

Shuttle Frame Assembly (Figure 5–31)

Removal

1. Prepare the printer for maintenance (page 5–3).
2. Remove the shuttle cover assembly (page 5–24).
3. Disconnect the MPU cable connector (1).
4. Disconnect the shuttle motor cable connector (2).
5. Disconnect the shuttle cable assembly connector (3).

CAUTION

The hammer bank flex circuit ribbon cables can tear if handled roughly. Do not pull on the cables; grasp the connectors to disconnect the flex circuit ribbon cables. In the next step, disconnect the left and right flex ribbon connectors gently, and do not bend the cables unnecessarily.

6. Disconnect the left and right hammer bank flex circuit ribbon connectors (4 and 5).
7. Loosen the side 5/32 inch socket head clamp screws (6) and pull the clamps (7) back and off the guide shaft (8). Do not remove the clamps.
8. Loosen the center 5/32 inch socket head screw (9) enough to release the shuttle frame assembly (10) from the base casting (11).
9. Unlock and slide the tractors (13) outward as far as they will go on the tractor support shaft (14).
10. Grasping the outer beam standoffs (12), lift the shuttle frame assembly (10) out of the base casting (11). Lift it slowly and carefully: the shuttle frame assembly is heavy.

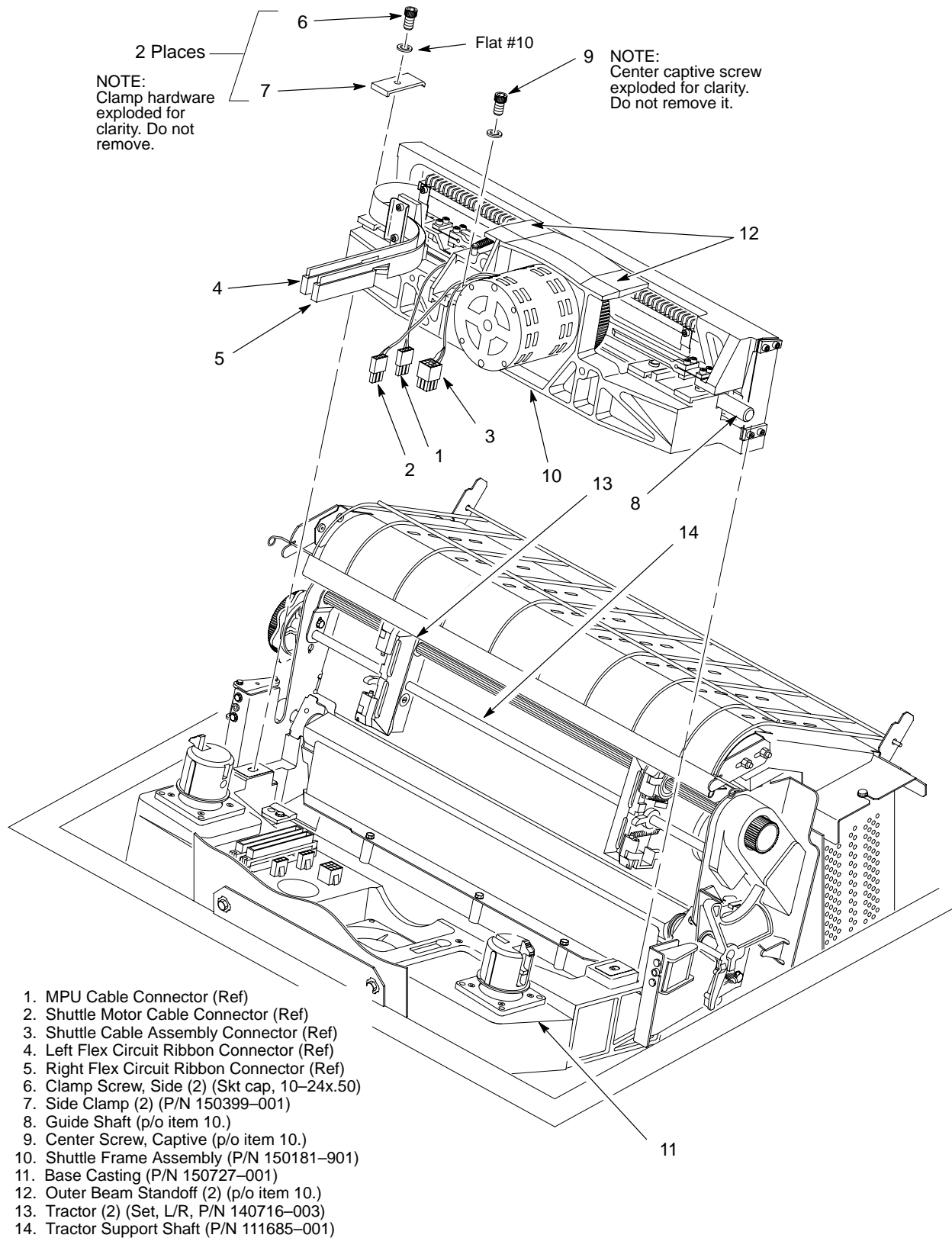


Figure 5-31 . Shuttle Frame Assembly Removal/Installation

Installation

1. Install the hammer bank cover (page 5–22), if it was removed.
2. Holding the shuttle frame assembly (10) by the outer beam standoffs (12), set it into the base casting (11). Use both hands: the shuttle frame assembly is heavy.
3. Align the center 5/32 inch socket head screw (9) in the base casting (11) and hand turn the screw until only two or three threads have started.
4. Pull the shuttle frame assembly (10) toward the front of the printer and hold it in this position while you do step 5.
5. Slide the side clamps (7) over the guide shaft (8) and torque the 5/32 inch socket head clamp screws (6) to 20 ± 2 inch-pounds.
6. Lift up on the shuttle motor, then gently set it down to align the center screw guide.
7. Torque the center captive 5/32 inch socket head screw (9) to 20 ± 2 inch-pounds.
8. Connect the left and right hammer bank flex circuit ribbon connectors (4 and 5).
9. Connect the shuttle cable assembly connector (3).
10. Connect the shuttle motor cable connector (2).

CAUTION

Make sure the MPU cable is below the extension spring and does not touch the spring after the cable is connected.

11. Connect the MPU cable connector (1).
12. Loosen the platen open belt (page 4–4, steps 3. and 4.).
13. Adjust the platen gap (page 4–14).
14. Adjust the platen open belt (page 4–4).
15. Check the platen gap again. Readjust if necessary (page 4–14).
16. Install the shuttle cover assembly (page 5–24).
17. Return the printer to normal operation (page 5–86).

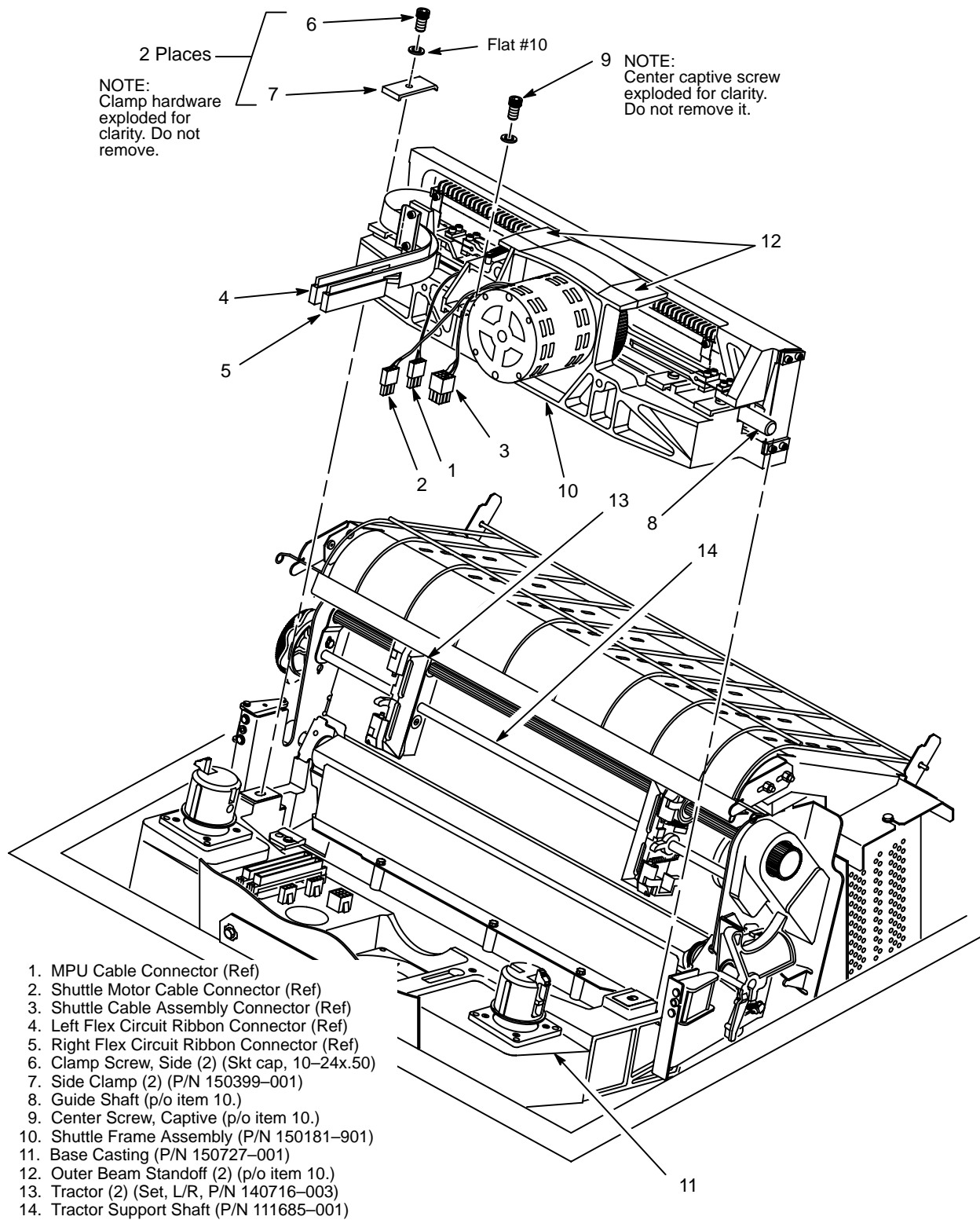


Figure 5-31 . Shuttle Frame Assembly Removal/Installation

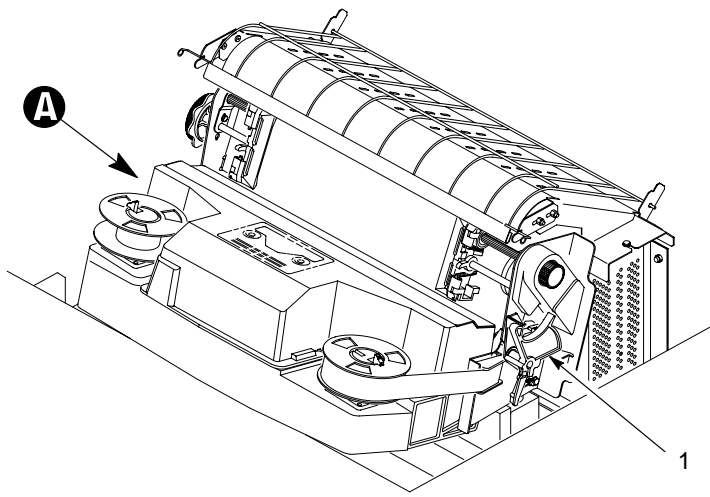
Platen Gap Adjustment (Figure 4–7)

1. Prepare the printer for maintenance (page 4–2).
2. Open the printer cover.
3. Remove the shuttle cover assembly (page 5–24).
4. Remove the ribbon.
5. Loosen the platen open belt (page 4–4, steps 3. and 4.).
6. Raise the forms thickness lever (1) to the fully open position.

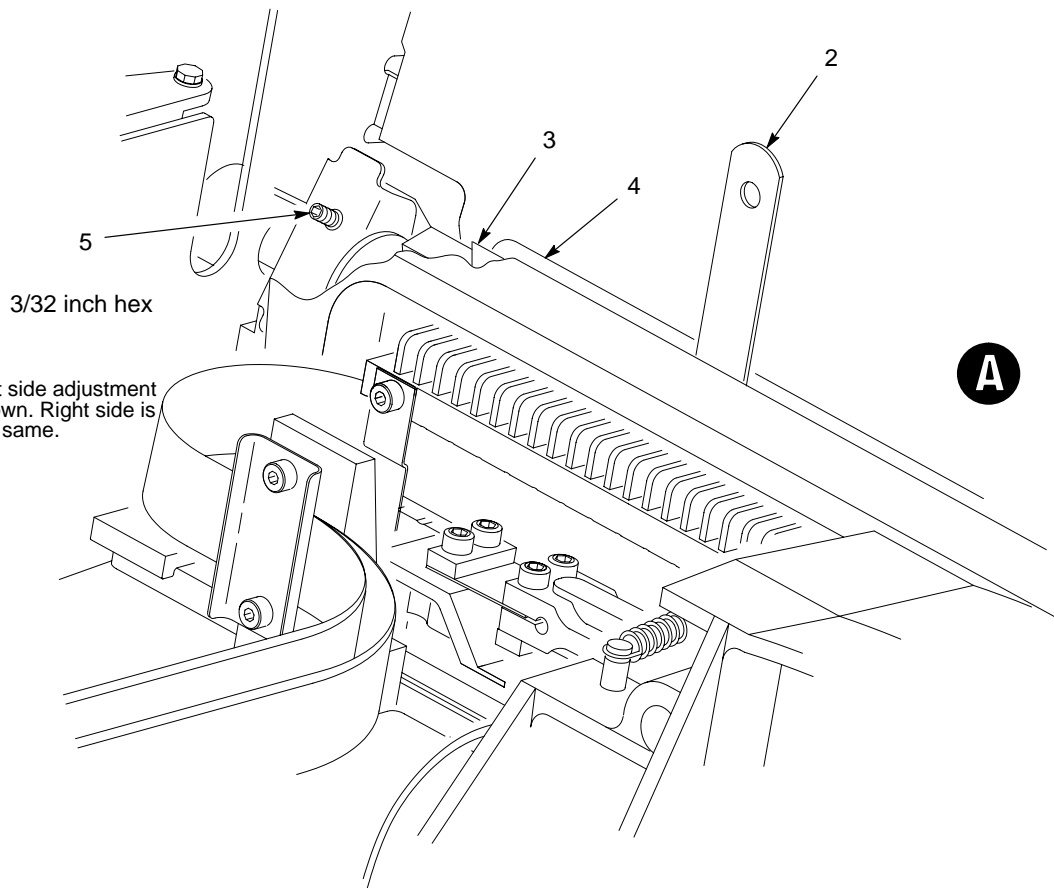
CAUTION

Do not force the platen against the feeler gauge. Damage to the printer will result.

7. Insert a 0.010 inch flat feeler gauge (2) straight down between the hammer bank cover plate (3) and ribbon mask (4), within four hammer positions of the left end of the hammer bank.
8. Gently close the forms thickness lever (1). As the platen is closing, gently slide the feeler gauge up and down, keeping it between the hammer tip and ribbon mask. If the feel is too tight when the platen is being closed, adjust the set screw (5) at the end of the platen counterclockwise. If the feel is too loose, adjust the set screw clockwise. With the forms thickness lever closed all the way, the feeler gauge should contact both the tips and the ribbon mask and move with light friction. Shift the gauge slightly to verify.
9. Repeat steps 6. through 8. at the right end of the hammer bank.
10. After adjusting both sides, check the gap again at both ends. Readjust if necessary.
11. When the platen gap is correct at both ends of the platen, adjust the platen open belt (page 4–4).
12. Install the shuttle cover assembly (page 5–24).
13. Return the printer to normal operation (page 4–22).



- 1. Forms Thickness Lever
- 2. Feeler Gauge (0.010 inch)
- 3. Hammer Bank Cover Plate
- 4. Ribbon Mask
- 5. Set Screw, 3/32 inch hex (2)



NOTE: Left side adjustment shown. Right side is the same.

Figure 4-7 . Platen Gap Adjustment

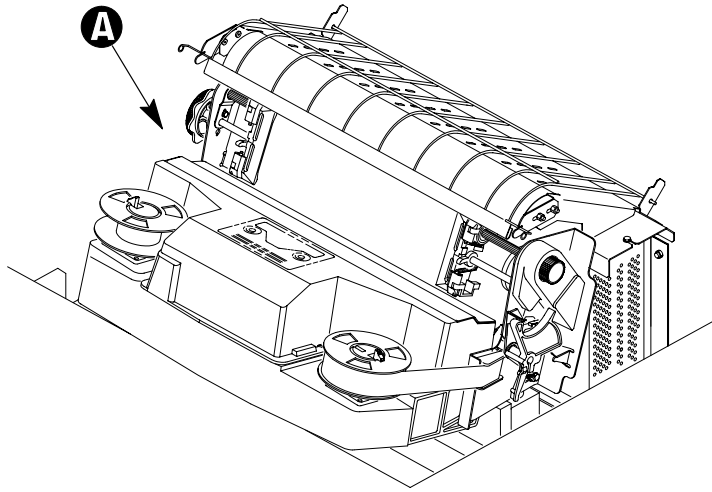
Belt, Platen Open, Adjustment (Figure 4-2)

1. Prepare the printer for maintenance (page 4-2).
2. Open the printer cover.
3. Remove the platen open belt cover (1) by squeezing the top and bottom to release the plastic tabs from the slots in the side plate.
4. Loosen the motor mount screws (2).
5. Close the forms thickness lever all the way.

CAUTION

Too much tension on the platen open belt can cause the platen gap to change, which can lead to premature wear of the platen, damaged hammer tips, and poor print quality.

6. Using a force gauge, apply 10 ± 1 pounds of tension to the platen open motor shaft (3), pulling away from the large platen pulley.
7. Reduce tension to 5 ± 1 pounds and torque the motor mount screws (2) to 11 ± 2 inch-pounds.
8. Check the platen gap (page 4-14). Loosen the belt and readjust the gap if necessary.
9. Snap the platen open belt cover (1) into the slots in the side plate.
10. Return the printer to normal operation (page 4-22).



- 1. Belt Cover
- 2. Motor Mount Screw
- 3. Platen Open Motor Shaft

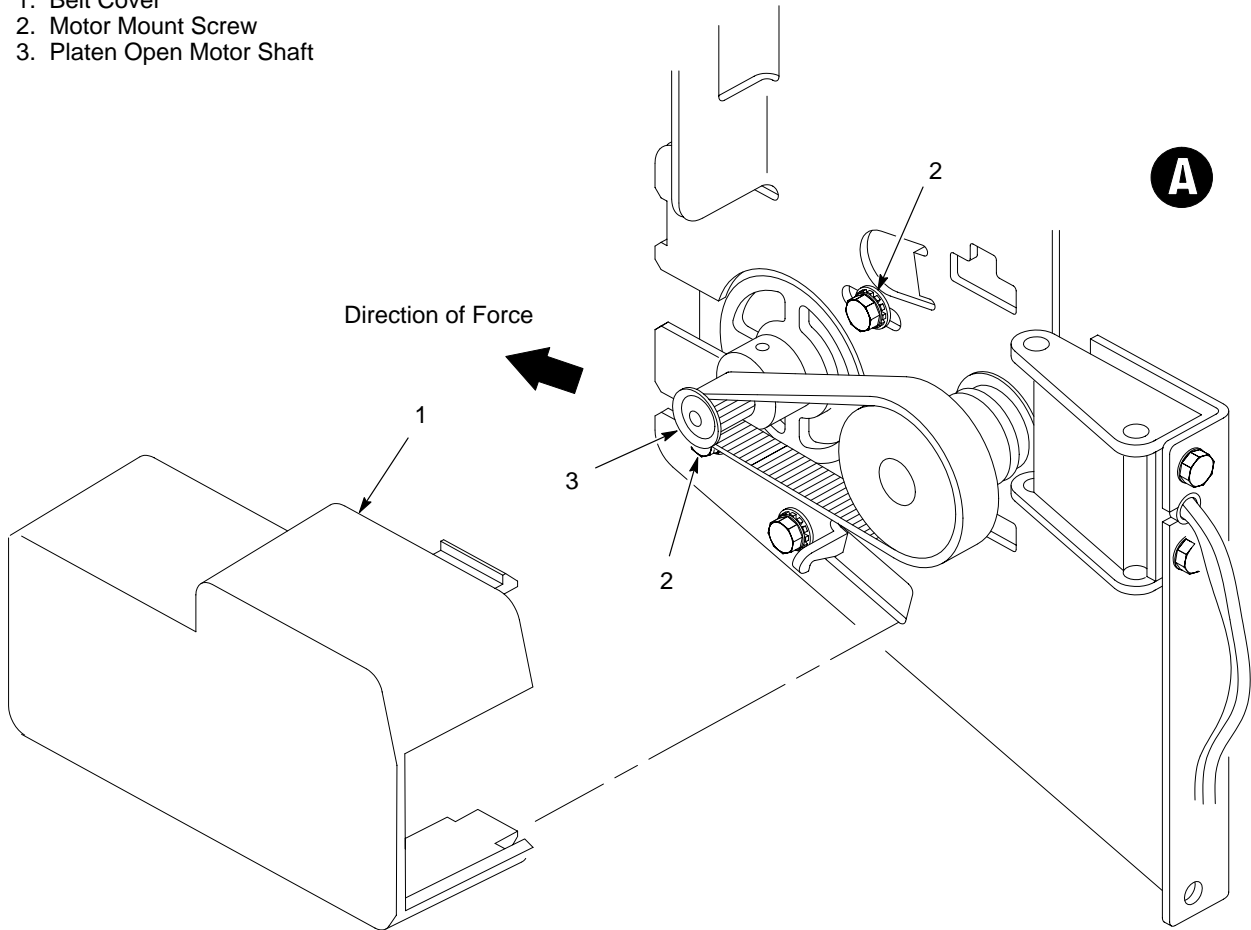


Figure 4-2 . Platen Open Belt Adjustment

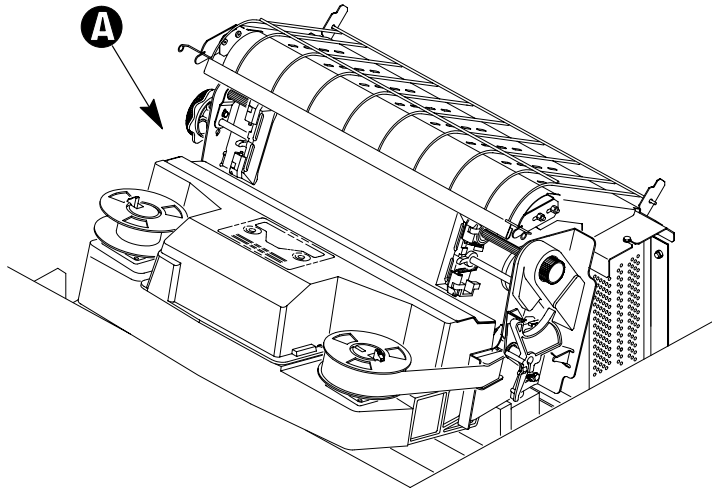
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10. Return the printer to normal operation (page 4-22).



- 1. Belt Cover
- 2. Motor Mount Screw
- 3. Platen Open Motor Shaft

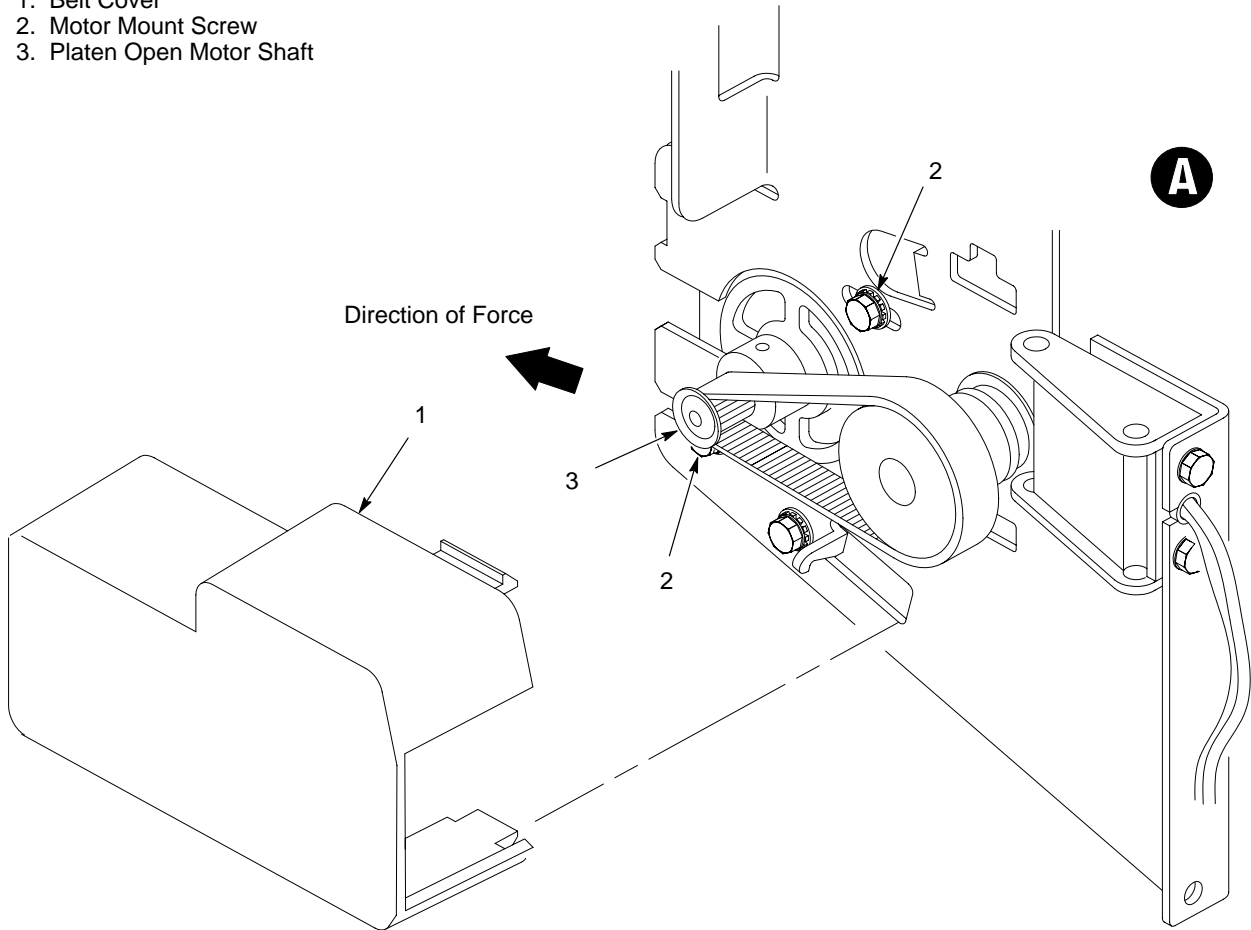
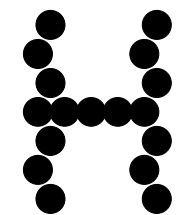


Figure 4-2 . Platen Open Belt Adjustment

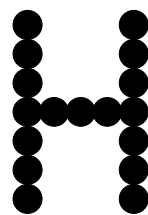
Hammer Phasing Adjustment (Figure 4–3)

NOTE: Hammer phasing must be checked and adjusted when PROMs on the common controller PCBA are replaced. Phasing adjustments should be made with the printer printing at full paper width.

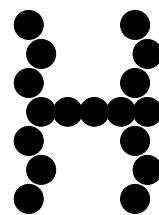
1. Load full width (132 column) paper and ribbon.
2. Connect the power cord to the AC power source.
3. Set the printer power switch to 1 (on).
4. Press the ON LINE switch to take the printer off–line. “Off–Line Ready” appears on the message display.
5. Open the printer cover.
6. Press the UP and DOWN switches simultaneously to unlock the ENTER switch. “Unlocked” appears briefly on the display.
7. Press the DOWN switch. “Ribbon Life xxx%” appears on the display.
8. Press PREV. “Diagnostics” appears on the display.
9. Press DOWN. “Configuration Print Out” appears on the display.
10. Press NEXT until “Printer Test Full Width” appears on the display.
11. Press DOWN, then press PREV until “Printer Test Phase Index” appears on the message display.
12. Press the R/S switch. “Phase Index” and the current phasing index number display. The printer begins printing all Hs in a data processing (DP) font, each line preceded by the phasing index number.
13. Press the NEXT or PREV switches to increase or decrease the phasing index until the pattern of Hs appears as shown in Figure 4–3 .
14. When the print pattern is acceptable, press the R/S switch. Printing stops, and the current phase index value is entered into nonvolatile memory.
15. Press the CLEAR switch. “Off–Line Ready” appears on the message display.
16. Press the UP and DOWN switches simultaneously to lock the ENTER switch. “Locked” appears briefly on the display.
17. Close the printer cover.
18. Press the ON LINE switch to place the printer on–line.



**NEEDS
ADJUSTMENT**



CORRECT



**NEEDS
ADJUSTMENT**

Figure 4-3 . Hammer Phasing Adjustment