

SK-1

Service Manual

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GENERAL



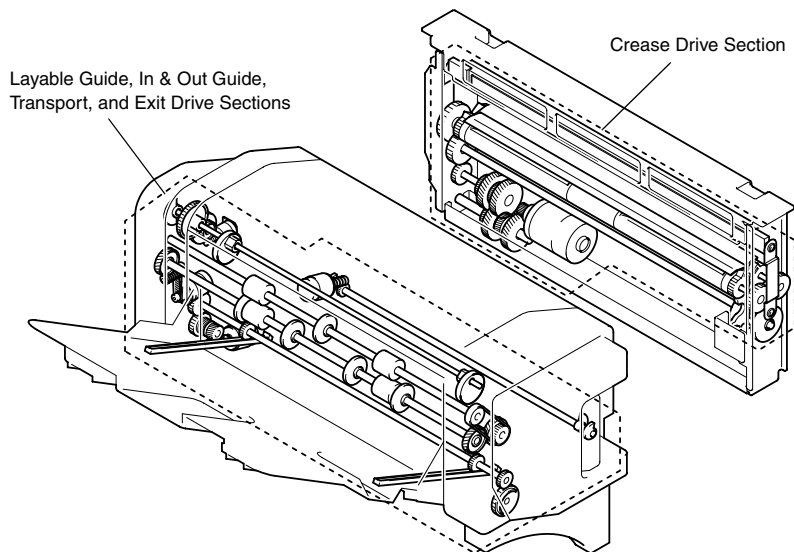
1. Specifications

Name	: Saddle Kit (SK-1)
Type	: Built into the Finisher
Installation	: Screwed to the Finisher
Document Alignment	: Center baseline
Staple Function	: Center parallel two-point binding
	Number of Bound Sheets: 2 to 15 sheets
Paper	

Paper Size	Paper Type	Capacity
B5L to A3L Maximum: 297 mm x 432 mm 11-3/4" x 17" Minimum: 182 mm x 257 mm 7-1/4" x 10"	Plain paper 16lb. to 24lb. (60 to 90 g/m ²) Recycled paper 16lb. to 24lb. (60 to 90 g/m ²)	200 sheets or 20 copies

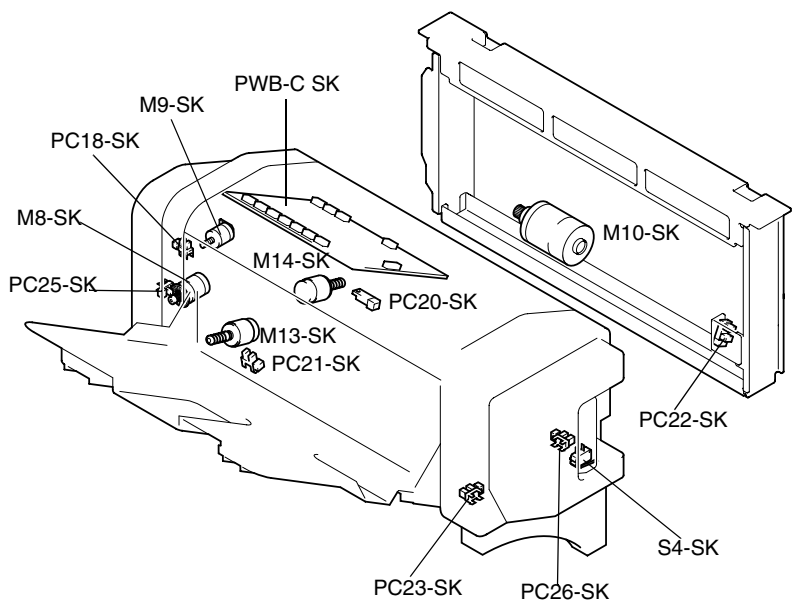
Power Requirements	: DC 24 V (supplied from the Finisher) DC 5 V
Max. Power Consumption	: 9.5 W or less
Dimensions	: 576(W) x 478(H) x 203(D) mm 22-3/4"W x 19"H x 8"D
Weight	: 9.3 kg (20-1/2 lb)
Operating Environment	: Conforms to the operating environment of the copier.
Consumables	: Staples 2000 (MS-2C) x 2

2. Revolving Parts Layout Drawing



4511G001AB

3. Electric Parts Layout Drawing



4511G002AA

Symbol	Name	Symbol	Name
PWB-C SK	Control Board	PC20-SK	Saddle Exit Sensor
M8-SK	Saddle Exit Motor	PC21-SK	Saddle Tray Empty Sensor
M9-SK	Saddle Exit Open/Close Motor	PC22-SK	Crease Roller Home Position Sensor
M10-SK	Crease Motor	PC23-SK	In & Out Guide Home Sensor
M13-SK	In & Out Guide Motor	PC25-SK	Transport Pulse Sensor
M14-SK	Layable Guide Motor	PC26-SK	Layable Guide Home Sensor
PC18-SK	Saddle Exit Roller Home Position Sensor	S4-SK	Saddle Interlock Switch

Test Mode Operations

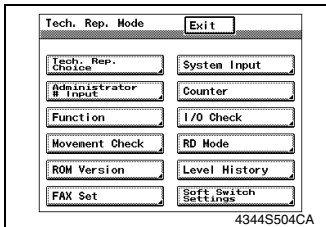


1. Test Mode Operations

- The Test Mode is performed from the copier's Tech. Rep. Mode.

1-1. Entering the Tech. Rep. Mode

1. Press the Utility key.
2. Touch [Total Check].



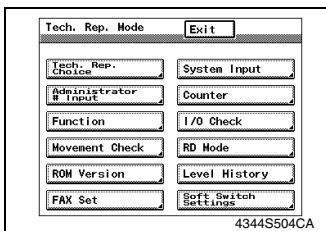
3. Press the following keys in order: Stop → 0 → 0 → Stop → 0 → 1.

NOTE

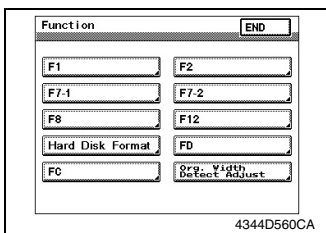
- Be sure to keep the display procedure for the Tech. Rep. Mode from any unauthorized persons not involved with service operations.

1-2. Entering Function Mode

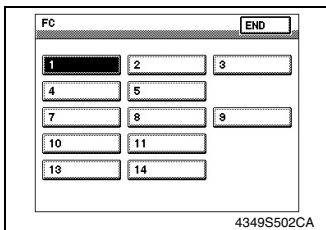
1. Display the Tech. Rep. Mode screen.



2. Touch [Function].



3. Touch [FC].



4. Touch [8] or [9].

1-3. Function Modes

The following 2 items are available under “FC” in the Function Mode.

- 8: Creasing Unit movement mode
- 9: Saddle Unit exit open/close mode

(1) Creasing Unit Movement Mode

- Performs the creasing drive once.
 - Raises the Layable guide.
 - Stops after the predetermined time.
 - Lowers the Layable guide.
 - The operation is finished.

(2) Saddle Unit Exit Open/Close Mode


- Opens the Saddle Exit after the Saddle Exit is opened and closed.
 - Stops after the predetermined time.
 - The Saddle Exit closes.
 - The Saddle In & Out Guide advances.
 - Stops after the predetermined time.
 - The Saddle In & Out Guide retracts.
 - The operation is finished.

DIS/REASSEMBLY, ADJUSTMENT



1. Maintenance Schedule

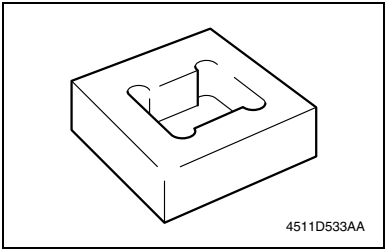
- To ensure that the copier produces good copies and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.

PM Parts	Job		Item Used for Cleaning	Qty	Ref. Page
	Clean	Replace			
Rollers and rolls	30K	—	Alcohol, water, and soft cloth	—	 D-16

CAUTIONS

- *K = 1,000 copies*
 - *The contents of this maintenance schedule are subject to change without notice.*
 - *For part numbers, see Parts Manual and Parts Modification Notice.*
-

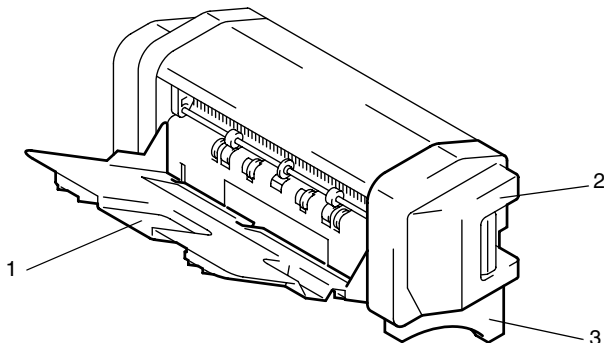
2. Adjustment Jig



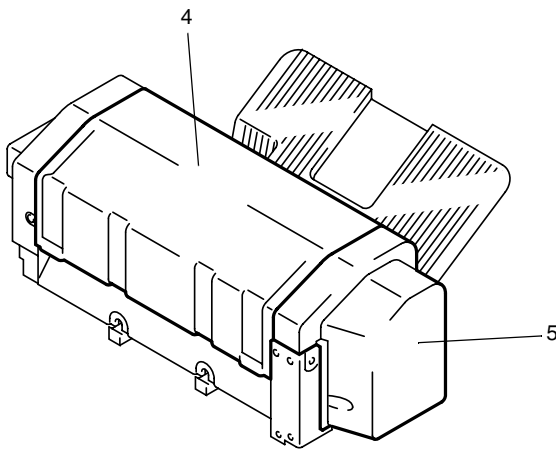
Stapler Unit Positioning Jig

3. Disassembly/Cleaning

3-1. Removal of the Outer Cover



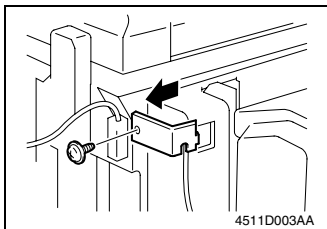
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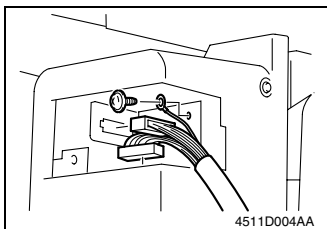
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No.	Name	Removal Procedure
1	Paper Output Tray	Align the cutout and remove the drawer.
2	Front Cover	Remove two screws.
3	Lower Front Cover	Remove one screw.
4	Upper Cover	Remove the Front and Rear Covers. → Remove four screws.
5	Rear Cover	Remove two screws.

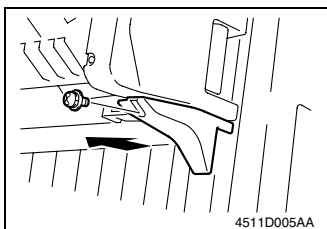
3-2. Removal of the Saddle Unit



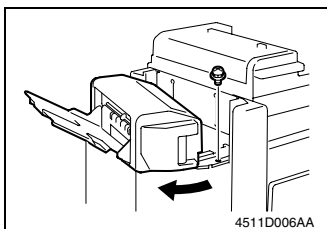
1. Remove one screw and remove the Connector Cover.



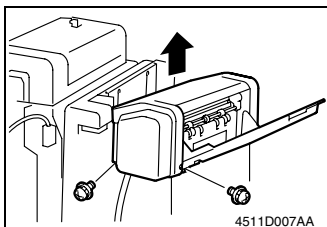
2. Remove one screw and the ground wire.
3. Unplug two connectors.



4. Remove one screw and the Lower Front Cover.



5. Pull the lock release lever and open the Saddle Unit.
6. Remove one screw.



7. Remove two screws and the Saddle Unit.

3-3. Removal of the Crease Unit

1. Remove the Saddle Unit.

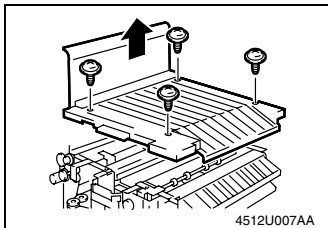
☞ See “Removal of the Saddle Unit” (D-3).

2. Remove the Sorted Copy Tray.

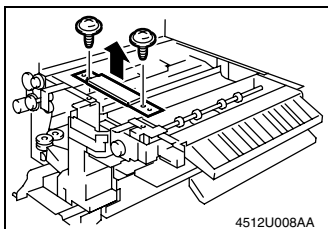
☞ See FN-117 “Disassembly/Assembly” (D-4).

3. Remove the Horizontal Transport Unit.

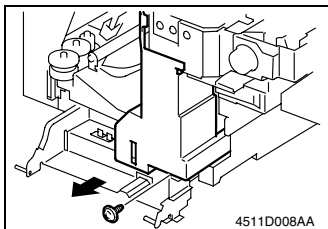
☞ See FN-117 “Disassembly/Assembly” (D-5).



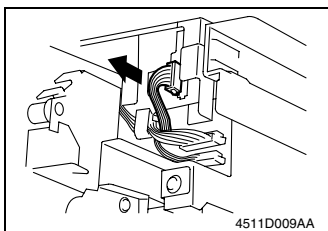
4. Remove four screws and the Upper Cover.



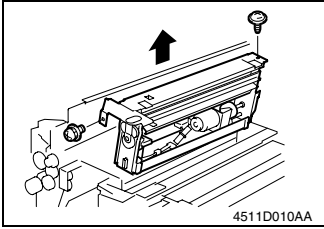
5. Remove two screws and the Reinforcement Bracket.



6. Remove one screw and the Front Cover.



7. Unplug one connector.



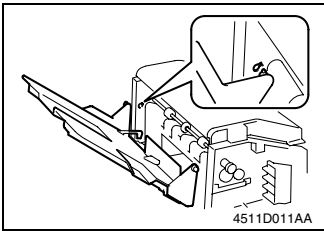
8. Remove two screws and the Crease Unit.

3-4. Removal of the Stapler Unit

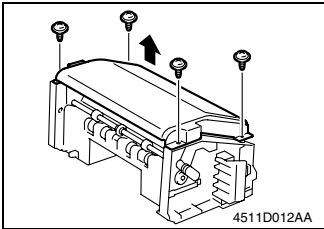
1. Remove the Saddle Unit.

See "Removal of the Saddle Unit" (D-3).

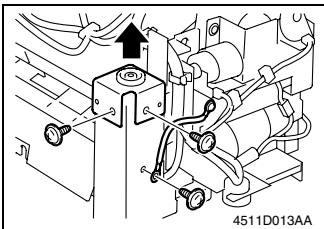
2. Remove the Front and Rear Cover.



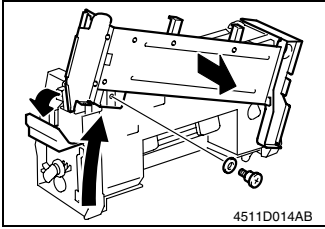
3. Align the tab and the cutout position and remove the Paper Output Tray.



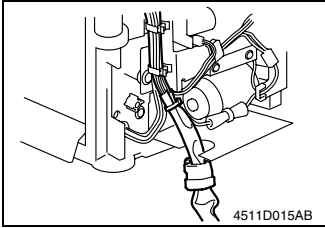
4. Remove four screws and the Upper Cover.



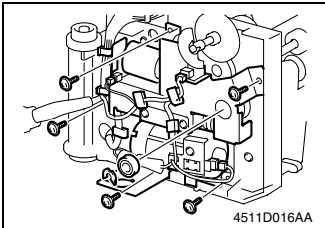
5. Remove one screw and the ground wire.
6. Remove two screws and the holder.



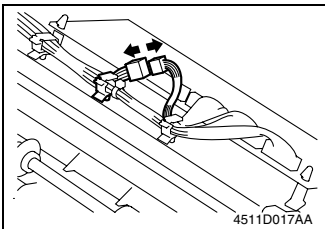
7. Release the lock release lever and slide the Saddle Unit Mounting Plate.
8. Remove one shoulder screw and the Saddle Unit Mounting Plate.



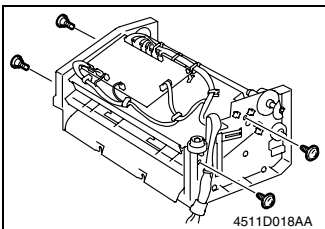
9. Remove the harness clamp from the Metal Bracket.



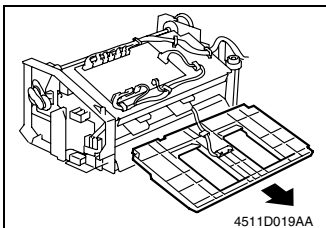
10. Remove the harness from the wire saddle.
11. Unplug four connectors.
12. Remove one C-ring and remove the bearing.
13. Remove five screws and the Drive Unit. AA



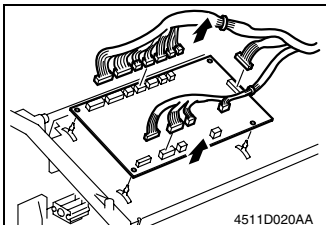
14. Remove the wire saddle and unplug one connector.



15. Remove two screws and two shoulder screws.

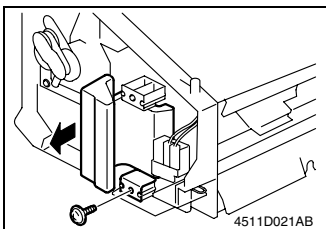


16. Remove the empty tray.

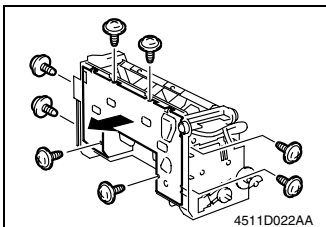


17. Unplug all the connectors on the Control Board.

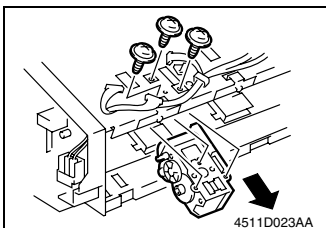
18. Remove the PWB support, and then remove the Control Board.



19. Remove one screw and the lock release lever.

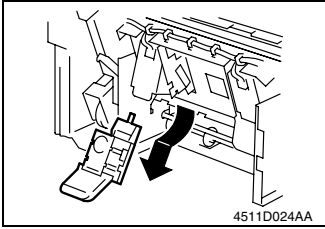


20. Remove eight screws, and the Lower Cover.

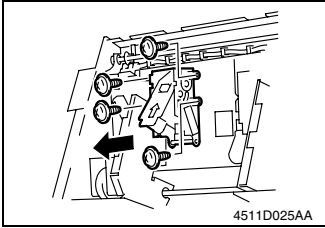


21. Remove the wire saddle and unplug one connector.

22. Remove three screws and Clincher 1.



23. Remove the Staple Cartridge 1.



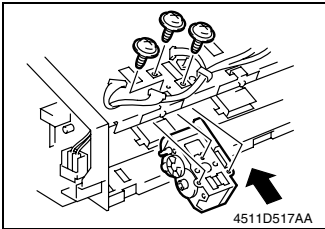
24. Remove four screws and Stapler 1.

CAUTION

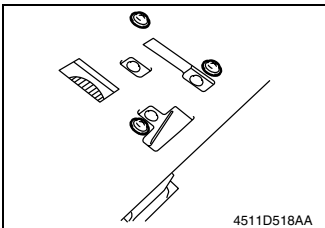
- To replace Clincher 2 and Stapler 2, repeat steps 21 to 24.
-

Precaution for Clincher Reinstallation

- When the Clincher is installed, the position of the Stapler and the Clincher will be misaligned. Be sure to perform the following adjustment.

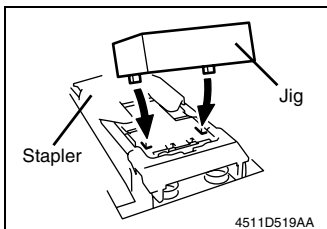


1. Use three screws to temporary fix the Clincher.



2. Loosen one screw of the stopper.

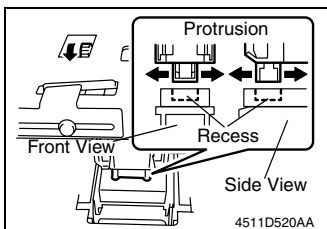
3. Loosen three screws of the Clincher.



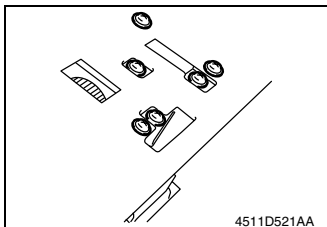
4. Aligning the protrusions of the jig with the recesses in the Stapler, fit the jig to the Stapler.

NOTE

- *Make sure that the protrusions of the jig properly rest in the recesses.*
-



5. Turn the gear of the Clincher and then slide the Clincher Assy so that the protrusion of the Clincher fits into the recess in the jig.



6. Tighten six screws.

NOTE

- *Turn the gear again and check to see that the protrusion of the Clincher smoothly fits into the recess in the jig.*
-

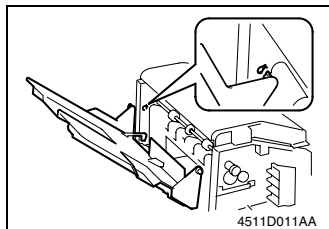
7. Turn the gear and remove the jig.
-

3-5. Removing the In & Out Guide Drive Motor

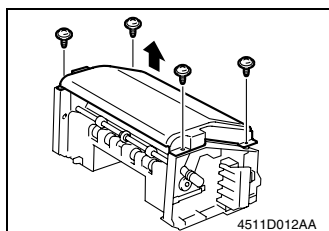
1. Remove the Saddle Unit.

☞ See "Removal of the Saddle Unit" (D-3).

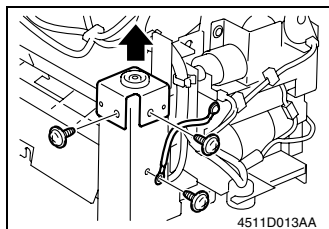
2. Remove the Front and Rear Cover.



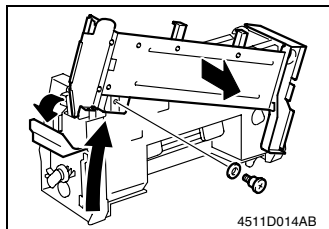
3. Align the tab and the cutout position and remove the Paper Output Tray.



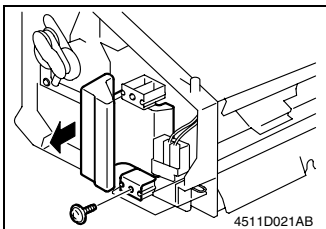
4. Remove four screws and the Upper Cover.



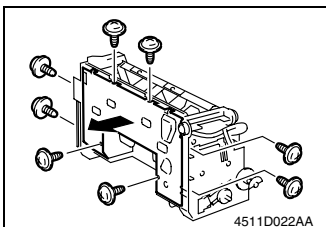
5. Remove one screw and the ground wire.
6. Remove two screws and the holder.



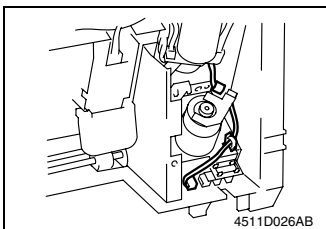
7. Release the lock release lever and slide the Saddle Unit Mounting Plate.
8. Remove one shoulder screw and the Saddle Unit Mounting Plate.



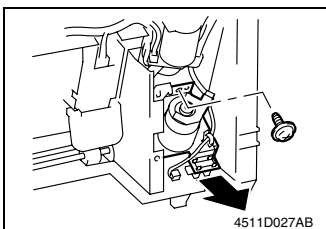
9. Remove one screw and the lock release lever.



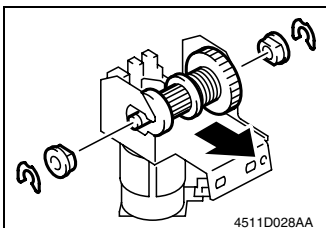
10. Remove eight screws, and the Lower Cover.



11. Remove the wire saddle and unplug two connectors.

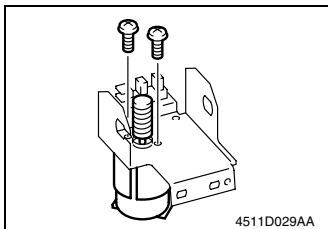


12. Remove one screw, and the In & Out Guide Drive Motor Assy.



13. Remove two C rings.

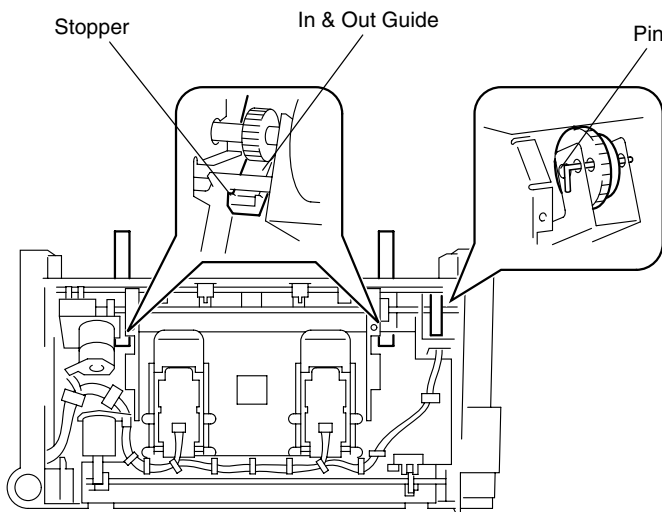
14. Remove two bushings and the Clutch Gear Assy.



15. Remove two screws, and the In & Out Guide Drive Motor.

Precaution for In & Out Guide Drive Motor Reinstallation

1. Press the two In & Out Guides in and check that they touch the stopper simultaneously.
2. Check that pins can be inserted through the positioning holes (3 holes) of the In & Out Guide Sensor Assy.



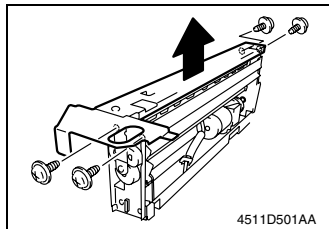
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3. Use one screw to secure the In & Out Guide Drive Motor.
-

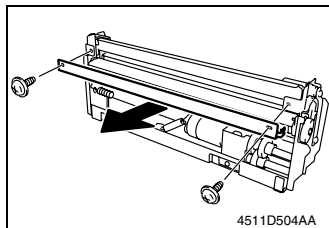
3-6. Removal of the Crease Roller

1. Remove the Crease Unit.

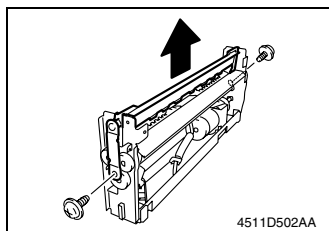
☞ See "Removal of the Crease Unit" (D-4)



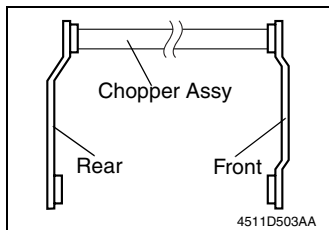
2. Remove four screws and the Upper Plate.



3. Remove two screws, and the guide plate.

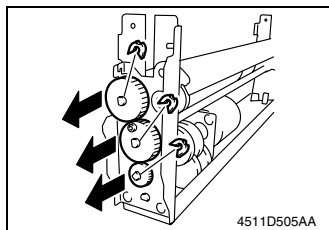


4. Remove two screws and the Chopper Assy.

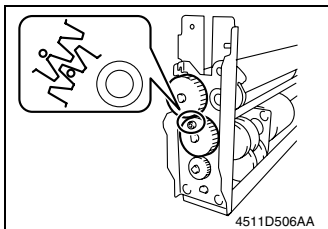


Precaution for Reinstallation of the Chopper Assy

- Install the Chopper Assy in the direction shown in the left figure.

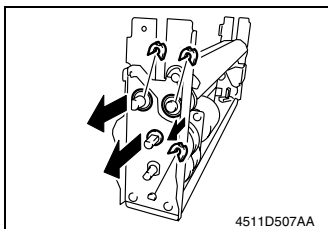


5. Remove three C-rings and three gears.



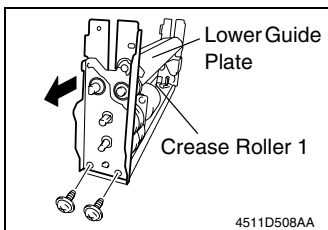
Precaution for Gear Reinstallation

- Install the gear so that the mark is aligned to the position shown in the left figure.

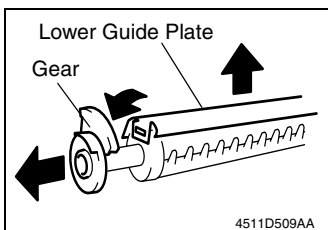


6. Remove three C-rings and two bearings.

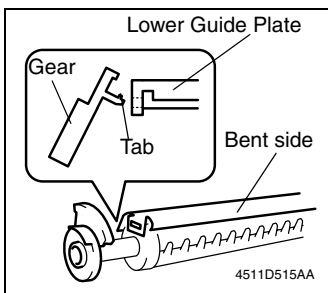
7. Remove one bushing.



8. Remove two screws and the Rear Holder.

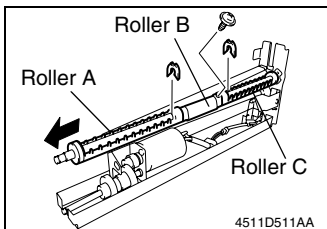


9. Remove the gear of Crease Roller 1 and remove the Lower Guide Plate.



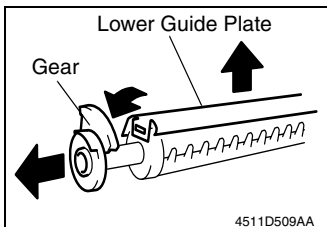
Precaution for Gear Reinstallation

- When installing the gear to the Lower Guide Plate, insert the gear at an angle and use care not to break the tabs.
- Install the Lower Guide Plate as shown on the left.
- Install the gear of Crease Roller 1 so that it is above one gear tooth.

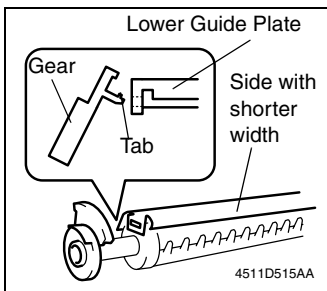


10. Remove one screw.

11. Remove two C-clips and remove the Crease Roller A, B, and C.

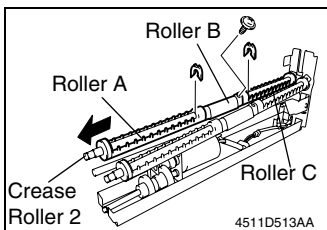


12. Remove the gear of Crease Roller 2 and remove the Lower Guide Plate.



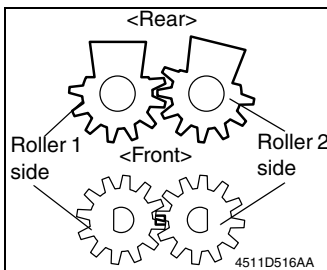
Precaution for Gear Reinstallation

- When installing the gear to the Lower Guide Plate, insert the gear at an angle and use care not to break the tabs.
- Install the Lower Guide Plate as shown on the left.



13. Remove one screw.

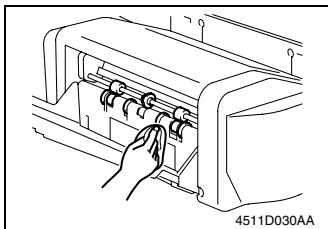
14. Remove two C-clips and remove the Crease Roller A, B, and C.



Precaution for Roller 1 and 2 Reinstallation

- Install the rear gear of Crease Roller 2 so that it is above one gear tooth.
- Align the mark of the front gear.

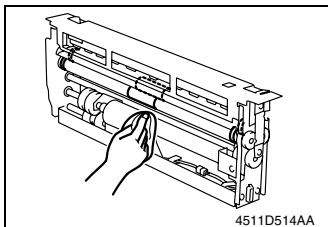
3-7. Cleaning of the Roller and Roll



1. Using a soft cloth dampened with alcohol, wipe the roller and roll.

2. Remove the Crease Unit.

 See "Removal of the Crease Unit" (D-4)



3. Using a soft cloth dampened with alcohol, wipe the roller and roll.

4. Adjustment

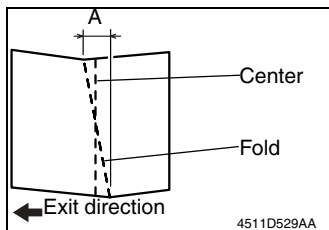
4-1. Fold Angle Adjustment

CAUTION

Make this adjustment after any of the following procedures has been performed.

- When the Crease Unit has been replaced.
 - When a slant occurs in the crease.
-

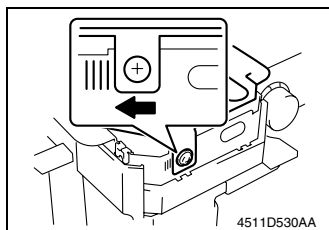
1. Enter the Crease mode and make a copy. (A3/11" x 17" Size)



2. Fold the output paper and half and check whether section A of the paper is aligned.

Specification: 0 ± 1.5 mm

3. If the fold position is slanted as shown on the left, make the following adjustment.



4. Open the Front Door, loosen one adjustment screw, and move the Crease Unit to the left to make the adjustment.

* If the fold position is slanted opposite to the figure of step 3, move the Crease Unit to the right to make the adjustment.

5. Make another copy and check the fold position.

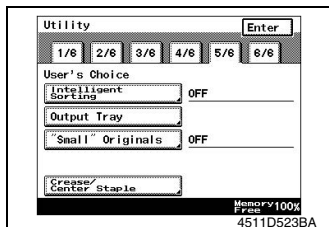
4-2. Fold Position Adjustment

CAUTION

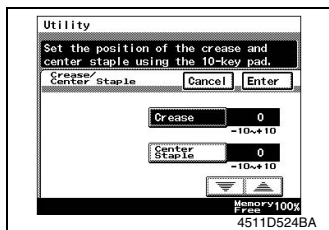
Make this adjustment after any of the following procedures has been performed.

- When the Crease Unit has been replaced.
- When a deviation occurs in the crease.
- When fold angle adjustment has been made.

1. Enter the Crease mode and make a copy. (A3/11" x 17" Size)



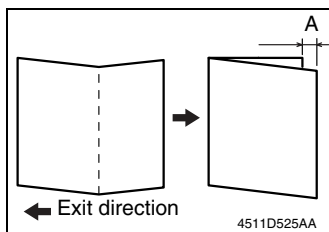
2. Press the Utility key and touch User's choice key.



3. Touch the 5/6 tab.

4. Touch the Crease key.

* Check the copy of step 1 and make the following adjustment.

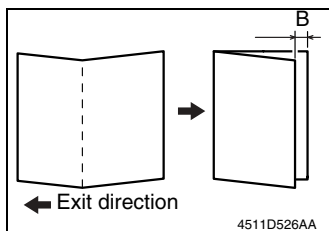


If the fold is offset as shown on the left.

5. Measure the length of A and touch the ▲ key.

Specification: 0 ± 1.5 mm

Adjustment range: 0 to +10 (1increment 0.5 mm)



If the fold is offset as shown on the left.

6. Measure the length of B and touch the ▼ key.

Specification: 0 ± 1.5 mm

Adjustment range: 0 to -10 (1increment 0.5 mm)

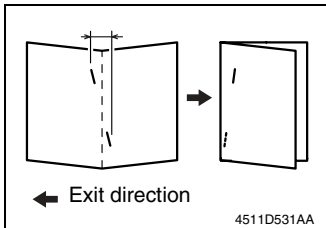
7. Touch END, make another copy, and check the deviation.

4-3. Center Staple Angle Adjustment

CAUTION

Make this adjustment after any of the following procedures has been performed.

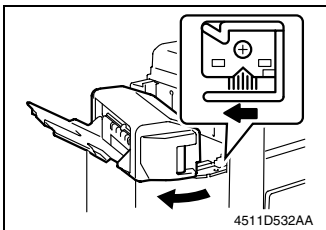
- When Staple Unit 1 or 2 has been replaced.
- When a slant occurs in the position of the center staple.



1. Set to Booklet Creation + 2-point Staple and Crease mode and make a copy. Check whether the staple position is aligned correctly.

Specification: 0 ± 1.5 mm

2. If the staple position is slanted as shown on the left, make the following adjustment.



3. Release the lock release lever of the Saddle Unit.
 4. Loosen one adjustment screw and move the lock lever to the left to make the adjustment.
- * If the staple position is slanted opposite to the figure of step 2, move the lock lever to the right to make the adjustment.

5. Make another copy and check the staple position.

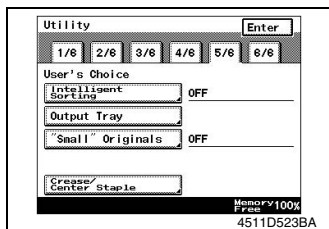
4-4. Center Staple Position Adjustment

CAUTION

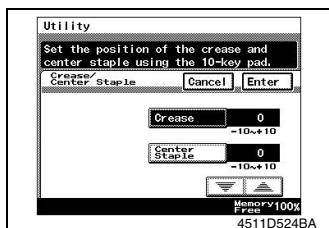
Make this adjustment after any of the following procedures has been performed.

- When Staple Unit 1 or 2 has been replaced.
- When center staple position is misaligned.
- When center staple angle adjustment has been made.

1. Make a copy in the Center Staple mode.
2. Fold the paper in half at the center.

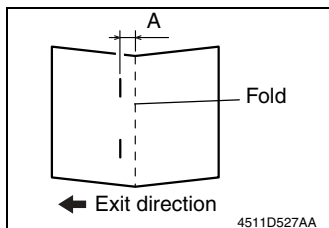


3. Press the Utility key and touch User's choice key.



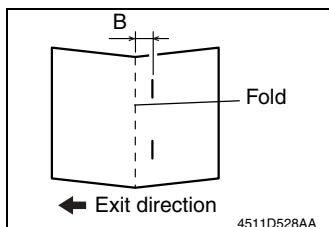
4. Touch the 5/6 tab.
5. Touch the Center Staple key.

* Check the copy of step 1 and make the following adjustment.



If the staple position is offset as shown on the left

6. Measure the length of A and touch the ▲ key.
- Specification: 0 ± 1.5 mm
Adjustment range: 0 to +10 (1increment 0.5 mm)



If the staple position is offset as shown on the left

7. Measure the length of A and touch the ▼ key.
- Specification: 0 ± 1.5 mm
Adjustment range: 0 to +10 (1increment 0.5 mm)

8. Touch END, make another copy, and check the deviation.

Troubleshooting



1. Introduction

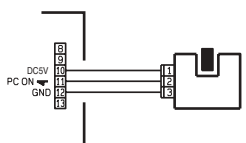
- Information required for troubleshooting and steps that must be performed are described in this chapter.

1-1. Electrical Components Check Procedure

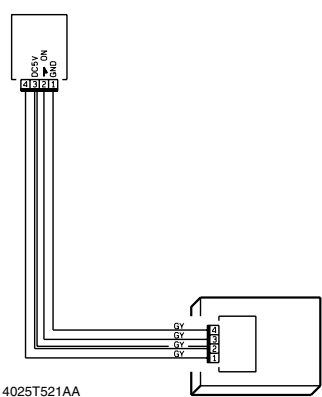
- If a paper misfeed or malfunction occurs, perform the following operation to check the condition of the electrical components.

(1) Sensor

Step	Check	Result	Action
1	Does the input signal of the control board change when the sensor light is interrupted? (H→ L, L→H)	NO	Replace the sensor.
		YES	Replace the control board.

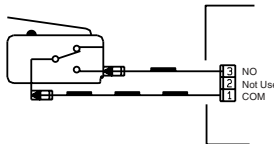


4025T520AA

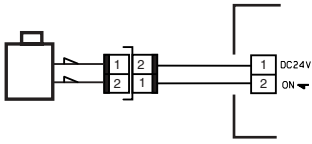


4025T521AA

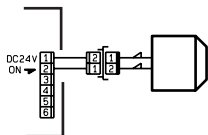
(2) Switch

Step	Check	Result	Action
1	Does the input signal (NO) of the control board change from L to H when the switch is turned on?	NO	Replace the switch.
		YES	Replace the control board.
<div></div>			
4025T523AB			

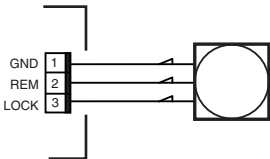
(3) Solenoid

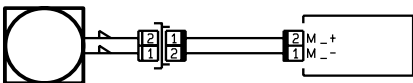
Step	Check	Result	Action
1	Does the output signal of the control board change from H to L when the solenoid is activated?	NO	Replace the control board.
		YES	Replace the solenoid.
<div></div> <p>4025T522AA</p>			

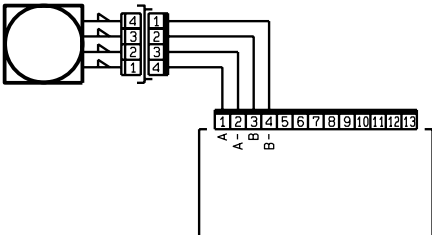
(4) Clutch

Step	Check	Result	Action
1	Does the output signal of the control board change from H to L when the clutch is activated?	NO	Replace the control board.
		YES	Replace the clutch.
<div></div> <p>4025T528AA</p>			

(5) Motor

Step	Check	Result	Action
1	Does the LOCK signal of the control board switch to H when the machine goes into standby?	NO	Replace the control board. Replace the motor.
2	Does the REM signal of the control board change from H to L when the motor is turned on?	YES	Replace the motor.
		NO	Replace the control board.
<div><p>4025T526AA</p></div>			

Step	Check	Result	Action
1	Does the input signal of the control board change from H to L when the motor is turned on? (Input signals differ according to the direction of rotation)	YES	Replace the motor.
		NO	Replace the control board.
<div></div> <p>4025T525AA</p>			

Step	Check	Result	Action
1	Are the relay connector of the motor and the print jack of the control board correctly connected?	YES	Replace the motor or the control board.
		NO	Connect the connector or the print jack.
<div></div> <div>4025T527AA</div>			

2. I/O CHECK

- For an easy and safe operation check of the sensors, the sensor input data is checked when the copier is in standby (including when a misfeed or a malfunction occurs or when a part is not correctly closed) to determine if signals are properly input.
1. Display the Tech. Rep. Mode screen.
 2. Touch [I/O CHECK].
 3. Touch [Finisher].
 4. Touch [Next] two times.
 5. Using a sheet of paper, activate the sensor and check the display in the Touch Panel.
(Paper present: 1; Paper not present: 0)

Finisher			Back	Next	END
Saddle			Layable Guide		
Exit(Saddle)			Home(Saddle)		
			0		
Saddle Empty					
			0		
Saddle Reset					
			0		
Staple Home 1					
(Saddle)					
			0		
Self Priming 1					
(Saddle)					
			0		
Staple Empty 1					
(Saddle)					
			0		
Staple Home 2					
(Saddle)					
			0		
Self Priming 2					
(Saddle)					
			0		
Staple Empty 2					
(Saddle)					
			0		
Home(Saddle					
In & Out Guide)					
			0		

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2-1. I/O Check List

Symbol	Panel Display	Parts/Signal Name	Operation Characteristics/ Panel Display		Input Board	CN/PJ No.
			1	0		
PC20-SK	Exit (Saddle)	Saddle Exit Sensor	Paper present	Paper not present	Control Board (PWB-C SK)	PJ9C SK-8
PC21-SK	Saddle Empty	Saddle Tray Empty Sensor	Paper present	Paper not present		PJ9C SK-3
S4-SK	Saddle Reset	Saddle Exit Roller Home Position Sensor	Open	Closed		PJ6C SK-3
—	Staple Home 1 (Saddle)	Staple Home Position Sensor 1	Blocked	Unblocked		PJ7C SK-8
—	Self Priming 1 (Saddle)	Self-Priming Sensor 1	Blocked	Unblocked		PJ11C SK-2
—	Staple Empty 1 (Saddle)	Staple Empty Detection Sensor 1	Blocked	Unblocked		PJ8C SK-7
—	Staple Home 2 (Saddle)	Staple Home Position Sensor 2	Blocked	Unblocked		PJ12C SK-4
—	Self Priming 2 (Saddle)	Self-Priming Sensor 2	Blocked	Unblocked		PJ12C SK-2
—	Staple Empty 2 (Saddle)	Staple Empty Detection Sensor 2	Blocked	Unblocked		PJ9C SK-8
PC23-SK	Home (Saddle In & Out Guide)	In & Out Guide Home Sensor	Blocked	Unblocked		PJ10C SK-3
PC26-SK	Layable Guide Home (Saddle)	Layable Guide Home Sensor	Blocked	Unblocked		PJ10C SK-6

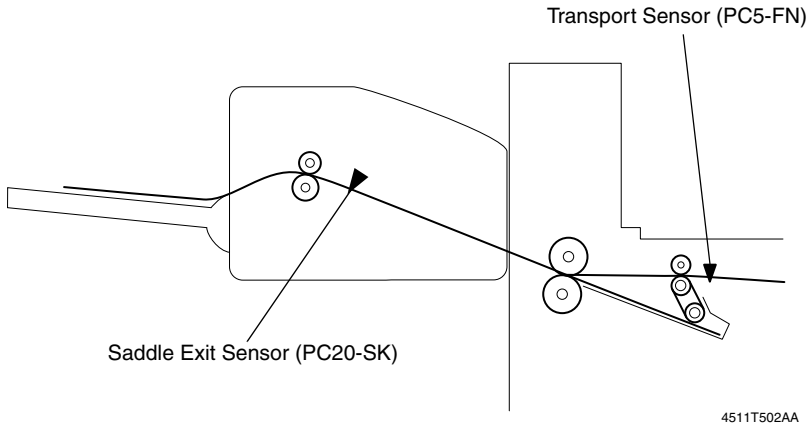
3. Misfeed Detection/Troubleshooting Procedures

3-1. Initial Checks

- When a paper misfeed occurs, first perform the following initial checks.

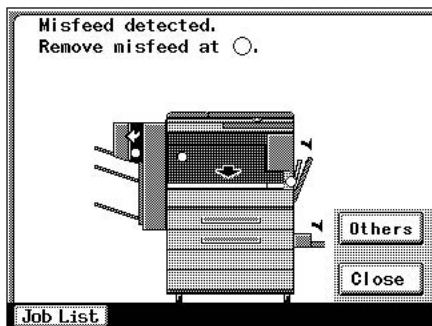
Check Item	Action
Does paper meet product specifications?	Replace paper.
Is the paper curled, wavy, or damp?	Replace paper. Instruct the user on the correct paper storage procedures.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Remove object or replace the damaged paper path.
Are the Paper Separator Fingers dirty, deformed, or worn?	Clean or replace the defective Paper Separator Finger.
Are rolls/rollers dirty, deformed, or worn?	Clean or replace the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators operating correctly?	Correct or replace the defective actuator.

3-2. Misfeed-Detecting Sensor Layout



3-3. Misfeed Detected

When a paper misfeed occurs, the misfeed message, misfeed location (⊗), and paper location (○) are displayed on the Touch Panel of the copier.



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3-4. Misfeed Detection Timing/Troubleshooting Procedures

(1) Creasing Section Misfeed

<Detection Timing>

Type	Description
Creasing Section misfeed detection	The Entrance Sensor (PC4-FN) is not blocked even after the set period of time has elapsed after the Entrance Motor (M3-FN) is energized (beginning of backward rotation operation).
	The Entrance Sensor (PC4-FN) is not unblocked even after the set period of time has elapsed after the Entrance Motor (M3-FN) is energized (beginning of forward rotation operation).

Action

Relevant Electrical Components	
Finisher Entrance Motor (M3-FN) Finisher Entrance Sensor (PC4-FN)	Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Initial checks	ES T-6	—	—
2	PC4-FN sensor check	ES T-1	PWB-A FN PJ25A FN-4	B-7
3	PWB-C SK replacement	—	—	D-5



(2) Staple Unit Misfeed

<Detection Timing>

Type	Description
Staple Unit misfeed detection	The Staple Home Position Sensor in the Staple Unit is not blocked even after the set period of time has elapsed after the Staple Motor rotates forward, and then the Staple Motor rotates backward, and the Staple Home Position Sensor in the Staple Unit is blocked within the set period of time.

Action

Relevant Electrical Components	
Staple Unit 1 Staple Unit 2	Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Initial checks	 T-6	—	—
2	Drive Coupling Section check	—	—	—
3	I/O CHECK	 T-5	—	—
4	Staple Unit 1 replacement	—	—	C-2
5	Staple Unit 2 replacement	—	—	A-2
6	PWB-C SK replacement	—	—	D-5

(3) Paper Bundle Exit Misfeed

<Detection Timing>

Type	Description
Paper Bundle misfeed detection	The Storage Tray Detecting Sensor (PC8-FN) is not unblocked even after the set period of time has elapsed after the Exit Motor (M1-FN) is energized.
	The Saddle Exit Sensor (PC20-SK) is not blocked even after the set period of time has elapsed after the Exit Motor (M1-FN) is energized.
	The Saddle Exit Sensor (PC20-SK) is not unblocked even after the set period of time has elapsed after the Saddle Exit Sensor (PC20-SK) is blocked.

Action

Relevant Electrical Components	
Finisher Exit Motor (M1-FN) Saddle Transport Motor (M8-SK) Finisher Storage Tray Detecting Sensor (PC8-FN)	Saddle Exit Sensor (PC20-SK) Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Initial checks	ES T-6	—	—
2	PC8-FN sensor check	ES T-1	PJ13A FN-8	F-7
3	PC20-SK sensor check	ES T-1	PJ19C SK-8	B-7
4	PWB-C SK replacement	—	—	C-5

4. Malfunction Detection/Troubleshooting Procedure

4-1. Malfunction Detection

- If any of the following incorrect operations are detected, the corresponding malfunction code appears on the copier's Touch Panel.
- To cancel the malfunction, open, then close the copier's Front Door.

Code	Description	Detection Timing
C0B56	Side Staple 1 Drive Failure	Home Position Sensor 1 is not blocked even after the set period of time has elapsed after Saddle Staple Motor 1 is energized (beginning of staple operation).
C0B57	Side Staple 2 Drive Failure	Home Position Sensor 2 is not blocked even after the set period of time has elapsed after Saddle Staple Motor 2 is energized (beginning of staple operation).
C0B4A	Saddle Exit Roller Pressure/ Retraction Failure	<ul style="list-style-type: none"> • The Saddle Exit Roller Home Position Sensor (PC18-SK) is not blocked even after the set period of time has elapsed after the Saddle Exit Open/Close Motor (M9-SK) is energized (beginning of pressure operation). • The Saddle Exit Roller Home Position Sensor (PC18-SK) is not unblocked even after the set period of time has elapsed after the Saddle Exit Open/Close Motor (M9-SK) is energized (beginning of retraction operation).
C0B4C	Saddle Exit Motor Failure	The Lock signal is detected after the set period of time has elapsed after the Saddle Transport Motor (M8-SK) is energized.
C0B4D	Saddle In & Out Guide Motor Failure	<ul style="list-style-type: none"> • The In & Out Guide Home Sensor (PC23-SK) is not unblocked even after the set period of time has elapsed after the In & Out Guide Motor (M13-SK) is energized (beginning of advancing operation). • The In & Out Guide Home Sensor (PC23-SK) is not unblocked even after the set period of time has elapsed after the In & Out Guide Motor (M13-SK) is energized (beginning of retracting operation).
C0B4F	Saddle Layable Guide Drive Failure	<ul style="list-style-type: none"> • The Layable Guide Home Sensor (PC26-SK) is not blocked even after the set period of time has elapsed after the Layable Guide Motor (M14-SK) is energized (beginning of return operation to predetermined position). • The Layable Guide Home Sensor (PC26-SK) is not unblocked even after the set period of time has elapsed after the Layable Guide Motor (M14-SK) is energized (beginning of return operation to predetermined position).
C0BC2	Crease Motor Drive Failure	<ul style="list-style-type: none"> • The Crease Roller Home Position Sensor (PC22-SK) is not unblocked even after the set period of time has elapsed after the Crease Motor (M10-FN) is energized (beginning of backward rotation operation). • The Crease Roller Home Position Sensor (PC22-SK) is not blocked even after the set period of time has elapsed after the Crease Motor (M10-FN) is energized (beginning of forward rotation operation).

4-2. Malfunction Detection Timing and Troubleshooting Procedure

(1) C0B56: Side Staple 1 Drive Failure

(2) C0B57: Side Staple 2 Drive Failure

<Detection Timing>

Malfunction Code	Description
C0B56	Home Position Sensor 1 is not blocked even after the set period of time has elapsed after Staple Motor 1 is energized (beginning of staple operation).
C0B57	Home Position Sensor 2 is not blocked even after the set period of time has elapsed after Staple Motor 2 is energized (beginning of staple operation).

Action

Relevant Electrical Components	
Staple Unit 1 Staple Unit 2	Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Check the Staple Unit 1 and 2 connectors for proper connection and correct as necessary.	—	—	—
2	Check Staple Units 1 and 2 for proper drive coupling, and correct as necessary.	—	—	—
3	Staple Units 1 and 2 operation check	—	—	C-2 A-2
4	Staple Units 1 and 2 replacement	—	—	C-2 A-2
5	PWB-C SK replacement	—	—	D-5



(3) C0B4A: Saddle Exit Roller Pressure/Retraction Failure

<Detection Timing>

Malfunction Code	Description
C0B4A	<ul style="list-style-type: none">• The Saddle Exit Roller Home Position Sensor (PC18-SK) is not blocked even after the set period of time has elapsed after the Saddle Exit Open/Close Motor (M9-SK) is energized (beginning of pressure operation).• The Saddle Exit Roller Home Position Sensor (PC18-SK) is not unblocked even after the set period of time has elapsed after the Saddle Exit Open/Close Motor (M9-SK) is energized (beginning of retraction operation).

Action

Relevant Electrical Components	
Saddle Exit Open/Close Motor (M9-SK) Saddle Exit Roller Home Position Sensor (PC18-SK)	Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Check the M9-SK connector for proper connection and correct as necessary.	—	—	—
2	Check M9-SK for proper drive coupling and correct as necessary.	—	—	—
3	M9-SK operation check	 T-3	PWB-C SK PJ4C SK-4,5	H-3
4	PC18-SK sensor check	 T-1	PWB-C SK PJ9C SK-6	B-7
5	PWB-C SK replacement	—	—	D-5


(4) C0B4C: Saddle Exit Motor Failure

<Detection Timing>

Malfunction Code	Description
C0B4C	The Lock signal is detected after the set period of time has elapsed after the Saddle Exit Motor (M8-SK) is energized.

Action

Relevant Electrical Components	
Saddle Exit Motor (M8-SK)	Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Check the M9-SK connector for proper connection and correct as necessary.	—	—	—
2	Check M9-SK for proper drive coupling and correct as necessary.	—	—	—
3	M9-SK operation check	 T-3	PWB-C SK PJ4C SK-4,5	H-3
4	PWB-C SK replacement	—	—	D-5



(5) C0B4D: Saddle In & Out Guide Motor Failure

<Detection Timing>

Malfunction Code	Description
C0B4D	<ul style="list-style-type: none">The In & Out Guide Home Sensor (PC23-SK) is not unblocked even after the set period of time has elapsed after the In & Out Guide Motor (M13-SK) is energized (beginning of advancing operation).The In & Out Guide Home Sensor (PC23-SK) is not unblocked even after the set period of time has elapsed after the In & Out Guide Motor (M13-SK) is energized (beginning of retracting operation).

Action

Relevant Electrical Components	
In & Out Guide Motor (M13-SK) In & Out Guide Home Sensor (PC23-SK)	Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Check the M13-SK connector for proper connection and correct as necessary.	—	—	—
2	Check M13-SK for proper drive coupling and correct as necessary.	—	—	—
3	M13-SK operation check	 T-3	PWB-C SK PJ4C SK-6,7	H-3
4	PC23-SK sensor check	 T-1	PWB-C SK PJ10C SK-3	C-7
5	PWB-C SK replacement	—	—	D-5



(6) C0B4F: Saddle Layable Guide Drive Failure

<Detection Timing>

Malfunction Code	Description
C0B4F	<ul style="list-style-type: none">The Layable Guide Home Sensor (PC26-SK) is not blocked even after the set period of time has elapsed after the Layable Guide Motor (M14-SK) is energized (beginning of return operation to predetermined position).The Layable Guide Home Sensor (PC26-SK) is not unblocked even after the set period of time has elapsed after the Layable Guide Motor (M14-SK) is energized (beginning of return operation to predetermined position).

Action

Relevant Electrical Components	
Layable Guide Motor (M14-SK) Layable Guide Home Sensor (PC26-SK)	Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Check the M14-SK connector for proper connection and correct as necessary.	—	—	—
2	Check M14-SK for proper drive coupling and correct as necessary.	—	—	—
3	M14-SK operation check	 T-3	PWB-C SK PJ4C SK-8,9	G-3
4	PC26-SK sensor check	 T-1	PWB-C SK PC10C SK-6	C-7
5	PWB-C SK replacement	—	—	D-5



(7) C0BC2: Crease Motor Drive Failure

<Detection Timing>

Malfunction Code	Description
C0BC2	<ul style="list-style-type: none">• The Crease Roller Home Position Sensor (PC22-SK) is not unblocked even after the set period of time has elapsed after the Crease Motor (M10-FN) is energized (beginning of backward rotation operation).• The Crease Roller Home Position Sensor (PC22-SK) is not blocked even after the set period of time has elapsed after the Crease Motor (M10-FN) is energized (beginning of forward rotation operation).

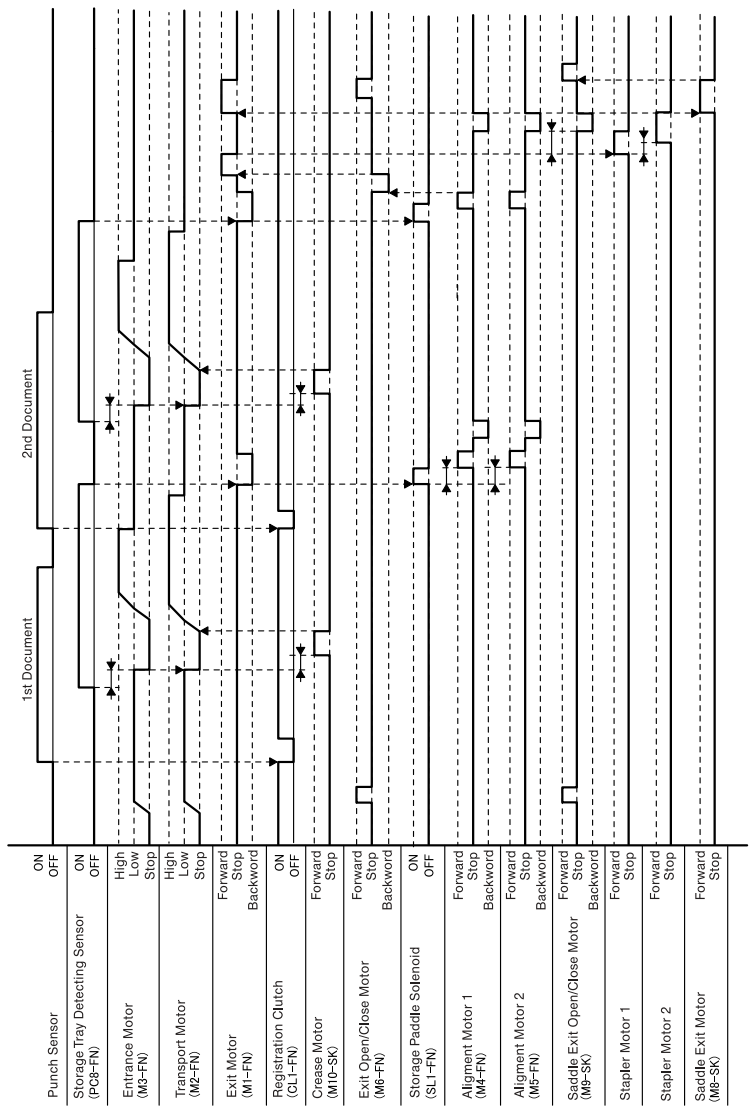
Action

Relevant Electrical Components	
Crease Motor (M10-SK) Crease Roller Home Position Sensor (PC22-SK)	Control Board (PWB-C SK)

Step	Operations	Ref. Page	WIRING DIAGRAM	
			Control signal	Location (Electrical Components)
1	Check the M10-SK connector for proper connection and correct as necessary.	—	—	—
2	Check M10-SK for proper drive coupling and correct as necessary.	—	—	—
3	M10-SK operation check	 T-3	PWB-C SK PJ3C SK-1,2	H-7
4	PC22-SK sensor check	 T-1	PWB-C SK PJ2C SK-3	H-7
5	PWB-C SK replacement	—	—	D-5

5. Time Chart

5-1. Booklet-binding mode (2-point stapling, A4L, 2 document pages, feeding out 1 set)





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