

Horizon FORE-EDGE TRIMMER **FC-20A**

Important Information

- This manual is designed to help you to install, operate and maintain Fore-edge Trimmer, FC-20A. Read, understand and keep this manual in a safe and convenient place.
- Do not operate FC-20A until you read and understand the instructions in this manual.
- Horizon International Inc. shall not be liable for incidental consequential damages resulting from : improper or inadequate maintenance by customer; unauthorized modification or misuse; operation outside of the environmental specifications for the product.
- Horizon International Inc. pursues a policy of continuing improvement in design and performance of the product. Therefore, the product design and specifications are subject to change without prior notice and without our legal obligation.
- All rights are reserved. No part of the manual may be photocopied, reproduced or translated to another language without the prior written consent of Horizon International Inc.

Safety Precautions

- The signal word **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

- The signal word **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in damage on machines. It may also be used to alert against unsafe practices.

- Read and understand all safety instructions with signal word such as **WARNING** and **CAUTION**. If safety instructions are ignored, personal injury may result.

- Horizon International Inc. cannot anticipate every possible situation that might involve a potential hazard. The instructions in this manual and warning labels on the machine are therefore not all inclusive.

- All equipment shall be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device where it is locked or tagged out.

- Do not operate the machines when any covers are removed.

- Some of the drawings in this manual show the machine uncovered for explaining the detail or inside of machine.

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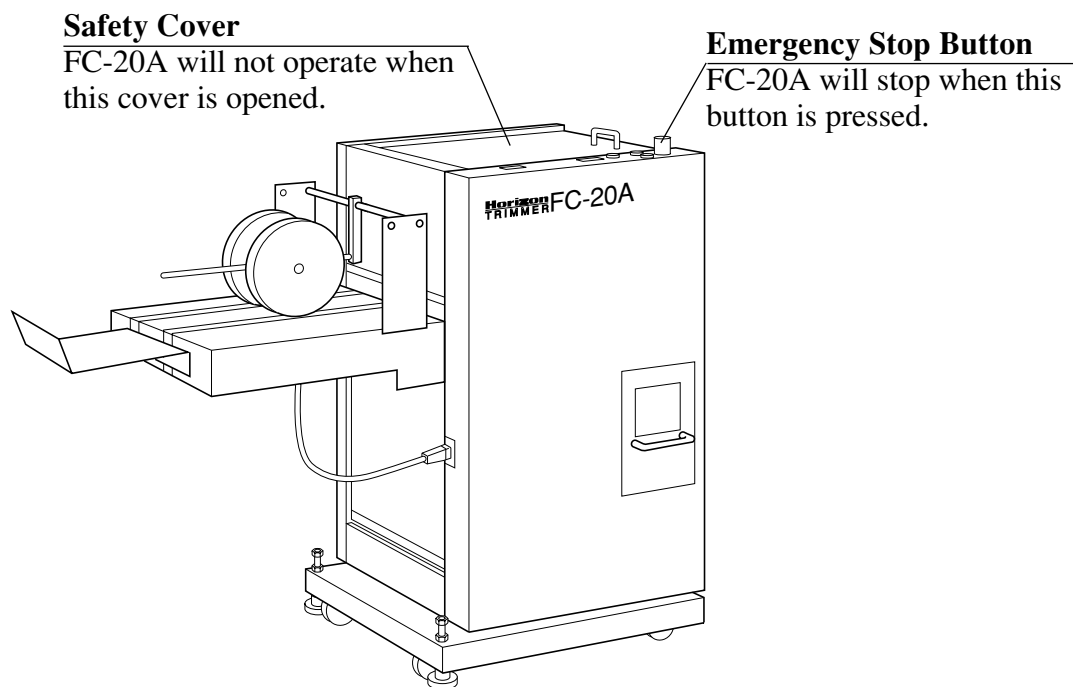
1-1 FC-20A Specification

Model	FC-20A	
Book Size (Before Trim)	Maximum	: 250 mm x 350 mm (9.8" x 13.8")
	Minimum	: 90 mm x 120 mm (3.5" x 4.7")
Finish Size	Maximum	: 250 mm x 350 mm (9.8" x 13.8")
	Minimum	: 85 mm x 120 mm (3.3" x 4.7")
Trimming Length	Maximum	: 20 mm (0.79")
Trimming Thickness	Maximum	: 4 mm (0.16") 50 sheets of 60 gsm
Production Speed	Maximum 3,660 booklets/hr (A4-Booklet) from serial number 017001	
Power Source	Single Phase AC200 V 50/60 Hz	
	Single Phase AC220 V 50/60 Hz 1.7 A	
	Single Phase AC230 V 50 Hz	
Power Consumption	200 W	
Motor	400 W x 1 / 60 W x 1 / 25 W x 1	
Weight	240 kg (530 lb)	
Machine Size	610 x 810 x 1070 mm	
(H x D x W)	(24" x 31.9" x 42.2")	

The machine design and specifications are subject to change without any notice.

1-2 Machine Descriptions

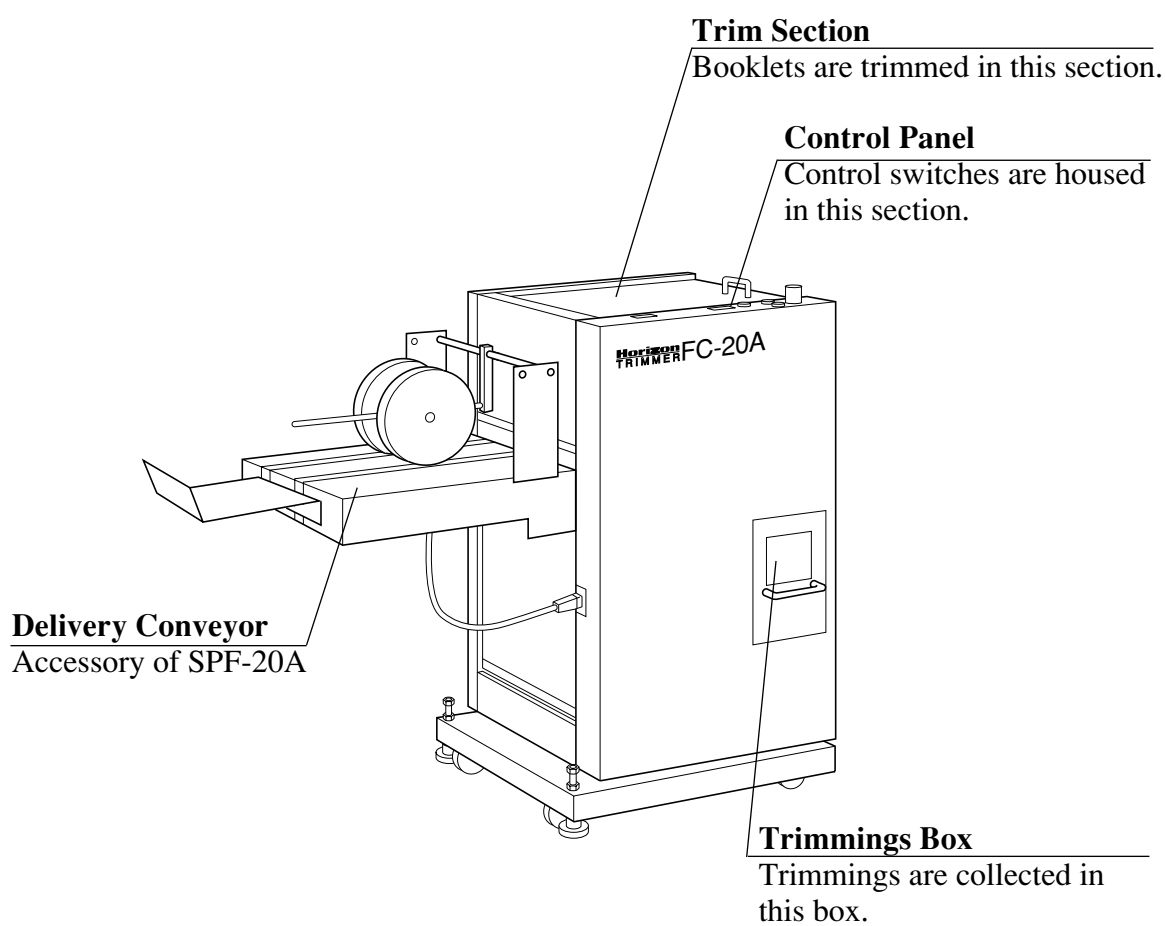
1-2-1 Safety Devices and Functions



1-2 Machine Descriptions

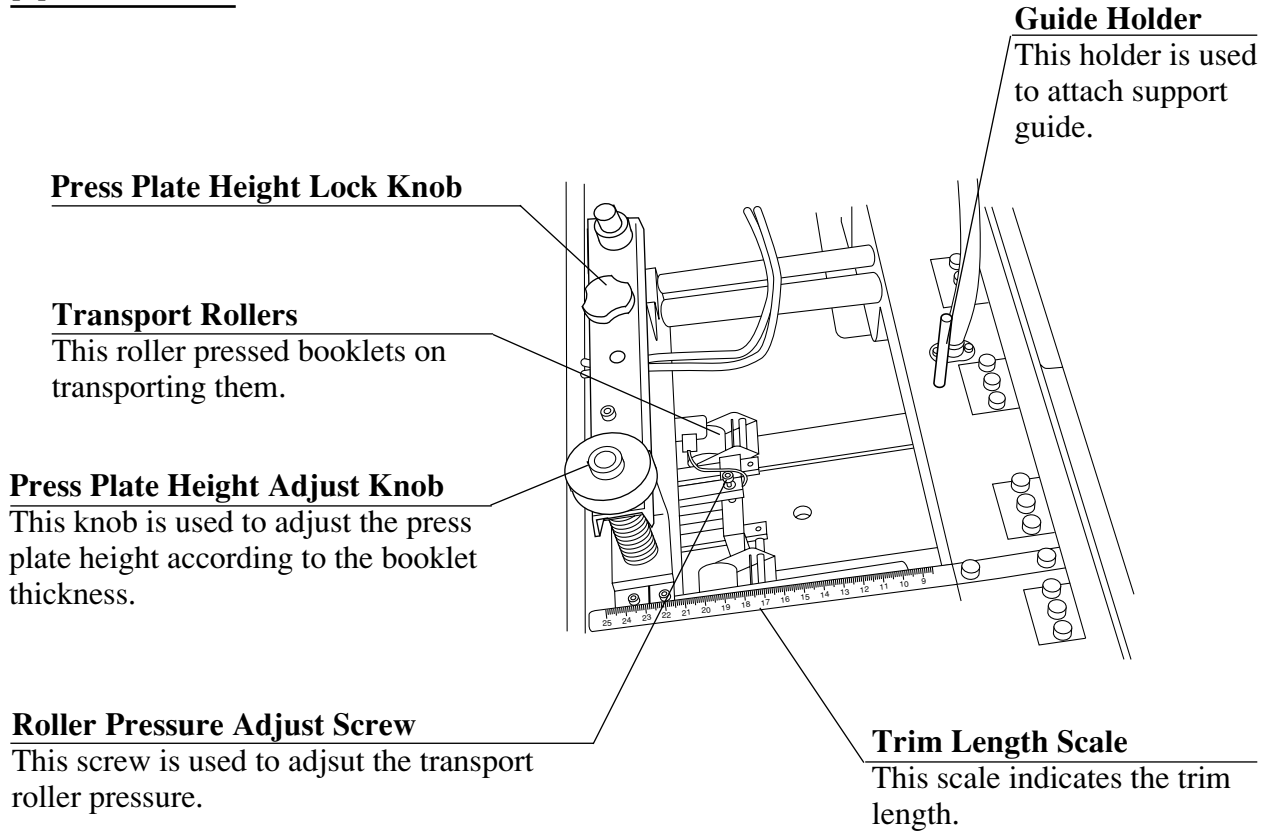
1-2-2 Machine Descriptions and Function

[1] General View

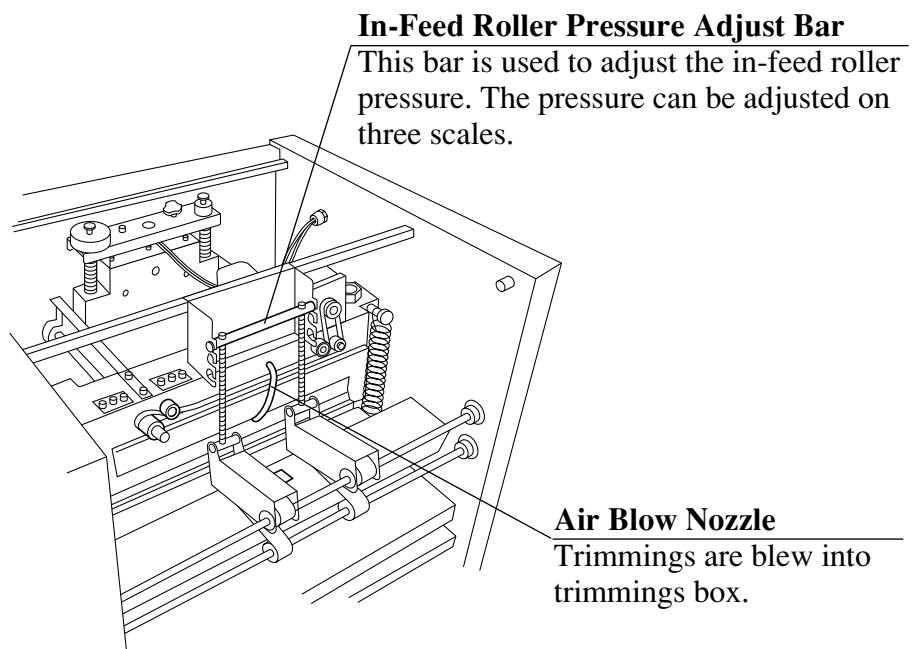


1-2 Machine Description

[2] Press Section



[3] In-Feed Section



1-2 Machine Descriptions

1-2-3 Control Section

Knife Inching Button

This button is used to inch upper knife. When upper knife is locked, knife can be moved to home position with this button.

Counter

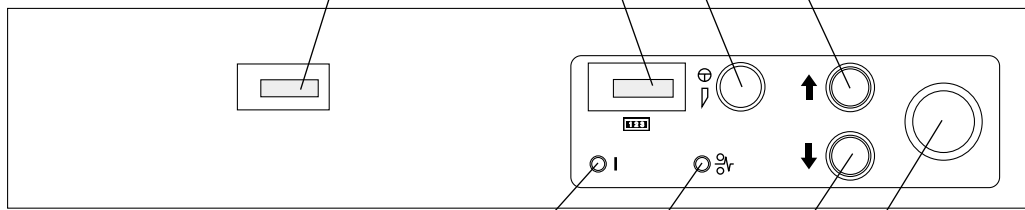
This counter counts the number of trimmed booklets. This counter can be reset with reset button.

Total Counter

This counter counts the total number of trimming times for maintenance.

FC-20A Backward Button

This button is used to move FC-20A to the drive side.



Pilot Lamp

This lamp lights when SPF-20A main power is turned on.

Jam Lamp

This lamp lights when sheets jam in FC-20A.

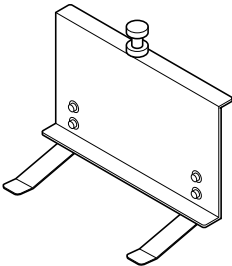
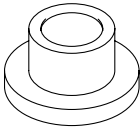
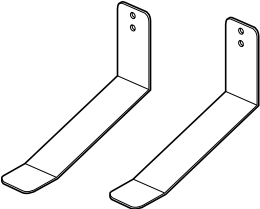
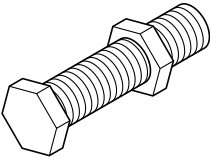
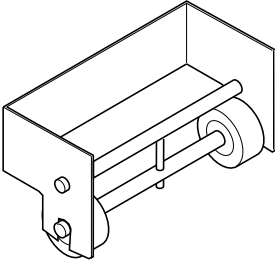
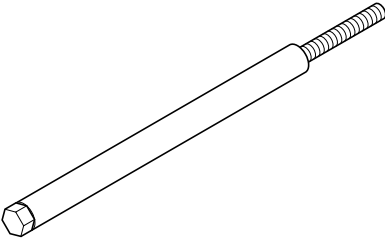
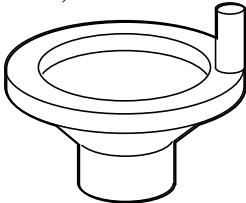
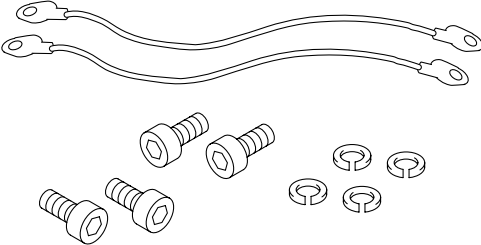
FC-20A Forward Button

This button is used to move FC-20A to the operation side.

Emergency Stop Button

This button is used to stop the whole system, including collator.

1-3 Tools and Accessories

Transport Guide (M035876-AS) 1 pc	Mount Base (M000025-01) 3 pcs
	
Hold Supporter (M035877-02) 2 pcs	Leveling Bolt (M12-100) 2 pcs
	
Ejection Roller Unit (M035871-AS) 1 pc	Adjust Bolt (M035564-01) 1 pc
	
Trim Length Adjust Handle (M035728-AS) 1 pc	Wires (M035682-00) 2 pc
	

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2-1 SPF-20A and FC-20A Positions

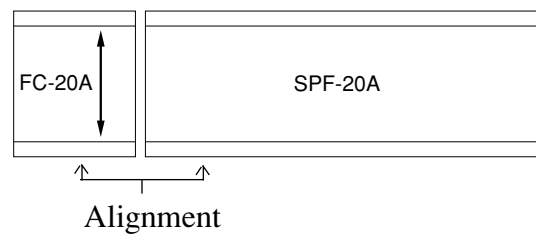
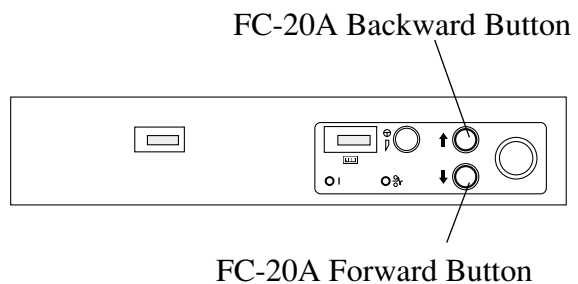
This section shows how to adjust positions of SPF-20A and FC-20A.



WARNING

- Connect FC-20A to SPF-20A completely before turning on power switch.

1. Press FC-20A forward button or backward button to align FC-20A with SPF-20A.

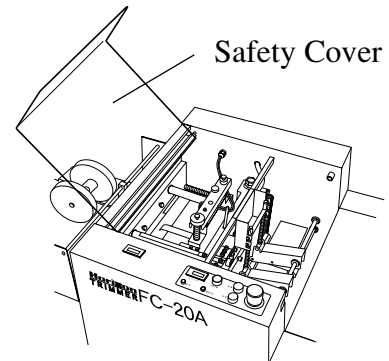


2. Setup the operation mode and sheet size on LCD touch screen on SPF-20A
 - The trim length on FC-20A is automatically set.

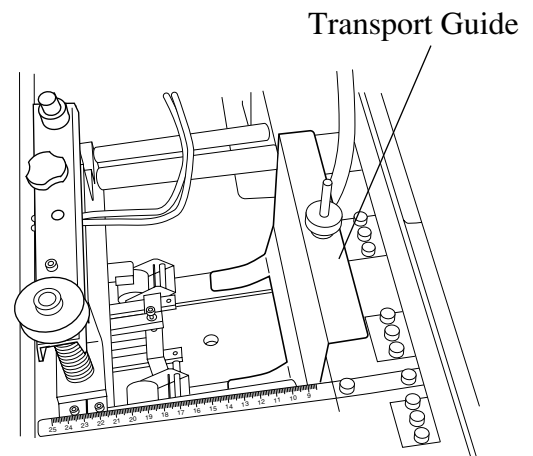
2-2 Trim Section Setup

This section shows how to set trim section.

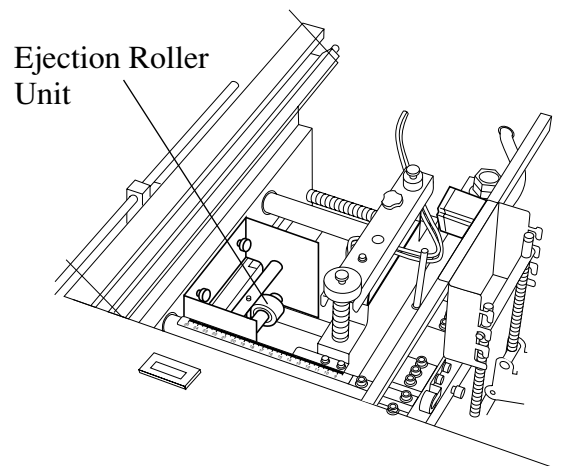
1. Open safety cover.



2. When the trim length is 180 mm (7.09") or more, attach transport guide.



3. When the booklet length is under 150 mm (5.91"), attach ejection roller unit.

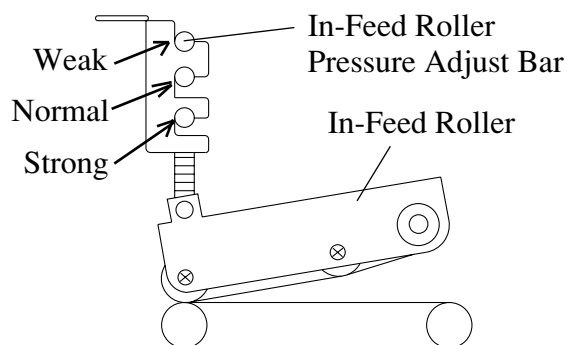


2-3 Other Setup

This section shows how to setup other part of FC-20A according to the booklet size or thickness.

2-3-1 In-Feed Roller Pressure

1. In-feed roller pressure can be adjusted on three scales. The standard position is shown in the drawing at right.

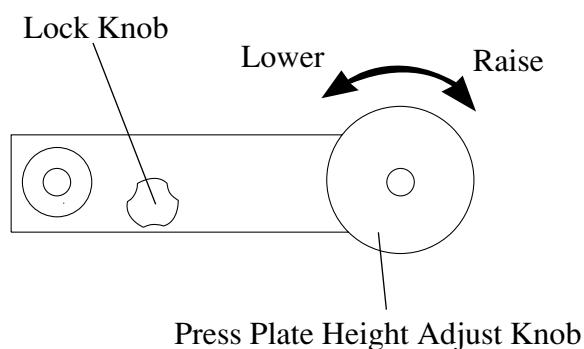


2-3-2 Press Plate Height

1. Height of press plate can be adjusted by press plate height adjust knob. Normal setting is highest position.

NOTE

- One turn of press plate height adjust knob changes the press plate height by 1 mm (0.04"). Press plate can be lowered up to 7 mm (0.27").

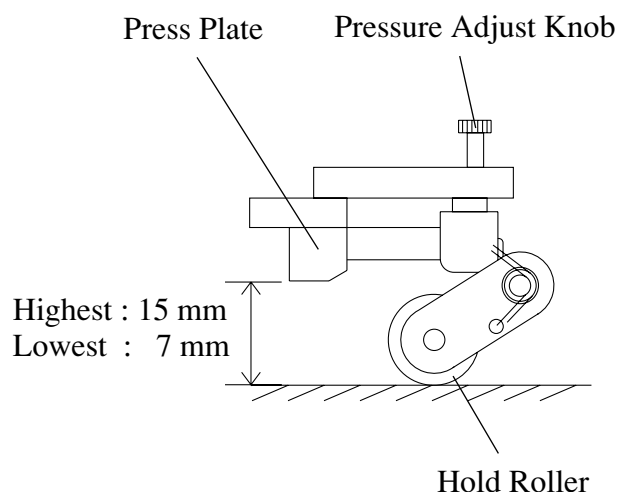


2-3-3 Hold Roller Pressure

1. Pressure of hold roller can be adjusted with pressure adjust knob. Adjust pressure according to booklet thickness.

NOTE

- Turning knob clockwise increases pressure, counterclockwise decreases pressure.



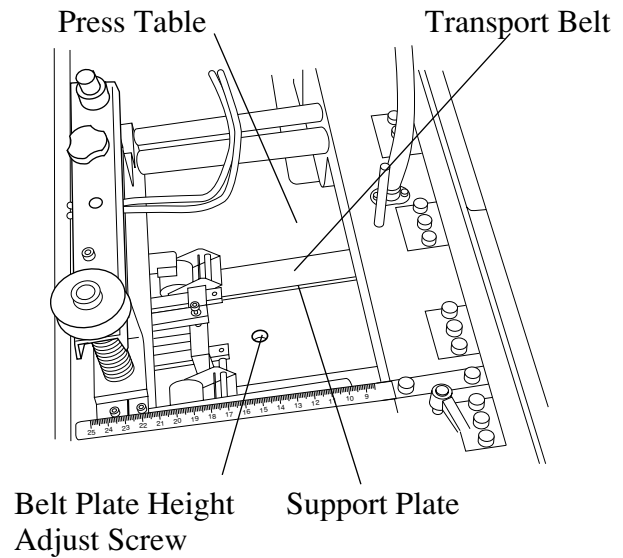
2-3 Other Setup

2-3-4 Transport Belt Height

1. Adjust the transport belt height using belt plate height adjust screw. The standard transport belt height is 1 mm (0.04") higher than the press table surface.

NOTE

- When booklets do not reach to stopper, raise support plate.



2-4 Binding Start

⚠ WARNING

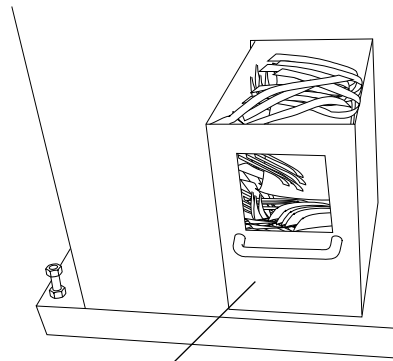
- Do not separate FC-20A from SPF-20A. Operate FC-20A and SPF-20A as one complete system.

1. Turn on SPF-20A main power and start the operation.
 - Booklets are trimmed only when stitching & folding or folding mode is selected.
 - Booklets pass through FC-20A when side/corner stitching mode is selected.

2-5 Trimmings Clearance

Before trimmings box becomes full, empty trimmings box.

1. Press emergency stop button.
2. Pull out trimmings box and remove trimmings.
3. Set trimmings box and resume the operation.



Trimming Box

3. Maintenance

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3-1 Knife Replacement

This section shows how to replace knives.

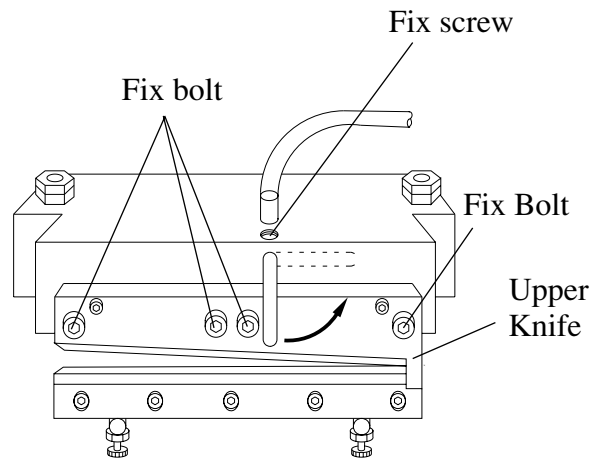


WARNING

- Wear leather groves on your hands. Otherwise sharp knives can cause severe personal injury.
- Turn off main switch on SPF-20A before replacing knife.

3-1-1 Upper Knife

1. Loosen fix screw and turn air blower nozzle to the arrow direction in the drawing at right.
2. Remove four set of fix bolts and springs and then remove upper knife.
3. Attach upper knife in the reverse order of removal.



3-1-2 Lower Knife

1. Remove upper knife.
2. Remove two fix screws and guide plate.

NOTE

- Hold guide plate horizontally.

3. Hold lower knife and remove five fix bolts and then remove lower knife.
4. Attach lower knife in the reverse order of removal.

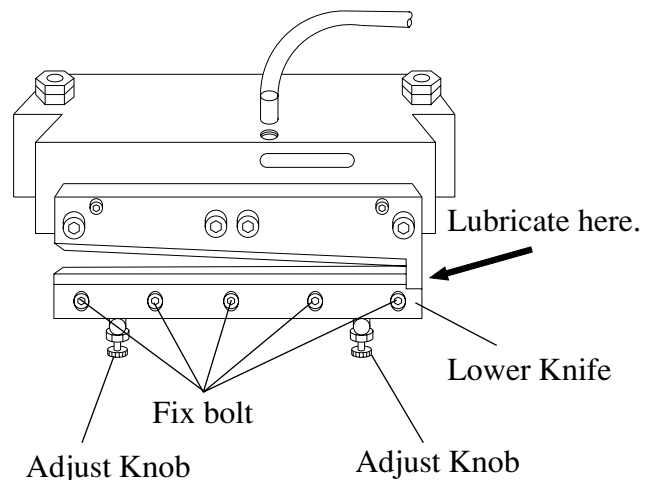
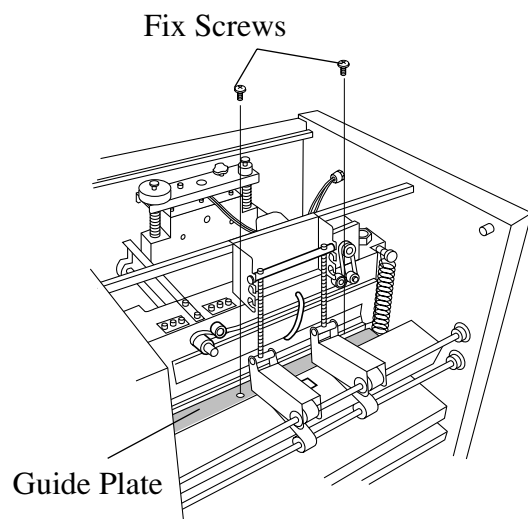
NOTE

- After lower knife is resharpened, adjust the lower knife height using adjust bolts so that it is aligned with table.

5. Attach guide plate.
6. Lubricate the part where the arrow mark indicates in the drawing at right.
7. Attach upper knife.

NOTE

- Before start operation, press knife inching button several times and check that knives move smoothly.



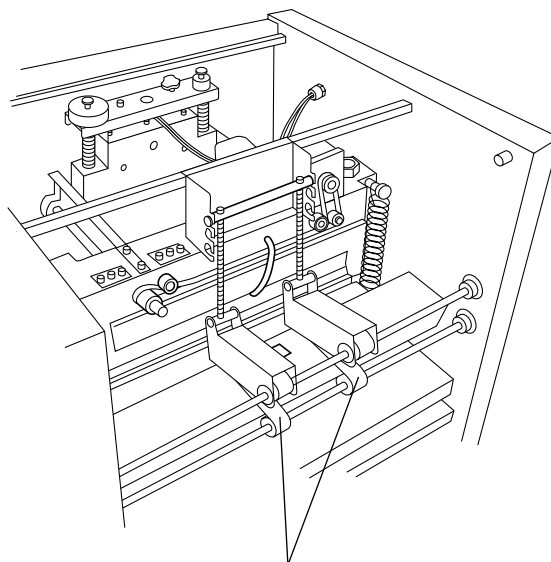
3-2 In-feed Roller and Transport Belt Cleaning



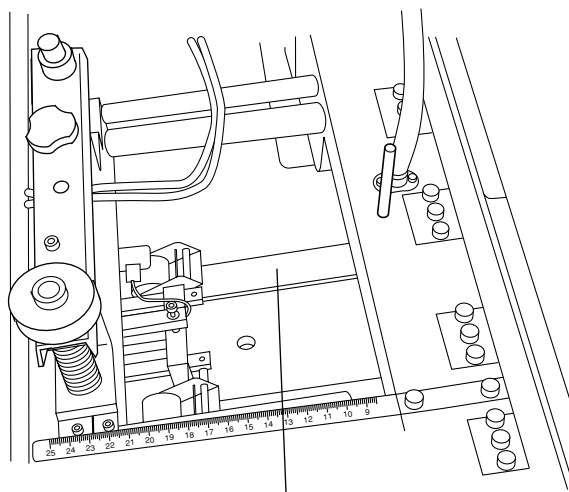
WARNING

- Turn off SPF-20A main power before cleaning rollers and belt.

Clean in-feed rollers and transport belts with alcohol-soaked cloth.



In-feed Rollers



Transport Belt

3-3 Grease Application for the Knife



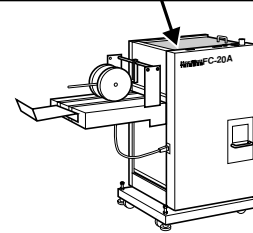
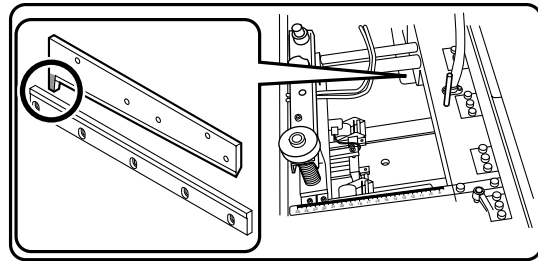
CAUTION

- *Turn off the power switch when applying the grease.*
- *Watch out for the cutter edge when applying the grease.*

1. Turn off the power switch.
2. Apply grease on the top of the stick.
3. Apply grease to the section shown in the figure to the right from the delivery side.

NOTE

- *Apply grease once a month.*
- *Do not apply too much grease. Too much glue will fill and stain the knife.*



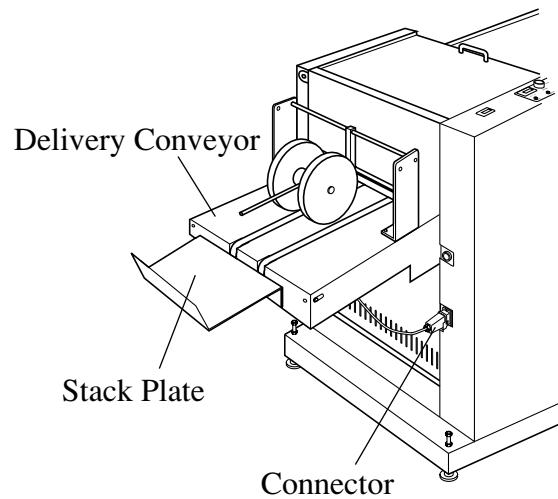
4. Move and Installation

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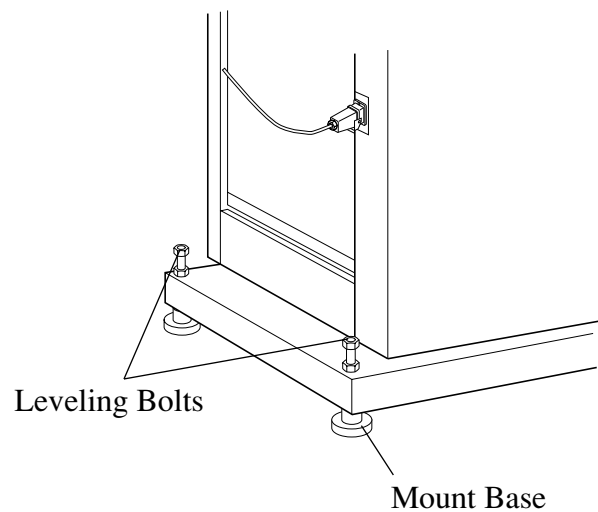
4-1 Move

This section shows how to move FC-20A.

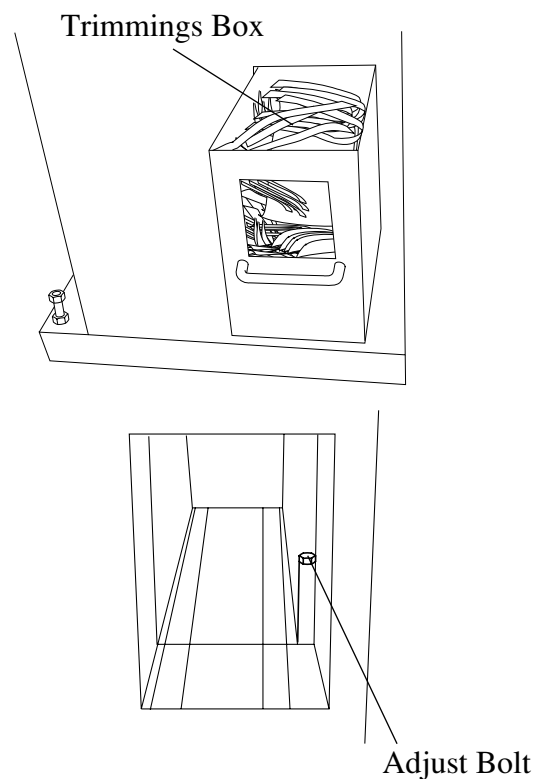
1. Remove stack plate, connector and then delivery conveyor.



2. Loosen two leveling bolts and remove two remove mount bases.



3. Remove trimmings box and loosen adjust bolt.



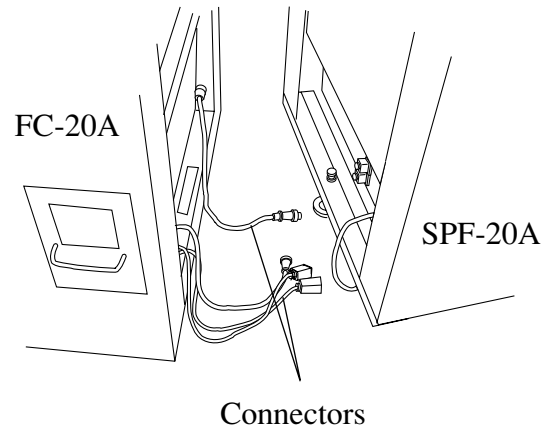
4-1 Move

4. Move FC-20A slightly to the left and remove four connectors.



CAUTION

- Remove four connectors before moving FC-20A away from SPF-20A.



5. Move FC-20A.

4-2 Installation

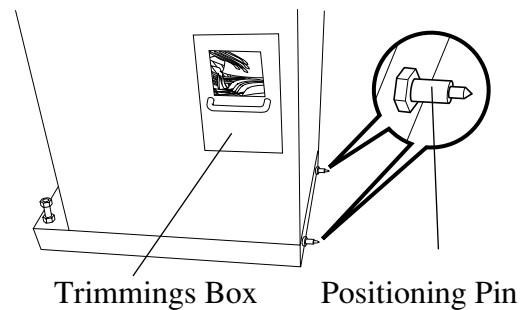
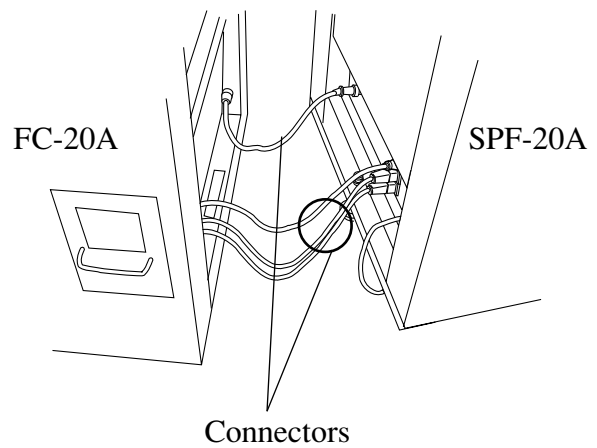
This section shows how to install FC-20A.

1. Attach four connectors from FC-20A to SPF-20A.

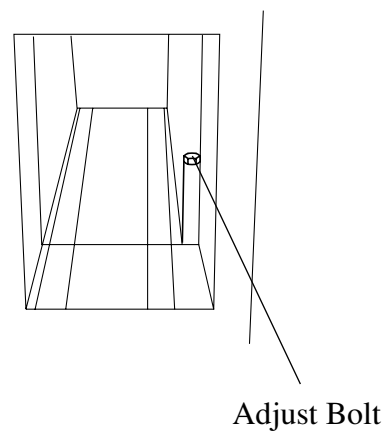
NOTE

- Correspond the number of connectors with that of receptacles.

2. Place mount bases on the floor where adjust bolt on FC-20A is positioned.
3. Insert positioning pin into SPF-20A holes.



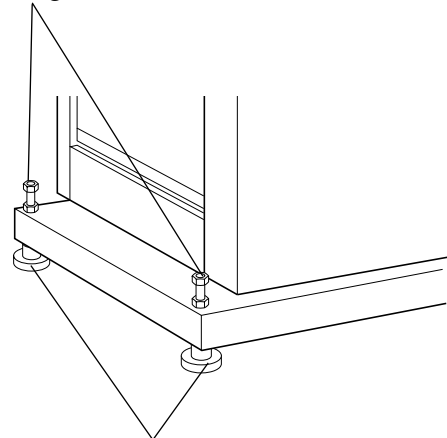
4. Remove trimmings box, attach adjust bolts and fix them.



4-2 Installation

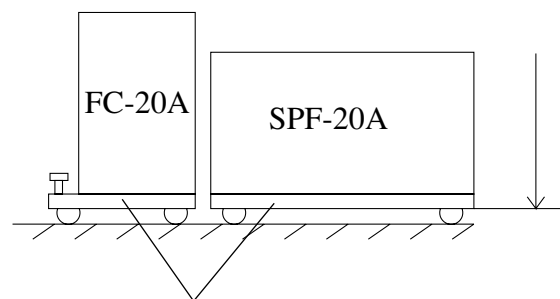
5. Place two mount bases under leveling bolts.

Leveling Bolts



Mount Bases

6. Raise FC-20A using adjust bolts and leveling bolts so that the FC-20A machine base is aligned with the SPF-20A machine base.

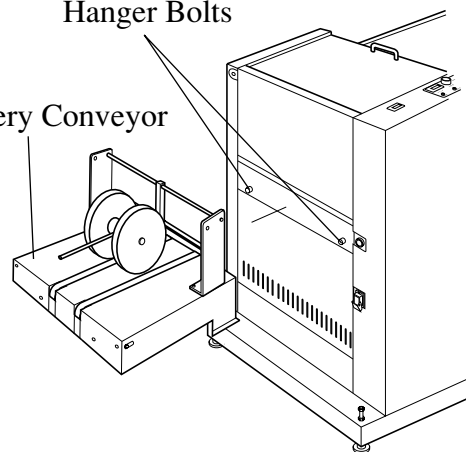


Machine Base

8. Hang delivery conveyor on hanger bolts of FC-20A.

Hanger Bolts

Delivery Conveyor



9. Attach stack plate and connect conveyor cable into FC-20A receptacle.

Delivery Conveyor

Stack plate

Connector

