INSTALLATION MANUAL

BOOK FOLDER BF90 / BF90+

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IMPORTANT SAFETY NOTICES

PREVENTION OF PHYSICAL INJURY

Always connect the equipment to a properly grounded power source. In doubt, have the power source checked by a qualified electrician.

WARNING: Improper connection of the equipment grounding conductor can result in electrical shock.

Always follow all warnings marked on, or supplied with, the equipment.

Always locate the equipment on a solid support surface with adequate strength for the weight of the machine.

Always exercise care in moving or relocating the equipment.

Always keep magnets and all devices with strong magnetic field away from the machine.

Never use a ground adapter plug to connect the equipment to a power source that lacks a ground connection terminal.

Never attempt any maintenance function that is not specifically described in this documentation.

Never remove the covers or guards that are fastened with screws.

Never install the unit near a radiator or any other heat source.

Never override or "cheat" electrical or mechanical interlock devices.

Never operate the equipment if you notice unusual noises or odours. Disconnect the power cord from the power source and call your customer service engineer to correct the problem.

1. Before disassembling or assembling parts of the Booklet maker and peripherals. make sure that the Booklet maker power cord is unplugged,

2. The wall outlet should be near the Booklet maker and easily accessible.

3. Note that some components of the Booklet maker and peripherals are supplied with electrical voltage even if the main power switch is turned off.

4. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrical or mechanically driven components.

OBSERVANCE OF ELECTRICAL SAFETY STANDARDS

1. The Booklet maker and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models.

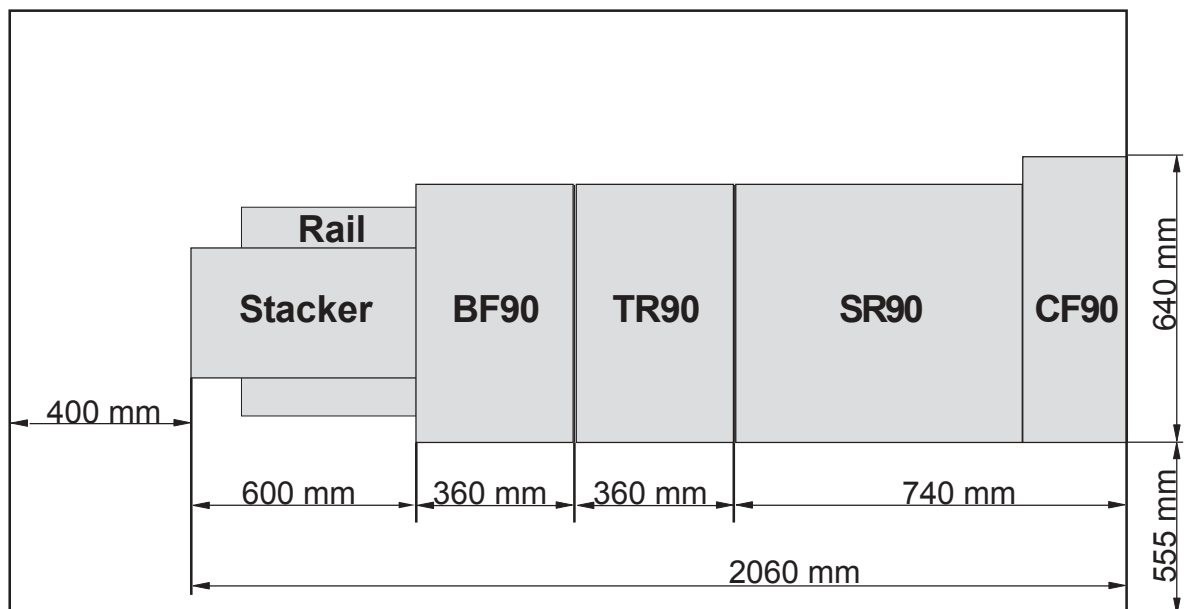**SAFETY AND ECOLOGICAL NOTES FOR DISPOSAL**

1. Dispose of replaced parts in accordance with local regulations.

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1.   INSTALLATION PROCEDURE

1.1   INSTALLATION REQUIREMENTS

1.1.1   MINIMUM SPACE REQUIREMENTS

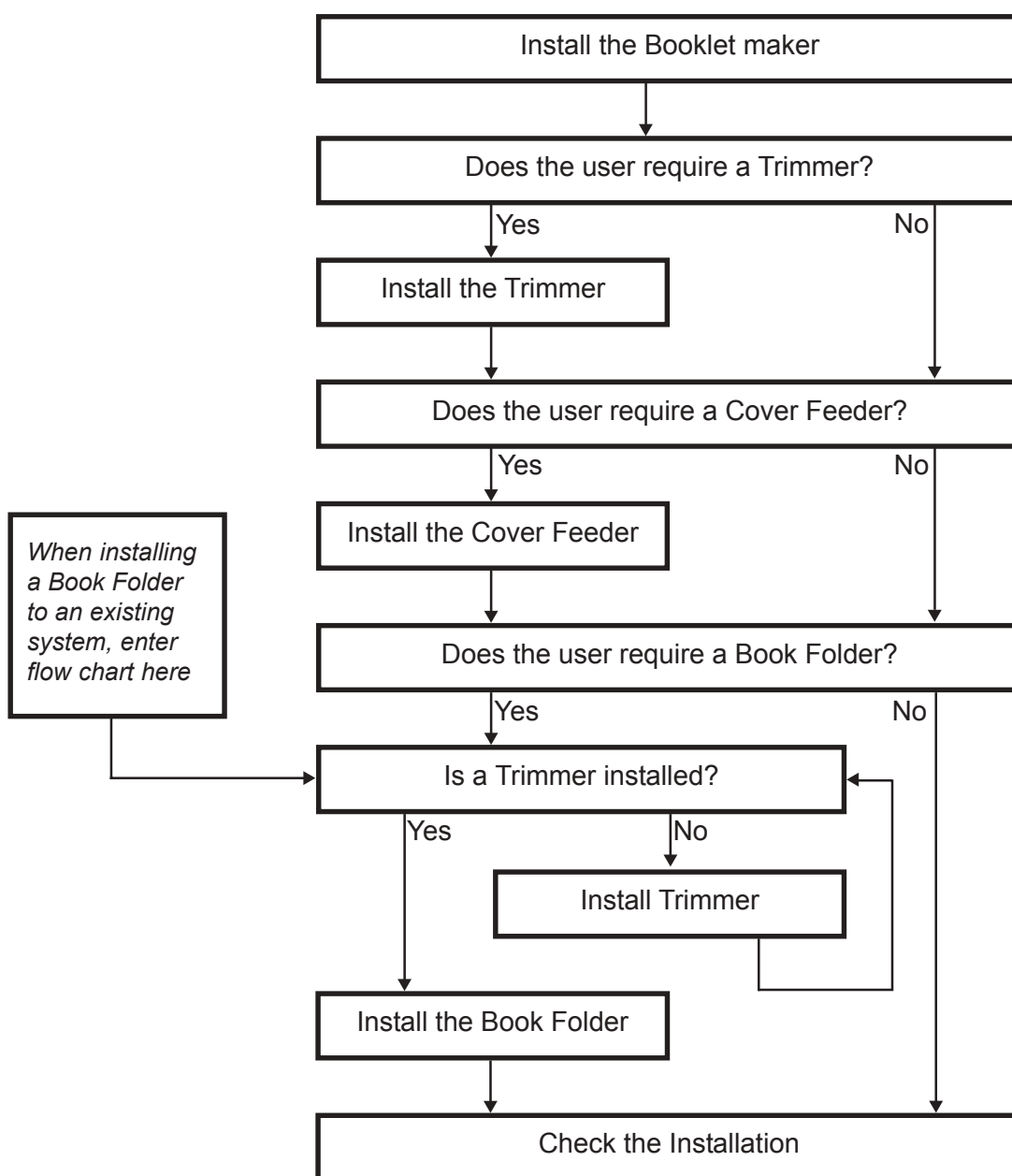|	Rail				
	Stacker	**BF90**	**TR90**	**SR90**	**CF90**

400 mm

600 mm   360 mm   360 mm   740 mm

2060 mm

640 mm

555 mm

1.1.2 POWER REQUIREMENTS

⚠ CAUTION
1. **Make sure that the wall outlet is near the main machine and easily accessible. Make sure the plug is firmly inserted in the outlet.** 2. **Avoid multi-wiring.** 3. **Be sure to ground the machine.**

1. Input voltage level:
   North America 115V, 50Hz/60Hz: 1,75 A
   Europe/Asia 230V, 50Hz/60Hz: 0,9 A

2. Permissible voltage fluctuation: ± 10%

3. Never set anything on the power cord.

1.2   INSTALLATION FLOW CHART

The following flow chart shows how to install the optional units more efficiently.

```
                        ┌─────────────────────────────┐
                        │   Install the Booklet maker  │
                        └─────────────────────────────┘
                                      │
                        ┌─────────────────────────────┐
                        │ Does the user require a Trimmer? │
                        └─────────────────────────────┘
                         Yes                         No
                  ┌──────────────────┐
                  │ Install the Trimmer │
                  └──────────────────┘
                         │                           │
                        ┌─────────────────────────────┐
                        │ Does the user require a Cover Feeder? │
                        └─────────────────────────────┘
                         Yes                         No
                  ┌──────────────────┐
                  │ Install the Cover Feeder │
                  └──────────────────┘
  ┌──────────────┐       │                           │
  │ When installing│      ┌─────────────────────────────┐
  │ a Book Folder │      │ Does the user require a Book Folder? │
  │ to an existing│      └─────────────────────────────┘
  │ system, enter │       Yes                         No
  │ flow chart here│
  └──────────────┘       ┌─────────────────────────────┐
                         │     Is a Trimmer installed?  │←──┐
                         └─────────────────────────────┘   │
                          Yes              No               │
                                    ┌──────────────────┐    │
                                    │  Install Trimmer  │────┘
                                    └──────────────────┘
                  ┌──────────────────────┐
                  │ Install the Book Folder │
                  └──────────────────────┘
                         │                           │
                        ┌─────────────────────────────┐
                        │     Check the Installation   │
                        └─────────────────────────────┘
```

TR90 Trimmer: Enables On-line trimming. Especially thicker sets (> 4 sheets) look unprofessional because of "creep". TR90 will trim those edges (up to 12.5 mm / 1/2").

CF90 Cover Feeder: Enables the possibility to add colour covers to the booklets.

BF90 Book Folder   Enables the possibility to give the booklets the perfect bound look.

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1.3   BOOK FOLDER INSTALLATION

1.3.1   ACCESSORY CHECK

[A]   [B]   [C]   [D]

[E]   [F]   [G]   [H]

[I]   [J]   [K]   [L]

COM. BF90

[M]   [N]   [O]

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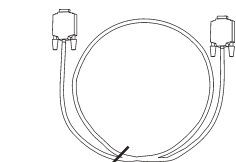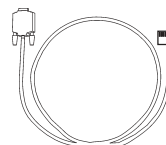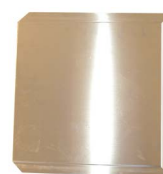
Check the quantity and condition of the accessories in the box against the following list:

Description

    A. Communication cable

    B. Power cord

    C. Sensor harness

    D. Software downloading cable

    E. Adapter PWB

    F. Auto set thickness bracket, with spring

    G. Sensor bracket, with sensor

    H. Spacer pin x 2, Torx screws x 2

    I.   External Interlock device

    J. 25 mm washer x 2, M5x16mm screws 2

    K. Extended trim bin x 2, screws x 4, nuts x 4

    L. Rail extension

    M. Tapping cable, 50mm / 2"

    N. COM. BF90 sticker

    O. Ground strap, Torx screw x 1

Installation

1.3.2 INSTALLATION PROCEDURE

Unpacking

1. Remove all parts from the pallets.

2. Ensure all of the packing material is removed from inside and outside of the Book Folder.
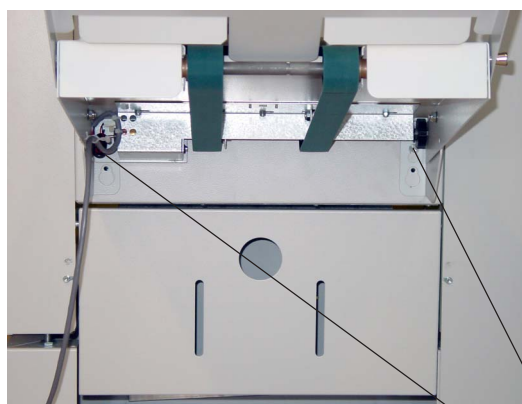
Installation

Remove the belt stacker

*Figure showing the
Trimmer TR90*

[A]

*Figure showing the
Trimmer TR90*

[D]

[E]

[B]

[C]
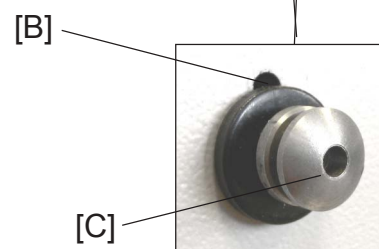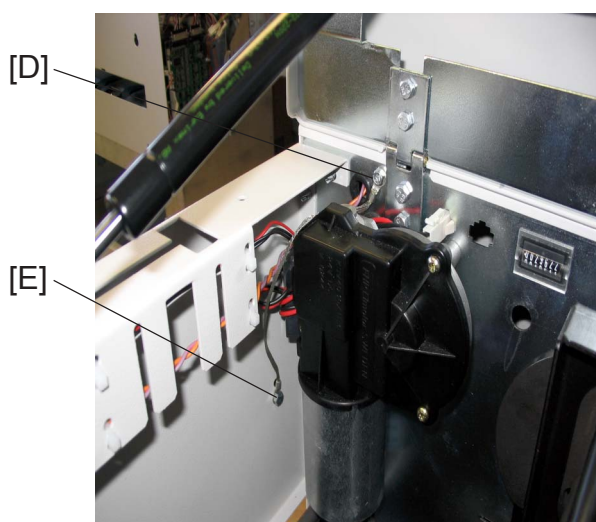
1.   Disconnect the Power cord to the SR90 (▤ x 1).

2.   Remove screws [A] (✍ x 2).

3.   Disconnect the belt stacker cable (▤ x 1).

4.   Remove the belt stacker from the TR90.

5.   Remove the positioning pins from the upper holes [B], used for the belt stacker
     (✍ x 2).

6.   Install the Ground strap to the left positioning pin [E], with the 25 mm washer
     and the screw from the installation kit, to the lower hole [C] (◎ x 1, ✍ x 1).

7.   Install the other end of the ground strap to the Top cover [D] (✍ x 1 torx).

8.   Install the right positioning pin, with the 25 mm washer and the screw from the
     installation kit, to the lower hole (◎ x 1, ✍ x 1).

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Extended trim bin

[E]
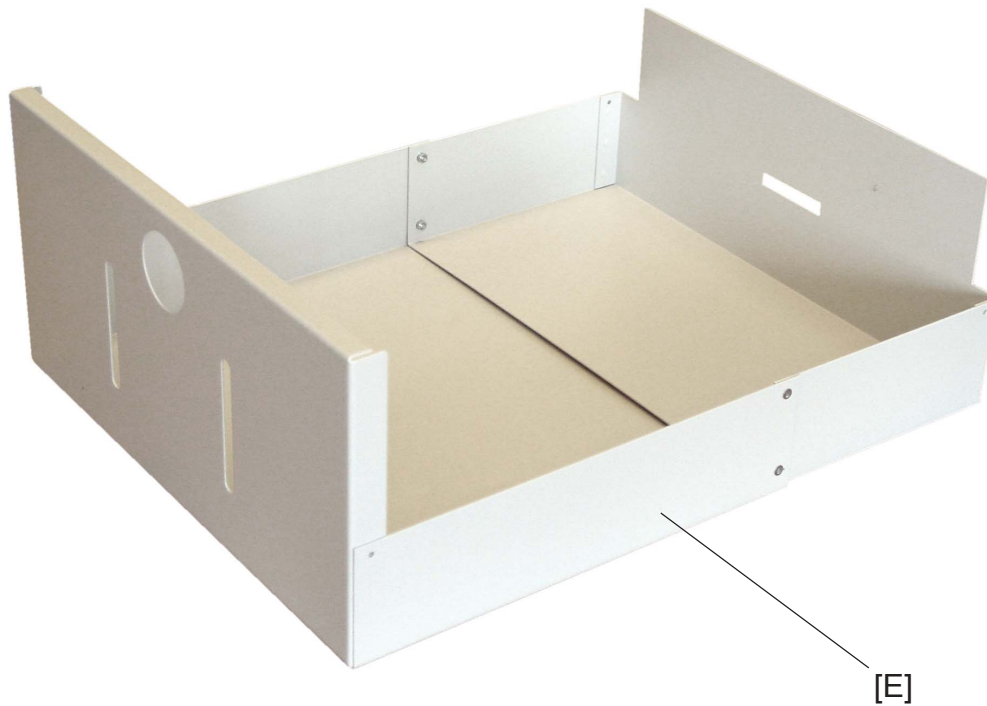
1. Remove the existing trim bin from the Trimmer. This trim bin can not be used together with the BF90.

2. Assemble the new Extended trim bin [E] with the four screws and nuts from the installation kit (⚲ x 4, ⬡ x 4).

Installing the External Interlock device

Figure showing the Book Folder BF90

Figure showing the Book Folder BF90
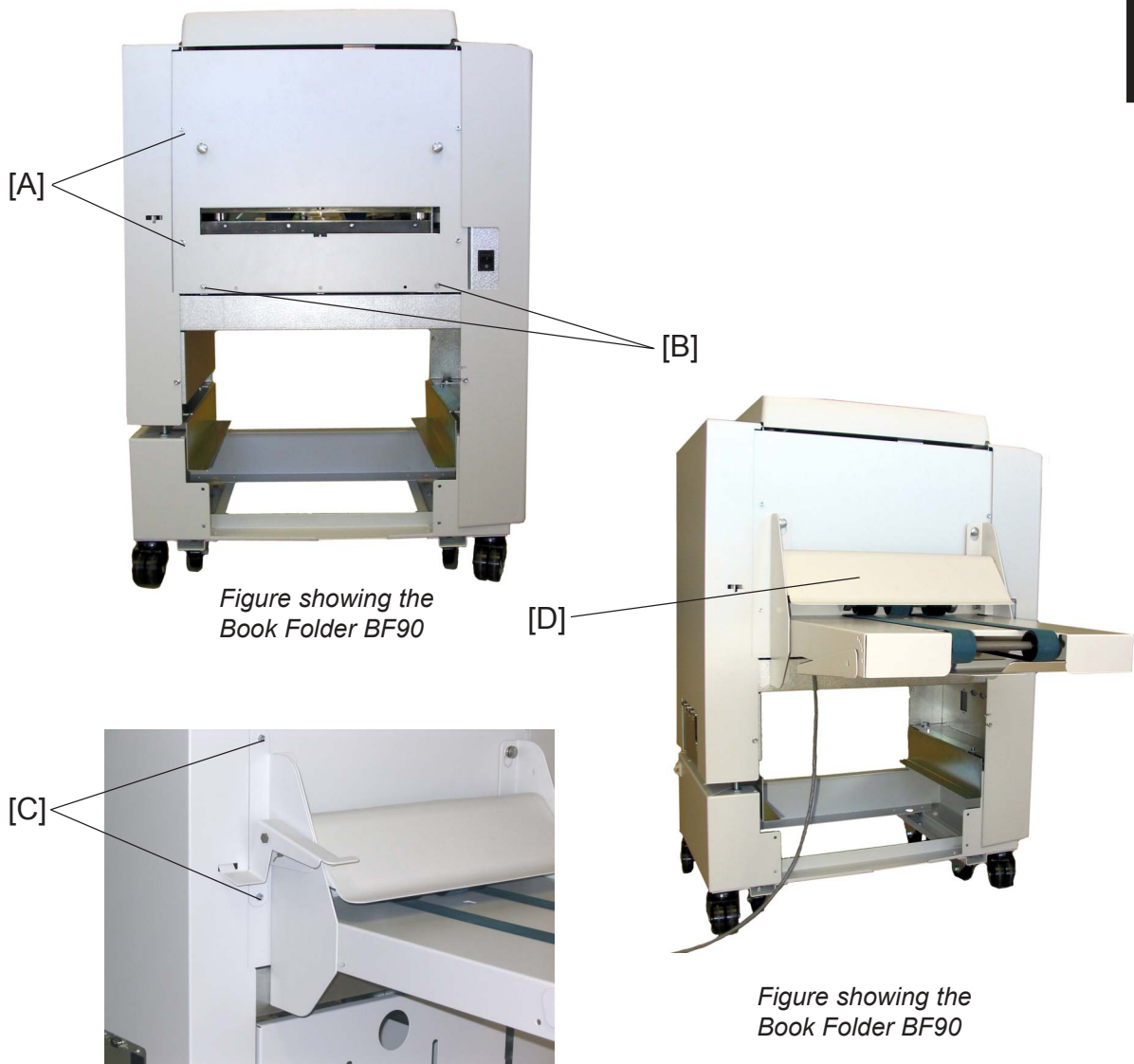
1. Remove the screws [A] (⌁ x 2).
   NOTE: Keep the screws. They will be used later.

2. Loosen screws [B] (⌁ x 2).

3. Install the belt stacker on the Book folder.

4. Secure the belt stacker, by tightening screws [B] (⌁ x 2).

5. Install the external interlock device [C].

6. Secure the External Interlock device with the screws [A] you removed (⌁ x 2).
   NOTE: Make sure that the upper part [D] of the belt stacker is in the lower position.

Installing the Rail extension

[A]   [B]

[D]   [C]
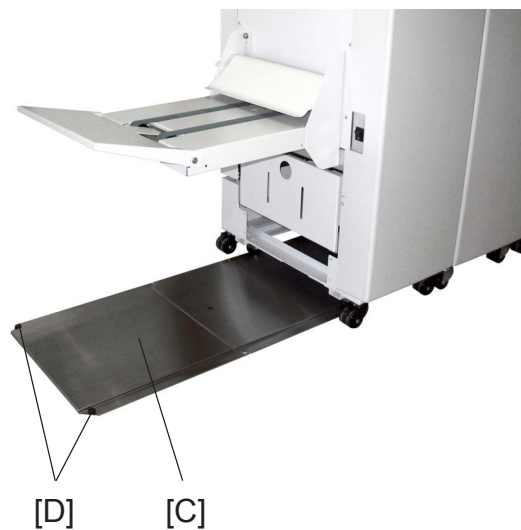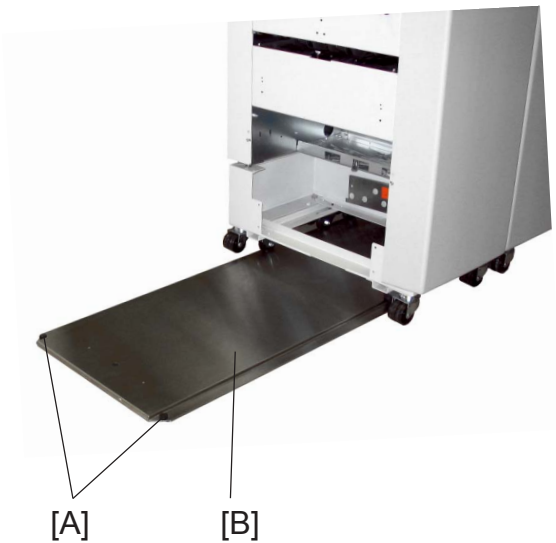
1. Remove the plastic stop's [A] from existing rail [B].

2. Install the rail extension [C] under the existing rail.

3. Place the Book Folder on the existing rail.

4. Install the plastic stops [D] on the rail extension [C].

1.3.3   ADJUSTMENTS

Height adjustment

[B]

[A]

[F]

[C]
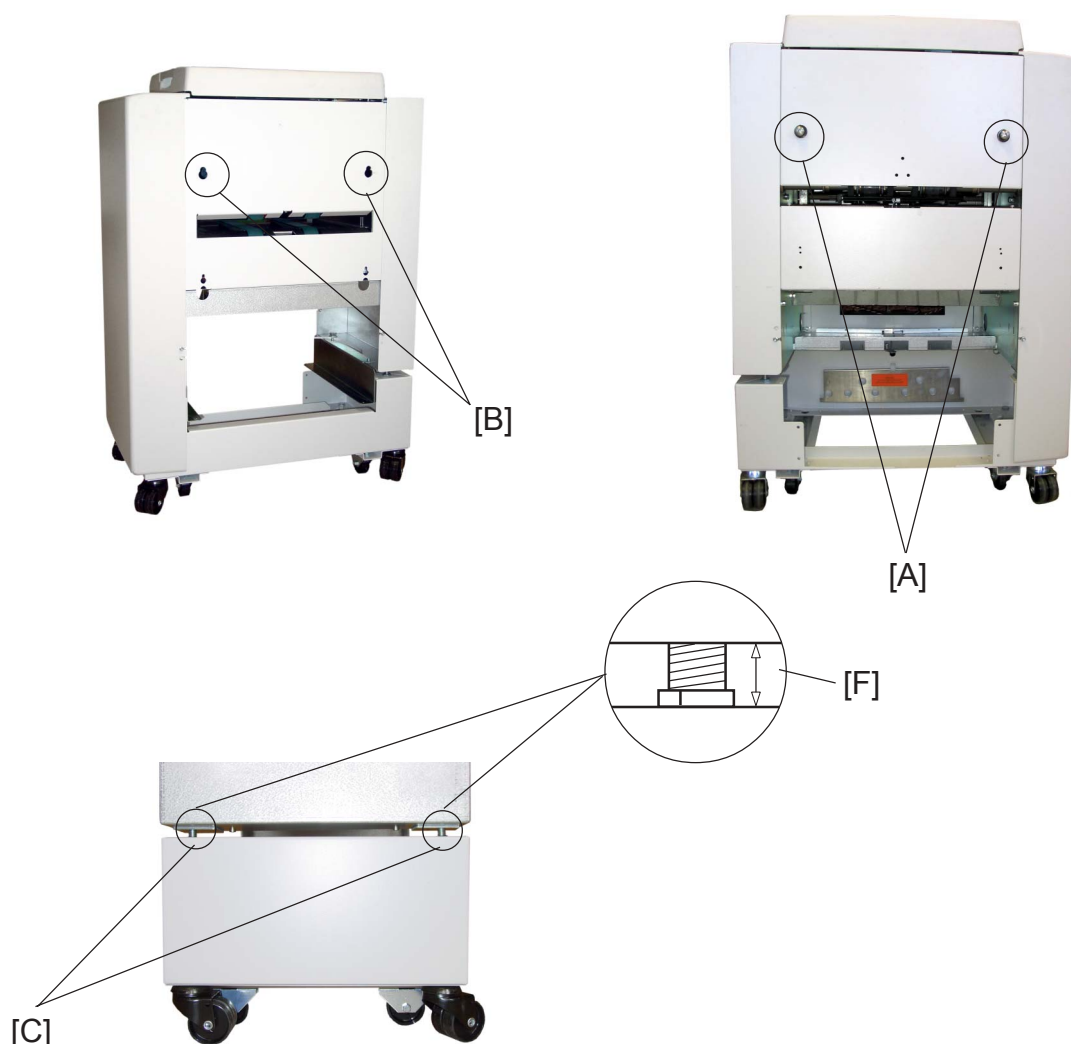
1.   Remove the front cover of the Book Folder by removing two screws, and loosening two screws (⌾ x 4).

2.   Move the Book Folder up to the Trimmer.

3.   Adjust the height of the Book Folder, so that the positioning pins [A] on the Trimmer fits in the docking holes [B] on the Book Folder.

     Adjust by turning the four nuts [C] on the Book Folder with the castor tool (one revolution on the nuts is 1,5mm / 1/16" in height). Adjust on the front and rear side.

     NOTE: The Multi tool is located behind the rear cover of the SR90 (⌾ x 3).

The distance [F] on the right side, and the left side of the Book folder should be equal.

Docking

[B]

[A]
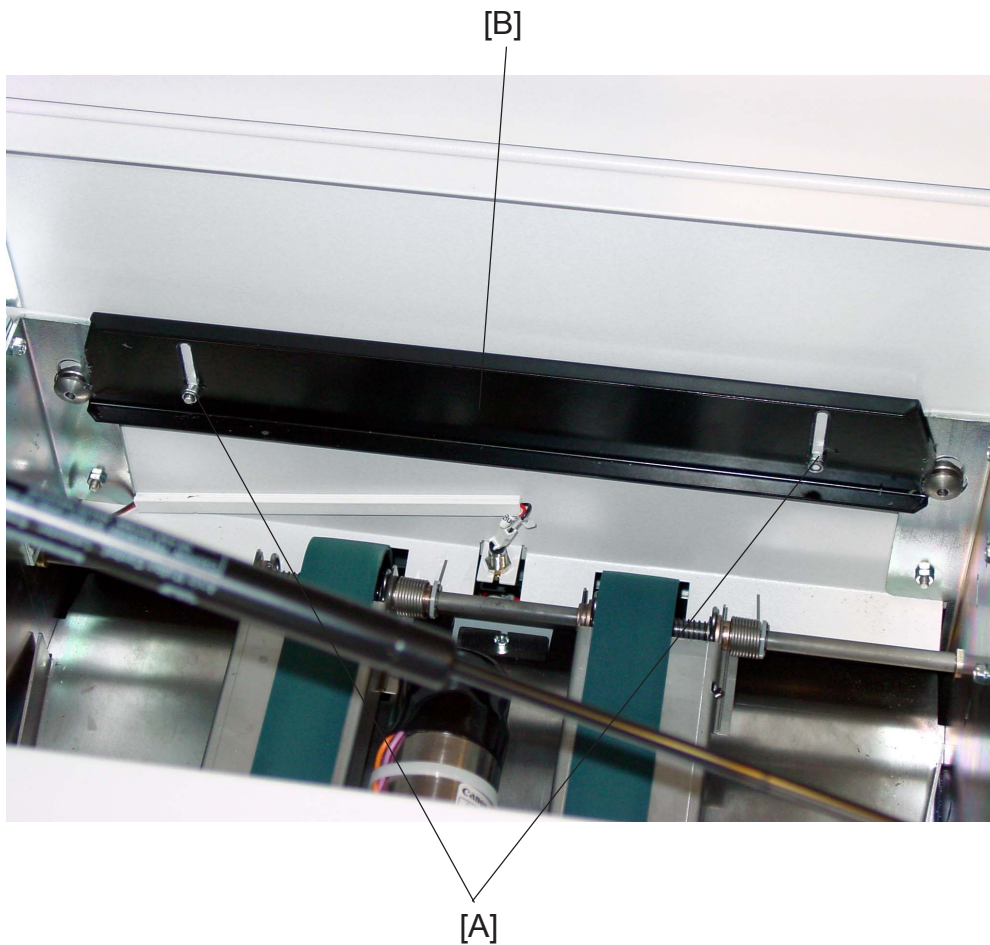
1.   Loosen nuts [A] to the Locking bracket [B].

2.   Dock the Book folder to the Trimmer.

3.   Secure the Book folder by lifting the Locking bracket [B] and tightening nuts
     [A] (⬡ x 2).
     NOTE: Make sure that the locking bracket locks in the outer slots on the
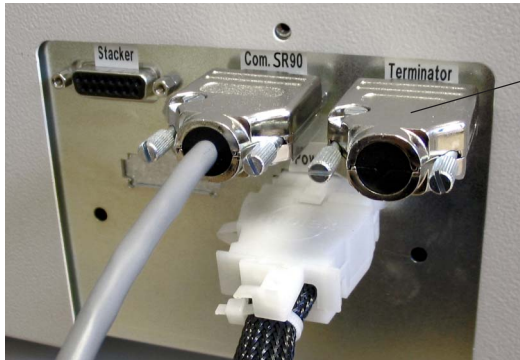   positioning pins.

4.   Install the new Extended trim bin

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1.3.4 CONNECTORS

[B]

Figure showing the Trimmer TR90

[A]

Figure showing the Book Folder BF90

[C]

Figure showing the Trimmer TR90

[D]

1.   Connect the Belt stacker cable [A] to the Book Folder (📑 x 1).
     NOTE: Do not connect the Belt stacker cable [A] to the Trimmer.

2.   Move the Terminator plug [B] from the Trimmer to the Book Folder (📑 x 1).

3.   Install the COM. BF90 sticker [C], from the installation kit, over the "Terminator" sticker on the Trimmer.

4.   Install the Communication cable [D] between the Trimmer and the Book Folder (📑 x 1).

5.   Hook up the cables on the cable holder on the Trimmer.

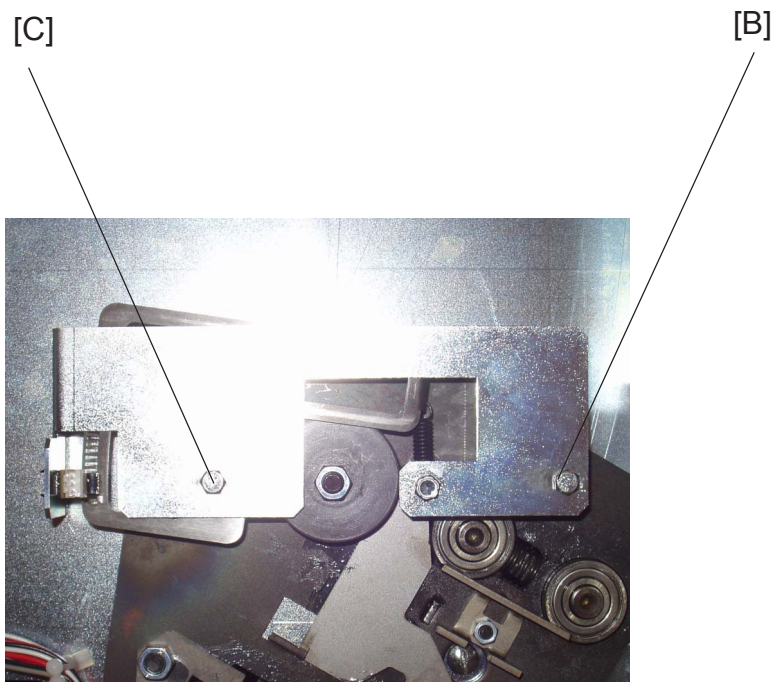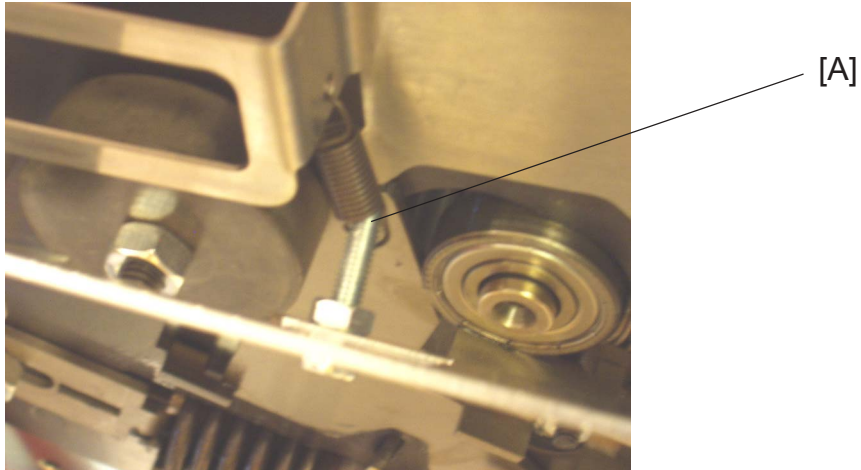## 1.3.5 AUTO SET THICKNESS BRACKET

Auto set thickness bracket
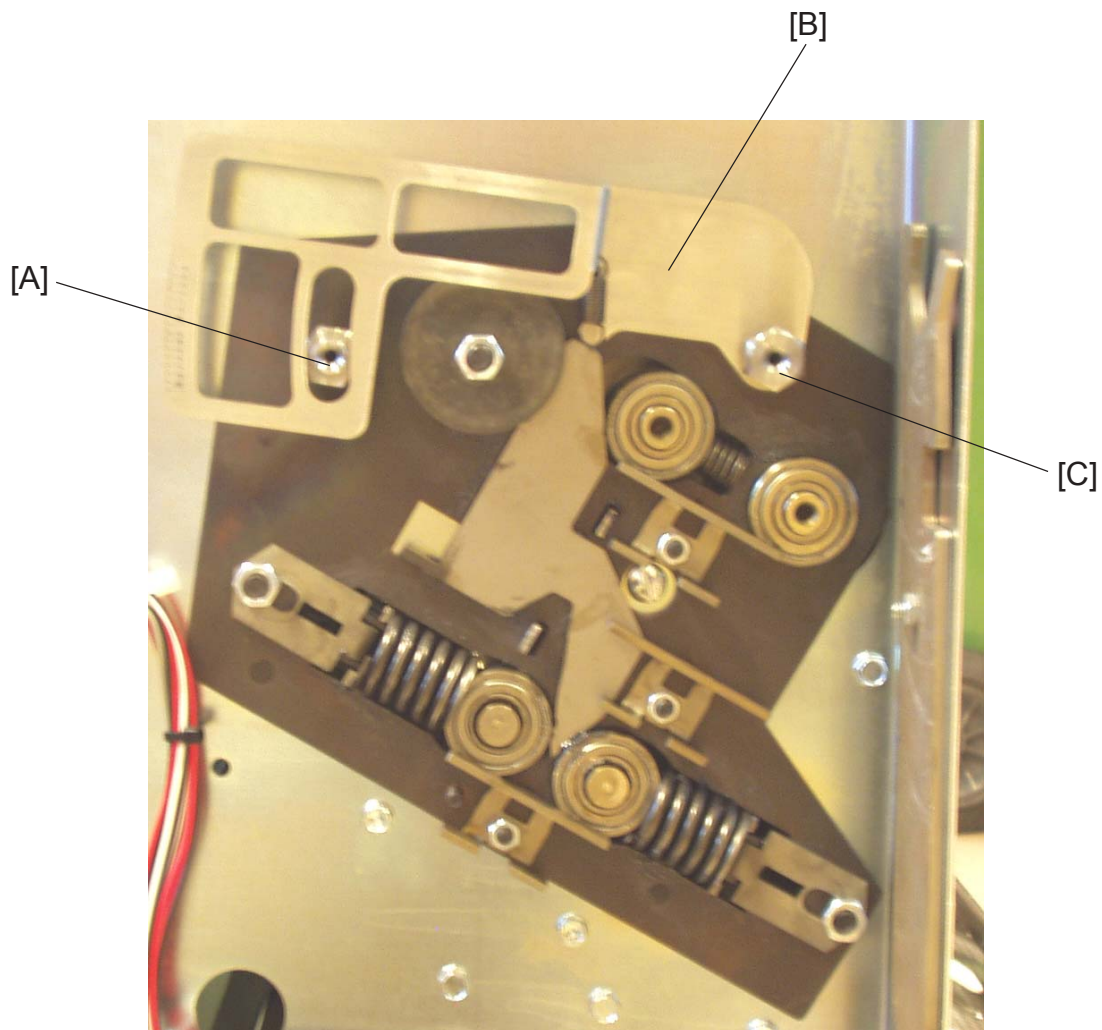
1. Remove the front and rear cover on the Booklet maker ((👉 Service Manual SR90 3.3.1).

⚠ CAUTION
ONLY install spacer pin [A] and [C] finger tight. **Over tightening may brake loos the screw from the Fold roller plate.**

2. Install the Spacer pin [A], with the collar out.

3. Install the Auto set thickness bracket [B], and tighten it with the other Spacer pin [C] with the collar in.

Sensor bracket

[A]

[C]   [B]

1. Place the spring [A] on the screw on the Sensor bracket.

2. Secure the Sensor bracket by tighten it with the screws [B] & [C] (⌁ x 2 torx).
   **NOTE:** Make sure that the Actuator runs in the sensor slot!

Auto set thickness sensor harness
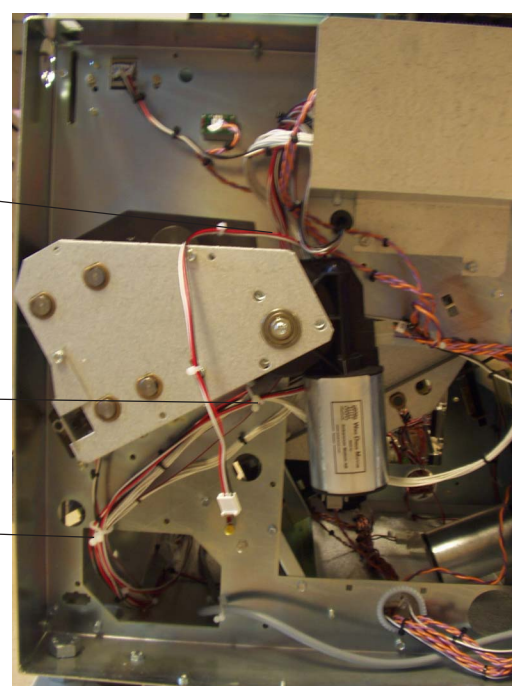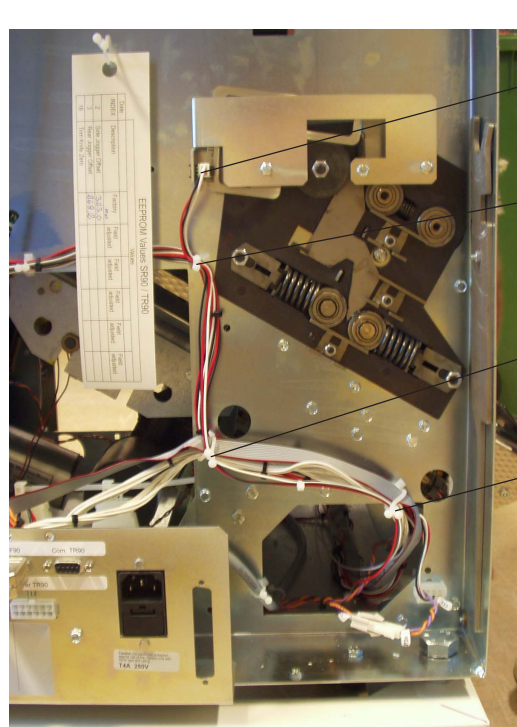
1. Install sensor harness to sensor BM-Q21 [A] on the Sensor bracket (📇 x 1).

2. Route the harness through cable holders [B, C & D].

3. Continue routing the harness through the Booklet maker, to the front side.

4. Continue routing the harness through the cable holders [E & F], and behind Fold motor M6 [G].

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Install Adapter PWB
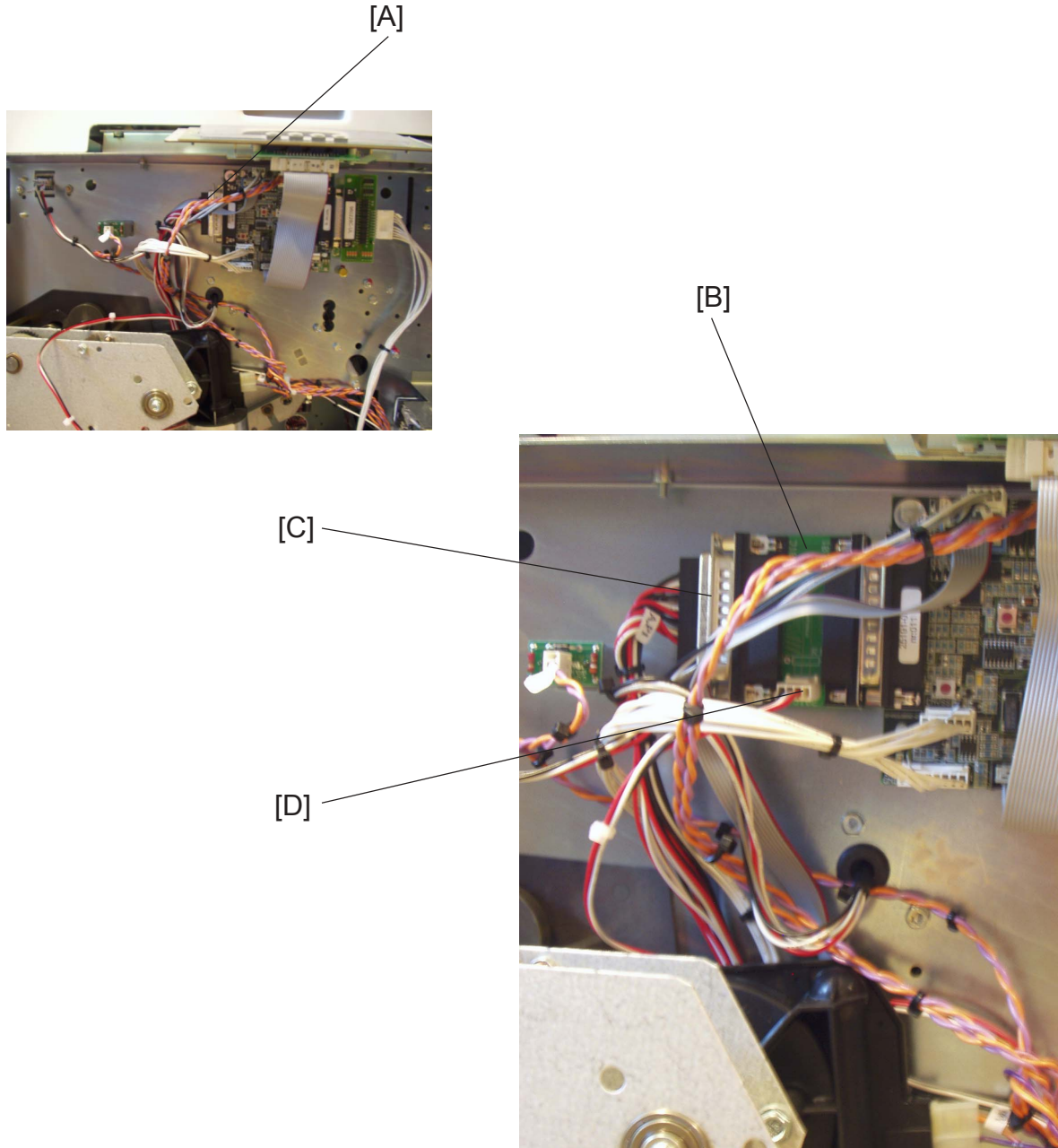
1. Remove the protection cover to the CPU PCB, by loosening two screws (🔩 x 2).

2. Remove the D-sub cable [A] from the CPU PCB (📭 x 1).

3. Install the Adapter PWB [B] to the CPU PCB.

4. Install the D-sub to the Adapter PWB [C] (📭 x 1).

5. Install the Sensor harness to the Adapter PWB [D] (📭 x 1).

BF90-1-21

1.3.6 LOAD NEW SOFTWARE TO SR90 CPU

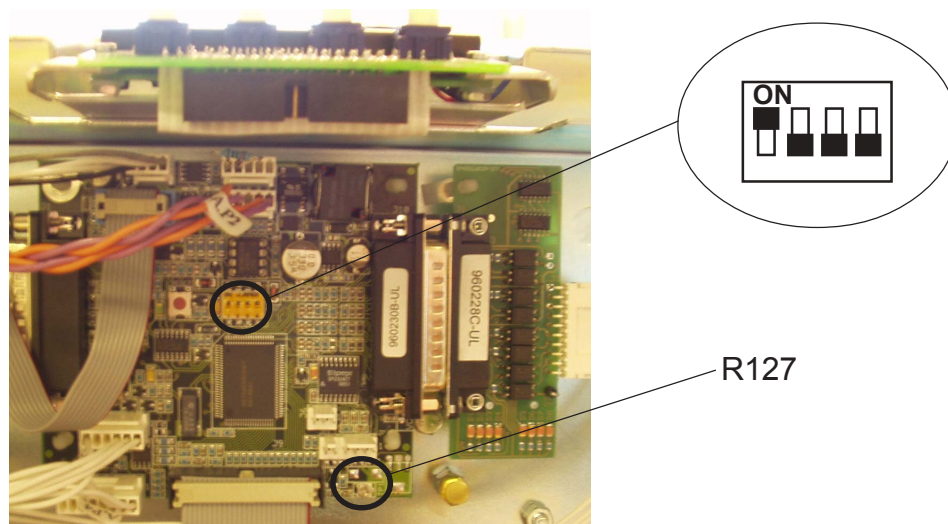⚠ **CAUTION**

ESD Hazard! ESD (Electrostatic Discharge) can cause software crashes, data and/or communications problems. Failure to use proper ESD procedures will cause damage to electronic components (example: PCBs). ESD problems can be minimized by maintaining all machine ground connections, ensuring the proper handling of circuit boards/ sensors - Use ESD protection when working near PCBs. Failure to use ESD protection is likely to result in a PCB failure ((☞ 3.1).

When Installing the Book folder to the SR90 system, you will have some differences in the Service menu, such as BF90 Service. Therefore do you need to perform an EEPROM reset AFTER loading the new software to the SR90 CPU

1. Make sure that the Main Power is Off on the SR90.

2. Remove the Front Cover on the SR90 (Service Manual SR90 (☞ 3.3.1).

3. Set DIP-switch 1 to ON (up) position. When PWB Adapter is installed on the SR90 CPU PCB, DIP-switch 1 should always be set to ON.

    NOTE: When the PWB Adapter is NOT installed on the SR90 CPU PCB, all DIP-switches 1 - 4 should be set to normal OFF (down) position.

4. Run the SR90 CPU v2.01.exe file and follow the instruction in the program, or according to the latest bulletin.

5. When the download is complete, set the contrast of the LCD by turning the potentiometer R 127 (Service Manual SR90 (☞ 4.4).
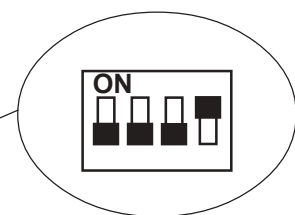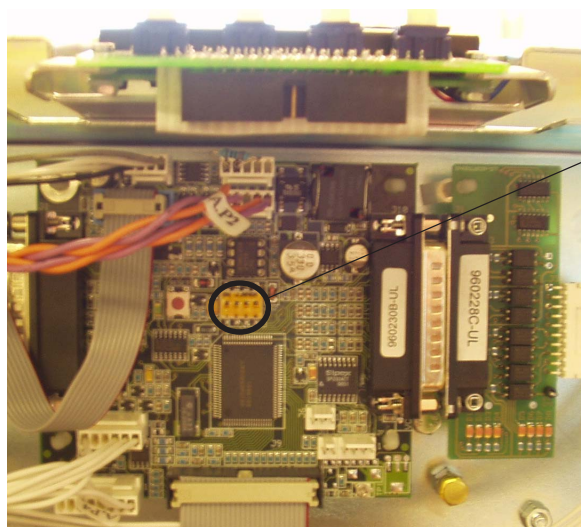

BF90-1-22

1.3.7 EEPROM RESET

> ⚠ **CAUTION**
>
> **ESD Hazard! ESD (Electrostatic Discharge) can cause software crashes, data and/or communications problems. Failure to use proper ESD procedures will cause damage to electronic components (example: PCBs). ESD problems can be minimized by maintaining all machine ground connections, ensuring the proper handling of circuit boards/ sensors - Use ESD protection when working near PCBs. Failure to use ESD protection is likely to result in a PCB failure ((☞ 3.1).**

1. Make sure the main power to the Booklet maker is switched off.

2. Move DIP-switch 4 to up position on the SR90 CPU PCB.

3. Press and hold the leftmost button on the Control Panel.

4. Switch ON the main power switch.

5. Release the button on the Control Panel.

6. The text CLEARING EEPROM followed by DONE will be shown on the LCD:

7. Key in the password, press the OK button.

8. Press the ESC button.

9. Switch off the main power to the Booklet maker.

10. Move DIP-switch 4 back to down position on the SR90 CPU PCB.

11. Switch on the main power switch.
   - Default EEPROM values are restored.

1.3.8 LOAD NEW SOFTWARE TO TR90 MD6DC

⚠ **CAUTION**

ESD Hazard! ESD (Electrostatic Discharge) can cause software crashes, data and/or communications problems. Failure to use proper ESD procedures will cause damage to electronic components (example: PCBs). ESD problems can be minimized by maintaining all machine ground connections, ensuring the proper handling of circuit boards/ sensors - Use ESD protection when working near PCBs. Failure to use ESD protection is likely to result in a PCB failure ((☞ 3.1).

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1.   Switch Off the Main Power Switch.

2.   Remove Rear Cover ((☞ TR90 Service Manual 1.1.1).

3.   Make sure all DIP-switches 1 - 4 is set to OFF (down) position.

4.   Run the TR90 MD6DC v2.00.exe file and follow the instruction in the program, or according to the latest bulletin.
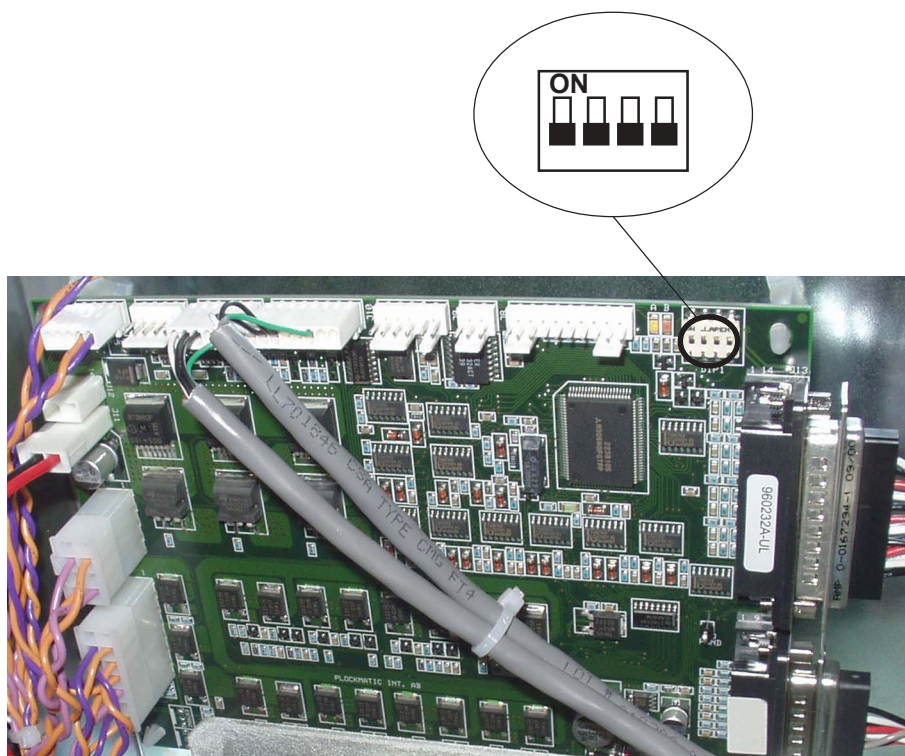
1.3.8 PAPER SIZE RESET

Executing Paper Size Reset

After the new software is loaded, it is important to perform a Paper size reset
((☛ Service manual SR90 5.4).

Installation

1.3.9 ENABLING THE BF90

1. Connect the power cord to the Book Folder [A] (▤ x 1).

2. Power on the Book Folder.

3. Enter the service mode on the Booklet Maker by pressing and holding the leftmost menu button while powering on the Booklet Maker.
    NOTE: Do not enter the service mode through the Tools menu.

4. Key in the password.

5. Scroll down to BF90 Service and press the OK button.

6. Press the CHG button, so the "Installed:" is set to YES.

7. Press the OK button

8. Make sure that the stapler heads are removed, according to SR90 Service Manual ((☞ Service manual SR90 3.4.12).

9. Perform a self diagnosis.
    - Scroll up to Diagnostic and press the OK button.
    - Press the RUN button.
    - If the Diagnostic is OK, continue.

10. Power off the Booklet Maker.

11. Power off the Book Folder.

12. Reinstall the stapler heads according to SR90 Service Manual section ((☞ Service manual SR90 3.4.12).

Figure showing the
Book Folder BF90

BF90-1-26

1.3.10 CHECK THE INSTALLATION

1.   Power on the Book Folder.

2.   Power on the Booklet Maker.

3.   Power on the Printer.

4.   Set up the Booklet Maker to Auto Paper size.

5.   Set up the Book Folder to Auto.

6.   Run five 10 sheet booklets of A3 (40 pages of A4 = a booklet containing 10 sheets of A3).

7.   Check that the booklet has a square formed spine.

8.   Run five 2 sheet booklets of A3 (8 pages of A4 = a booklet containing 2 sheets of A3).

9.   Check that the booklet *not* has a Book folded spine.