Installation Procedure

Finisher, Sorter, DeliveryTray Saddle Finisher-Q2



Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products. This manual covers all localities where the products are sold. For this reason, there may be

information in this manual that does not apply to your locality.

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Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

Symbols Used

This documentation uses the following symbols to indicate special information:

Symbol

Description



Indicates an item of a non-specific nature, possibly classified as Note, Caution, or Warning.



Indicates an item requiring care to avoid electric shocks.



Indicates an item requiring care to avoid combustion (fire).



Indicates an item prohibiting disassembly to avoid electric shocks or problems.



Indicates an item requiring disconnection of the power plug from the electric outlet.



Indicates an item intended to provide notes assisting the understanding of the topic in question.



Indicates an item of reference assisting the understanding of the topic in question.



Provides a description of a service mode.



Provides a description of the nature of an error indication.

The following rules apply throughout this Service Manual:

- 1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.
 - In the diagrams, represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow indicates the direction of the electric signal.
 - The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.
- 2. In the digital circuits, 'l'is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low".(The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.
 - In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine."

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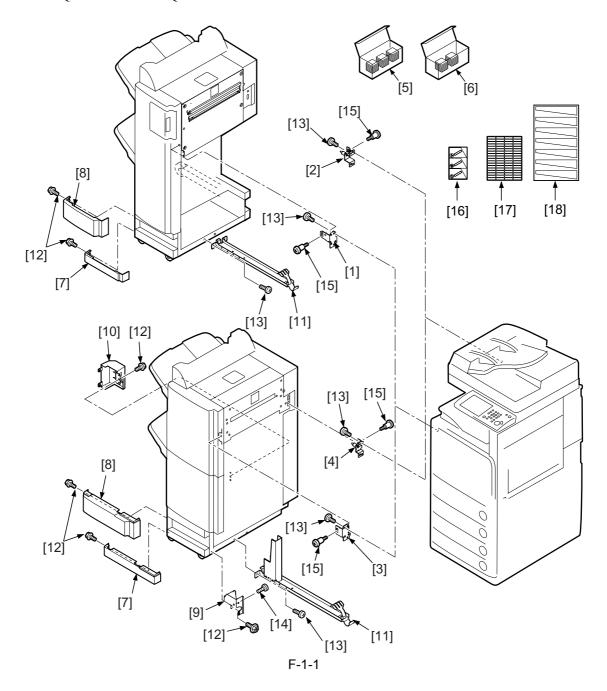
Chapter 1 Installation Procedure

1.1 Making Pre-Checks

1.1.1 Checking the Contents

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■ Finisher-Q1/Saddle Finisher-Q2



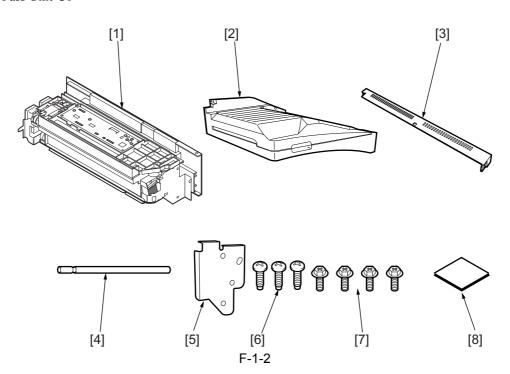
T-1-1

<Finisher-Q1>

<Saddle Finisher-Q2>

[1]Fixing plate (FC5-6463)	1 pc.	[3]Fixing plate (FC5-4976)	1 pc.
[2]Fixing plate (FC5-6185)	1 pc.	[4]Fixing plate (FC5-4196)	1 pc.
[5]Staple cartridge	1 box (3 pc.)	[5]Staple cartridge	1 box (3 pc.)
[7]Front foot cover	1 pc.	[6]Cartridge for saddle	1 box (2 pc.)
[8]Front lower extension cover	1 pc.	[7]Front foot cover	1 pc.
[11]Rail	1 pc.	[9]Front lower extension stay	1 pc.
[12]Screw (RS tightening; M3x8)	2 pc.	[8]Front lower extension cover	1 pc.
[13]Screw (binding; M4x6)	6 pc.	[10]Rear foot cover	1 pc.
[15]Stepped screw (M4)	2 pc.	[11]Rail	1 pc.
[16]Tray label	1 pc.	[12]Screw (RS tightening; M3x8)	5 pc.
[17]Settings label	1 pc.	[13]Screw (binding; M4x6)	6 pc.
		[14]Screw (tapping; M4x12)	1 pc.
		[15]Stepped screw (M4)	2 pc.
		[16]Tray label	1 pc.
		[17]Settings label	1 pc.
		[18]Bookmaking label	1 pc.

■ Buffer Pass Unit-C1



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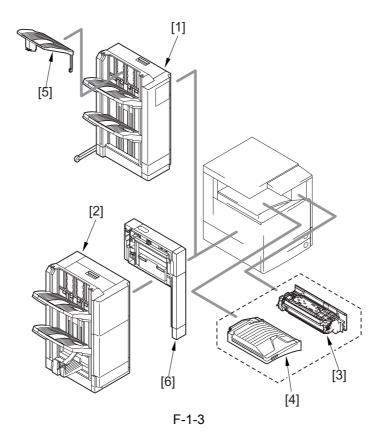
[1]Inner 2-way tray	1 pc.
[2]Buffer pass unit	1 pc.
[3]Protective cover	1 pc.
[4]Joint shaft	1 pc.
[5]Joint plate	1 pc.
[6]Screw (tapping; M4x12)	3 pc.
[7]Screw (RS tightening; M3x8)	4 pc.
[8]Rubber sheet	1 pc.

1.1.2 Installing the Accessories

0002-9662

If you are installing accessories at the same time as you are installing the host machine, install the host machine first and then the accessories in the following sequence:

- 1. Side paper deck (see its Installation Procedure)
- 2. Finisher [1], [2] (see the steps up to "Making Preparations on the Host Machine" herein)
- 3.Inner 2-way tray [3] and buffer pass unit [4] (see "Installing the Inner 2-Way Tray and the Buffer Pass Unit" herein)
- 4. Additional finisher tray [5] (see its Installation Procedure)
- 5. Puncher unit [6] (see its Installation Procedure)
- 6. Connection to the host machine (see "Connecting to the Host Machine" herein or the steps in "Connecting to the Host Machine" and thereafter in the Puncher Unit Installation Procedure)



ABe sure to perform the following in strict sequence on the host machine before starting to install an accessory:

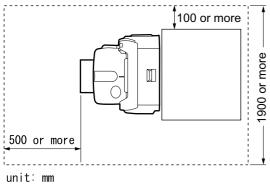
- 1. Turn off the host machine's control panel power switch.
- 2. Turn off the host machine's main power switch.
- 3. Disconnect the host machine's power plug (from the power outlet).

1.1.3 Selecting the Site of Installation

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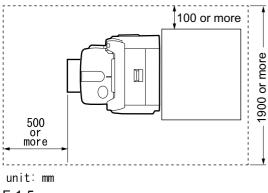
Select the site of installation, making sure there will be enough space for work (e.g., removal of paper). Be sure also that there will be no gap between the finisher and the host machine.

<Finisher-Q1>



F-1-4

<Saddle Finisher-Q2>



F-1-5

ABe sure to install the host machine and the finisher on a level surface without any step or gap. Otherwise, faults associated with paper movement can occur.

1.2 Unpacking and Chacking the Components

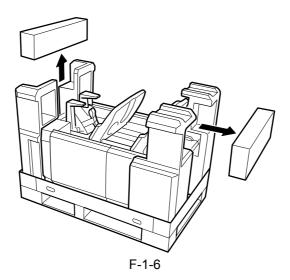
1.2.1 Unpacking

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Memo: The machine is packed using tape and cushioning material to protect against vibration and shock during transit. Be sure to remove them before starting to install the machine. (It is a good idea to store away the removed tape and cushioning material for possible relocation of the machine, e.g., to a new site or for repairs.)

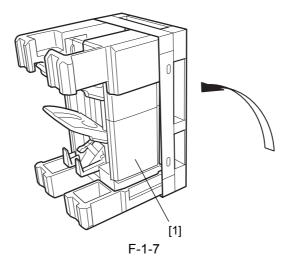
1) Take out the accessory box from the shipping box.

At this point, do not remove the 4 cushioning materials (Styrofoam) from the finisher. Otherwise, you would likely deform some areas of the machine.



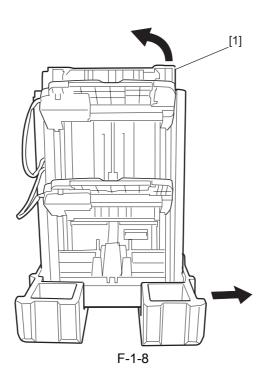
2) Lift the finisher together with its cushioning base (Styrofoam). Be sure to work in a group of 2 persons.

Alf you shift up the finisher on its side, you would likely deform or damage the machine. Moreover, in the case of the Saddle Finisher-Q2, force applied to the front cover [1] can deform the hinge.



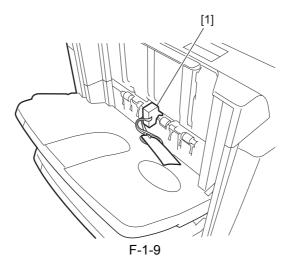
- 3) Remove the cushioning material (Styrofoam) from the upper cover.
- 4) Slightly lift the front and rear casters, and remove the cushioning material (Styrofoam). Be sure to shift up the finisher by holding the upper left cover [1] (gray area).

⚠ The finisher is rather heavy. Be sure to work in a group of 2 persons. Particularly when moving it over a step on the floor, be sure to take full care not to let it tumble over.

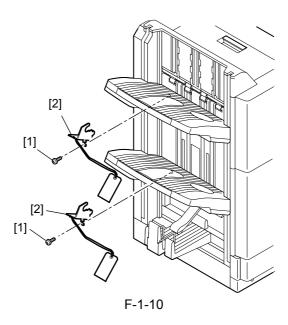


5) Remove the tape used on the outside of the finisher.

6) Remove the cushioning material [1] (Styrofoam) of the tray.

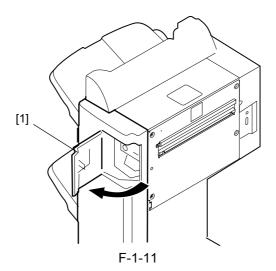


7) Remove the fixing screw [1], and remove the 2 tray fixings [2].

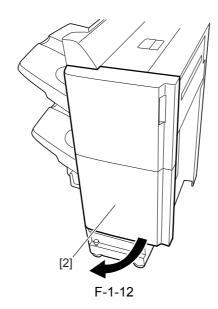


8) In the case of the Finisher-Q1, open the front door [1]. In the case of the Saddle Finisher-Q2, open the front cover [2].

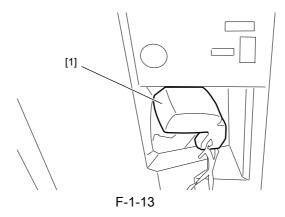
<Finisher-Q1>



<Saddle Finisher-Q2>

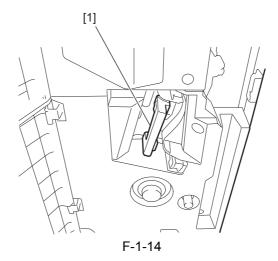


9) Remove the tape and the cushioning material [1] (Styrofoam) from the stapler.

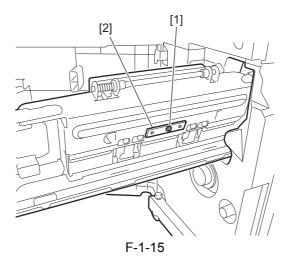


10) In the case of the Finisher-Q1, close the front door. In the case of the Saddle Finisher-Q2, go to the next step while keeping the front cover open.

- Removing the Stitcher Fixing Member (only for the Saddle Finisher-Q2)
- 1) Slide out the stitcher unit [1] to the front, and remove the tape.



2) Remove the screw [1], and remove the stitcher fixing member [2].

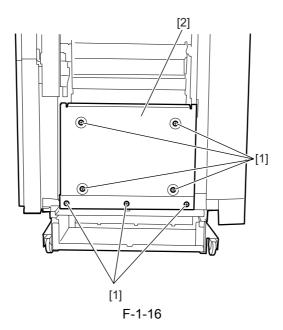


- 3) Put the stitcher back in and close the front cover.
- Removing the Folding Roller Releasing Plate (only for the Saddle Finisher-Q2)

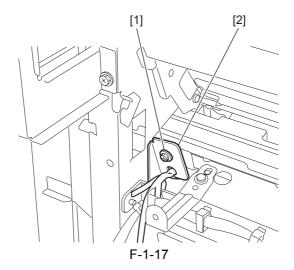
Memo: The releasing plate must be mounted to prevent roller deformation, as otherwise occurring when the machine is not used for a long time. Once you have removed the plate and its fixing screws, it is a good idea to store

them away for future use.

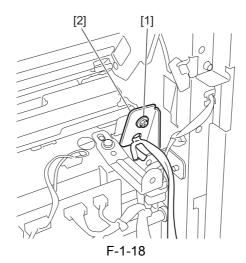
1) Remove the 7 screws [1], and detach the lower right cover [2].



2) Remove the fixing screw [1], and detach the releasing plate (front) [2].



3) Remove the fixing screw [1], and detach the releasing plate (rear) [2].



4) Mount the lower right cover you have removed using the 7 screws.

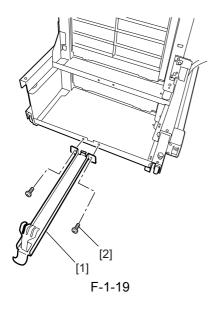
1.3 Installatiopn Procedure

1.3.1 Preparing for the Installation of the Finisher

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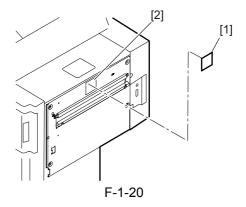
<Finisher-Q1>

1) Mount the rail [1] to the finisher using 2 screws [2] (binding; M4x6).



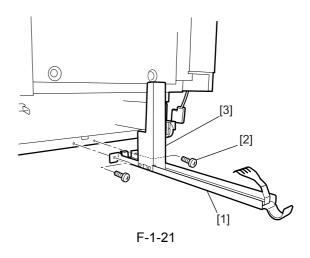
2) Attach the included rubber sheet [1] to the Buffer Pass Unit-C1 along the line of reference [2].

Alf you are installing a puncher unit, do not attach the rubber sheet; for instructions, see the Puncher Unit Installation Procedure.

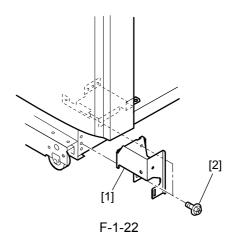


<Saddle Finisher-Q2>

1) Mounting the rail [1] to the finisher using 2 screws [2] (binding; M4x6).

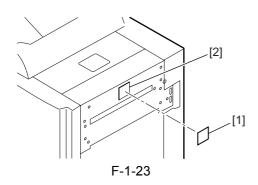


2) Mount the lower front extension stay [1] using 2 screws [2] (RS tightening; M3x8).



3) Attach the included rubber sheet [1] to the Buffer Pass Unit-C1 along the line of reference [2].

Alf you are mounting the puncher unit, do not attach the rubber sheet; for instructions, see the Puncher Unit Installation Procedure.

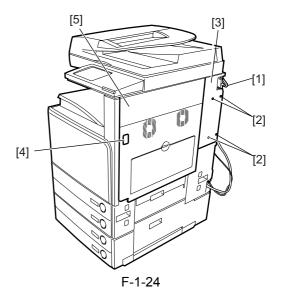


1.3.2 Installing the Inner 2-Way Tray and the Buffer Pass Unit

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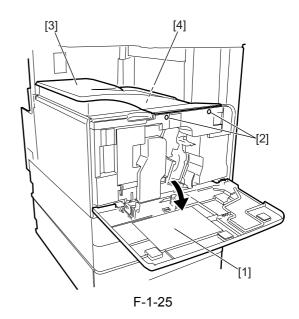
ABefore connecting the finisher to its host machine, be sure to install the inner 2-way tray and the buffer pass unit.

- 1) Disconnect the reader power cables [1]; then, remove the 4 screws [2], and detach the rear right cover [3].
- 2) Push the open/close button [4], and open the right door [5].



3) Open the front cover [1]; then, loosen the 2 screws [2], and detach the delivery tray [3].

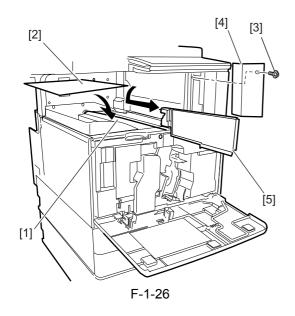
⚠When detaching the delivery tray, be sure to take full care not to damage the intermediate transfer belt (ITB) [4] found at the bottom.



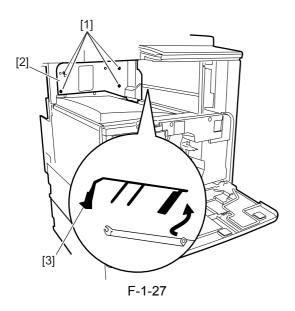
- 4) Place paper (single A3 sheet) [2] on the ITB [1] to protect against damage.
- 5) Remove the screw [3], and detach the support cover

[4].

6) Detach the inside right cover [5] by shifting it to the left.



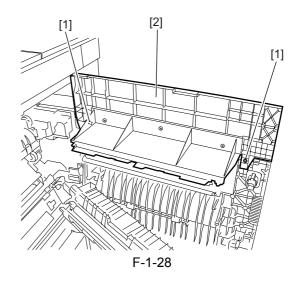
- 7) Remove the 4 screws [1], and detach the inside rear cover [2].
- 8) Remove the No. 2 delivery tray full sensor [3], and mount the inside rear cover.



- 9) Remove the paper used to protect the ITB, and mount the support cover using a screw.
- 10) Mount the delivery tray, and tighten the 2 screws;

then, close the front cover.

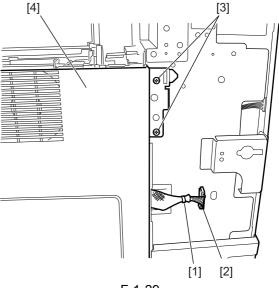
11) Remove the 2 screws [1], and detach the right cover [2].



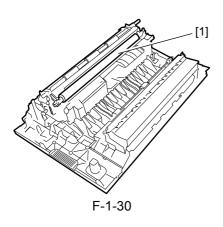
12) Remove the tie-wrap [1], and disconnect the connector [2].

⚠Do not cut the tie-wrap; rather, pick its connector to detach.

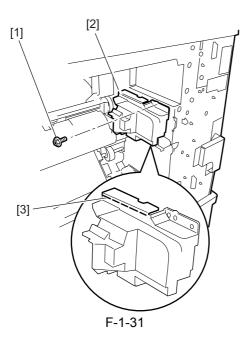
13) Remove the 2 screws [3], and lift the right door [4] to detach.



AWhen detaching the right door, take full care not to touch the secondary transfer outside roller [1], which will come off with the door.

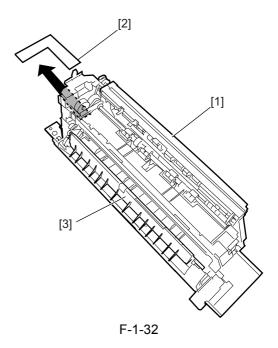


- 14) Remove the screw [1], and detach the fixing connector cover [2].
- 15) Cut the face cover [3] with nippers, and put the fixing connector cover back to its initial position.

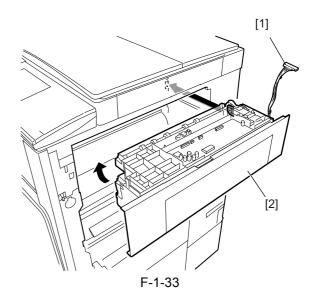


16) Remove all packing tape from the inner 2-way tray [1], and pull out the cushioning material (spacer) [2].

⚠When handling the inner 2-way tray, be sure to take care not to damage the No. 1 delivery flapper [3] found at the bottom.

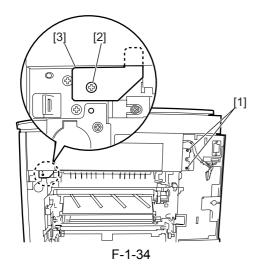


17) Route the connector cable [1] to the right side, and mount the inner 2-way tray [2] to the machine. To do so, fit its claw at the rear into the slit.

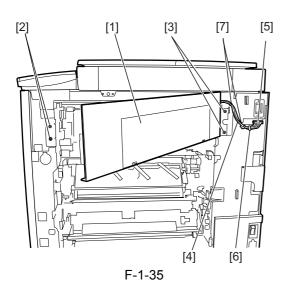


18) Temporarily tighten the 2 screws [1].

19) Remove the screw [2], and detach the fixing plate [3].

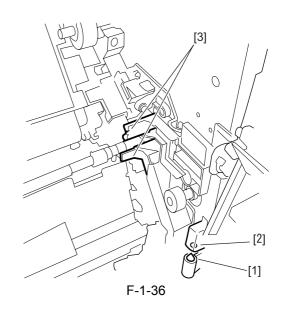


- 20) Open the door of the inner 2-way tray [1], and fix it in place using 2 screws [2] (RS tightening: M3x8).
- 21) Tighten the 2 screws [3] that you have previously tightened temporarily.
- 22) Close the door of the inner 2-way tray, and connect the connector [5] of the cable [4] to the machine. Be sure to lead the cable through the cable clamp [6], and fix it in place using the 2 tie-wraps [7].

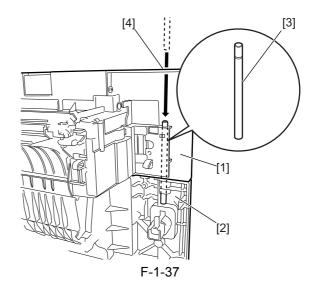


23) Match the hinge hole [2] of the right door against the protrusion [1] of the connecting assembly of the machine; then, fit the right door, and fix it in place using 2 screws.

⚠Do not close the right door without fixing it in place. Moreover, when mounting it, take full care not to break the high-voltage contact [3] for the secondary transfer outside roller.

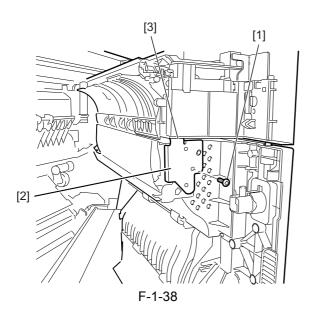


- 24) Put back the tie-wrap and the connector removed in step 12).
- 25) Open the inner 2-way tray [1], and lift it to match the right door [2]; then, fit the joint shaft [3] through the top hole [4] until it stops.

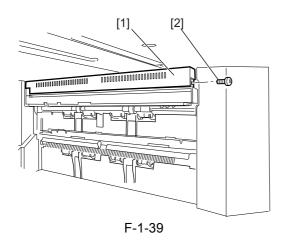


26) Remove the screw [1], and match the joint plate [2] against the slit [3]; then, fix it in place using a screw [1].

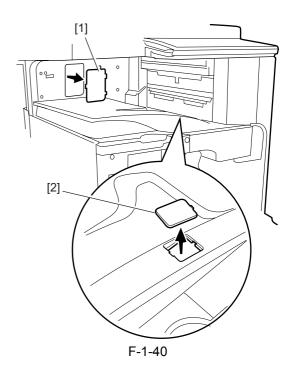
ABe sure to fit the joint plate correctly in the slit of the inner 2 way tray.



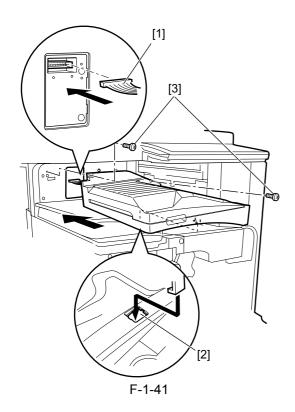
- 27) Close the right door.
- 28) Mount the rear right door using 4 screws.
- 29) Connect the reader power cable.
- 30) Mount the protective cover [1] using a screw [2]; (tapping; M4x12).



31) Free the claw using a flat-blade screwdriver, and detach the face cover [2] of the delivery tray and the face cover [1] of the inside rear cover.



- 32) Remove all packing tape of the buffer pass unit.
- 33) Place the buffer pass unit on the delivery tray, and connect the connector [1] to the machine.
- 34) Mach the claw of the buffer pass unit against the connecting assembly [2], and fix it in place using 2 screws [3] (tapping; M4x12).

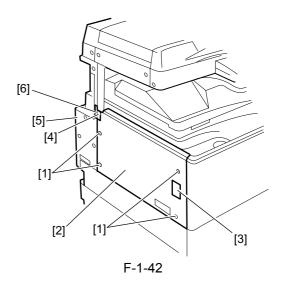


1.3.3 Making Preparations on the Host Machine

0002-9903

ABefore connecting the finisher to its host machine, mount the fixing plate to the host machine.

- 1) Remove the 4 screws [1], and detach the left cover [2] of the host machine.
- 2) Using nippers, cut off the 2 face covers [3] [4] of the left cover; then, mount the left cover to the machine.
- 3) Cut off the face cover [6] of the rear left cover [5].

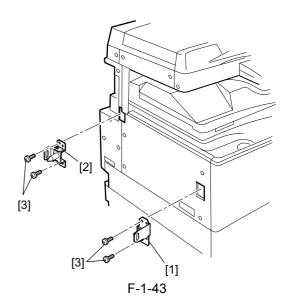


4) Mount the fixing plate [1] at the front and the fixing plate [2] at the rear using 2 screws each [3] (binding; M4x6).

A When mounting the puncher unit, mount the fixing plate that comes with the puncher unit by referring to the Puncher Unit Installation Procedure and then make the necessary connection.

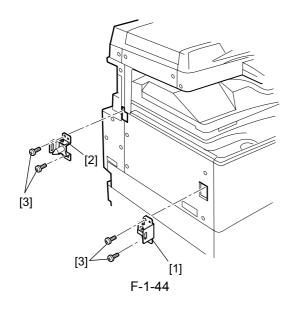
<Finisher-Q1>

Use FC5-6463 as the fixing plate [1] and FC5-6185 as the other fixing plate [2].



<Saddle Finisher-Q2>

Use FC5-4976 as the fixing plate [1], and use FC5-4196 as the other fixing plate [2].

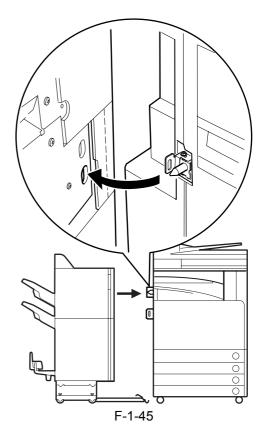


1.3.4 Connecting to the Host Machine 0002-9912

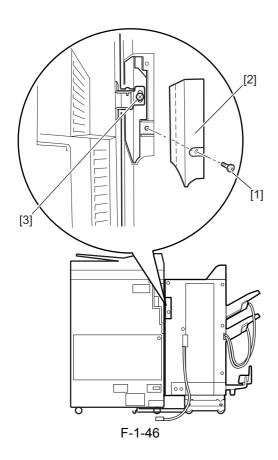
A Check to make sure that the host machine is off, and its power plug is not connected to the power outlet.

1) Make the connection by matching the pin found on the fixing plate (rear) of the host machine against the hole in the finisher.

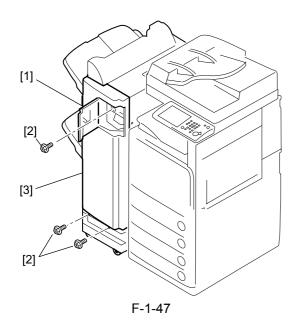
A Check to be sure that there is no gap between the finisher and its host machine.



- 2) Remove the screw [1], and detach the upper rear cover (small) [2] of the finisher.
- 3) Fix the fixing plate (rear) of the host machine in place to the finisher using a stepped screw [3] (M4).

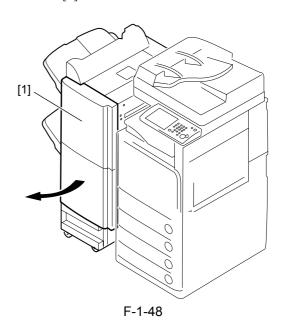


4) In the case of the Finisher-Q1, open the front door [1] and remove the 3 screws [2], then detach the front cover [3].

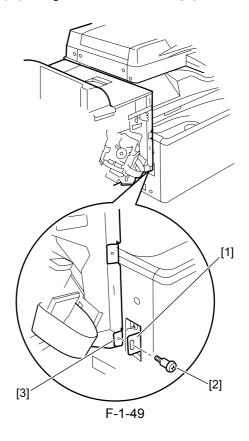


5) In the case of the Saddle Finisher-Q2, open the

front cover [1].



6) Fix the fixing plate [1] (front) of the host machine in place to the finisher [3] using a stepped screw [2] (M4). (The figure shows a Finisher-Q1.)



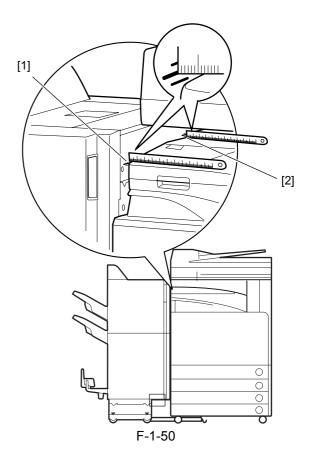
7) In the case of the Saddle Finisher-Q2, close the

front cover. In the case of the Finisher-Q1, do not attach the front cover until you have adjusted the height/tilt.

1.3.5 Checking the Height/ Tilt 0002-9924

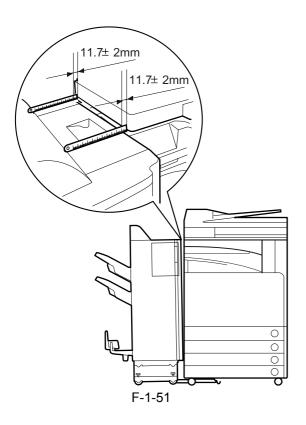
⚠ Depending on the condition of the floor of the site of installation, you may need to adjust the height or the tilt of the finisher. A discrepancy in the height or tilt of the finisher can well lead to frequency jams. Check the height/tilt as follows, and make adjustments as necessary. (If you are installing a puncher unit, be sure to make adjustments by referring to the Puncher Unit Installation Procedure.)

1) Check the height of the finisher and the host machine. Place a ruler on the buffer pass unit as shown and check to see if it is as indicated on the right side of the finisher (falling between the top and bottom index lines). Check the height at both front [1] and rear [2] by referring to the 2 sets of index lines; be sure that the discrepancy in height is 1.5 mm or less.



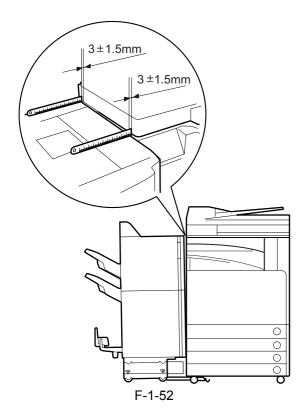
2) Check the tilt of the finisher and the host machine. Check to see that the gap between the top edges of the finisher top cover and the host machine delivery cover is 11.7±2 mm or less of the Finisher-Q1 and 3±1.5 mm or less for the Saddle Finisher-Q2. Take measurements at 2 locations (front and rear), making sure that the discrepancy at front and rear is 1.5 mm or less. Moreover, when looking from the front, the gap between the finisher and the host machine must run in parallel lines.

<Finisher-Q1>



3) If the height/tilt is correct, end the installation work as instructed in "Work After Making Checks/ Adjustments." If you need to adjust the height/tilt, see "Adjusting the Height/Tilt."

<Finisher-Q2>



1.4 Making Adjustments

1.4.1 Adjusting the Height/Tilt

0002-9927

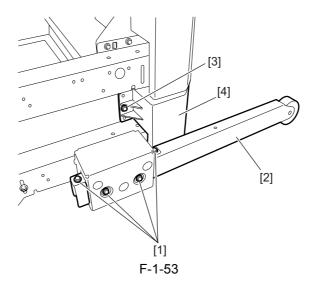
All the height or the tilt of the finisher and the host machine is not as indicated, go through the following steps to make an appropriate correction:

■ Preparing for Adjustment

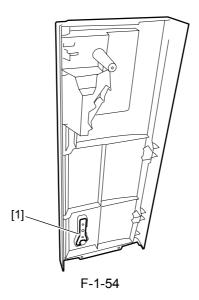
<Finisher-Q1>

AIn the case of the Finisher-Q1, you will need to remove its auxiliary ring and rear foot cover. Be sure to remove the auxiliary ring with the finisher and its host machine intact, thus preventing the machine from tumbling over.

- 1) If you need to adjust the height at the rear, remove the 4 screws [1], and detach the auxiliary plate [2].
- 2) Remove the screw [3], and detach the left rear foot cover [4].

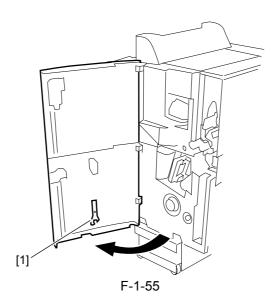


3) From the back of the removed front cover, remove the fixing screw, and detach the pliers [1].



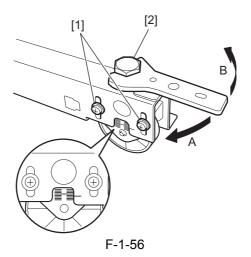
<Saddle Finisher-Q2>

1) Open the front cover; then, from the back of the front cover, remove the fixing screw, and detach the pliers [1].



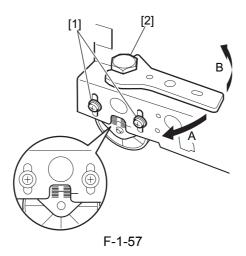
■ Adjusting the Height

- 1) Loosen the 2 fixing screws [1] each of the casters at the front and rear of the finisher pickup side.
- 2) If you want to increase the height of the finisher, turn the adjusting bolt [2] in the direction of arrow A of the figure.
- (A full turn of the adjusting bolt will increase the height of the finisher by 1.75 mm.) Refer to the index in the caster area when adjusting the height. Perform this for both front and rear casters.
- 3) If you want to decrease the height of the finisher, turn the adjusting bolt [2] in the direction of arrow B. (A full turn of the adjusting bolt will decrease the height of the finisher by 1.75 mm.) Refer to the index in the caster area when adjusting the height. Perform this for both front and rear casters.



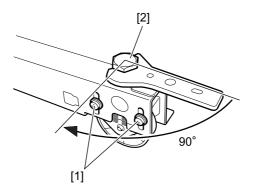
■ Adjust the Tilt

- 1) Loosen the 2 fixing screws [1] 2 each on the front and rear casters of the finisher delivery side.
- 2) If you want to decrease the gap between the finisher and its hot machine, turn the adjusting bolt [2] in the direction of A. (A full turn will increase the height of the finisher by 1.75 mm.)
- 3) If you want to increase the gap between the finisher and its host machine, turn the adjusting bolt [2] in the direction of arrow B. (A full turn of the adjusting bolt will decrease the height of the finisher by 1.75 mm.) Adjust the tilt by referring to the index in the caster area. Perform this for both front and rear casters.



■ Making Checks After Making Adjustments

- 1) Check to see that the difference in height between the finisher and the host machine and the tilt are as indicated once again. Otherwise, start over the foregoing steps.
- 2) When done, tighten the 2 fixing screws [1] each on the casters.
- 3) To prevent loosening of the adjusting bolts after installation (as by relocation), turn each adjusting bolt [2] about 90 deg in the direction of the arrow. Do not turn them more than 90 deg; excess tightening can displace positions.



F-1-58

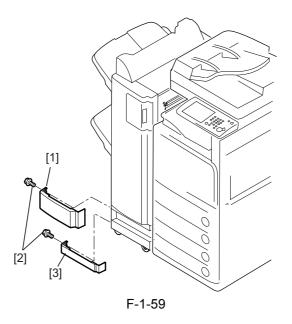
- 4) Fit the pliers in place to the back of the front cover using a screw.
- 5) End the installation work by referring to the instructions in "Work After Making Checks/Adjustments."

1.4.2 Work After Making Checks/Adjustments

0002-9929

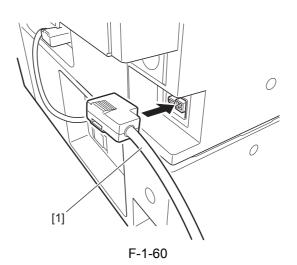
<Finisher-Q1>

- 1) If you removed the auxiliary ring, attach the left rear foot cover; then, adjust the auxiliary rail to suit needs of the user, and mount it in place using 4 screws.
- 2) Mount the front cover to the finisher using 3 screws.
- 3) Mount the rear upper cover (small) to the finisher using a screw.
- 4) Mount the front lower extension cover [1] using a screw [2] (RS tightening; M3x8).
- 5) Mount the front foot cover [3] using a screw [2] (RS tightening; M3x8).



6) Connect the finisher to its host machine using the interface cable [1].

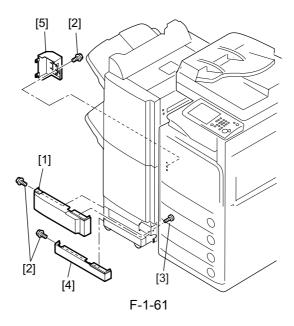
ABefore connecting the interface cable, be sure that the host machine is off and its power plug is disconnected from the power outlet. Otherwise, you can suffer an electric shock.



<Saddle Finisher-Q2>

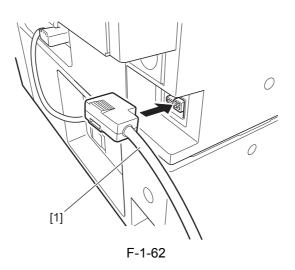
- 1) Remove the stepped screw [1] (1 pc. each at front and rear), and separate the finisher from its host machine.
- 2) Mount the front lower extension cover [1] using a screw [2] (RS tightening; M3x8) and another screw [3] (tapping; M4x12).
- 3) Mount the front foot cover [4] using a screw [2] (RS tightening; M3x8).

4) Mount the rear foot cover [5] using a screw [2] (RS tightening; M3x8).



- 5) Connect the finisher to its host machine, and fix it in place using a stepped screw (1 pc. each at front and rear).
- 6) Mount the upper rear cover (small) to the finisher using a screw.
- 7) Connect the finisher and its host machine using the interface cable [1].

AWhen connecting the interface cable, be sure to turn of the host machine and disconnect the power cable of the host machine before doing so. Otherwise, you can suffer an electric shock.



1.5 Attaching the Labels etc.

1.5.1 Attaching the Labels

0002-9937

- 1) Attach the tray label [1] to the tray as indicated.
- 2) Attach the settings label [2] within the frame of the tray label to suit the user habit of the user.
- 3) In the case of the Saddle Finisher-Q2, attach the Bookmaking label [3] to the saddle tray as shown.

