB is okay, replace the HVTPCB.

(8) One side of the copy image is darker than the other.

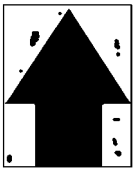
Causes
1. Unevenly distributed halogen lamp light.
2. Dirty optical section.
3. Dirty main charger wire or grid.



Causes	Check procedures/corrective measures
1. Unevenly distributed halogen lamp light.	Adjust the positions of the light adjusters. (see page 3-3-45)
2. Dirty optical section.	Clean the mirrors, dust filter and any other dirty parts in the optical section.
3. Dirty main charger wire or grid.	Check if the main charger wire or grid is dirty. It is, replace it.

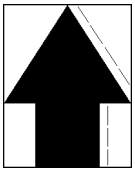
(9) Black dots appears on the image.

Causes
1. Dirty or flawed drum.
2. Dirty contact glass.
3. Deformed cleaning brush.



Causes	Check procedures/corrective measures
1. Dirty or flawed drum.	Clean the drum or, if it is flawed, replace it. (see page 3-3-81)
2. Dirty contact glass.	Clean the contact glass.
3. Deformed cleaning brush.	Check visually if the cleaning brush is deformed. If it is, replace it.

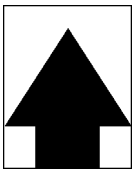
(10) Image is blurred.



Causes
1. Scanner moving erratically.
2. Foreign matter on the scanner rail.
3. Deformed press roller.
4. Drive system problem.

Causes	Check procedures/corrective measures
1. Scanner moving erratically.	Adjust the tension of the scanner wire. (see page 3-3-52)
2. Foreign matter on the scanner rail.	Check visually and remove, it any.
3. Deformed press roller.	Check visually and replace. (see page 3-3-117)
4. Drive system problem.	Check the gears and belts. Grease the gears or readjust the belt tension if necessary.

(11) The leading edge of the image is consistently misaligned with the original.

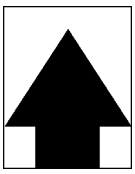


Cause
1. Misadjusted leading edge registration.

Cause	Check procedures/corrective measures
1. Misadjusted leading edge registration.	Readjust the leading edge registration. (see page 3-3-26)

(12) The leading edge of the image is sporadically misaligned with the original.

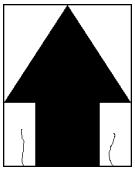
Cause
1. Registration clutch installed or operating incorrectly.



Cause	Check procedures/corrective measures
1. Registration clutch installed or operating incorrectly.	Check the installation position and operation of the registration clutch.

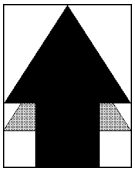
(13) Paper creases.

Causes
1. Paper curled.
2. Paper damp.
3. Defective pressure springs.



Causes	Check procedures/corrective measures
1. Paper curled.	Check the paper storage conditions.
2. Paper damp.	Check the paper storage conditions.
3. Defective pressure springs.	Replace the pressure springs.

(14) Offset occurs.

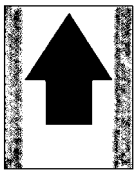


Causes
1. Cleaning blade installed in the wrong position.
2. Defective cleaning blade.
3. Defective cleaning brush.
4. Cleaning lamp fails to light.
5. Abnormally high heat roller control temperature.

Causes	Check procedures/corrective measures
1. Cleaning blade installed in the wrong position.	Check the installation position of the cleaning blade and correct it, if necessary. (see page 3-3-100)
2. Defective cleaning blade.	Replace the cleaning blade.
3. Defective cleaning brush.	Clean or replace the cleaning brush.
4. Cleaning lamp fails to light.	
A. The connector terminals of the cleaning lamp make poor contact.	Check for continuity across the terminals. If none, replace them.
B. Defective cleaning lamp.	Check for continuity across the lamp. If none, replace the lamp.
C. Defective MPCB.	Force CN5-6A on the MPCB to go low and check if the cleaning lamp lights. If it does, replace the MPCB.
5. Abnormally high heat roller control temperature.	Check if the fixing unit thermistor is installed correctly.

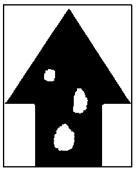
(15) Black lines appear on both sides of the image in reduction copies.

Causes
1. Dirty blank lamp.
2. Defective blank lamp.
3. Defective MPCB.



Causes	Check procedures/corrective measures
1. Dirty blank lamp.	Clean the blank lamp.
2. Defective blank lamp.	Check for one-way continuity across the terminals of each blank lamp. If none, replace the blank lamp PCB.
3. Defective MPCB.	*Run simulation 42 and check if the level of CN12-6B terminal on the MPCB is changed. If not, replace the MPCB.*

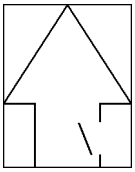
(16) Image is partly missing.



Causes
1. Paper damp.
2. Paper creased.
3. Drum condensation.
4. Flawed drum.

Causes	Check procedures/corrective measures
1. Paper damp.	Check the paper storage conditions.
2. Paper creased.	Change the paper.
3. Drum condensation.	Clean the drum. (see page 3-3-81)
4. Flawed drum.	Replace the drum. (see page 3-3-81)

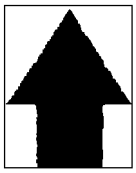
(17) Fixing is poor.



Causes
1. Wrong paper.
2. Defective pressure springs.
3. Flawed press roller.

Causes	Check procedures/corrective measures
1. Wrong paper.	Check if the paper meets specifications.
2. Defective pressure springs.	Replace the pressure springs.
3. Flawed press roller.	Replace the roller. (see page 3-3-117)

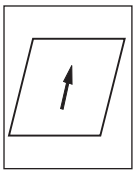
(18) Image is out of focus.



Cause
1. Misadjusted focus (installation position of light source unit 1).

Cause	Check procedures/corrective measures
1. Misadjusted focus (installation position of light source unit 1).	Readjust the focus of the image (refitting of light source unit 1). (see page 3-3-57)

(19) Image is not square longitudinally.



Cause
1. Light source unit 2 positioned incorrectly at the rear.

Cause	Check procedures/corrective measures
1. Light source unit 2 positioned incorrectly at the rear.	Adjust the longitudinal squareness of the image. (see page 3-3-65)

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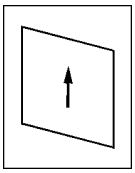
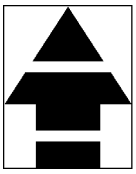
(20) Image is not square laterally.



Cause
1. The height of light source unit 2 is adjusted incorrectly.

Cause	Check procedures/corrective measures
1. The height of light source unit 2 is adjusted incorrectly.	Adjust the lateral squareness of the image. (see page 3-3-66)

(21) Image is partially missing laterally.



Causes
1. Registration clutch incorrectly installed or malfunctioning.
2. Feed clutch 1 or 2 incorrectly installed or malfunctioning.

Causes	Check procedures/corrective measures
1. Registration clutch incorrectly installed or malfunctioning.	Check and correct the clutch installation position and its operation.
2. Feed clutch 1 or 2 incorrectly installed or malfunctioning.	Check and correct the clutch installation alignment and its operation.

3-6-2 Paper misfeeds

• Copier

Problem	Causes/check procedures	Corrective measure
(1) The misfeed indicator for the paper feed, paper conveying or fixing section lights as soon as the main switch is turned on.	A piece of paper torn from copy paper is caught around the feed, registration or eject switch.	Check visually and remove it, if any.
	Defective paper feed switch 1.	If CN3-27 on the MPCB remains low or high when the paper feed switch 1 is turned on and off, replace the paper feed switch 1.
	Defective paper feed switch 2.	If CN3-13 on the MPCB remains low or high when the paper feed switch 2 is turned on and off, replace the paper feed switch 2.
	Defective paper feed switch 3.	If CN3-14 on the MPCB remains low or high when the paper feed switch 3 is turned on and off, replace the paper feed switch 3.
	Defective paper feed switch 4.	If CN3-19 on the MPCB remains low or high when the paper feed switch 4 is turned on and off, replace the paper feed switch 4.
	Defective paper feed switch 5.	If CN3-20 on the MPCB remains low or high when the paper feed switch 5 is turned on and off, replace the paper feed switch 5.
	Defective feed switch (paper feed section).	If CN3-29 on the MPCB remains low or high when the feed switch is turned on and off, replace the feed switch.
	Defective registration switch (paper conveying section).	If CN5-6B on the MPCB remains low or high when the registration switch is turned on and off, replace the registration switch.
	Defective eject switch (fixing section).	If CN10-2 on the MPCB remains low or high when the eject switch is turned on and off, replace the eject switch.

Problem	Causes/check procedures	Corrective measure
(2) The misfeed indicator for the paper feed section lights during copying. (Large paper deck)	Paper in the large paper deck is extremely curled.	Change the paper.
	Check if the deck paper feed roller 1, 2, deck paper conveying roller, deck upper and lower separation pulleys are deformed.	Check visually and replace any deformed pulleys. (see page 3-3-16)
	Defective large paper deck paper pass sensor 1.	If CN8-3B on the MPCB remains low or high when the large paper deck paper pass sensor 1 is turned on and off, replace the large paper deck paper pass sensor 1.
	Defective large paper deck paper pass sensor 2.	If CN8-13A on the MPCB remains low or high when the large paper deck paper pass sensor 2 is turned on and off, replace the large paper deck paper pass sensor 2.
	Defective large paper deck paper pass sensor 3.	If CN8-2B on the MPCB remains low or high when the large paper deck paper pass sensor 3 is turned on and off, replace the large paper deck paper pass sensor 3.
	Broken paper feed switch 1 actuator.	Check visually and replace the paper feed switch 1 if the actuator is broken.
	Defective paper feed switch 1 .	If CN3-27 on the MPCB remains low or high when the paper feed switch 1 is turned on and off, replace the paper feed switch 1.
	Broken paper feed switch 2 actuator.	Check visually and replace the paper feed switch 2 if the actuator is broken.
	Defective paper feed switch 2 .	If CN3-13 on the MPCB remains low or high when the paper feed switch 2 is turned on and off, replace the paper feed switch 2.
	The large paper deck paper feed clutch 1 or 2 malfunctions.	Check and remedy.
	Electrical problem with the large paper deck paper feed clutch 1or 2.	Check. (see page 3-6-50)

Problem	Causes/check procedures	Corrective measure
(2) The misfeed indicator for the paper feed section lights during copying. (Large paper deck)	The large paper deck conveying clutch malfunctions.	Check and remedy.
	Electrical problem with the large paper deck conveying clutch.	Check. (see page 3-6-51)
	The feed clutch 3 malfunctions.	Change the paper.
	Electrical problem with the feed clutch 3.	Check. (see page 3-6-49)
(3) The misfeed indicator for the paper feed section lights during copying. (upper cassette)	Paper in the upper cassette is extremely curled.	Change the paper.
	Check if the forwarding pulley, upper and lower paper feed pulley in the upper cassette is deformed.	Check visually and replace any deformed pulleys. (see page 3-3-3)
	Broken paper feed switch 4 actuator.	Check visually and replace the paper feed switch 4 if the actuator is broken.
	Defective paper feed switch 4.	If CN3-19 on the MPCB remains low or high when the paper feed switch 4 is turned on and off, replace the paper feed switch 4.
	Broken paper feed switch 3 actuator.	Check visually and replace the paper feed switch 3 if the actuator is broken.
	Defective paper feed switch 3.	If CN3-14 on the MPCB remains low or high when the paper feed switch 3 is turned on and off, replace the paper feed switch 3.
	The upper paper feed clutch malfunctions.	Check and remedy.
	Electrical problem with the upper paper feed clutch.	Check. (see page 3-6-51)
	The feed clutch 5 malfunctions.	Check and remedy.
	Electrical problem with the feed clutch 5.	Check. (see page 3-6-50)
	The feed clutch 4 malfunctions.	Check and remedy.
	Electrical problem with the feed clutch 4.	Check. (see page 3-6-49)

Problem	Causes/check procedures	Corrective measure
(4) The misfeed indicator for the paper feed section lights during copying. (lower cassette)	Paper in the lower cassette is extremely curled.	Change the paper.
	Check if the forwarding pulley, upper and lower paper feed pulley in the lower cassette is deformed.	Check visually and replace any deformed pulleys. (see page 3-3-3)
	Broken paper feed switch 5 actuator.	Check visually and replace the paper feed switch 5 if the actuator is broken.
	Defective paper feed switch 5.	If CN3-20 on the MPCB remains low or high when the paper feed switch 5 is turned on and off, replace the paper feed switch 5.
	The lower paper feed clutch malfunctions.	Check and remedy.
	Electrical problem with the lower paper feed clutch.	Check. (see page 3-6-51)
	The feed clutch 6 malfunctions.	Check and remedy.
	Electrical problem with the feed clutch 6.	Check. (see page 3-6-50)
(5) The misfeed indicator for the bypass lights during copying.	Paper on the bypass is extremely curled.	Change the paper.
	Check if the bypass forwarding roller, bypass upper and lower paper feed pulley are deformed.	Check visually and replace any deformed pulleys. (see page 3-3-8)
	Broken feed switch actuator.	Check visually and replace the feed switch if the actuator is broken.
	Defective feed switch.	If CN3-29 on the MPCB remains low when the feed switch is turned on and off, replace the feed switch.
	The bypass paper feed clutch malfunctions.	Check and remedy.
	Electrical problem with the bypass paper feed clutch.	Check. (see page 3-6-50)

Problem	Causes/check procedures	Corrective measure
(6) The misfeed indicator for the paper feed or conveying section lights during copying.	Broken registration switch actuator.	Check visually and replace the registration switch if the actuator is broken.
	Defective registration switch.	If CN5-6B on the MPCB remains low or high when the registration switch is turned on and off, replace the registration switch.
	The feed clutch 1 malfunctions.	Check and remedy.
	Electrical problem with the feed clutch 1.	Check. (see page 3-6-49)
	The feed clutch 2 malfunctions.	Check and remedy.
	Electrical problem with the feed clutch 2.	Check. (see page 3-6-49)
	The registration clutch malfunctions.	Check and remedy.
	Electrical problem with the registration clutch.	Check. (see page 3-6-50)
	The upper and lower feed rollers do not contact each other.	Check and remedy (replace the pressure springs if deformed).
	The upper and lower feed roller cleaner has deteriorated.	Check.
	The upper and lower registration rollers do not contact each other.	Check and remedy (replace the pressure springs if deformed).
	The upper and lower registration roller cleaner has deteriorated.	Check.
	The left feed rollers and the right feed pulley do not contact each other.	Check and remedy.
	Check if the vertical conveying roller C and right feed pulley contact each other.	Check and remedy.

Problem	Causes/check procedures	Corrective measure
(7) The misfeed indicator for the paper conveying section lights during copying.	Broken registration switch actuator.	Check visually and replace the registration switch if the actuator is broken.
	Defective registration switch.	If CN5-6B on the MPCB remains low or high when the registration switch is turned on and off, replace the registration switch.
	The feed clutch 1 malfunctions.	Check and remedy.
	Electrical problem with the feed clutch 1.	Check. (see page 3-6-49)
	The feed clutch 2 malfunctions.	Check and remedy.
	Electrical problem with the feed clutch 2.	Check. (see page 3-6-49)
	The registration clutch malfunctions.	Check and remedy.
	Electrical problem with the registration clutch.	Check. (see page 3-6-50)
	The upper and lower feed rollers do not contact each other.	Check and remedy (replace the pressure springs if deformed).
	The upper and lower feed roller cleaner has deteriorated.	Check.
	The upper and lower registration rollers do not contact each other.	Check and remedy (replace the pressure springs if deformed).
	The upper and lower registration roller cleaner has deteriorated.	Check.

Problem	Causes/check procedures	Corrective measure
(7) The misfeed indicator for the paper conveying section lights during copying.	Broken eject switch actuator.	Check visually and replace the eject switch if the actuator is broken.
	Defective eject switch.	If CN10-2 on the MPCB remains low or high when the eject switch is turned on and off, replace the eject switch.
(8) The misfeed indicator for the fixing section lights during copying.	Broken eject switch actuator.	Check visually and replace the eject switch if the actuator is broken.
	Defective eject switch.	If CN10-2 on the MPCB remains low or high when the eject switch is turned on and off, replace the eject switch.
	Check if the lower and upper front fixing guides are deformed.	Check visually and remedy or replace.
	Check if the lower and upper fixing eject guides are deformed.	Check visually and remedy or replace.
	Deformed or extremely dirty press roller.	Check visually and clean or replace. (see page 3-3-117)
	The lower eject roller and eject pulley do not contact each other.	Check and remedy.
	Dirty or deformed heat roller separation claws.	Check visually and clean or replace. (see page 3-3-119)
	The heat roller separation claws and the heat roller do not contact each other.	Check visually and remedy if the heat roller separation claw spring is separated. (see page 3-3-119)
(9) The misfeed indicator for the eject section lights during copying.	Check if the upper eject roller and eject roller contact each other.	Remedy.

• Feed shift and duplex sections

Problem	Causes/check procedures	Corrective measure
(1) The misfeed indicator for the duplex section lights as soon as the main switch is turned on.	A piece of paper torn from copy paper is caught around the duplex paper conveying switch, duplex registration switch or duplex eject switch.	Check visually and remove it, if any.
	Defective duplex paper conveying switch.	If CN4-4 on the MPCB remains low or high when the duplex paper conveying switch is turned on and off, replace the duplex paper conveying switch.
	Defective duplex registration switch.	If CN4-6 on the MPCB remains low or high when the duplex registration switch is turned on and off, replace the duplex registration switch.
	Defective duplex eject switch.	If CN4-5 on the MPCB remains low or high when the duplex eject switch is turned on and off, replace the duplex eject switch.
	Defective feedshift switch.	If CN10-10 on the MPCB remains low or high when the feed shift switch is turned on and off, replace the feed shift switch.
(2) The misfeed indicator for the duplex section lights during duplex copying.	Paper extremely curled.	Change the paper.
	Deformed guide plate(s) in the feed shift section.	Check visually and remedy or replace if necessary.
	Broken feedshift switch actuator.	Check visually and replace the feed shift switch if the actuator is broken.
	Defective feedshift switch.	If CN10-10 on the MPCB remains low or high when the feed shift switch is turned on and off, replace the feed shift switch.
	Broken duplex paper conveying switch actuator.	Check visually and replace the duplex paper conveying switch if the actuator is broken.
	Broken duplex registration switch actuator.	Check visually and replace the duplex registration switch if the actuator is broken.
	Broken duplex eject switch actuator.	Check visually and replace the duplex eject switch if the actuator is broken.

Problem	Causes/check procedures	Corrective measure
(2) The misfeed indicator for the duplex section lights during duplex copying.	Defective duplex paper conveying switch.	If CN4-4 on the MPCB remains low or high when the duplex paper conveying switch is turned on and off, replace the duplex paper conveying switch.
	Defective duplex registration switch.	If CN4-6 on the MPCB remains low or high when the duplex registration switch is turned on and off, replace the duplex registration switch.
	Defective duplex eject switch.	If CN4-5 on the MPCB remains low or high when the duplex eject switch is turned on and off, replace the duplex eject switch.
	Defective duplex paper switch.	*Check if CN4-3 on the MPCB changes level as the forwarding solenoid operates. If not, replace the duplex paper switch.*
	The duplex paper conveying clutch malfunctions.	Check and remedy.
	Electrical problem with the duplex paper conveying clutch.	Check. (see page 3-6-58)
	The duplex registration clutch malfunctions.	Check and remedy.
	Electrical problem with the duplex registration clutch.	Check. (see page 3-6-58)
	Deformed guide plate(s) in the duplex section.	Check visually and remedy or replace if necessary.
	Deformed duplex forwarding pulley.	Replace. (see page 3-3-122)
(3) The misfeed indicator for the paper feed with refeed from the duplex section lights during duplex copying.	Broken paper feed switch 1 actuator.	Check visually and replace the paper feed switch 1 if the actuator is broken.
	Defective paper feed switch 1.	If CN3-27 on the MPCB remains low or high when the paper feed switch 1 is turned on and off, replace the paper feed switch 1.
	Broken feed switch actuator.	Check visually and replace the feed switch if the actuator is broken.
	Defective feed switch.	If CN3-29 on the MPCB remains low or high when the feed switch is turned on and off, replace the feed switch.

• RDH

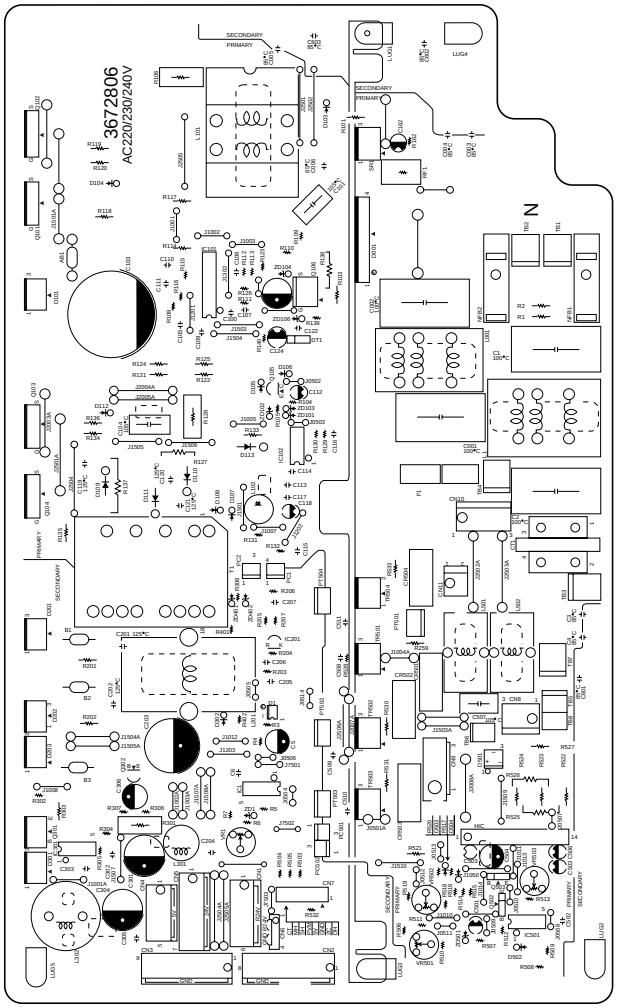
Problem	Causes/check procedures	Corrective measure
(1) The original jam is indicated as soon as the print key is pressed.	Original jam.	Check visually and remove if any.
	Defective original feed switch.	If CN7-18 on the RDHMPCB remains low or high when the original feed switch is turned on and off, replace the original feed switch.
	Defective original registration switch.	If CN7-16 on the RDHMPCB remains low or high when the original registration switch is turned on and off, replace the original registration switch.
	Defective original eject switch.	If CN3-27 on the RDHMPCB remains low when the original eject switch is turned on and off, replace the original eject switch.
	Poor contact in the each switch connector terminals.	Check for continuity across the terminals in the each switch. If none, replace them.
	Defective RDHMPCB.	The paper misfeed indicates though each switch and connector are normal. If so, replace the RDHMPCB.
(2) Original misfeed occurs during coping.	Check if the original feed pulley and original separation pulley are deformed.	Check visually and replace worn pulleys (see page 3-3-140, 142).
	Original feed motor malfunctions.	Check. (See page 3-6-61)
	Original conveying motor malfunctions.	Check. (See page 3-6-62)
	Original eject motor malfunctions.	Check. (See page 3-6-62)
	Original stopper solenoid malfunctions.	Check. (see page 3-6-63)
	Original feed solenoid malfunctions.	Check. (see page 3-6-63)
	Original strike solenoid malfunctions.	Check. (See page 3-6-63)
	Original partition lever solenoid malfunctions.	Check. (See page 3-6-63)
	Original eject solenoid malfunctions.	Check. (See page 3-6-63)
	Check if the each guide of the RDH are deformed.	Remedy or replace if deformed.

3-6-3 PCB terminal voltages

Precautions

- When handling the circuit boards, do not touch the components with bare hands.
- ICs can be damaged by static discharges. If a PCB contains ICs, do not touch the ICs, cable connectors or edge connectors.
- Store the circuit boards wrapped in aluminum foil, conductive sponge rubber, or similar material.

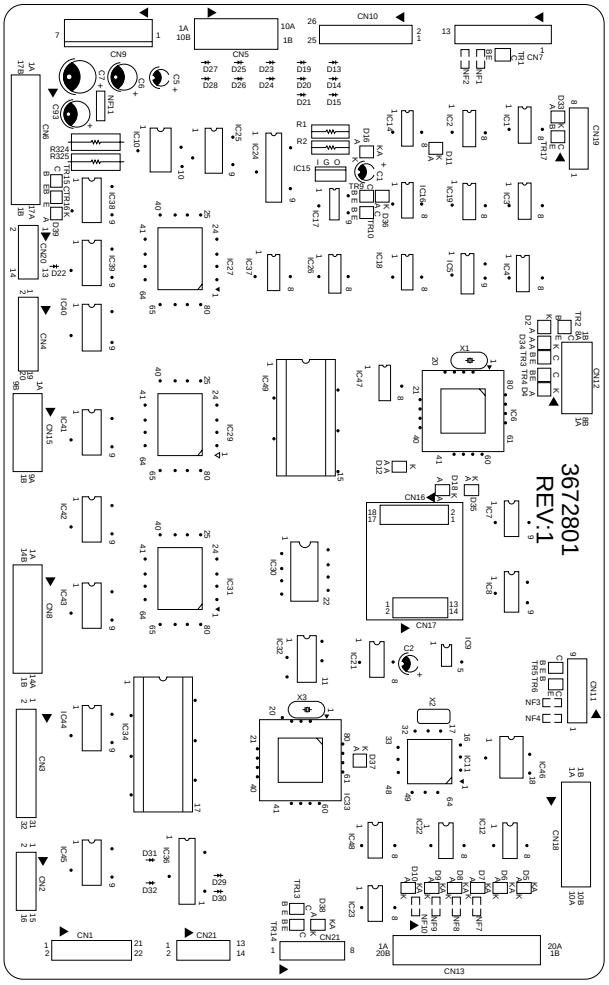
(1) Composition PCB



Terminals (CN)		Voltage	Remarks
TB1	TB2	Local voltage	AC supply, input
TB3	TB4	Local voltage	AC supply, output
TB5	TB6	Local voltage	AC supply, input
TB7	9-1	Local voltage/0v	FHM on/off, output
TB7	9-3	Local voltage/0v	FHS on/off, output
TB8	11-1	24/0 V DC	DH on/off, output
1-1	2-1	24 V DC	24 V DC supply for DM, output
1-2	2-2	24 V DC	24 V DC supply for IFM and PFM, output
1-3	2-3	24 V DC	24 V DC supply for HVTPCB, output
1-4	2-5	24 V DC	24 V DC supply for MPCB, output
1-6	5-7	24 V DC	24 V DC supply from PRY, input
4-1	3-1	5 V DC	5 V DC supply for OMPCB, output
4-2	3-3	5 V DC	5 V DC supply for MPCB, output
4-3	2-8	5 V DC	5 V DC supply for RDH, output
4-4	3-7	5 V DC	5 V DC supply for BL, output
4-5	3-7	5 V DC	5 V DC supply for BL, output
5-1	3-2	24 V DC	24 V DC supply for OMPCB and MSW, output
5-2	2-4	24 V DC	24 V DC supply for MPCB, output
5-3	3-5	24 V DC	24 V DC supply for SCPCB, output
5-4	3-5	24 V DC	24 V DC supply for SCPCB, output
5-5	2-6	24 V DC	24 V DC supply for RDH, output
5-6	2-6	24 V DC	24 V DC supply for MMD, output*
6-1	2-3	24 V DC	24 V DC supply for CL, output
6-2	6-3	24 V DC	24 V DC supply for TCBPCB, output
7-1	7-3	5/0 V DC	DH off/on signal, input
7-2	7-3	5/0 V DC (Pulse)	Zero cross signal, output
7-4	7-3	5 V DC	5 V DC supply from MPCB, input
7-5	7-3	5/0 V DC (Pulse)	HL control PWM, input
7-6	7-3	5/0 V DC	FHM off/on, input
7-7	7-3	5/0 V DC	FHS off/on, input
7-8	7-3	5/0 V DC	Current detection off/on, output
8-1	8-3	Local voltage	AC supply for HL, output
10-1	10-4	Local voltage	AC supply from MSW, input
10-2	10-5	Local voltage	AC supply for MSW, output

*: Option

(2) Main PCB


3672801
REV:1
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
CN9
CN10
CN11
CN12
CN13
CN15
CN16
CN17
CN18
CN19
CN20
CN21
X1
X2
X3

Terminals (CN)		Voltage	Remarks
1-1	9-2	24/0 V DC	PCLM-U off/on, output
1-2	9-2	24 V DC	24 V DC supply for PCLM-U, output
1-3	9-2	24/0 V DC	PCLM-L off/on, output
1-4	9-2	24 V DC	24 V DC supply for PCLM-L, output
1-5	9-2	24/0 V DC	FCL1 off/on, output
1-6	9-2	24 V DC	24 V DC supply for FCL2, output
1-7	9-2	24/0 V DC	FCL2 off/on, output
1-8	9-2	24 V DC	24 V DC supply for FCL1, output
1-9	9-2	24/0 V DC	RCL off/on, output
1-10	9-2	24 V DC	24 V DC supply for RCL, output
1-12	1-11	5/0 V DC	PWSW-U 2 off/on, input *1
1-13	1-11	5/0 V DC	PWSW-U 1 off/on, input *1
1-14	1-11	5/0 V DC	PWSW-U 0 off/on, input *1
1-16	1-15	5/0 V DC	PWSW-L 2 off/on, input *1
1-17	1-15	5/0 V DC	PWSW-L 1 off/on, input *1
1-18	1-15	5/0 V DC	PWSW-L 0 off/on, input *1
1-20	1-19	5/0 V DC	PLSW-U off/on, input *1
1-22	1-21	5/0 V DC	PLSW-L off/on, input *1
1-20	1-19	5/0 V DC	CDSW-U off/on, input *2
1-22	1-21	5/0 V DC	CDSW-L off/on, input *2
2-1	9-2	24 V DC	24 V DC supply for PFCL-U, output
2-2	9-2	24 V DC	24 V DC supply for PFCL-L, output
2-3	9-2	24/0 V DC	PFCL-U off/on, output
2-4	9-2	24/0 V DC	PFCL-L off/on, output
2-5	2-7	5/0 V DC	PSW-U off/on, input
2-6	2-8	5/0 V DC	PSW-L off/on, input
2-9	2-7	5 V DC	5 V DC supply for PSW-U, output
2-10	2-8	5 V DC	5 V DC supply for PSW-L, output
2-11	2-13	5/0 V DC	LICSW-U off/on, input
2-12	2-14	5/0 V DC	LICSW-L off/on, input
2-15	2-13	5 V DC	5 V DC supply for LICSW-U, output
2-16	2-14	5 V DC	5 V DC supply for LICSW-L, output
3-1	9-2	24 V DC	FCL3 off/on, output
3-2	9-2	24/0 V DC	24 V DC supply for FCL3, output
3-3	9-2	24 V DC	FCL4 off/on, output
3-4	9-2	24/0 V DC	24 V DC supply for FCL4, output
3-5	9-2	24 V DC	FCL5 off/on, output
3-6	9-2	24/0 V DC	24 V DC supply for FCL5, output
3-7	9-2	24 V DC	FCL6 off/on, output
3-8	9-2	24/0 V DC	24 V DC supply for FCL6, output
3-10	3-9	5 V DC	5 V DC supply for PFSW2, output
3-12	3-11	5 V DC	5 V DC supply for PFSW3, output
3-13	3-9	5/0 V DC	PFSW2 off/on, input
3-14	3-11	5/0 V DC	PFSW3 off/on, input
3-16	3-15	5 V DC	5 V DC supply for PFSW4, output
3-18	3-17	5 V DC	5 V DC supply for PFSW5, output
3-19	3-15	5/0 V DC	PFSW4 off/on, input

*1: For inch models only. 2: For metric models only.

Terminals (CN)		Voltage	Remarks
3-20	3-17	5/0 V DC	PFSW5 off/on, input
3-22	9-2	24 V DC	24 V DC supply for DUPRCL, RFCL, SRM and DUPFWDSOL, output
3-24	9-2	24 V DC	24 V DC supply for DUPPCCL, DUPPPSOL and DUPPTSOL, output
3-26	3-21	5 V DC	5 V DC supply for DUPSENS, DUPPCSW, DUPESW, DUPRSW, STKSW and SRHPSW,output
3-27	3-23	5/0 V DC	PFSW 1 off/on, input
3-28	3-23	5 V DC	5 V DC supply for PFSW1, output
3-29	3-25	5/0 V DC	FSW off/on, input
3-30	3-25	5 V DC	5 V DC supply for FSW, output
3-31	3-3	5 V DC	5 V DC supply for SSR, output *3
3-32	3-3	5 V DC	5 V DC supply for PFM, output
4-2	4-1	5/0 V DC	Duplex unit disconnected/connected, input
4-3	3-21	5/0 V DC	DUPSENS off/on, input
4-4	3-21	5/0 V DC	DUPPCSW off/on, input
4-5	3-21	5/0 V DC	DUPESW off/on, input
4-6	3-21	5/0 V DC	DUPRSW off/on, input
4-7	3-21	5/0 V DC	STKSW off/on, input
4-8	3-21	5/0 V DC	SRHPSW off/on, input
4-9	9-2	24/0 V DC	DUPRCL off/on, output
4-10	9-2	24/0 V DC	DUPPCCL off/on, output
4-11	9-2	24/0 V DC	RFCL off/on, output
4-12	9-2	24/0 V DC (pulse)	SRM drive, output ($\overline{B}$)
4-13	9-2	24/0 V DC (pulse)	SRM drive, output ($\overline{A}$)
4-14	9-2	24/0 V DC (pulse)	SRM drive, output (B)
4-15	9-2	24/0 V DC (pulse)	SRM drive, output (A)
4-16	9-2	24/0 V DC	DUPFWDSOL off/on, output
4-17	9-2	24/0 V DC	DUPPPSOL off/on, output
4-18	9-2	24/0 V DC	DUPPTSOL off/on, output
5-1A	5-4		TNS control voltage, output
5-2A	5-4	24 V DC	24 V DC supply for TNS, output
5-3A	5-4		TNS detection voltage, input
5-5A	9-6	5 V DC	5 V DC supply for TLDS, output
5-6A	9-2	24/0 V DC	CL off/on, output
5-7A	5-7B	*24/0 V DC (pulse)*	TFM off/on, output
5-8A	5-8B	*24/0 V DC (pulse)*	TAM off/on, output
5-9A	5-10A		DRMTH detection voltage, input
5-1B	5-2B	5/0/-5 V DC	MCCM forward/stop/reverse, output
5-5B	5-4A	5/0 V DC	TLDS off/on, input
5-6B	9-6	5/0 V DC	RSW off/on, input
5-9B	5-10B		DEVTH detection voltage, input
6-2A	6-3A	5 V DC	5 V DC supply for HUMPCB, output
6-4A	6-3A		HUMSENS detection voltage, input

*3: CE standard correspondence models only.

Terminals (CN)		Voltage	Remarks
6-5A	6-6A		ETTH detection voltage, input
6-7A	9-6	5/0 V DC	SSR off/on, output *3
6-8A	9-2	24/0 V DC	DFM off/on, output
6-9A	9-2	24/0 V DC	CFM 2 off/on, output
6-10A	9-2	24/0 V DC	MCFM off/on, output
6-11A	9-2	24/0 V DC	FFM off/on, output
6-12A	9-2	24/0 V DC	OPFM off/on, output
6-13A	9-2	24/0 V DC	TCBRCL off/on, output
6-14A	6-4B	5/0 V DC	WTDSW off/on, input
6-5B	9-2	24 V DC	24 V DC supply for TCBRCL, output
6-6B	9-2	24 V DC	24 V DC supply for OPFM, output
6-7B	9-2	24 V DC	24 V DC supply for FFM, output
6-8B	9-2	24 V DC	24 V DC supply for MCFM, output
6-9B	9-2	24 V DC	24 V DC supply for CFM2, output
6-10B	9-2	24 V DC	24 V DC supply for DFM, output
6-11B	6-12B		FTH detection voltage, input
6-13B	9-2	24/0 V DC	FBB ALARM off/on, input
6-14B	9-2	24/0 V DC	TCBPCB ALARM off/on, input
6-15B	9-2	24/0 V DC	FBB off/on, output
6-16B	9-2	24/0 V DC (Pulse)	TCBPCB transfer charger control voltage, output
6-17B	9-2	24/0 V DC	TCBPCB transfer charger off/on, output
7-2	7-1	5 V DC	5 V DC supply for SCPCB, output
7-3	7-1	5/0 V DC (Pulse)	Scanner control signal, output
7-4	7-1	5/0 V DC (Pulse)	Scanner control signal, output
7-5	7-1	5/0 V DC (Pulse)	Scanner control signal, output
7-6	7-1	5/0 V DC (Pulse)	Scanner control signal, output
7-7	7-1	5/0 V DC (Pulse)	Reset signal, output
7-9	7-1	5/0 V DC (Pulse)	Timing signal, output
7-10	7-11	5/0 V DC (Pulse)	Serial signal from SCPCB, input
7-12	7-13	5/0 V DC (Pulse)	Serial signal for SCPCB, output
8-1A	9-2	24 V DC	24 V DC supply for Large paper deck, output
8-2A	9-2	24/0 V DC	LPDPFCL1 off/on, output
8-3A	8-4A	5/0 V DC	LPDPLDSENS1 off/on, input
8-5A	8-4A	5 V DC	5 V DC supply for LPDPLDSENS1, output
8-6A	8-7A	5/0 V DC	LPDLSW1 off/on, input
8-8A	8-7A	5 V DC	5 V DC supply for large paper deck, output
8-9A	9-2	24 V DC	24 V DC supply for LPDLM-R, output
8-10A	9-2	24/0 V DC	LPDLM-R off/on, output
8-11A	8-7A	5/0 V DC	LPDOSSW off/on, input
8-12A	8-7A	5/0 V DC	LPDPESENS off/on, input
8-13A	8-7A	5/0 V DC	LPDPPSENS2 off/on, input
8-14A	8-7A	5/0 V DC	LED A off/on, output
8-2B	8-7A	5/0 V DC	LPDPPSENS3 off/on, input

*3: CE standard correspondence models only.

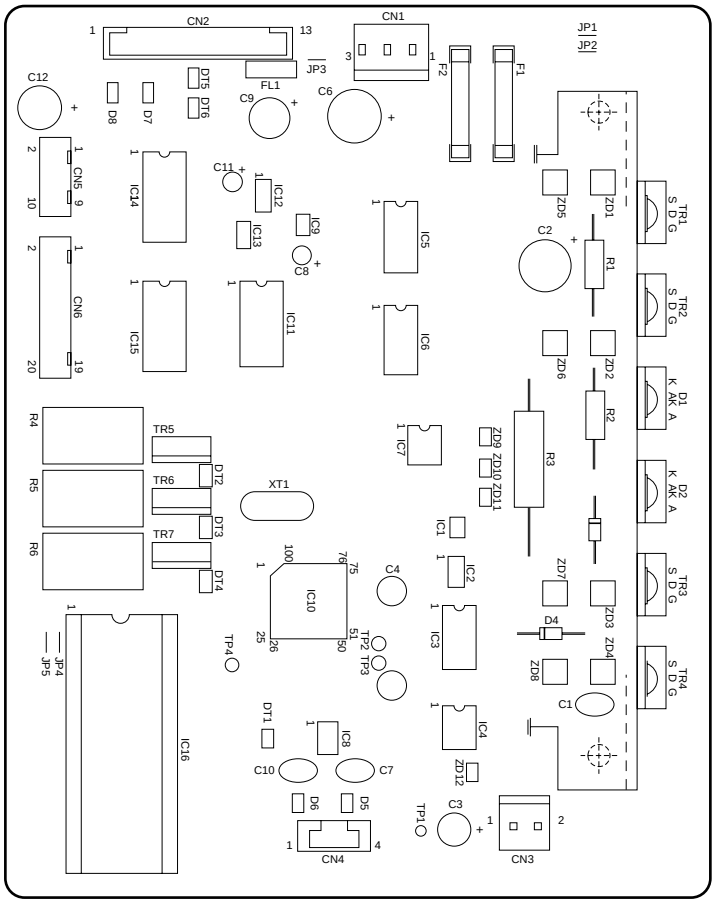
Terminals (CN)		Voltage	Remarks
8-3B	8-7A	5/0 V DC	LPDPPSENS1 off/on, input
8-4B	9-2	24/0 V DC	LPDCCL off/on, output
8-5B	9-2	24/0 V DC	LPDLM-L off/on, output
8-6B	9-2	24 V DC	24 V DC supply for LPDLM-L, output
8-9B	8-7A	5/0 V DC	LPDLSW2 off/on, input
8-10B	8-11B	5 V DC	5 V DC supply for LPDPLDSENS2, output
8-12B	8-11B	5/0 V DC	LPDPLDSENS2 off/on, input
8-13B	9-2	24/0 V DC	LPDPFCL2 off/on, output
8-14B	9-2	24 V DC	24 V DC supply for large paper deck, output
9-1	9-2	24 V DC	24 V DC supply, input
9-4	9-3	24 V DC	24 V DC supply, input
9-5	9-6	5 V DC	5 V DC supply, input
10-1	12-2B	24/0 V DC	PRY off/on, output
10-2	10-4	5/0 V DC	ESW off/on, input
10-3	10-4	5 V DC	5 V DC supply for ESW, output
10-5	10-6	5 V DC	5 V DC supply for FSSW, output
10-7	10-8	5 V DC	5 V DC supply for TCBDSW, output
10-9	10-8	5/0 V DC	TCBDSW off/on, input
10-10	10-6	5/0 V DC	FSSW off/on, input
10-11	9-2	24 V DC	5 V DC supply for FSSOL, output
10-12	9-2	24/0 V DC	FSSOL off/on, output
10-13	9-6	0/24 V DC	PFCSSW1 off/on, input
10-14	9-6	0/24 V DC	ECSSW off/on, input
10-15	9-6	0/24 V DC	PFCSSW2 off/on, input
10-16	9-6	24/0 V DC	HVTPCB main charger off/on, output
10-17	9-6	24/0 V DC (pulse)	HVTPCB main charger control signal, output
10-18	9-6	24/0 V DC	HVTPCB ALARM off/on, input
10-19	9-6	24/0 V DC (pulse)	HVTPCB grid control voltage, output
10-20	9-6	24/0 V DC	HVTPCB developing bias change, output
10-21	9-6	24/0 V DC	HVTPCB developing bias off/on, output
10-22	9-6	24/0 V DC (pulse)	HVTPCB developing bias control voltage, output
10-23	9-6	24/0 V DC	Cleaning bias off/on voltage, output
10-24	9-6	24/0 V DC	Cleaning bias change, output
10-25	9-6		HVTPCB current value, input
11-1	11-2	5/0 V DC (pulse)	Serial signla from OMPCB, input
11-3	11-4	5/0 V DC (pulse)	Serial signla to OMPCB, output
11-5	11-4	5/0 V DC	OMPCB control signal, input (P1)
11-6	11-4	5/0 V DC	OMPCB control signal, output (P2)
11-7	11-4	5/0 V DC	OMPCB control signal, input (P3)
11-8	11-4	5/0 V DC	OMPCB control signal, output (P4)
11-9	11-4	5/0 V DC (pulse)	Reset signal for OMPCB, output

*: Option

Terminals (CN)		Voltage	Remarks
12-1A	12-2A	24 V DC	24 V DC supply for DSPSENS and TC, output
12-3A	9-6	5/0 V DC (pulse)	BL latch signal, output
12-4A	9-6	5/0 V DC (pulse)	BL strobe signal, output
12-6A	9-2	24 V DC	24 V DC supply for the coil to force MSW off, output
12-7A	9-6	0/24 V DC	FCSSW off/on, input
12-2B	9-2	24 V DC	24 V DC supply for PRY, output
12-3B	9-2	24/0 V DC	MSW forced off/normal on, output
12-5B	9-2	24/0 V DC	MSW on/off, input
12-6B	9-6	5/0 V DC (pulse)	BL data signal, output
12-7B	9-6	5/0 V DC (pulse)	BL clock signal, output
12-8B	12-2A		DSPSENS detection voltage, input
13-6A	13-15B	5/0 V DC (pulse)	Seiral signal from sorter, input*
13-7A	13-14B	5/0 V DC (pulse)	Serial signal for sorter, output*
13-8A	9-6	5/0 V DC	Sorter connected/disconnected, input*
13-9A	13-12A	5/0 V DC	RDH connected/disconnected, input
13-10A	13-12A	5/0 V DC (pulse)	Control signal for RDH, output
13-15A	13-19A	24/0 V DC	MMD count off/on, output*
13-16A	13-5B	5/0 V DC	MMD disconnected/connected, input*
13-20A	9-2	24/0 V DC	SRY off/on, output
13-1B	9-2	24 V DC	24 V DC supply for SRY, output
13-3B	13-18A	5/0 V DC (pulse)	Serial signal from MMD, input*
13-4B	13-17A	5/0 V DC (pulse)	Serial signal for MMD, output*
13-9B	13-12A	5/0 V DC (pulse)	Serial signal for RDH, output
13-10B	13-11A	5/0 V DC (pulse)	Serial signal from RDH, input
13-11B	13-12A	5/0 V DC (pulse)	Control signal from RDH, input
13-12B	13-12A	5/0 V DC (pulse)	Reset signal for RDH, output
13-13B	9-6	5/0 V DC	Reset signal for sorter, output*
15-3A	15-1A	5/0 V DC	BYPPLSW off/on, input
15-6A	15-5A	5/0 V DC	BYPPWSW1 off/on, input
15-7A	9-2	24/0 V DC	BYPCL off/on, output
15-8A	9-2	24/0 V DC	BYPSOL off/on, output
15-2B	9-2	24 V DC	24 V DC supply for BYPSOL, output
15-3B	9-2	24 V DC	24 V DC supply for BYPCL, output
15-4B	15-5A	5/0 V DC	BYPPWSW0 off/on, input
15-5B	15-5A	5/0 V DC	BYPPWSW2 off/on, input
15-6B	9-6	5/0 V DC	PFM ALARM off/on, input
15-7B	15-2A	5/0 V DC	BYPPSW off/on, input
15-8B	15-2A	5 V DC	5 V DC supply for BYPPSW, output
15-9B	15-1A	5 V DC	5 V DC supply for BYPPLSW, output
19-1	19-3	5/0 V DC	DH off/on, output
19-2	19-3	5/0 V DC (Pulse)	Zero cross signal, input
19-4	19-3	5 V DC	5 V DC supply for CPCB, output
19-5	19-3	5/0 V DC (Pulse)	HL control PWM, output
19-6	19-3	5/0 V DC	FHM off/on, output

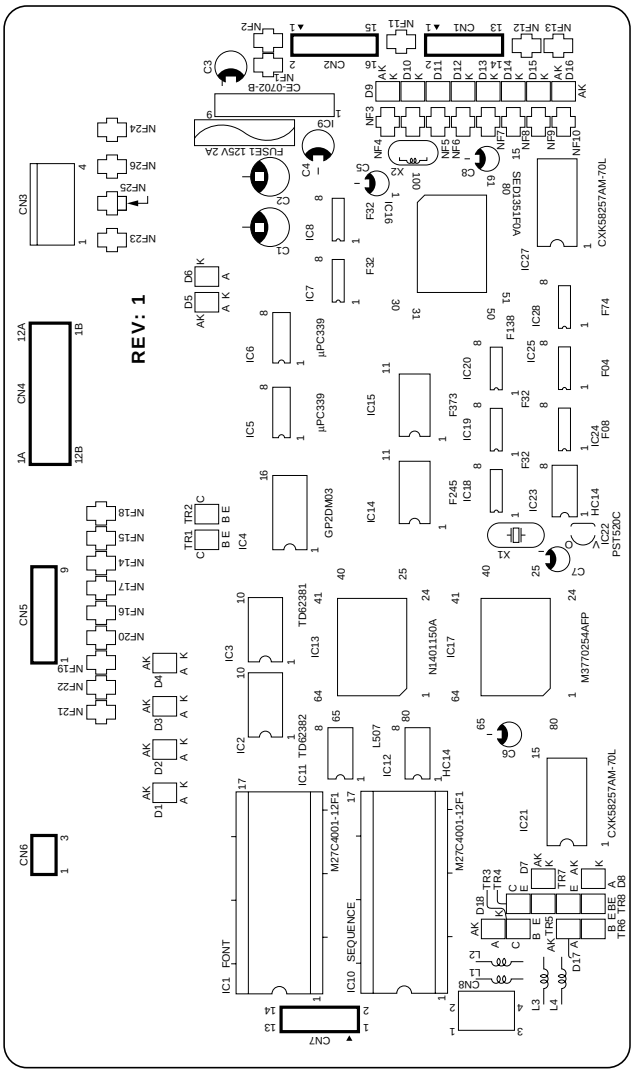
Terminals (CN)		Voltage	Remarks
19-7	19-3	5/0 V DC	FHS off/on, output
19-8	19-3	5/0 V DC	Current detection off/on, input
20-1	9-6	5/0 V DC	DM high speed/low speed, output
20-3	9-6	5/0 V DC	DM ALARM, input
20-4	9-6	5/0 V DC	IFM ALARM signal, input
20-5	9-6	5/0 V DC	DM off/on, output
20-6	9-6	5/0 V DC	IFM off/on, output
20-7	20-9	5 V DC	5 V DC supply for DM, output
20-8	20-10	5 V DC	5 V DC supply for IFM, output
20-11	9-2	24/0 V DC	CFM1 half speed off/on, output
20-12	9-2	24 V DC	24 V DC supply for CFM1, output
20-13	9-2	24/0 V DC	CFM1 full speed off/on, output
20-14	9-6	5/0 V DC	PFM off/on, output

(3) Scanner control PCB



Terminals (CN)		Voltage	Remarks
1-1	1-3	24 V DC	24 V DC supply, input
1-2	1-3	24 V DC	24 V DC supply, input
2-2	2-1	5/0 V DC (Pulse)	Serial signal from MPCB, input
2-4	2-3	5/0 V DC (Pulse)	Serial signal for MPCB, output
2-5	2-13	5/0 V DC (Pulse)	Timing signal, input
2-7	2-13	5/0 V DC (Pulse)	Reset signal, input
2-8	2-13	5/0 V DC (Pulse)	Scanner control signal, input
2-9	2-13	5/0 V DC (Pulse)	Scanner control signal, input
2-10	2-13	5/0 V DC (Pulse)	Scanner control signal, input
2-11	2-13	5/0 V DC (Pulse)	Scanner control signal, input
2-12	2-13	5 V DC	5 V DC supply, input
3-1	4-4	5/0 V DC	SM reverse off/on, output
3-2	4-4	5/0 V DC	SM forward off/on, output
4-1	4-4	5/0 V DC (Pulse)	SM detection pulse, output
4-2	4-4	5/0 V DC (Pulse)	SM detection pulse, output
4-3	4-4	5 V DC	5 V DC supply for SM, output
6-1	1-3	24/0 V DC (Pulse)	LCM drive, output ($\overline{B}$)
6-2	1-3	24/0 V DC (Pulse)	MM drive, output ($\overline{B}$)
6-3	1-3	24 V DC	24 V DC supply for LCM, output
6-4	1-3	24 V DC	24 V DC supply for MM, output
6-5	1-3	24/0 V DC (Pulse)	LCM drive, output ($\overline{A}$)
6-6	1-3	24/0 V DC (Pulse)	MM drive, output ($\overline{A}$)
6-7	1-3	24/0 V DC (Pulse)	LCM drive, output (A)
6-8	1-3	24/0 V DC (Pulse)	MM drive, output (A)
6-9	1-3	24/0 V DC (Pulse)	LCM drive, output (B)
6-10	1-3	24/0 V DC (Pulse)	MM drive, output (B)
6-11	6-13	5/0 V DC	LCHPSW off/on, input
6-12	6-14	5/0 V DC	MHPSW off/on, input
6-15	6-13	5 V DC	5 V DC supply for LCHPSW, output
6-16	6-14	5 V DC	5 V DC supply for MHPSW, output
6-18	6-17	5 V DC	5 V DC supply for SHPSW, output
6-19	6-17	5/0 V DC	SHPSW off/on, input

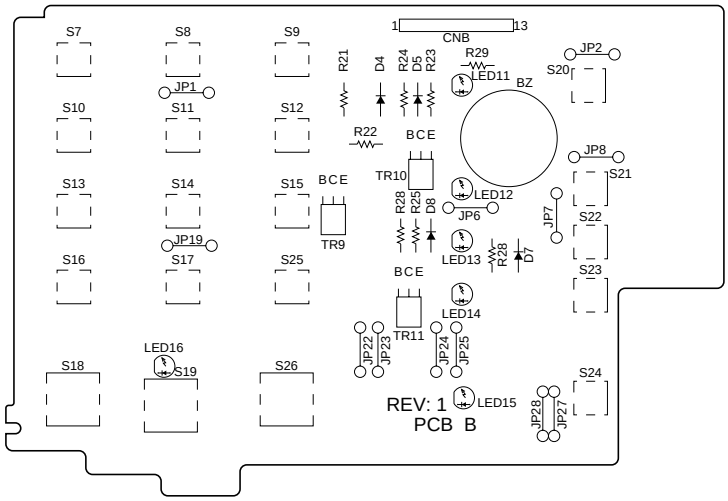
(4) Operation unit main PCB

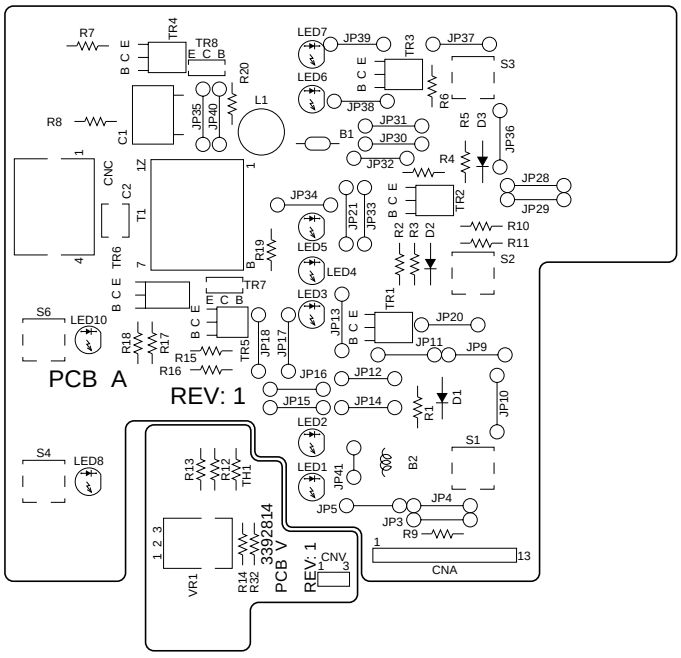


Terminals (CN)		Voltage	Remarks
1-2	2-3	-23 V DC	-23 V DC supply for LCD, output
1-3	1-8	5/0 V DC (Pulse)	LCD data, output (XD3)
1-4	1-8	5/0 V DC (Pulse)	LCD data, output (XD2)
1-5	1-8	5/0 V DC (Pulse)	LCD data, output (XD1)
1-6	1-8	5/0 V DC (Pulse)	LCD data, output (XD0)
1-7	1-8	-23 V DC	-23 V DC supply for LCD, output
1-9	1-8	5 V DC	5 V DC supply for LCD, output
1-10	1-8	5/0 V DC (Pulse)	LCD control signal, output (XSCL)
1-11	1-8	5/0 V DC (Pulse)	LCD control signal, output (LP)
1-12	1-8	5/0 V DC (Pulse)	LCD control signal, output (DIN)
1-14	1-8	5 V DC	LCD control signal, output (DISP OFF)
2-1	2-3	24 V DC	24 V DC supply for OLPCB, output
2-2	2-3	-23 V DC	-23 V DC supply for OLPCB, output
2-4	2-3		OLPCB contrast adjustment control voltage, input
2-5	3-3	5/0 V DC (Pulse)	Return signal from OLPCB, input (DIGKEY L1)
2-6	3-3	5/0 V DC (Pulse)	Return signal from OLPCB, input (DIGKEY L2)
2-7	3-3	5/0 V DC (Pulse)	Scan signal for OLPCB, output (SCAN L1)
2-8	3-3	5/0 V DC (Pulse)	Scan signal for OLPCB, output (SCAN L2)
2-9	3-3	5/0 V DC (Pulse)	Scan signal for OLPCB, output (SCAN L3)
2-10	3-3	5/0 V DC (Pulse)	Scan signal for OLPCB, output (SCAN L4)
2-11	3-3	5/0 V DC (Pulse)	OLPCB LED on, output (DIG LED L1)
2-12	3-3	5/0 V DC (Pulse)	OLPCB LED on, output (DIG LED L2)
2-13	3-3	5/0 V DC (Pulse)	OLPCB LED on, output (DIG LED L3)
2-14	3-3	5/0 V DC	OLPCB CFL off/on, output
2-15	3-3	5 V DC	5 V DC supply for OLPCB, output
2-16	3-3	5 V DC	5 V DC supply for OLPCB, output
3-1	3-4	24 V DC	24 V DC supply, input
3-2	3-3	5 V DC	5 V DC supply, input
5-1	5-2	5/0 V DC (Pulse)	Serial signal for MPCB, output
5-3	5-4	5/0 V DC (Pulse)	Serial signal from MPCB, input
5-5	3-3	5/0 V DC	Control signal for MPCB, output (P1)
5-6	3-3	5/0 V DC	Control signal from MPCB, input (P2)
5-7	3-3	5/0 V DC	Control signal for MPCB, output (P3)
5-8	3-3	5/0 V DC	Control signal from MPCB, input (P4)
5-9	3-3	5/0 V DC	Reset signal, input
7-1	7-14	5/0 V DC	Return signal from ORPCB, input (DIGKEY R1)
7-2	7-14	5/0 V DC	Return signal from ORPCB, input (DIGKEY R2)

Terminals (CN)		Voltage	Remarks
7-3	7-14	5/0 V DC	Return signal from ORPCB, input (DIGKEY R3)
7-4	7-14	5/0 V DC	Return signal from ORPCB, input (DIGKEY R4)
7-5	7-14	5/0 V DC	Return signal from ORPCB, input (DIGKEY R5)
7-6	7-14	5/0 V DC (Pulse)	Scan signal for ORPCB, output (SCAN R1)
7-7	7-14	5/0 V DC (Pulse)	Scan signal for ORPCB, output (SCAN R2)
7-8	7-14	5/0 V DC (Pulse)	Scan signal for ORPCB, output (SCAN R3)
7-9	7-14	5/0 V DC (Pulse)	Scan signal for ORPCB, output (SCAN R4)
7-10	7-14	5/0 V DC (Pulse)	ORPCB LED on, output (DIG LED R1)
7-11	7-14	5/0 V DC (Pulse)	ORPCB LED on, output (DIG LED R2)
7-12	7-14	5/0 V DC	ORPCB BZ1 off/on, output
7-13	7-14	5 V DC	5 V DC supply for ORPCB, output
8-1	3-3	5/0 V DC (Pulse)	Touch panel detection voltage, output (Y2)
8-2	3-3		Touch panel detection voltage, input (X1)
8-3	3-3		Touch panel detection voltage, input (Y1)
8-4	3-3	5/0 V DC (Pulse)	Touch panel detection voltage, output (X2)

(5) Operation unit left and right PCBs





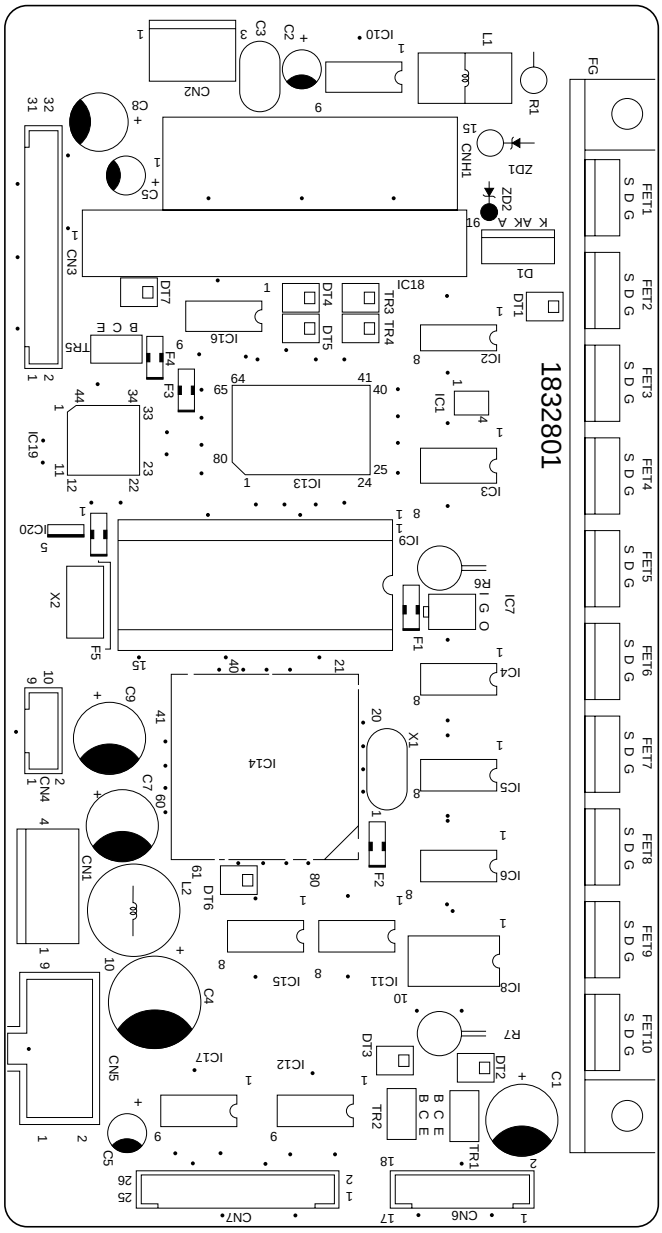
Operation unit left PCB

Terminals (CN)		Voltage	Remarks
A-1	A-3	24 V DC	24 V DC supply, input
A-2	A-3	-23 V DC	-23 V DC supply, input
A-4	A-3		OLPCB contrast adjustment control voltage, input
A-5	A-3	5/0 V DC	Return signal for OMPCB, output (DIGKEY L1)
A-6	A-3	5/0 V DC	Return signal for OMPCB, output (DIGKEY L2)
A-7	A-3	5/0 V DC (Pulse)	Scan signal from OMPCB, input (SCAN L1)
A-8	A-3	5/0 V DC (Pulse)	Scan signal from OMPCB, input (SCAN L2)
A-9	A-3	5/0 V DC (Pulse)	Scan signa from OMPCBl, input (SCAN L3)
A-10	A-3	5/0 V DC (Pulse)	Scan signal from OMPCB, input (SCAN L4)
A-11	A-3	5/0 V DC (Pulse)	LED on from OMPCB, input (DIG LED L1)
A-12	A-3	5/0 V DC (Pulse)	LED on from OMPCB, input (DIG LED L2)
A-13	A-3	5/0 V DC (Pulse)	LED on from OMPCB, input (DIG LED L3)
A-14	A-3	5/0 V DC	CFL on/off from OMPCB, input
A-15	A-3	5 V DC	5 V DC supply, input
A-16	A-3	5 V DC	5 V DC supply , input
C-1	C-4		CFL on/off supply, output

Operation unit right PCB

Terminals (CN)		Voltage	Remarks
B-1	B-14	5/0 V DC	Return signal for OMPCB, output (DIGKEY R1)
B-2	B-14	5/0 V DC	Return signal for OMPCB, output (DIGKEY R2)
B-3	B-14	5/0 V DC	Return signal for OMPCB, output (DIGKEY R3)
B-4	B-14	5/0 V DC	Return signal for OMPCB, output (DIGKEY R4)
B-5	B-14	5/0 V DC	Return signal for OMPCB, output (DIGKEY R5)
B-6	B-14	5/0 V DC (Pulse)	Scan signal from OMPCB, input (SCAN R1)
B-7	B-14	5/0 V DC (Pulse)	Scan signal from OMPCB, input (SCAN R2)
B-8	B-14	5/0 V DC (Pulse)	Scan signal from OMPCB, input (SCAN R3)
B-9	B-14	5/0 V DC (Pulse)	Scan signal from OMPCB, input (SCAN R4)
B-10	B-14	5/0 V DC (Pulse)	LED on from OMPCB, input (DIG LED R1)
B-11	B-14	5/0 V DC (Pulse)	LED on from OMPCB, input (DIG LED R2)
B-12	B-14	5/0 V DC	BZ1 off/on from OMPCB, input
B-13	B-14	5 V DC	5 V DC supply, input

(6) RDH main PCB



Terminals (CN)		Voltage	Remarks
1-1	1-3	24 V DC	24 V DC supply, output
2-1	1-3	24 V DC	24 V DC supply for OEM, output
2-3	1-3	24/0 V DC	OEM off/on, output
3-2	1-3	24/0 V DC	OPSOL off/on, output
3-4	1-3	24/0 V DC	OMSOL off/on, output
3-6	1-3	24/0 V DC	OESOL off/on, output
3-8	1-3	24/0 V DC (Pulse)	OMM drive, output ($\overline{B}$)
3-10	1-3	24/0 V DC (Pulse)	OMM drive, output (B)
3-12	1-3	24/0 V DC (Pulse)	OMM drive, output ($\overline{A}$)
3-14	1-3	24/0 V DC (Pulse)	OMM drive, output (A)
3-15	3-3	5 V DC	5 V DC supply for OMHPSW, output
3-16	3-11	5/0 V DC	*OWSW off/on, input*
3-17	3-5	5 V DC	5 V DC supply for OLSW2, output
3-18	3-3	5/0 V DC	*OMHPSW off/on, input*
3-19	3-7	5 V DC	5 V DC supply for OLSW1, output
3-20	3-5	5/0 V DC	*OLSW2 off/on, input*
3-21	3-9	5 V DC	5 V DC supply for OEMPS, output
3-22	3-7	5/0 V DC	*OLSW1 off/on, input*
3-23	3-1	5 V DC	5 V DC supply for OESW, output
3-24	3-9	5/0 V DC	OEMPS off/on, input
3-25	3-11	5 V DC	5 V DC supply for OWSW, output
3-26	1-3	24 V DC	24 V DC supply for OMSOL, output
3-27	3-1	5/0 V DC	*OESW off/on, input*
3-28	3-13	5/0 V DC	*OECSSW off/on, input*
3-29	1-3	24 V DC	24 V DC supply for OESOL, output
3-30	1-3	24 V DC	24 V DC supply for OMM, output
3-31	1-3	24 V DC	24 V DC supply for OMM, output
3-32	1-3	24 V DC	24 V DC supply for OPSOL, output
4-1	4-2	5 V DC	5 V DC supply, input
4-4	4-3	5/0 V DC (Pulse)	Serial signal for MPCB, output
4-6	4-5	5/0 V DC (Pulse)	Serial signal from MPCB, input
4-7	4-2	5/0 V DC (Pulse)	Control signal from MPCB, input
4-8	4-2	5/0 V DC (Pulse)	Control signal for MPCB, output
4-9	4-2	5/0 V DC (Pulse)	Reset signal, input
4-10	4-2	5/0 V DC (Pulse)	RDH connected/disconnected, output
5-1	1-3	24 V DC	24 V DC supply for RDHSSW, output
5-2	1-3	24 V DC	24 V DC supply for ORCSSW, output
5-4	5-6	24/-24 V DC	OCM forward/reverse, output
5-5	1-3	24/0 V DC	RDHSSW off/on, input
5-8	5-10	24/-24 V DC	OFM forward/reverse, output
5-9	1-3	24/0 V DC	ORCSSW off/on, input
6-2	6-5	24/0 V DC	OPHPSW off/on, input
6-8	1-3	24/0 V DC	OSTSOL off/on, output
6-10	1-3	24/0 V DC	OSSOL RET off/on, output
6-11	1-3	24 V DC	24 V DC supply for OSTSOL, output

Terminals (CN)		Voltage	Remarks
6-12	1-3	24/0 V DC	OSSOL ACT off/on, output
6-13	1-3	24 V DC	24 V DC supply for OSSOL, output
6-14	1-3	24/0 V DC	OFSOL off/on, output
6-15	1-3	24 V DC	24 V DC supply for OFSOL, output
6-16	1-3	24/0 V DC	OPLSOL RET off/on, output
6-17	1-3	24/0 V DC	OPLSOL ACT off/on, output
6-18	1-3	24 V DC	24 V DC supply for OPLSOL, output
7-1	7-15	5 V DC	5 V DC supply for OFMPS, output
7-3	7-17	5 V DC	5 V DC supply for OCMPS, output
7-4	7-24	5/0 V DC	LED on, output (green)
7-5	7-19	5 V DC	5 V DC supply for OSSW, output
7-6	7-24	5/0 V DC	LED on, output (red)
7-7	7-21	5 V DC	5 V DC supply for ORSW, output
7-8	7-15	5/0 V DC	OFMPS off/on, input
7-9	7-23	5 V DC	5 V DC supply for OFSW, output
7-10	7-17	5/0 V DC	OCMPS off/on, input (A)
7-11	7-25	5 V DC	5 V DC supply for OPSSW, output
7-12	7-17	5/0 V DC	OCMPS off/on, input (B)
7-13	7-26	5 V DC	5 V DC supply for ORPCB, output
7-14	7-19	5/0 V DC	OSSW off/on, input
7-16	7-21	5/0 V DC	ORSW off/on, input
7-18	7-23	5/0 V DC	OFSW off/on, input
7-20	7-25	5/0 V DC	OPSSW off/on, input
7-22	7-26	5/0 V DC	ORPCB OUT off/on, input

3-6-4 Electrical problems

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Problem	Causes	Check procedures/corrective measures
(1) The machine does not operate when the main switch turn on.	No electricity at the power outlet.	Measure the input voltage.
	The power cord is not plugged in properly.	Check the contact between the power plug and the outlet.
	Broken power cord.	Check for continuity. If none, replace the cord.
	Blown fuse in the CPCB.	Check for continuity. If none, remove the cause of blowing and replace the fuse.
	Defective main switch.	Check for continuity across the contacts. If none, replace the switch.
	Defective front cover safety switch, Eject cover safety switch, paper feed cover safety switch 1 or 2.	Check for continuity across the contacts of each switch. If none, replace the switch.
	Defective CPCB.	with AC present, check for 24 V DC at CN5-2 and 1-4 on the CPCB and 5 V DC at CN4-2. If none, replace the CPCB.
(2) *The drive motor does not operate. (C230)*	Poor contact in the drive motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Broken drive motor gear.	Check visually and replace the drive motor if necessary.
	Defective drive motor.	Run simulation 10 and check if the drive motor operates when CN20-5 on the MPCB goes low. If not, replace the drive motor.
	Defective MPCB.	Run simulation 10 and check if CN20-5 on the MPCB goes low. If not, replace the MPCB.
(3) The paper feed motor does not operate. (C240)	Poor contact in the paper feed motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Broken paper feed motor gear.	Check visually and replace the paper feed motor if necessary.
	Defective paper feed motor.	Run simulation 02 and check if the paper feed motor operates when CN20-14 on the MPCB goes low. If not, replace the paper feed motor.
	Defective MPCB.	Run simulation 02 and check if CN20-14 on the MPCB goes low. If not, replace the MPCB.

Problem	Causes	Check procedures/corrective measures
(4) The image forming motor does not operate. (C210)	Poor contact in the image forming motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Broken image forming motor gear.	Check visually and replace the image forming motor if necessary.
	Defective image forming motor.	Run simulation 02 and check if the image forming motor operates when CN20-6 on the MPCB goes low. If not, replace the image forming motor.
	Defective MPCB.	Run simulation 02 and check if CN20-6 on the MPCB goes low. If not, replace the MPCB.
(5) The scanner motor does not operate. (C310)	Poor contact in the scanner motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective scanner motor.	*Run simulation 23 and check if the scanner motor does not rotate though the motor drive energization signal (pulse) present at CN4-1, CN4-2, CN3-1 and CN3-2 terminals on the SCPCB. If so, replace the scanner motor.*
	Defective SCPCB.	*Run simulation 23 and check if the motor drive coil energization pulse signals are output at CN4-1, 2 and CN3-1, 2 on the SCPCB. If not, replace the SCPCB.*
(6) The mirror motor does not operate. (C430)	Poor contact in the mirror motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective mirror motor.	*Run simulation 23 and check if the mirror motor does not rotate though the motor drive energization signal (pulse) present at CN6-2, 6, 8 and 10 terminals on the SCPCB. If so, replace the mirror motor.*
	Defective SCPCB.	Run simulation 23 and check if the motor drive coil energization pulse signals are output at CN6-2, -6, -8 and -10 on the SCPCB. If not, replace the SCPCB.

Problem	Causes	Check procedures/corrective measures
(7) The lens carriage motor does not operate. (C410)	Poor contact in the lens carriage motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective lens carriage motor.	*Run simulation 23 and check if the lens carriage motor does not rotate though the motor drive energization signal (pulse) present at CN6-1, 5, 7 and 9 terminals on the SCPCB. If so, replace the lens carriage motor.*
	Defective SCPCB.	*Run simulation 23 and check if the motor drive coil energization pulse signals are output at CN6-1, -5, -7 and -9 on the SCPCB. If not, replace the SCPCB.*
(8) The toner feed motor does not operate.	Poor contact in the toner feed motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective toner feed motor.	*Run simulation 61 and check if the toner feed motor does not rotate though the 24 V DC (pulse) is output across CN5-7A and CN5-7B terminals on the MPCB. If so, replace the toner feed motor.*
	Defective MPCB.	*Run simulation 61 and check if 24 V DC (pulse) is output across CN5-7A and 5-7B on the MPCB. If not, replace MPCB.*
(9) The toner agitation motor does not operate.	Poor contact in the toner agitation motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective toner agitation motor.	*Run simulation 61 and check if the toner agitation motor does not rotate though the 24 V DC (pulse) is output across CN5-8A and CN5-8B terminals on the MPCB. If so, replace the toner agitation motor.*
	Defective MPCB.	*Run simulation 61 and check if 24 V DC (pulse) is output across CN5-8A and 5-8B on the MPCB. If not, replace MPCB.*
(10) The cooling fan motor 1 does not operate.	Broken cooling fan motor 1 coil.	Check for continuity across the coil. If none, replace the cooling fan motor 1.
	Poor contact in the cooling fan motor 1 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	With CN20-13 or CN20-11 on the MPCB held low. Check if the cooling fan motor 1 rotates. If it does, replace the MPCB.

Problem	Causes	Check procedures/corrective measures
(11) The cooling fan motor 2 does not operate.	Broken cooling fan motor 2 coil.	Check for continuity across the coil. If none, replace the cooling fan motor 2.
	Poor contact in the cooling fan motor 2 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	With CN6-9A on the MPCB held low. Check if the cooling fan motor 2 rotates. If it does, replace the MPCB.
(12) The developing fan motor does not operate.	Broken developing fan motor coil.	Check for continuity across the coil. If none, replace the developing fan motor.
	Poor contact in the developing fan motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	With CN6-8A on the MPCB held low. Check if the developing fan motor rotates. If it does, replace the MPCB.
(13) The optical section fan motor does not operate.	Broken optical section fan motor coil.	Check for continuity across the coil. If none, replace the optical section fan motor.
	Poor contact in the optical section fan motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	With CN6-12A on the MPCB held low. Check if the optical section fan motor rotates. If it does, replace the MPCB.
(14) The main charger fan motor does not operate.	Broken main charger fan motor coil.	Check for continuity across the coil. If none, replace the main charger fan motor.
	Poor contact in the main charger fan motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	With CN6-10A on the MPCB held low. Check if the main charger fan motor rotates. If it does, replace the MPCB.

Problem	Causes	Check procedures/corrective measures
(15) The fixing unit fan motor does not operate.	Broken fixing unit fan motor coil.	Check for continuity across the coil. If none, replace the fixing unit fan motor.
	Poor contact in the fixing unit fan motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	With CN6-11A on the MPCB held low. Check if the fixing unit fan motor rotates. If it does, replace the MPCB.
(16) The large paper deck left or right lift motor does not operate. (C255)	Broken large paper deck left or right lift motor coil.	Check for continuity across the coil. If none, replace the large paper deck left or right lift motor.
	Poor contact in the large paper deck left or right lift motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Check if 24 V DC is output across CN8-10A (+) and CN8-9A (-) or CN8-5B (+) and CN8-6B (-) on the MPCB right after the large paper deck is installed. If not, replace the MPCB.
(17) The upper paper cassette lift motor does not operate. (C253)	Broken upper paper cassette lift motor coil.	Check for continuity across the coil. If none, replace the upper paper cassette lift motor.
	Poor contact in the upper paper cassette lift motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Check if 24 V DC is output across CN1-2 (+) and CN1-1 (-) on the MPCB right after the upper cassette is installed. If not, replace the MPCB.
(18) The lower paper cassette lift motor does not operate. (C254)	Broken lower paper cassette lift motor coil.	Check for continuity across the coil. If none, replace the lower paper cassette lift motor.
	Poor contact in the lower paper cassette lift motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Check if 24 V DC is output across CN1-4 (+) and CN1-3 (-) on the MPCB right after the lower cassette is installed. If not, replace the MPCB.

Problem	Causes	Check procedures/corrective measures
(19) The main charger cleaning motor does not operate.	Broken main charger cleaning motor coil.	Check for continuity across the coil. If none, replace the main charger cleaning motor.
	Poor contact in the main charger cleaning motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 38 and check if 12 V DC is output across CN5-2B (+) and CN5-1B (-) on the MPCB during forward rotation and -12V DC is output across CN5-1B (+) and CN5-2B (-) on the MPCB during reverse rotation. If not, replace the MPCB.
(20) The feed clutch 1 does not operate.	Broken feed clutch 1 coil.	Check for continuity across the coil. If none, replace the feed clutch 1.
	Poor contact in the feed clutch 1 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN1-5 on the MPCB goes low. If not, replace the MPCB.
(21) The feed clutch 2 does not operate.	Broken feed clutch 2 coil.	Check for continuity across the coil. If none, replace the feed clutch 2.
	Poor contact in the feed clutch 2 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN1-7 on the MPCB goes low. If not, replace the MPCB.
(22) The feed clutch 3 does not operate.	Broken feed clutch 3 coil.	Check for continuity across the coil. If none, replace the feed clutch 3.
	Poor contact in the feed clutch 3 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN3-1 on the MPCB goes low. If not, replace the MPCB.
(23) The feed clutch 4 does not operate.	Broken feed clutch 4 coil.	Check for continuity across the coil. If none, replace the feed clutch 4.
	Poor contact in the feed clutch 4 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN3-3 on the MPCB goes low. If not, replace the MPCB.

Problem	Causes	Check procedures/corrective measures
(24) The feed clutch 5 does not operate.	Broken feed clutch 5 coil.	Check for continuity across the coil. If none, replace the feed clutch 5.
	Poor contact in the feed clutch 5 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN3-5 on the MPCB goes low. If not, replace the MPCB.
(25) The feed clutch 6 does not operate.	Broken feed clutch 6 coil.	Check for continuity across the coil. If none, replace the feed clutch 6.
	Poor contact in the feed clutch 6 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN3-7 on the MPCB goes low. If not, replace the MPCB.
(26) The registration clutch does not operate.	Broken registration clutch coil.	Check for continuity across the coil. If none, replace the registration clutch.
	Poor contact in the registration clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN1-9 on the MPCB goes low. If not, replace the MPCB.
(27) The bypass paper feed clutch does not operate.	Broken bypass paper feed clutch coil.	Check for continuity across the coil. If none, replace the bypass paper feed clutch.
	Poor contact in the bypass paper feed clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN15-7A on the MPCB goes low. If not, replace the MPCB.
(28) The large paper deck paper feed clutch 1 or 2 does not operate.	Broken large paper deck paper feed clutch 1 or 2 coil.	Check for continuity across the coil. If none, replace the large paper deck paper feed clutch 1 or 2.
	Poor contact in the large paper deck paper feed clutch 1 or 2 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN8-2A or CN8-13B on the MPCB goes low. If not, replace the MPCB.

Problem	Causes	Check procedures/corrective measures
(29) The large paper deck conveying clutch does not operate.	Broken large paper deck conveying cluch coil.	Check for continuity across the coil. If none, replace the large paper deck conveying clutch.
	Poor contact in the large paper deck conveying clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN8-4B on the MPCB goes low. If not, replace the MPCB.
(30) The upper paper feed clutch does not operate.	Broken upper paper feed clutch coil.	Check for continuity across the coil. If none, replace the upper paper feed clutch.
	Poor contact in the upper paper feed clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN2-3 on the MPCB goes low. If not, replace the MPCB.
(31) The lower paper feed clutch does not operate.	Broken lower paper feed clutch coil.	Check for continuity across the coil. If none, replace the lower paper feed clutch.
	Poor contact in the lower paper feed clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN2-4 on the MPCB goes low. If not, replace the MPCB.
(32) The transfer charger belt release clutch does not operate.	Broken transfer charger belt release clutch coil.	Check for continuity across the coil. If none, replace the transfer charger belt release clutch.
	Poor contact in the transfer charger belt release clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN6-13A on the MPCB goes low. If not, replace the MPCB.
(33) The bypass solenoid does not operate.	Broken bypass solenoid coil.	Check for continuity across the coil. If none, replace the bypass solenoid.
	Poor contact in the bypass solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 13 and check if CN15-8A on the MPCB goes low. If not, replace the MPCB.

Problem	Causes	Check procedures/corrective measures
(34) The cleaning lamp does not light.	Broken cleaning lamp coil.	Check for continuity. If none, replace the cleaning lamp.
	Poor contact in the cleaning lamp connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 02 and check if CN5-6A on the MPCB goes low. If not, replace the MPCB.
(35) The halogen lamp does not light. (C100)	Broken halogen lamp filament.	Check for continuity. If none, replace the halogen lamp. (see page 3-3-43)
	Optical section thermostat triggered.	See page 3-6-4.
	Poor contact in the CPCB connector terminals.	
	Defective MPCB.	
	Defective CPCB.	
(36) The halogen lamp does not turn off.	Defective MPCB.	If HL CONT (PWM) signal is always output from CN19-5 on the MPCB, replace the MPCB.
	Defective CPCB.	If the halogen lamp does not turn off when no HL CONT (PWM) signal is input to CN7-5 on the CPCB, replace the CPCB.
(37) Fixing heater M or S does not turn on. (C610, C630, C650)	Broken wire in fixing heater M or S.	Check for continuity across each heater. If none, replace the fixing heater M or S. (see page 3-3-112)
	Fixing unit thermostat 1 or 2 triggered.	Check for continuity. If none, remove the cause and replace the fixing unit thermostat.
	Broken fixing unit thermistor wire.	Measure the resistance. If it is ∞, replace the fixing unit thermistor.
	Defective MPCB.	Run simulation 43 and check if CN19-7 and 19-6 on the MPCB go low. If not, replace the MPCB.
	Defective CPCB.	*Run simulation 43 and check if CN7-7 and CN7-6 terminals on the CPCB are "LOW". If so, replace the CPCB.*

Problem	Causes	Check procedures/corrective measures
(38) Fixing heater M or S does not turn off. (C640)	Shorted fixing unit thermistor.	Measure the resistance. If it is 0 Ω, replace the fixing unit thermistor.
	Dirty sensor part of the fixing unit thermistor.	Check visually and clean the thermistor sensor parts.
	Defective MPCB.	If CN19-6 or CN19-7 on the MPCB remains low all the time, replace the MPCB.
	Defective CPCB.	If fixing heaters M and S does not turn off while the MPCB is okay, replace the CPCB.
(39) Main charger is not performed. (C510)	Broken main charger wire.	Replace the main charger wire. (see page 3-3-37)
	The main charger housing leaks.	See page 3-6-3.
	Poor contact in the HVTPCB connector terminals.	
	Defective MPCB.	
	Defective HVTPCB.	
(40) Transfer charging is not performed. (C520)	Broken transfer charger belt.	Replace the transfer charger belt. (see page 3-3-94)
	The transfer charger housing leaks.	See page 3-6-3.
	Poor contact in the TCBPCB connector terminals.	
	Defective MPCB.	
	Defective TCBPCB.	
(41) No developing bias is output.	Shorted or broken developing bias wire.	Check for continuity. If none, repair wiring.
	Poor contact in the HVTPCB connecter terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 02. If no developing bias is output while CN10-21 on the MPCB goes low, replace the MPCB.
	Defective HVTPCB.	If no developing bias output while the MPCB is okay, replace the HVTPCB.

Problem	Causes	Check procedures/corrective measures
(42) The touch panel keys do not work.	Poor contact in the touch panel connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective touch panel or OMPCB.	Run simulation 55. If any keys do not work after the touch panel has been initialized, replace the touch screen or OMPCB.
(43) The message requesting paper to be loaded is shown when paper is present in the large paper deck.	Poor contact in the large paper deck level detection sensor 1 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective large paper deck level detection sensor 1.	If CN8-3A on the MPCB remains low or high when the large paper deck level detection sensor 1 is turned on and off, replace the large paper deck level detection sensor 1.
	Poor contact in the large paper deck level detection sensor 2 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective large paper deck level detection sensor 2.	If CN8-12B on the MPCB remains low or high when the large paper deck level detection sensor 2 is turned on and off, replace the large paper deck level detection sensor 2.
(44) The message requesting paper to be loaded is shown when paper is present in the upper cassette.	Poor contact in the upper paper switch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective upper paper switch.	If CN2-5 on the MPCB remains low or high when the upper paper switch is turned on and off, replace the upper paper switch.
(45) The message requesting paper to be loaded is shown when paper is present in the lower cassette.	Poor contact in the lower paper switch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective lower paper switch.	If CN2-6 on the MPCB remains low or high when the lower paper switch is turned on and off, replace the lower paper switch.

Problem	Causes	Check procedures/corrective measures
(46) The message requesting paper to be loaded is shown when paper is present in the bypass table.	Poor contact in the bypass paper switch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective bypass paper switch.	If CN15-7B on the MPCB remains low or high when the bypass paper switch is turned on and off, replace the bypass paper switch.
(47) The size of paper in the upper cassette is not displayed correctly.	Poor contact in the upper paper length switch *1 or upper paper width switch *1 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective the upper paper length switch *1 or upper paper width switch *1.	Check for continuity across the three switches in the upper paper width switch *1 or the one in the upper paper length switch *1. If there is no continuity when the switch is turned on, replace the upper paper width switch *1 or the upper paper length switch *1.
	Poor contact in the upper cassette detection switch *2 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective the upper cassette detection switch *2.	Check for continuity across the upper cassette detection switch *2. If there is no continuity when the switch is turned on, replace the upper cassette detection switch *2.
(48) The size of paper in the lower cassette is not displayed correctly.	Poor contact in the lower paper length switch*1 or lower paper width switch *1 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective the lower paper length switch *1 or lower paper width switch *1.	Check for continuity across the three switches in the lower paper width switch *1 or the one in the lower paper length switch *1. If there is no continuity when the switch is turned on, replace the lower paper width switch *1 or the lower paper length switch *1.
	Poor contact in the lower paper cassette detection switch *2 connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective the lower paper cassette detection switch *2.	Check for continuity across the lower cassette detection switch *2. If there is no continuity when the switch is turned on, replace the lower cassette detection switch *2.

*1: For inch models only. *2: For metric models only.

Problem	Causes	Check procedures/corrective measures
(49) A paper jam in the paper feed, paper conveying or fixing section is indicated on the touch screen immediately after the main switch is turned on, or cannot be reset.	A piece of paper torn from copy paper is caught around the paper feed switch 1 - 5, the feed switch, the registration switch, or the eject switch.	Check and remove if any.
	Defective paper feed switch 1.	If CN3-27 on the MPCB remains low or high when the paper feed switch 1 is turned on and off, replace the paper feed switch 1.
	Defective paper feed switch 2.	If CN3-13 on the MPCB remains low or high when the paper feed switch 2 is turned on and off, replace the paper feed switch 2.
	Defective paper feed switch 3.	If CN3-14 on the MPCB remains low or high when the paper feed switch 3 is turned on and off, replace the paper feed switch 3.
	Defective paper feed switch 4.	If CN3-19 on the MPCB remains low or high when the paper feed switch 4 is turned on and off, replace the paper feed switch 4.
	Defective paper feed switch 5.	If CN3-20 on the MPCB remains low or high when the paper feed switch 5 is turned on and off, replace the paper feed switch 5.
	Defective feed switch.	If CN3-29 on the MPCB remains low or high when the feed switch is turned on and off, replace the feed switch.
	Defective registration switch.	If CN5-6B on the MPCB remains low or high when the registration switch is turned on and off, replace the registration switch.
	Defective eject switch.	If CN10-2 on the MPCB remains low or high when the eject switch is turned on and off, replace the eject switch.

Problem	Causes	Check procedures/corrective measures
(50) The message requesting covers to be closed is displayed when the front, paper feed, eject covers are closed.	Poor contact in the connector terminals of front cover safety switch, Eject cover safety switch, paper feed cover safety switch 1 or 2.	Check for continuity across the connector terminals. If none, replace them.
	Defective front cover safety switch, Eject cover safety switch, paper feed cover safety switch 1 or 2.	Check for continuity across each switch. If there is no continuity when the switch is on, replace it.
(51) Others.	Wiring is broken, shorted or makes poor contact.	Check for continuity. If none, repair.
	Noise.	Locate the source of noise and remove.

• Feedshift and duplex sections

Problem	Causes	Check procedures/corrective measures
(1) The side registration motor does not rotate. (C220)	Poor contact in the side registration motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Broken side registration motor gear.	Check visually and replace the side registration motor if necessary.
	Broken side registration motor coil.	Check for continuity across the coil. If none, replace the side registration motor.
	Defective MPCB.	Check if the motor drive energization signal (pulse) is output at CN4-12, 13, 14 and 15 terminals on the MPCB during duplex copying. If not, replace the lens carriage motor.
(2) The duplex registration clutch does not rotate.	Broken duplex registration clutch coil.	Check for continuity across the coil. If none, replace the duplex registration clutch.
	Poor contact in the duplex registration clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN4-9 on the MPCB goes low. If not, replace the MPCB.
(3) The duplex paper conveying clutch does not rotate.	Broken duplex paper conveying clutch coil.	Check for continuity across the coil. If none, replace the duplex paper conveying clutch.
	Poor contact in the duplex paper conveying clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN4-10 on the MPCB goes low. If not, replace the MPCB.
(4) The refeed clutch does not rotate.	Broken refeed clutch coil.	Check for continuity across the coil. If none, replace the refeed clutch.
	Poor contact in the refeed clutch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 12 and check if CN4-11 on the MPCB goes low. If not, replace the MPCB.

Problem	Causes	Check procedures/corrective measures
(5) The feedshift solenoid does not operate.	Broken feedshift solenoid coil.	Check for continuity across the coil. If none, replace the feedshift solenoid.
	Poor contact in the feedshift solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 13 and check if CN10-12 on the MPCB goes low. If not, replace the MPCB.
(6) The duplex forward solenoid does not operate.	Broken duplex forward solenoid coil.	Check for continuity across the coil. If none, replace the duplex forward solenoid.
	Poor contact in the duplex forward solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 13 and check if CN4-16 on the MPCB goes low. If not, replace the MPCB.
(7) The duplex paper press solenoid does not operate.	Broken duplex paper press solenoid coil.	Check for continuity across the coil. If none, replace the duplex paper press solenoid.
	Poor contact in the duplex paper press solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 13 and check if CN4-17 on the MPCB goes low. If not, replace the MPCB.
(8) The duplex paper tapping solenoid does not operate.	Broken duplex paper tapping solenoid coil.	Check for continuity across the coil. If none, replace the duplex paper tapping solenoid.
	Poor contact in the duplex paper tapping solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective MPCB.	Run simulation 13 and check if CN4-18 on the MPCB goes low. If not, replace the MPCB.
(9) The message requesting covers to be closed displayed when the eject cover is closed.	Poor contact in eject cover safety switch connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective eject cover safety switch.	Check for continuity across the contacts. If there is no continuity when eject cover safety switch is on, replace it.

Problem	Causes	Check procedures/corrective measures
(10) Others.	Wiring is broken, shorted or makes poor contact.	Check for continuity. If none, replace.
	Noise.	Locate the source of noise and remove.

• RDH

Problem	Causes	Check procedures/corrective measures
(1) The RDH does not operate when the main switch turn on.	RDH and the machine are partial operation control.	Run simulation 06 and reset partial operation.
	Poor contact in the signal cable connector terminals between the RDH and the copier.	Check that the signal cable is connected correctly.
		Check for continuity across the connector terminals. If none, replace them.
	Defective RDH safety switch, original reverse cover safety switch or original eject cover safety switch	Check that each safety switch is turned on/off by each cover opening or closing. Check for continuity across the contacts of each switch. If none, replace the switch.
	Blown fuse in the CPCB.	Check for continuity. If none, remove the cause of blowing and replace the fuse.
	Defective CPCB.	With AC present, check for 24 V DC at CN5-5 on the CPCB and 5 V DC at CN4-3. If none, replace the CPCB.
(2) The original feed motor does not operate.	Poor contact in the original feed motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Broken original feed motor coil.	Check for continuity across the coil. If none, replace the original feed motor.
	Poor contact in the original feed motor pulse sensor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective original feed motor pulse sensor.	Check if the motor drive coil energization pulse signals are output at CN7-8 on the RDHMPCB when the shaft of the original feed motor has rotated. If not, replace the original feed motor.

Problem	Causes	Check procedures/corrective measures
(3) The original conveying motor does not operate.	Poor contact in the original conveying motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Broken original conveying motor coil.	Check for continuity across the coil. If none, replace the original conveying motor.
	Poor contact in the original conveying motor pulse sensor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective original conveying motor pulse sensor.	Check if the motor drive coil energization pulse signals are output at CN7-10 or CN 7-12 on the RDHMPCB when the shaft of the original conveying motor has rotated. If not, replace the original conveying motor.
(4) The original moving motor does not operate.	Poor contact in the original moving motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Broken original moving motor coil.	Check for continuity across the coil. If none, replace the original moving motor.
(5) The original eject motor does not operate.	Poor contact in the original eject motor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Broken original eject motor coil.	Check for continuity across the coil. If none, replace the original eject motor.
	Poor contact in the original eject motor pulse sensor connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective original eject motor pulse sensor.	Check if the motor drive coil energization pulse signals are output at CN3-24 on the RDHMPCB when the shaft of the original eject motor has rotated. If not, replace the original eject motor.

Problem	Causes	Check procedures/corrective measures
(6) The original feed solenoid does not operate.	Broken original feed solenoid coil.	Check for continuity across the coil. If none, replace the original feed solenoid.
	Poor contact in the original feed solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective RDHMPCB.	Check if CN6-14 on the RDHMPCB goes low. If not, replace the RDHMPCB.
(7) The original stopper solenoid does not operate.	Broken original stopper solenoid coil.	Check for continuity across the coil. If none, replace the original stopper solenoid.
	Poor contact in the original stopper solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective RDHMPCB.	*Check if CN6-10 on the RDHMPCB goes low. If not, replace the RDHMPCB.*
(8) The original strike solenoid does not operate.	Defective original strike solenoid installation position adjustment	Readjust. (see page 3-3-159)
	Broken original strike solenoid coil.	Check for continuity across the coil. If none, replace the original strike solenoid.
	Poor contact in the original strike solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective RDHMPCB.	Check if CN6-8 on the RDHMPCB goes low. If not, replace the RDHMPCB.
(9) The original partition lever solenoid does not operate.	Broken original partition lever solenoid coil.	Check for continuity across the coil. If none, replace the original partition lever solenoid.
	Poor contact in the original partition lever solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective RDHMPCB.	Check if CN6-18 on the RDHMPCB goes low. If not, replace the RDHMPCB.
(10) The original eject solenoid does not operate.	Broken original eject solenoid coil.	Check for continuity across the coil. If none, replace the original eject solenoid.
	Poor contact in the original eject solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective RDHMPCB.	Check if CN3-6 on the RDHMPCB goes low. If not, replace the RDHMPCB.

Problem	Causes	Check procedures/corrective measures
(11) The original moving solenoid does not operate.	Broken original moving solenoid coil.	Check for continuity across the coil. If none, replace the original moving solenoid.
	Poor contact in the original moving solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective RDHMPCB.	Check if CN3-4 on the RDHMPCB goes low. If not, replace the RDHMPCB.
(12) The original partition solenoid does not operate.	Broken original partition solenoid coil.	Check for continuity across the coil. If none, replace the original partition solenoid.
	Poor contact in the original partition solenoid connector terminals.	Check for continuity across the connector terminals. If none, replace them.
	Defective RDHMPCB.	Check if CN3-2 on the RDHMPCB goes low. If not, replace the RDHMPCB.
(13) An original jam is indicated immediately after the copier print key is pressed.	Original jam.	Check visually and remove if any.
	Defective original feed switch.	If CN7-18 on the RDHMPCB remains low or high when the original feed switch is turned on and off, replace the original feed switch.
	Defective original registration switch.	If CN7-16 on the RDHMPCB remains low or high when the original registration switch is turned on and off, replace the original registration switch.
	Defective original eject switch.	If CN3-27 on the RDHMPCB remains low or high when the original eject switch is turned on and off, replace the original eject switch.
	Poor contact in the each switch connector terminals.	Check for continuity across the terminals in the each switch. If none, replace them.
	Defective RDHMPCB.	The paper misfeed indicates though each switch and connector are normal. If so, replace the RDHMPCB.
	Defective original length switch 1, 2 or original width switch.	Check for continuity across the original length switch 1, 2 or the original width switch. If there is no continuity when the switch is turned on, replace the original length switch 1, 2 or the original width switch.

Problem	Causes	Check procedures/corrective measures
(14) The RDH does not enter ready mode when originals are placed on the RDH.	*Poor contact in the original set switch.*	Check for continuity across the connector terminals. If none, replace them.
	Defective original set switch.	If CN7-14 on the RDHMPCB remains low when the original set switch is turned on and off, replace the original set switch.
	Poor contact in the original preset switch.	*Check for continuity across the connector terminals. If none, replace them.*
	Defective original preset switch.	If CN7-20 on the RDHMPCB remains low when the original preset switch is turned on and off, replace the original preset switch.
	Defective RDHMPCB.	The original is not detected though the original set switch, original preset switch are normal. If so, replace the RDHMPCB.

3-6-5 Mechanical problems

• Copier

Problem	Causes/check procedures	Corrective measure
(1) No primary paper feed.	Check if the surfaces of the following rollers or pulleys are ditry with paper powder: • *Deck paper feed roller 1, 2, deck paper conveying roller, forwarding pulley, upper and lower paper feed pulley, left feed roller, right feed pulley, vertical conveying roller A, B and C* • Bypass forwarding roller, bypass lower and upper paper feed pulleys	Clean with isopropyl alcohol.
	Check if the upper and lower paper feed pulleys are deformed.	Replace if necessary (see page 3-3-3).
	Check if the forwarding pulley is deformed.	Replace if necessary (see page 3-3-3).
	Electrical problem with the following electromagnetic. • Large deck paper feed clutch 1, 2 and large deck conveying clutch • Feed clutch 1, 2, 3, 4, 5 and 6 • Upper and lower paper feed clutch • Bypass paper feed clutch	See 3-6-4 Electrical problems.
(2) No secondary paper feed.	Check if the surfaces of the following rollers are ditry with paper powder: • Upper registration roller, lower registration roller, upper and lower feed roller	Clean with isopropyl alcohol.
	Electrical problem with the registration clutch.	See page 3-6-50.
(3) Skewed paper feed.	Check if the paper side guide of the large paper deck are deformed.	Check visually and correct or replace if necessary.
	The paper side guide of the large paper deck are installed incorrectly.	Check visually and correct or replace if it is deformed.
	Check if the width guides in the cassette are installed incorrectly.	Check visually and correct or replace if necessary.
	Check if the width guides in the cassette are deformed.	Check visually and correct or replace if it is deformed.
	Check if a pressing spring along the paper conveying path is deformed or out of place.	Correct or replace.

Problem	Causes/check procedures	Corrective measure
(4) The scanner does not travel.	Check if the scanner wire is loose.	Reinstall the wire (see page 3-3-46).
	The scanner motor is defective.	See page 3-6-45.
(5) Multiple sheets of paper are fed at one time.	Check if the deck lower separation pulley is worn.	Replace worn roller (see page 3-3-13).
	Check if the lower paper feed pulley is worn.	Replace worn pulley (see page 3-3-13).
	Check if the bypass lower paper feed pulley is worn.	Replace worn pulley (see page 3-3-12).
	Check if the paper is curled.	Change the paper, it the paper is curled.
(6) Paper misfeed.	Check if the paper is excessively curled.	Change the paper, it the paper is curled.
	The guide plate along the paper conveying path is deformed.	Check visually and correct or replace if it is deformed.
	Check if the upper and lower feed rollers are in contact with each other correctly.	Remedy if necessary. Replace the pressure springs if deformed.
	Check if the upper and lower registration rollers are in contact with each other correctly.	Remedy if necessary. Replace the pressure springs if deformed.
	Check if the lower and upper front fixing guide are deformed.	Remedy or replace.
	Check if the lower and upper front fixing eject guide are deformed.	Remedy or replace.
	Check if the press roller is extremely dirty or deformed.	Check visually and clean or replace (see page 3-3-117).
	Check if the heat roller and claws are in contact with each other correctly.	Repair if the heat roller separation claw spring of the heat roller is off.
	Check if the fixing eject roller and eject pulley are in contact with each other correctly.	Repair it, if the crimp-style spring of the eject pulley is off.
(7) Toner drops on the paper conveying path.	Check if the developing unit is extremely dirty.	Clean the developing unit.

Problem	Causes/check procedures	Corrective measure
(8) Abnormal noise is heard.	Check if the pulleys, rollers or gears move smoothly.	Grease the bearings and gears.
	Check if the following electromagnetic cluthes are installed correctly: • Feed clutch 1, 2, 3, 4, 5, 6, large deck paper feed clutch 1, 2, large paper deck conveying clutch, upper paper feed clutch, lower paper feed clutch and bypass paper feed clutch	Correct.

• Feedshift and duplex sections

Problem	Causes/check procedures	Corrective measure
(1) No refeed.	Check if the surface of the following rollers and pulley are dirty with paper powder; duplex forwarding pulley, refeed roller, switchback roller and duplex upper/lower registration rollers.	Clean with isopropyl alcohol.
	Check if the duplex forwarding pulley is deformed.	Replace (see page 3-3-122)
	Electrical problem with the refeed or duplex registration clutch.	See page 3-6-58.
	Electrical problem with the duplex paper press or paper tapping solenoid.	See page 3-6-59.
(2) paper is refed askew.	Side registration amount adjusted incorrectly.	Run simulation 18 and adjust the side registration clutch. (see page 3-3-134)
(3) Multiple sheets of paper are fed at one time.	Check if the switchback separation belts are worn.	Replace the switchback separation belts if they are worn. (see page 3-3-123)
(4) Paper jam.	Forwarding amount adjusted incorrectly.	Run simulation 18 and adjust the forwarding amount. (see page 3-3-136)
	Check if the paper is excessively curled.	Change the paper, it the paper is curled.
	Deformed guides along the paper conveying path.	Check visually and repair or replace any deformed guides.
	The feedshift solenoid malfunctions.	See page 3-6-59.
	Check if the contact between the feedshift lower roller and feedshift pulley is correct.	Repair if a pressure spring has come off the feedshift pulley.
(5) Abnormal noise is heard.	Check if pulleys, rollers and gears operate smoothly.	Grease the bushings and gears.
	Check if the refeed, duplex registration and duplex conveying clutches are installed correctly.	Correct.

• RDH

Problem	Causes/check procedures	Corrective measure
(1) No original feed from RDH.	Check if the surfaces of the original feed pulley and original separation pulley are stained with paper powder.	Clean with isopropyl alcohol.
	Check if the original feed pulley and original separation pulley are deformed.	Replace (see page 3-3-140, 142.)
	Electrical problem of the original stopper solenoid.	See page 3-6-63.
	Electrical problem with the original feed solenoid.	See page 3-6-63.
	The guide plate along the paper feed path is deformed.	Check visually and correct or replace if it is deformed.
(2) Multiple sheets opf original are fed from RDH at one time.	Check if the original feed pulley, original separation pulley and original separation belt are worn.	Replace worn pulleys or belt (see page 3-3-140, 142, 143).
	Check if the original separation belt loosen.	Check the spring of the original separation tension shaft. If any, replace.
	The guide plate along the paper feed path is deformed.	Check visually and correct or replace if it is deformed.
	Check if the original is excessively curled.	Change the original if necessary.
(3) Skewed original feed from RDH.	Poor attachment of the RDH.	Adjust. (see page 3-3-163)
	Poor attachment of the original cursors.	Check visually and correct or replace if necessary.
	Check if the original registration/left switchback roller and original registration roller contact each other correctly.	If the crimp-style spring of the right original registration roller is off. If so, remedy.
	Check if the original switchback pulley and original registration/left switchback roller contact each other correctly.	If the crimp-style spring of the original switchback pulley is off. If so, remedy.
	Check if the original conveying belt is stained or worn.	Clean if it is stained and replace if it is worn. (see page 3-3-145)
	Check if the original conveying belt is off from the original conveying belt guide.	Remedy.

Problem	Causes/check procedures	Corrective measure
(3) Skewed original feed from RDH.	Check if the original conveying belt loosen.	Check the spring of the original conveying pressure pulley is off. If so, remedy.
	Defective original conveying on the contact glass.	Check.
	The guide plate along the paper feed or paper conveying path are deformed.	Check visually and correct or replace if it is deformed.
(4) Original misfeed.	Check if the original is excessively curled.	Change the original if the original is curled.
	The guide plate along the paper conveying path is deformed.	Check visually and correct or replace if it is deformed.
	Defective otiginal feed solenoid.	See page 3-6-63.
	Defective original stopper solenoid.	See page 3-6-63.
	Defective original strike solenoid.	See page 3-6-63.
	Defective otiginal eject solenoid.	See page 3-6-63.
	Original size indicator malfunctions.	Check the operation of the original size indicator.
	Defective original feed switch.	See page 3-6-64.
	Defective original registration switch.	See page 3-6-64.
	Defective original eject switch.	See page 3-6-64.
	Check if the surfaces of the original feed switch, original length switch 1 or 2 are stained with paper powder.	Clean.
	Original size miss detection.	See page 3-6-64.
(5) Abnormal noise is heard.	Check if the pulleys, rollers or gears move smoothly.	Grease the bearings and gears.