

INSTRUCTIONS FOR INSTALLING, ADJUSTING AND PARTS ORDERING INFORMATION  
FOR THE 152316, 153701 THROUGH 153717 AND 153926 MODIFICATION KIT,  
AND THE 153726 THROUGH 153729 PAPER TRAY, TO CONVERT A MODEL 28  
FRICTION FEED PRINTER SET TO A SPROCKET FEED PRINTER SET

1. GENERAL

a. The 152316 modification kit contains common parts necessary to convert a Model 28 Page Typing Unit from friction feed to sprocket feed. The 152316 modification kit consists of:

|   |        |                       |    |        |                         |
|---|--------|-----------------------|----|--------|-------------------------|
| 1 | 1179   | Screw 6-40 x 5/8 fil. | 1  | 153683 | Left Bracket            |
| 9 | 2191   | Lock Washer           | 2  | 153685 | Arm w/hub               |
| 2 | 8330   | Flat Washer           | 1  | 153686 | Sleeve Bearing          |
| 1 | 55063  | Extension Spring      | 1  | 153687 | Sleeve Bearing          |
| 1 | 76800  | Spring                | 1  | 153689 | Spur Gear               |
| 1 | 80848  | Extension Spring      | 1  | 153690 | Idler Gear              |
| 9 | 110743 | Lock Washer           | 1  | 153692 | Gear w/hub              |
| 7 | 125011 | Flat Washer           | 22 | 153695 | Pin ) See paragraph     |
| 1 | 128357 | Retainer Ring         | 22 | 153696 | Spring ) l.d.           |
| 1 | 150436 | Bushing               | 1  | 153697 | Bracket                 |
| 1 | 150646 | Shoulder Screw        | 1  | 153698 | Left Cam                |
| 1 | 150969 | Spring                | 1  | 153699 | Right Cam               |
| 2 | 151073 | Screw 4-40 x 1/8 fil. | 2  | 153700 | Platen Hub              |
| 2 | 151346 | Screw 6-40 x 3/8 fil. | 1  | 153721 | Right Arm               |
| 2 | 151629 | Nut 6-40 special      | 1  | 153722 | Left Arm                |
| 3 | 151630 | Screw 6-40 x 1/4 hex. | 1  | 153791 | Shaft                   |
| 1 | 151632 | Screw 6-40 x 3/8 hex. | 2  | 153794 | Plate                   |
| 1 | 151637 | Screw 4-40 x 1/4 fil. | 6  | 153799 | Screw 4-40 x 21/64 hex. |
| 1 | 151657 | Screw 6-40 x 1/4 fil. | 1  | 153800 | Cam w/hub               |
| 1 | 153676 | Bail w/stud           | 1  | 153810 | Ribbon Guide            |
| 1 | 153678 | Plate w/shaft         | 2  | 153839 | Screw 6-40 x 5/8 hex.   |
| 1 | 153682 | Right Bracket         | 1  | 154519 | Latch                   |
|   |        |                       | 1  | 157286 | Clamp                   |

b. The 153701 through 153717 modification kit (one required) with the 153726 through 153729 paper tray (one required) adapts a Model 28 Page Typing Unit to use a particular width of continuous superfold form stationery. The tabulated list in Figure 3 indicates the components of the 153701 through 153717 modification kit, the 153726 through 153729 paper tray required, and the paper width.

c. The 153926 modification kit is required to adapt a Model 28 Cabinet to handle super fold form stationery. The 153926 modification kit consists of:

|   |                    |   |                               |
|---|--------------------|---|-------------------------------|
| 3 | 2191 Lock Washer   | 1 | 80481 Stud                    |
| 1 | 3598 Nut 6-40 hex. | 2 | 151658 Screw 6-40 x 5/16 fil. |
| 3 | 7002 Flat Washer   | 1 | 153830 Form Guide             |
| 1 | 7015 Nut Plate     | 1 | 153833 Bracket Guide          |

d. The 153673 shaft tool and 153797 retaining tool are required for the assembly of the 153695 pins and 153696 springs into the platen hubs.

e. The 153905 (for units not equipped with the automatic CR-LF feature) or 153914 (for units equipped with the automatic CR-LF feature) modification kit is required to change the spacing drum on Model 28 Typing Units (LP4, LP5) when converting from friction to sprocket feed for handling stationery of 8½ or less inches in width. (See Specification 5816S.)

f. The 152349\*\* paper supply box and form accumulating shelf (for use only with floor cabinets), while not required for the conversion, will simplify handling of continuous superfold form stationery. (See Specification 5809S). The double asterisk (\*\*) designates a two-letter suffix which indicates the paint finish. The following four standard wrinkle finishes are now available.

|                 |                  |
|-----------------|------------------|
| AA - Black      | AC - Light Brown |
| AB - Gray-Green | AD - Dark Brown  |

g. For part numbers referred to, other than those listed in the modification kits, see Model 28 Printer Parts Bulletin.

## 2. INSTALLATION (Figures 1 through 4).

NOTE: References made to left or right, up or down, front or rear, etc., apply to unit in its normal operating position as viewed from the operator's position in front of the unit unless otherwise specified.

a. 152316 modification kit with a 153701 through 153717 (one required) modification kit, and with a 153726 through 153729 (one required) paper tray.

(1) Remove the Typing Unit from the Printer Set, if previously mounted therein.

(2) Remove the type box, ribbon spools and discard the 150907 paper spindle.

(3) Remove and discard the following parts from the right rear side frame in the order listed:

|           |             |     |        |    |                         |     |
|-----------|-------------|-----|--------|----|-------------------------|-----|
| 151346    | Screw       | (1) | 3598   | or |                         |     |
| 153839 or |             |     | 95030  |    | Nut                     | (2) |
| 150040    | Screw       | (1) | 125015 |    | Spacer                  | (2) |
| 153841 or |             |     | 150904 |    | Block                   | (1) |
| 151693    | Screw       | (1) | 85407  |    | Spring (1) (if present) |     |
| 2191      | Lock Washer | (3) | 150935 |    | Plate (1) (if present)  |     |

(4) Remove and discard the following parts from the left rear side

frame:

|        |             |     |        |                         |     |
|--------|-------------|-----|--------|-------------------------|-----|
| 151346 | Screw       | (1) | 125015 | Spacer                  | (2) |
| 2191   | Lock Washer | (1) | 3598   | or                      |     |
| 151721 | or          |     | 95030  | Nut                     | (2) |
| 151642 | Screw       | (2) | 150903 | Block                   | (1) |
| 2191   | Lock Washer | (2) | 85407  | Spring (1) (if present) |     |
|        |             |     | 150935 | Plate (1) (if present)  |     |

(5) Remove and discard the following paper straightener parts:

|        |             |     |        |             |     |
|--------|-------------|-----|--------|-------------|-----|
| 151686 | Screw       | (1) | 73894  | Screw       | (4) |
| 110743 | Lock Washer | (1) | 151686 | Screw       | (1) |
| 125011 | Lock Washer | (1) | 110743 | Lock Washer | (1) |
| 150816 | Lever       | (1) | 125011 | Washer      | (1) |
| 150815 | Bushing     | (1) | 150816 | Lever       | (1) |
| 74701  | or          |     | 150815 | Bushing     | (1) |
| 31636  | Spring      | (1) | 74701  | or          |     |
| 150992 | Stud        | (1) | 31636  | Spring      | (1) |
| 110743 | Lock Washer | (1) | 150992 | Stud        | (1) |
| 152831 | Clip        | (1) | 110743 | Lock Washer | (1) |
| 152832 | Shaft       | (1) | 152831 | Clip        | (1) |
| 153634 | or          |     |        |             |     |
| 150683 | Collar      | (2) |        |             |     |

(6) Remove the following parts located above the platen. Discard all except those marked "(retain)":

|        |                         |     |        |                     |     |
|--------|-------------------------|-----|--------|---------------------|-----|
| 72468  | Spring                  | (1) | 150826 | Paper Finger, Left  | (1) |
| 151637 | Screw (retain)          | (1) | 150803 | Flat Spring         | (1) |
| 110743 | Lock Washer (retain)    | (1) | 150804 | Paper Finger, Right | (1) |
| 125802 | Washer (1) (if present) |     | 150803 | Flat Spring         | (1) |
| 125011 | Washer (retain)         | (1) | 150685 | Plate W/shaft       | (1) |
| 151703 | Pin                     | (1) |        |                     |     |

(7) Remove the following parts from the upper left frame:

Retain the following for reuse in paragraph 2a (21):

Discard the following:

|        |             |     |        |                |     |
|--------|-------------|-----|--------|----------------|-----|
| 151630 | Screw       | (1) | 150900 | Detent Bail    | (1) |
| 2191   | Lock Washer | (1) | 150969 | Torsion Spring | (1) |
| 150961 | Bushing     | (1) |        |                |     |

(8) Remove the platen assembly as follows, discard the platen assembly, and retain the other parts for re-use:

|        |                |     |        |                 |     |
|--------|----------------|-----|--------|-----------------|-----|
| 151073 | or             |     | 110743 | Lock Washer     | (2) |
| 110434 | Screw          | (1) | 150719 | Left Retainer   | (1) |
| 110743 | Lock Washer    | (1) |        | Platen Assembly | (1) |
| 150720 | Right Retainer | (1) |        |                 |     |
| 151073 | or             |     |        |                 |     |
| 110434 | Screw          | (2) |        |                 |     |

(9) Remove and discard the following paper guide parts:

|        |               |     |        |             |     |
|--------|---------------|-----|--------|-------------|-----|
| 151692 | Screw         | (4) | 151657 | Screw       | (2) |
| 2191   | Lock Washer   | (4) | 2191   | Lock Washer | (2) |
| 152539 | Guide         | (1) | 3598   | Nut         | (2) |
| 150840 | Guide Bracket | (1) |        |             |     |

(10) Remove the 119652 retainer rings at the upper end of the 150386 and 150387 ribbon drive links for access to the following parts to be removed. Discard all the following parts except those marked "(Retain)":

|        |                      |     |        |                 |     |
|--------|----------------------|-----|--------|-----------------|-----|
| 151657 | or                   |     | 150436 | Bushing         | (1) |
| 151658 | Screw (retain)       | (4) | 150276 | Lever           | (1) |
| 2191   | Lock Washer (retain) | (4) | 125015 | Washer          | (1) |
| 119651 | Retainer Ring        | (2) |        | Pressure        |     |
| 150270 | Link                 | (1) |        | Roller Assembly | (1) |
| 151657 | Screw                | (1) |        |                 |     |
| 2191   | Lock Washer          | (1) |        |                 |     |

(11) Replace the 152871 line feed bar bell crank spring with the 80848 spring.

(12) Mount the 153697 bracket, using the four mounting holes vacated by the pressure roller assembly with the four 151657 or 151658 screws and 2191 lock washers previously removed.

(13) For typing units other than LP6, remove and retain the following parts:

|        |             |     |        |               |     |
|--------|-------------|-----|--------|---------------|-----|
| 3599   | Nut         | (2) | 119651 | Retainer Ring | (1) |
| 110743 | Lock Washer | (2) | 1293   | Screw         | (2) |
| 150335 | Gear        | (2) |        |               |     |

(14) For typing units other than LP6 (LP6 is equipped with the 153800 cam), replace the ribbon reverse detent cam as follows:

Slide the 152582 shaft to the left, and replace the 150934 cam with the 153800 cam furnished in the modification kit. Reassemble in the reverse order the parts removed in paragraph 2a (13).

(15) Replace the 150666 idler gear with the 153690 gear.

(16) Install the following parts on the rear typing unit frames:

|        |               |     |        |              |     |
|--------|---------------|-----|--------|--------------|-----|
| 153682 | Right Bracket | (1) | 153683 | Left Bracket | (1) |
| 153794 | Plate         | (1) | 153794 | Plate        | (1) |
| 151630 | Screw, Hex.   | (1) | 151630 | Screw        | (2) |
| 151632 | Screw, Hex.   | (1) | 2191   | Lock Washer  | (2) |
| 2191   | Lock Washer   | (2) |        |              |     |

(17) Assemble the platen as follows:

(a) Slip the 153692 spur gear on the 153791 platen shaft. Secure with the 151346 screw and 2191 lock washer. Slip on the 153687 bearing sleeve with the groove toward the gear.

(b) Place the 153673 tool into the 153700 platen hub and secure with a 151346 screw. Insert the hub into the 153797 retaining tool (Figure 1) Assemble the 153696 springs and 153695 pins (11 of each) and insert spring end first, into sprocket hole visible through the slot in the retaining tool. Rotate the platen hub by means of a 73404 tommy wrench inserted into the 153673 shaft tool, to the next sprocket hole. The grooves in the pins must then be aligned so that all slots face up and one pin must line up with the letter "P" stamped on the retaining tool. Pack the cavity in which the pins are visible with grease.

(c) Press the 153698 left cam into the greased hub. The cam should be positioned so that the letter "L" on the retaining tool is visible through the fork in the cam. When the cam is fully seated it should be flush with the projecting hub. Do not force the cam in. If it does not go in freely repeat instructions from paragraph 2.a (17) (b). Add the 153689 spur gear, flat side toward the hub. Fasten with three 153799 screws, 110743 lock washers, and 125011 washers. Remove the assembly from the retaining tool. Remove the 153673 shaft tool from the hub. Wipe off excessive grease.

(d) Slip the sprocket assembly over the 153791 plate shaft and fasten with a 151346 screw, and 2191 lock washer. Slip the 153751 through 153767 platen cylinder (one required) over the shaft and hub.

(e) Assemble the right hand sprocket as described in paragraphs 2.a (17) (b), and (c), using the following parts and lining up the cam with the letter "R"; assemble to the shaft:

|        |           |      |        |             |     |
|--------|-----------|------|--------|-------------|-----|
| 153700 | Hub       | (1)  | 153799 | Screw       | (3) |
| 153696 | Spring    | (11) | 110743 | Lock Washer | (3) |
| 153695 | Pin       | (11) | 125011 | Washer      | (3) |
| 153699 | Right Cam | (1)  | 1179   | Screw       | (1) |
| 157286 | Clamp     | (1)  |        |             |     |

Place the 153686 right bearing sleeve on the shaft with the chamfer facing the end of the shaft.

(18) Install the platen assembly into the Typing Unit. Cam yokes must point up, and bushings must be aligned so that the rounded portion of the slot goes into the slot in the typing unit frames.

(19) Assemble the following platen retainer parts:

|        |               |     |        |                |     |
|--------|---------------|-----|--------|----------------|-----|
| 150719 | Left Retainer | (1) | 150720 | Right Retainer | (1) |
| 151073 | Screw         | (3) | 125011 | Washer         | (1) |
| 110743 | Lock Washer   | (3) | 110743 | Lock Washer    | (1) |
| 151637 | Screw         | (1) |        |                |     |

(20) Install the following guide bracket parts:

|        |               |     |        |               |     |
|--------|---------------|-----|--------|---------------|-----|
| 153721 | Right Arm     | (1) | 2191   | Lock Washer   | (2) |
| 153722 | Left Arm      | (1) | 8330   | Washer        | (2) |
| 153771 | to            |     | 151629 | Nut           | (2) |
| 153787 | Guide Bracket | (1) | 153685 | Arm w/hub     | (2) |
| 151073 | Screw         | (2) | 153678 | Plate w/shaft | (1) |
| 110743 | Lock Washer   | (2) | 128357 | Retainer      | (1) |
| 153839 | Screw         | (2) | 55063  | Spring        | (1) |
| 154519 | Latch         | (1) | 151657 | Screw         | (1) |
| 150436 | Bushing       | (1) | 76800  | Spring        | (1) |
| 2191   | Lock Washer   | (1) |        |               |     |

(21) Install the following platen detent parts:

|        |                |     |        |                |     |
|--------|----------------|-----|--------|----------------|-----|
| 153676 | Detent Bail    | (1) | 2191   | Lock Washer    | (1) |
| 150969 | Torsion Spring | (1) | 150961 | Bushing        | (1) |
| 151630 | Screw          | (1) | 150646 | Shoulder Screw | (1) |

(22) Clip in the 153726 through 153729 (one required) paper tray.

(23) Move the type box carriage to its extreme right-hand position. Hold the code bars in the marking position and rotate the main shaft so that the type box is in its uppermost position. Remove the retainer ring from the stud in the right-hand end of the type box carriage link and disengage the link from the carriage. Rotate the printer shaft so that the type box carriage is in its lowest position. Hold the ribbon guide forward and the ribbon reverse lever back and pull the carriage toward the right to disengage it from the carriage track. For typing units other than LP6 (LP6 is equipped with the 153810 ribbon guide), substitute the 153810 ribbon guide in the modification kit for the 152501 ribbon guide in the type box carriage. Reassemble in the reverse order.

(24) Replace the ribbon spools and the type box.

(25) Substitute the 153652 through 153667 form guide (one required), included in the 153701 through 153717 (one required) modification kit, for the paper guide fastened to the lip of the small console lid. Secure with same mounting screws.

b. 153701 through 153717 (one required) modification kit when changing from one width of stationery to a different width on sprocket feed printers.

(1) Follow procedure in paragraphs 2a (1), (2).

(2) Remove the 150907 paper spindle.

(3) Remove the 153726 through 153729 (one present) paper tray.

(4) Remove the following guide bracket parts:

|        |               |     |        |               |     |
|--------|---------------|-----|--------|---------------|-----|
| 76800  | Spring        | (1) | 2191   | Lock Washer   | (2) |
| 153721 | Right Arm     | (1) | 8330   | Washer        | (2) |
| 153722 | Left Arm      | (1) | 151629 | Nut           | (2) |
| 153771 | to            |     | 153685 | Arm w/hub     | (2) |
| 153787 | Guide Bracket | (1) | 153678 | Plate w/shaft | (2) |
| 151073 | Screw         | (2) | 128357 | Retainer      | (1) |
| 110743 | Lock Washer   | (2) | 55063  | Spring        | (1) |
| 153839 | Screw         | (2) |        |               |     |

(5) Remove and retain the following platen retainer parts:

|        |                |     |        |               |     |
|--------|----------------|-----|--------|---------------|-----|
| 151073 | Screw          | (2) | 151685 | Screw         | (1) |
| 110743 | Lock Washer    | (2) | 153688 | Eccentric     | (1) |
| 150719 | Right Retainer | (1) | 125011 | Washer        | (1) |
| 151073 | Screw          | (1) | 110743 | Lock Washer   | (1) |
| 110743 | Lock Washer    | (1) | 150720 | Left Retainer | (1) |

Remove the platen assembly from the Typing Unit:

(6) Disassemble the platen in the following order:

|        |                      |     |
|--------|----------------------|-----|
| 153686 | Right Bearing Sleeve | (1) |
|        | Right Sprocket Hub   |     |
|        | Assem.               | (1) |
| 153751 | to                   |     |
| 153767 | Platen Cylinder      | (1) |

(7) Replace the 153751 through 153767 platen cylinder (one present) with the platen cylinder in the 153701 through 153717 (one required) modification kit.

(8) Reassemble the platen assembly by reversing the order used in removing it.

(9) Follow procedure in paragraph 2a (18).

(10) Assemble the following platen retainer parts:

|        |                |     |        |             |     |
|--------|----------------|-----|--------|-------------|-----|
| 150719 | Left Retainer  | (1) | 110743 | Lock Washer | (1) |
| 151073 | Screw          | (2) | 151685 | Screw       | (1) |
| 110743 | Lock Washer    | (2) | 153688 | Eccentric   | (1) |
| 150720 | Right Retainer | (1) | 125011 | Washer      | (1) |
| 151073 | Screw          | (1) | 110743 | Lock Washer | (1) |

(11) Install the 153771 through 153787 guide bracket (one required) furnished in the modification kit together with the following parts:

|        |             |     |        |               |     |
|--------|-------------|-----|--------|---------------|-----|
| 153721 | Right Arm   | (1) | 8330   | Washer        | (2) |
| 153722 | Left Arm    | (1) | 151629 | Nut           | (2) |
| 151073 | Screw       | (2) | 153685 | Arm w/hub     | (2) |
| 110743 | Lock Washer | (2) | 153678 | Plate w/shaft | (1) |
| 153839 | Screw       | (2) | 128357 | Retainer      | (1) |
| 2191   | Lock Washer | (2) | 55063  | Spring        | (1) |
|        |             |     | 76800  | Spring        | (1) |

(12) Follow procedure in paragraphs 2a (22), (24).

(13) Replace the type box

(14) Follow procedure in paragraph 2a (25).

c. 153926 modification kit (Figure 4)

(1) Remove the Typing Unit from the Cabinet.

(2) Remove the following parts which seal the paper emission slot in the cabinet. These parts are located below the cabinet terminal block and should be retained for future reconversion.

|                  |     |                       |     |
|------------------|-----|-----------------------|-----|
| 6345 Nut         | (2) | 7002 Washer           | (2) |
| 2191 Lock Washer | (2) | 152797 Plate Retainer | (1) |
|                  |     | 151532 Cover          | (1) |

(3) Install the 153926 modification kit as shown in Figure 4.

NOTE: If the 153926 modification kit is installed into Cabinets IAC200\*\* or IAC201\*\*, drill a second hole (.161" diam. - No. 20 drill) to mount the 153833 guide bracket. Use the 7015 nut plate as a template for locating this hole.

(4) Remove the 151545 paper guide mounted to the small lid of the cabinet and in its place install the 153652 through 153667 form guide furnished with the typing unit or with the 153701 through 153717 modification kit shown in Figure 3.

3. ADJUSTMENTS (Figures 5 through 12)

For standard adjustment procedure refer to Model 28 Printer Adjustment and Lubrication Bulletin. Remake the adjustments shown in Figures 5 through 12.

4. LUBRICATION

For standard lubrication procedure see Model 28 Printer Adjustment and Lubrication Bulletin. Lubricate the following:

(1) Use one or two drops of oil.

- (a) Platen bearings (2 drops each end)
- (b) Platen detent bail bearing (two drops)
- (c) Guide bracket shaft pivots (two drops each)
- (d) Guide bracket spring hooks (one drop each)
- (e) Idler gear bearing (two drops)
- (f) Line feed bell crank spring hooks (one drop each)
- (g) Guide bracket latch pivot (two drops)
- (h) Guide bracket latch spring hooks (one drop each)

(2) Brush a light film of grease.



- (a) Idler gear teeth
- (b) Hand wheel gear teeth
- (c) Platen gear

(3) Pack sprocket pin and spring cavity with grease (2 sides).

## 5. MAINTENANCE

a. The following instructions are provided for lubrication of the sprocket hub assemblies which house the sprocket pins and cams or for replacement of pins or springs. Detailed instructions may be obtained by reversing assembly instructions in paragraph 2.a (18).

- (1) Remove the guide bracket assembly
- (2) Remove the platen assembly.
- (3) Remove sprocket hub assemblies from platen assembly.
- (4) Insert the 153673 shaft tool into hub and fasten with 151346 screw.
- (5) Insert right sprocket assembly into the 153797 retaining tool. Remove the 154518 clamp and 153699 cam from the assembly.

(6) Should a pin require replacement, rotate the hub assembly within the retaining tool (by means of a 73404 tommy wrench inserted in the 153673 shaft tool) until the pin to be replaced is opposite the notch in the retaining tool. The pin may then be replaced without disassembling the hub.

NOTE: While rotating the hub, the notch must be covered to prevent pins from being released.

- (7) Pack with grease.
- (8) Reverse procedure used in paragraphs 5.a (4) and (5).
- (9) Repeat paragraphs 5.a (5) through (8) with left sprocket assembly.
- (10) Reverse paragraphs 5.a (1) through (3).
- (11) Refer to NOTE in Paper Guide Adjustment, Figure 9.

## 6. PAPER HANDLING INFORMATION

The Model 28 sprocket feed typing unit is capable of reliably handling up to 12 copies of stapled continuous form stationery or up to six copies of unstapled form stationery.

a. For stapled stationery, place the form supply box on the floor behind the cabinet or on the shelf provided in the 152349\*\* paper supply box and form accumulating shelf.

b. For unstapled stationery, place the form supply box on a platform not more than 18 inches below the paper admission slot or on the shelf provided in the 152349\*\* paper supply box and form accumulating shelf.

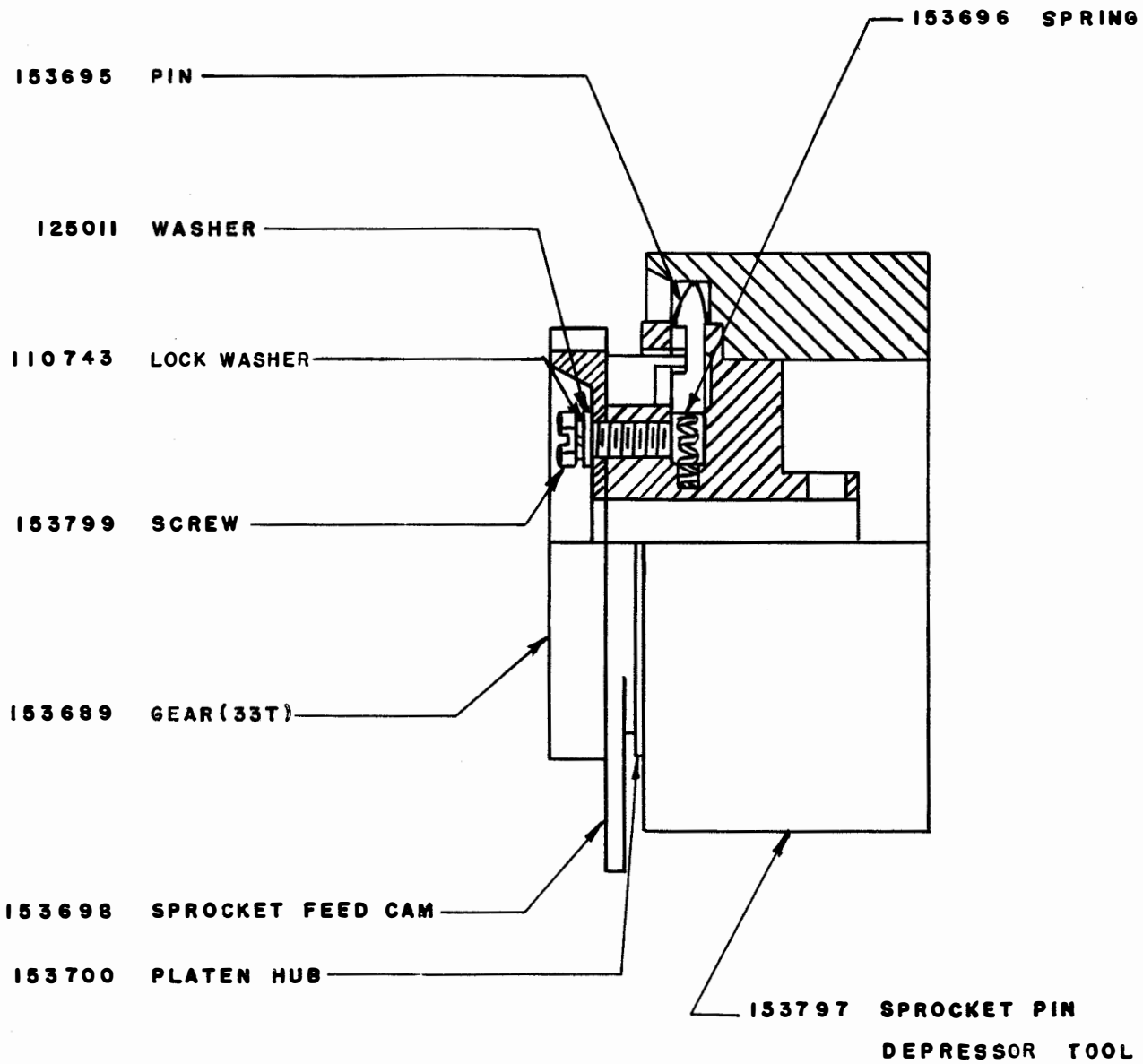
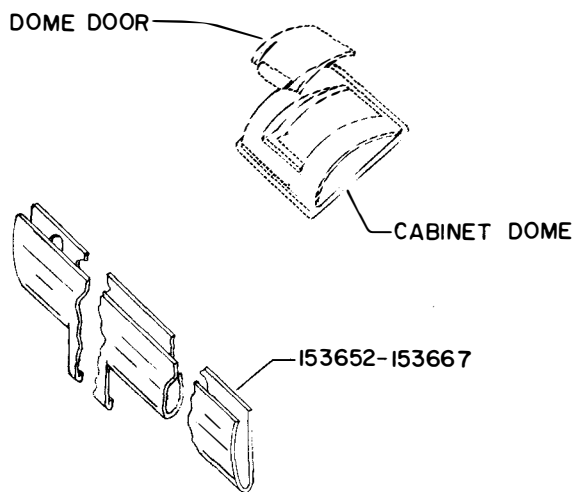
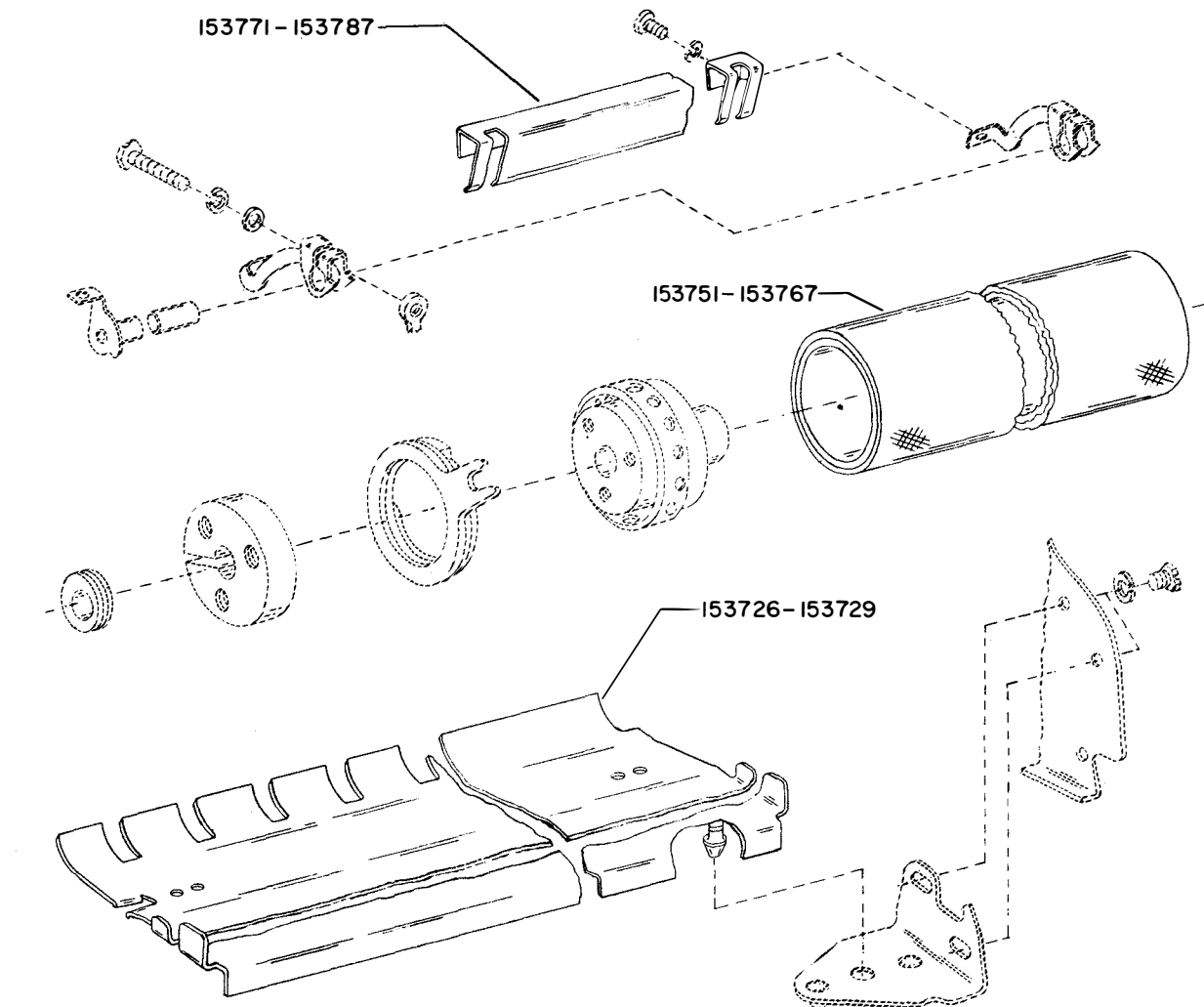


FIGURE 1.





| PAPER WIDTHS | PAPER TRAY | SPROCKET FEED PAPER HANDLING PARTS |        |               |            |
|--------------|------------|------------------------------------|--------|---------------|------------|
|              |            | SET NUMBER                         | PLATEN | GUIDE BRACKET | FORM GUIDE |
| 9"           | I53727     | I53701                             | I53751 | I53771        | I53652     |
| 8-1/2"       | I53726     | I53702                             | I53752 | I53772        | I53653     |
| 8"           | I53727     | I53703                             | I53753 | I53773        | I53654     |
| 7-1/2"       | I53726     | I53704                             | I53754 | I53774        | I53655     |
| 7"           | I53727     | I53705                             | I53755 | I53775        | I53656     |
| 6-1/2"       | I53726     | I53706                             | I53756 | I53776        | I53657     |
| 6-3/8"       | I53728     | I53707                             | I53757 | I53777        | I53658     |
| 6-1/4"       | I53729     | I53708                             | I53758 | I53778        | I53659     |
| 6"           | I53727     | I53709                             | I53759 | I53779        | I53660     |
| 5-3/4"       | I53728     | I53710                             | I53760 | I53780        | I53661     |
| 5-1/2"       | I53726     | I53711                             | I53761 | I53781        | I53662     |
| 5"           | I53727     | I53712                             | I53762 | I53782        | I53663     |
| 4-1/2"       | I53726     | I53713                             | I53763 | I53783        | I53664     |
| 4-5/16"      | I53729     | I53714                             | I53764 | I53784        | I53665     |
| 4-1/4"       | I53728     | I53715                             | I53765 | I53785        | I53665     |
| 4"           | I53727     | I53716                             | I53766 | I53786        | I53666     |
| 3-5/8"       | I53726     | I53717                             | I53767 | I53787        | I53667     |

DOTTED PARTS APPEAR IN FIGURE 2

FIGURE 3. SPROCKET FEED PAPER HANDLING MODIFICATION KITS (TYPING UNIT AND CABINET)

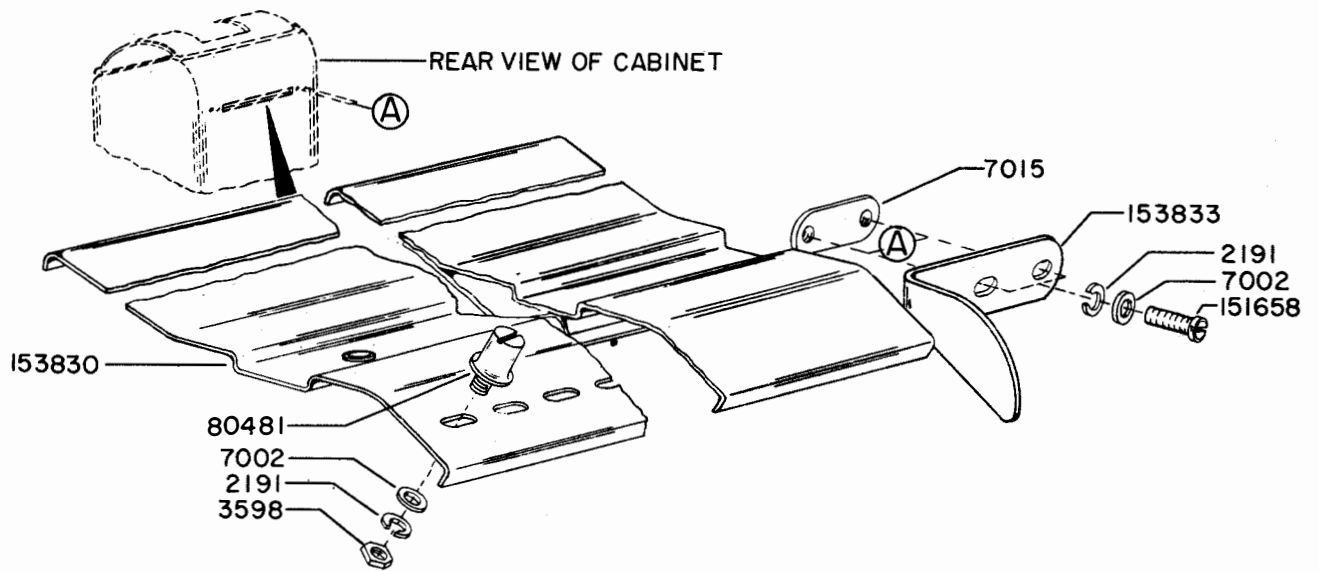


FIGURE 4. I53926 SPROCKET FEED REAR PAPER GUIDE MODIFICATION KIT

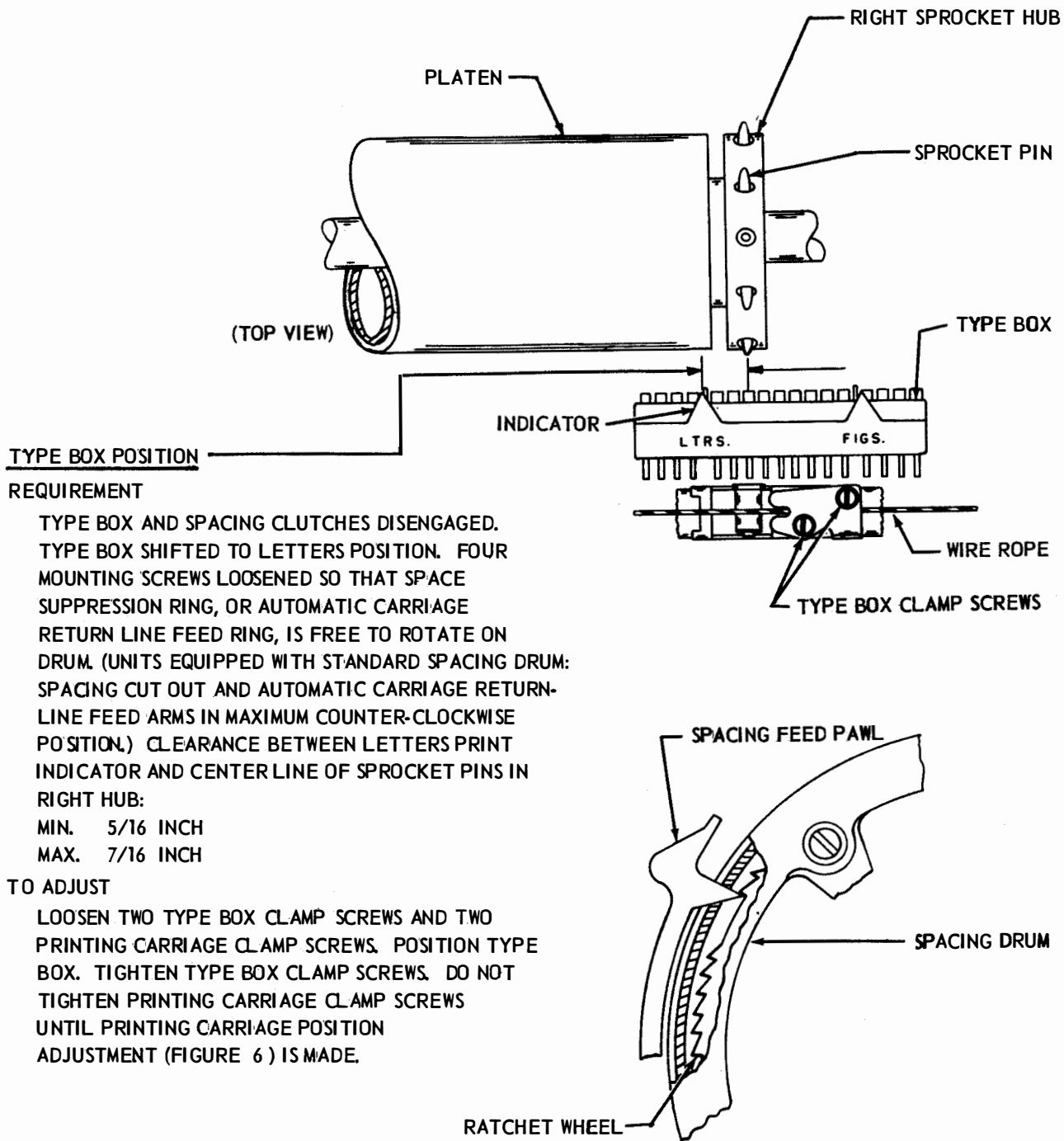
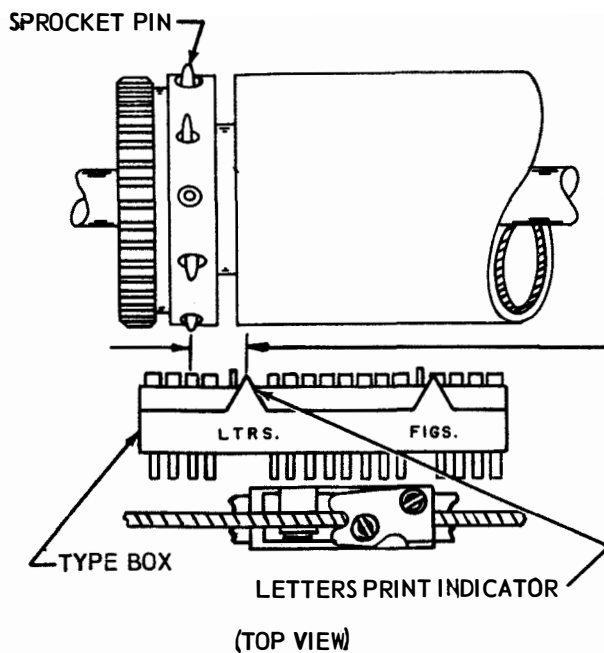


FIGURE 5. TYPING UNIT, PLATEN AND PRINTING MECHANISM



LEFT MARGIN

(1) REQUIREMENT

TYPE BOX CLUTCH DISENGAGED. SPACING DRUM FULLY RETURNED. TYPE BOX SHIFTED TO LETTERS POSITION. CLEARANCE BETWEEN CENTER OF LETTERS PRINT INDICATOR ON TYPE BOX AND CENTERLINE OF SPROCKET PINS IN LEFT HUB

MIN. 5/16 INCH  
MAX. 7/16 INCH

(2) REQUIREMENT

SPACING CLUTCH DISENGAGED. FRONT SPACING FEED PAWL FARTHEST ADVANCED. SPACING DRUM FULLY RETURNED. PLAY IN SPACING SHAFT GEAR TAKEN UP C.L.O.C.K.-WISE. CLEARANCE BETWEEN PAWL AND SHOULDER OF RATCHET WHEEL TOOTH IMMEDIATELY AHEAD.

MIN. 0.002 INCH  
MAX. 0.015 INCH

(3) REQUIREMENT

REAR PAWL, WHEN FARTHEST ADVANCED, SHOULD REST AT BOTTOM OF INDENTATION BETWEEN RATCHET WHEEL TEETH

TO ADJUST

POSITION CARRIAGE RETURN RING WITH MOUNTING SCREWS LOOSENED.

PRINTING HAMMER STOP BRACKET

REQUIREMENT

CLEARANCE BETWEEN PRINTING HAMMER AND DUMMY TYPE PALLET SHOULD BE

MIN. SOME MAX. 0.020 INCH

APPLY STANDARD ADJUSTING PROCEDURE.

RIGHT MARGIN

APPLY STANDARD ADJUSTING PROCEDURE AND REQUIREMENT.

SPACING FEED PAWL

SPACING DRUM RATCHET WHEEL

CARRIAGE RETURN RING

MOUNTING SCREWS

PRINTING CARRIAGE POSITION

APPLY STANDARD ADJUSTING PROCEDURE AND REQUIREMENT.

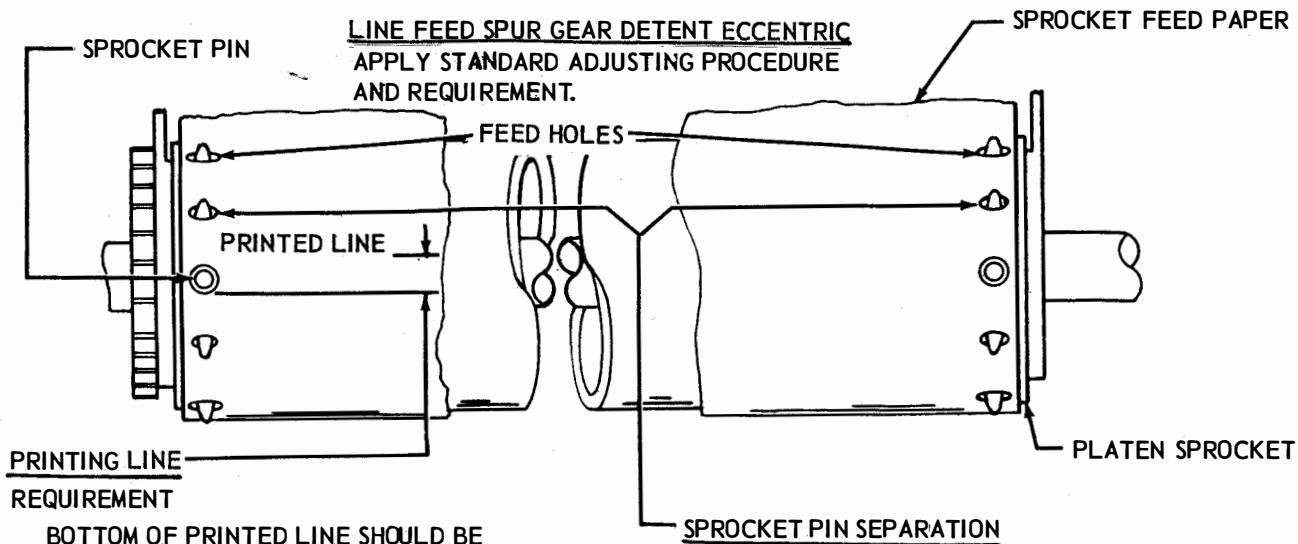
FOLLOWING THIS ADJUSTMENT, ALL SCREWS SHOULD BE TIGHTENED.

TYPE BOX ALIGNMENT

APPLY STANDARD ADJUSTING PROCEDURE AND REQUIREMENT.

(FRONT VIEW)

FIGURE 6. TYPING UNIT, PLATEN AND SPACING MECHANISM



**PRINTING LINE  
REQUIREMENT**

BOTTOM OF PRINTED LINE SHOULD BE  
MIN. 0 MAX. 1/32 INCH  
OR ANY MULTIPLE OF 1/6 THEREOF ABOVE  
LOWER EDGE OF FEED HOLE.

**TO ADJUST**

POSITION THE LEFT SPROCKET WITH ITS  
CAM AND GEAR RETAINING SCREWS LOOSENED.

**NOTE:** SPUR GEAR AND LEFT PLATEN RETAINER  
MUST BE REMOVED TO MAKE PRINTING  
LINE ADJUSTMENT.

**SPROCKET PIN SEPARATION**

**(1) REQUIREMENT**

WITH SINGLE SHEET OF SPROCKET FEED  
PAPER PLACED ON THE PLATEN THE  
SPROCKET PIN SHOULD BE CENTRALLY  
LOCATED IN THE FEED HOLES OF THE  
PAPER.

**(2) REQUIREMENT**

PRINTED LINE SHOULD BE PARALLEL  
TO A LINE DRAWN PERPENDICULAR TO  
EDGE OF PAPER WITHIN PLUS OR MINUS  
1/32 INCH

**TO ADJUST**

POSITION RIGHT SPROCKET WITH CLAMP  
SCREW LOOSENED.

**PLATEN END PLAY  
REQUIREMENT**

LINE FEED PAWLS DISENGAGED.  
PLATEN SHAFT SHOULD HAVE SOME  
END PLAY.  
MAX. 0.010 INCH

**TO ADJUST**

POSITION PLATEN SPUR GEAR WITH  
CLAMP SCREW LOOSENED.

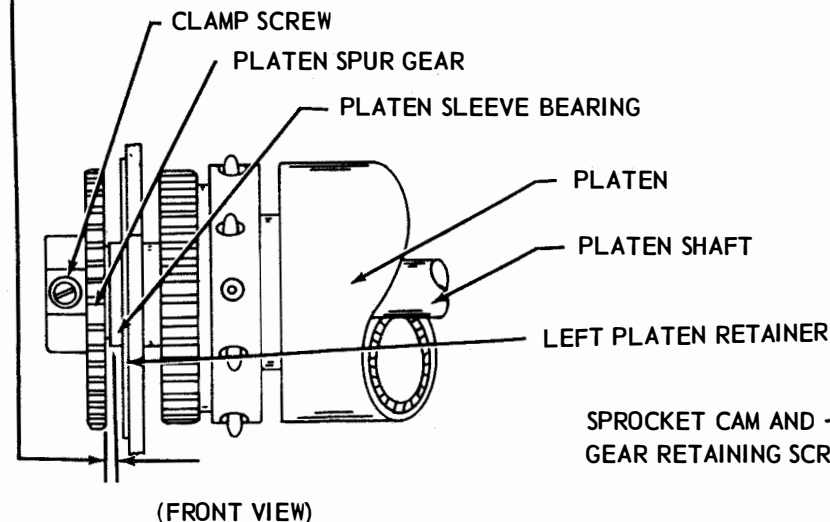
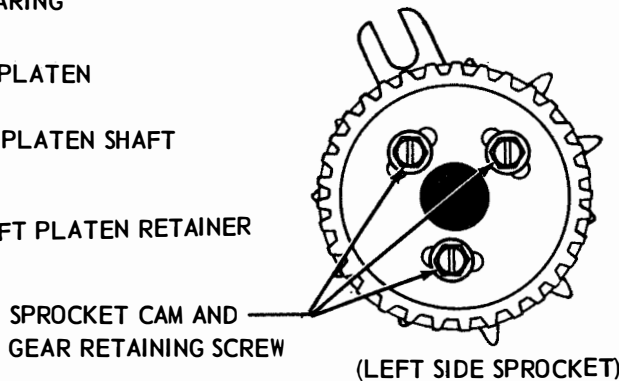
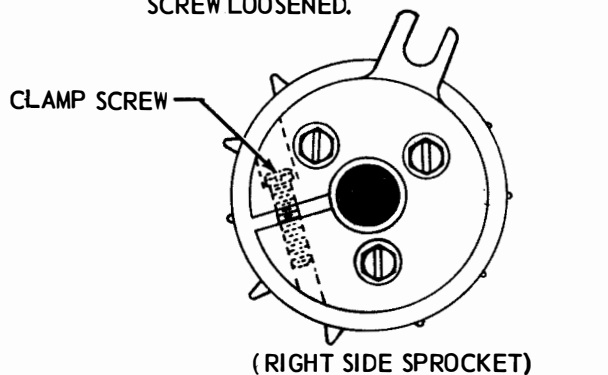
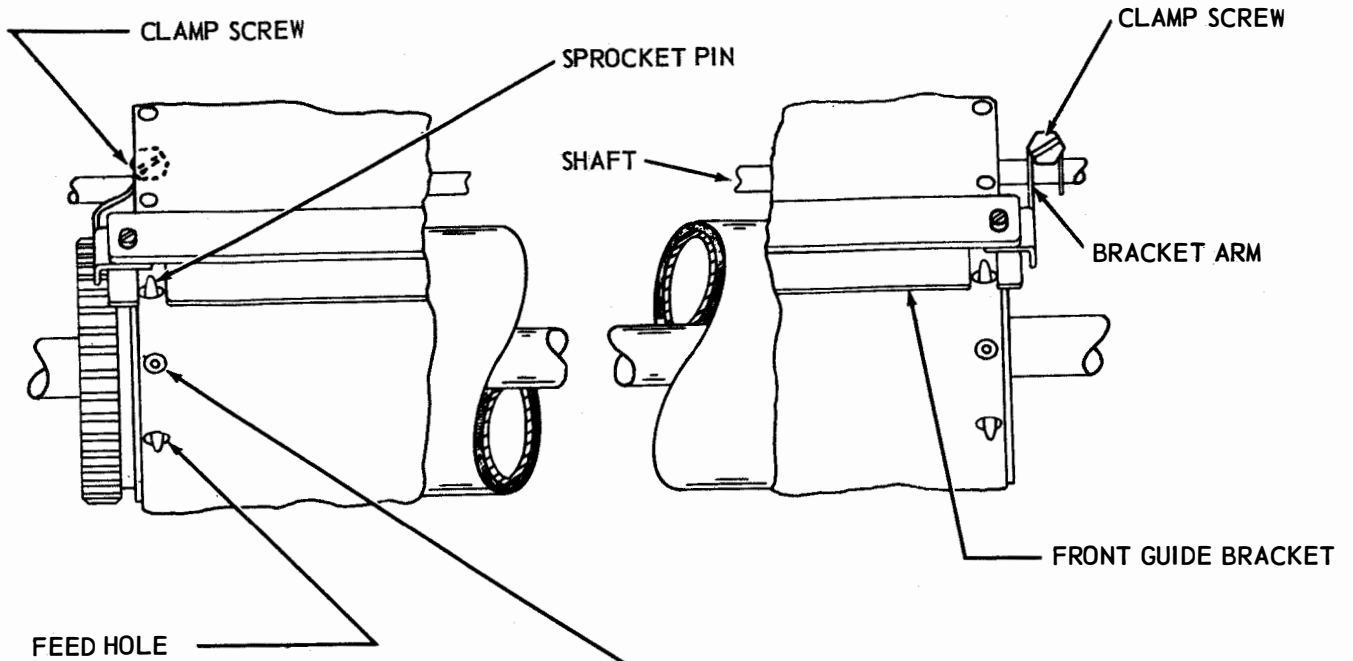


FIGURE 7. TYPING UNIT, SPROCKET FEED PLATEN





FRONT GUIDE BRACKET

(1) REQUIREMENT

THE SPROCKET PINS SHOULD BE CENTRALLY LOCATED IN THE PAPER HOLES.

(2) REQUIREMENT

THE GAP BETWEEN THE PLATEN AND THE FRONT GUIDE BRACKET SHOULD BE

MIN. 0.090 INCH

MAX. 0.105 INCH

TO ADJUST

LATCH BRACKET. BRING BRACKET AGAINST PLATEN AND POSITION BRACKET ARMS HORIZONTALLY ON SHAFT WITH CLAMP SCREWS LOOSENED TO MEET REQUIREMENT NO. (1). ROTATE ARMS TO MEET REQUIREMENT NO. (2).

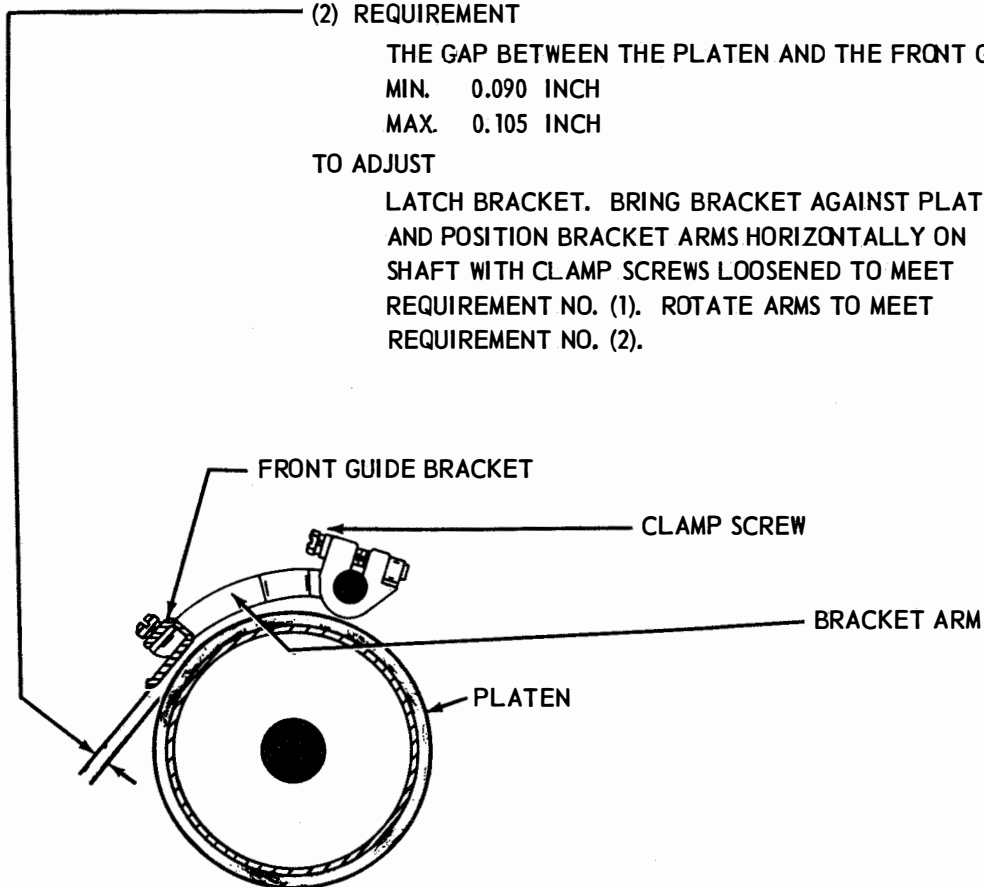
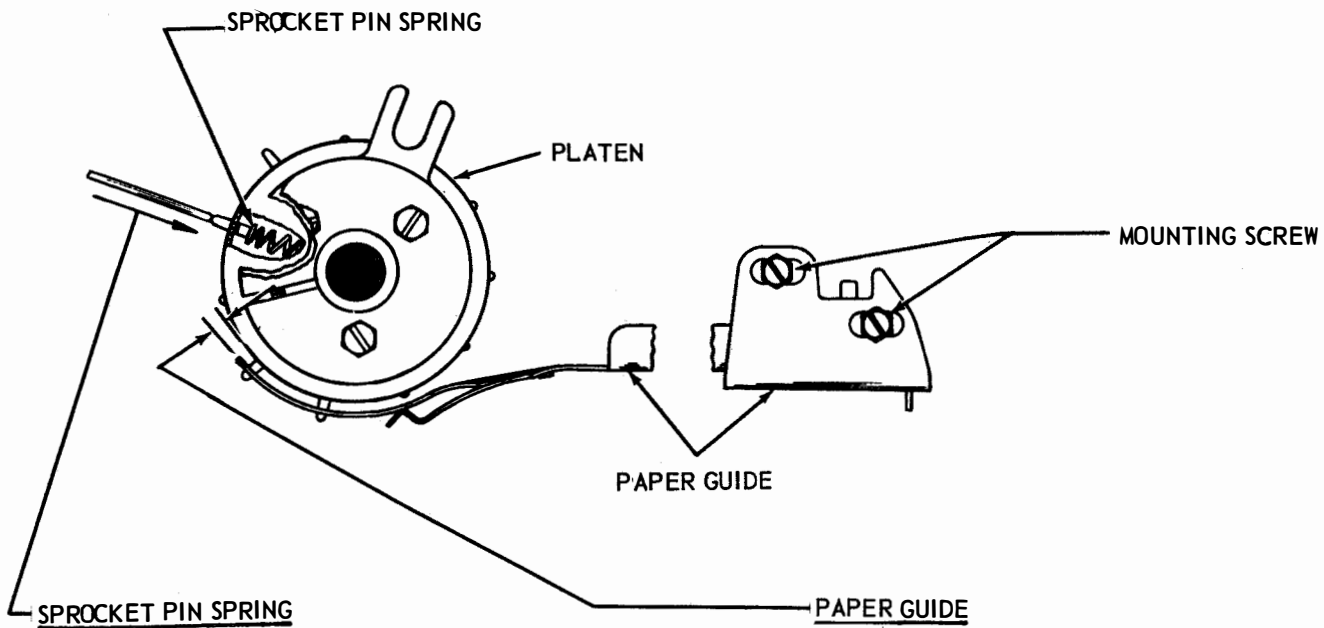


FIGURE 8. TYPING UNIT, PLATEN MECHANISM



SPROCKET PIN SPRING  
REQUIREMENT

MIN. 6 OZS.  
MAX. 8 OZS.  
TO START DEPRESSING THE PIN

PAPER GUIDE  
REQUIREMENT

THE CLEARANCE BETWEEN THE PLATEN  
AND THE FRONT EDGE OF THE PAPER  
GUIDE SHOULD BE  
MIN. 0.090 INCH  
MAX. 0.105 INCH

TO ADJUST

POSITION THE GUIDE WITH ITS REAR  
MOUNTING SCREWS LOOSENED.

NOTE

IF SINGLE COPY OR UNSTAPLED MULTIPLE COPY PAPER IS USED,  
THE CLEARANCE IN THIS ADJUSTMENT AND FRONT GUIDE BRACKET  
ADJUSTMENT SHOULD BE 0.050 TO 0.060 INCH FOR IMPROVED FEEDING.

RIBBON REVERSE SPUR GEAR

APPLY STANDARD ADJUSTING PROCEDURE AND REQUIREMENT.

RIBBON REVERSE DETENT

APPLY STANDARD ADJUSTING PROCEDURE AND REQUIREMENT.

LINE FEED BAR BELL CRANK SPRING

REQUIREMENT

MIN. 28 OZS.  
MAX. 38 OZS.

APPLY STANDARD ADJUSTING PROCEDURE.

FIGURE 9. TYPING UNIT, PLATEN AND PAPER TRAY

FRONT FORM GUIDE (CABINET)

REQUIREMENT

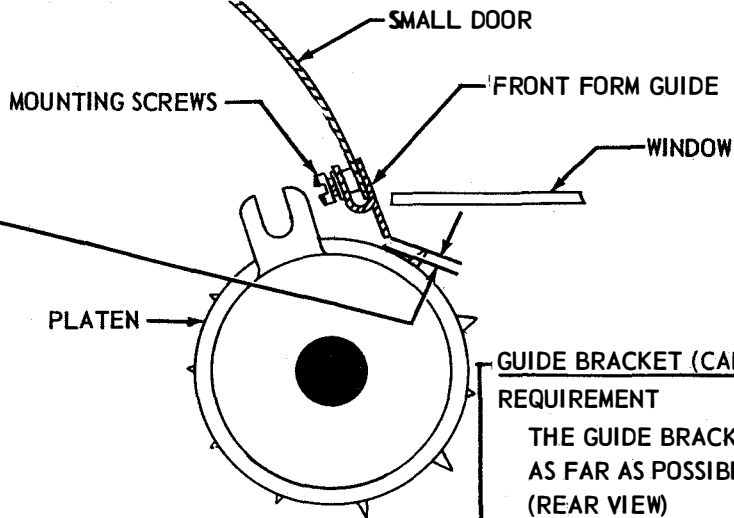
WITH TYPING UNIT IN CABINET AND LARGE AND SMALL DOORS LATCHED, CLEARANCE BETWEEN THE LOWER EDGE OF THE FRONT FORM GUIDE AND THE PLATEN SHOULD BE

MIN. 3/64 INCH

MAX. 5/64 INCH

TO ADJUST

LOOSEN THE FORM GUIDE MOUNTING SCREWS. PRESS THE PAPER GUIDE AGAINST THE PLATEN, THEN RAISE THE FORM GUIDE PARALLEL TO THE PLATEN.



GUIDE BRACKET (CABINET)

REQUIREMENT

THE GUIDE BRACKET SHOULD BE PLACED AS FAR AS POSSIBLE TO THE LEFT (REAR VIEW)

TO ADJUST

POSITION THE GUIDE BRACKET WITH ITS MOUNTING SCREWS LOOSENED.

REAR FORM GUIDE (CABINET)

REQUIREMENT

WITH A SHEET OF SPROCKET FEED PAPER PLACED IN THE FORM GUIDE AND PUSHED TO THE RIGHT (REAR VIEW) AGAINST THE GUIDE BRACKET, THE CLEARANCE BETWEEN THE LEFT EDGE OF THE PAPER AND THE GUIDE POST SHOULD BE

MIN. 3/64 INCH

MAX. 5/64 INCH

TO ADJUST

POSITION THE GUIDE POST WITH ITS MOUNTING NUT LOOSENED.

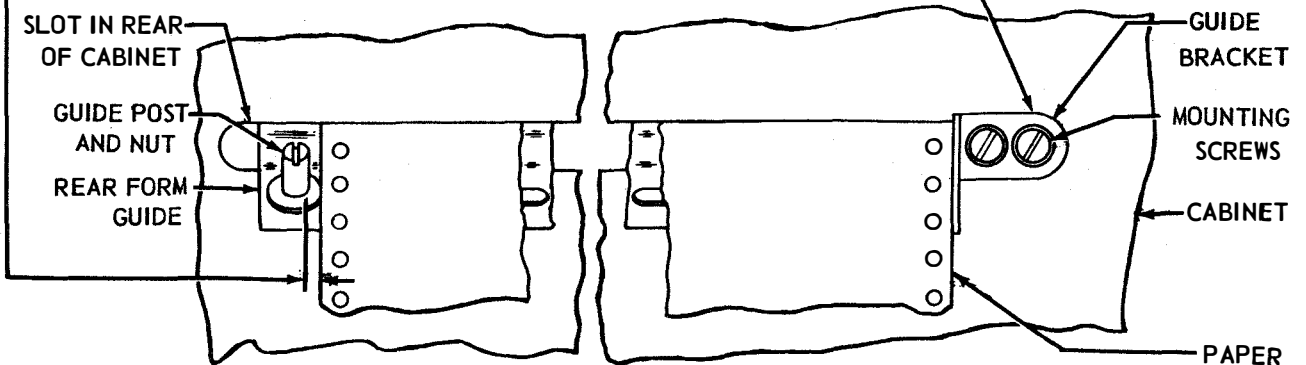
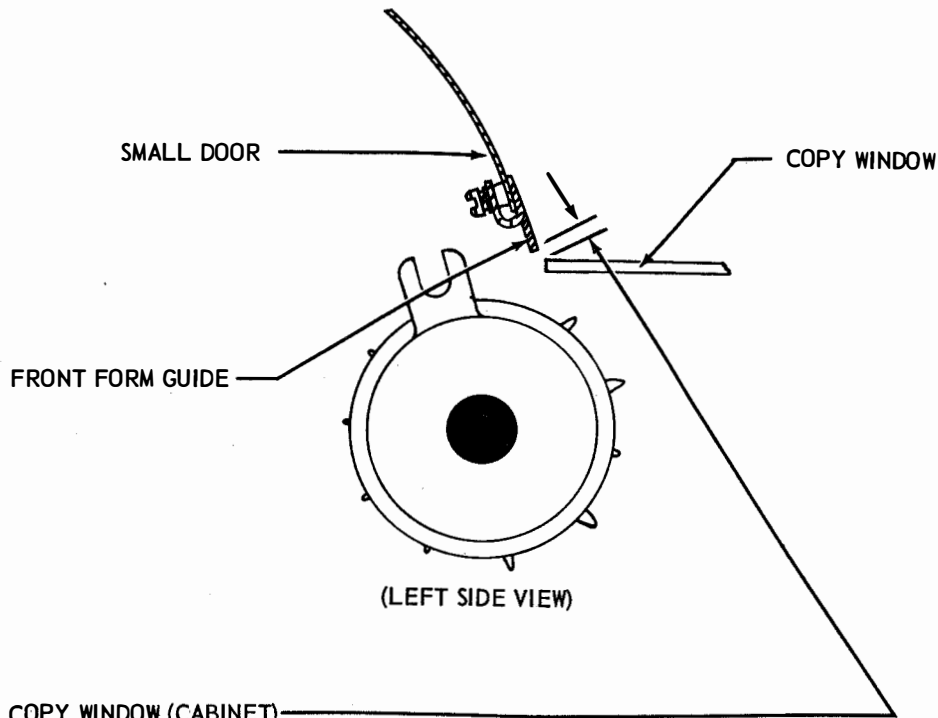


FIGURE 10. CABINET, FRONT AND REAR FORM GUIDES



**COPY WINDOW (CABINET)  
REQUIREMENT**

SMALL DOOR OPEN AND POSITIONED SO THAT  
CLEARANCE BETWEEN FRONT FORM  
GUIDE AND WINDOW IS AT MINIMUM.  
CLEARANCE.

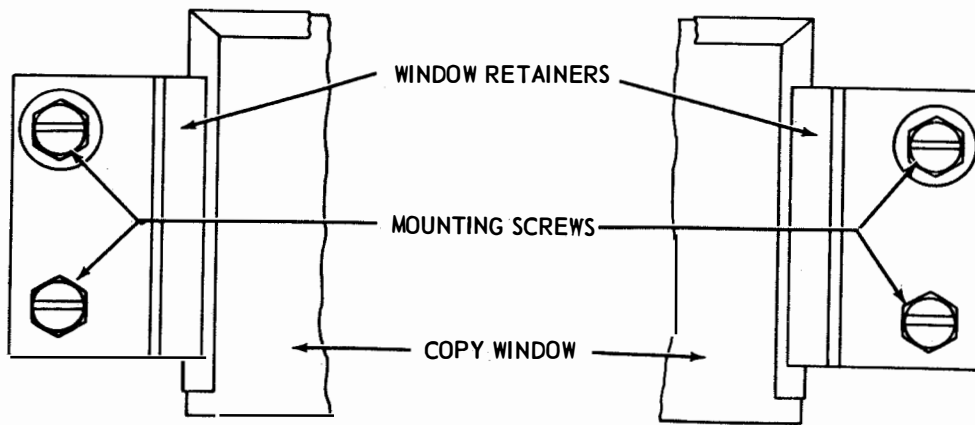
MIN. 0.060 INCH  
MAX. 0.080 INCH

TO ADJUST

POSITION WINDOW WITH FOUR WINDOW  
RETAINER MOUNTING SCREWS LOOSENED.

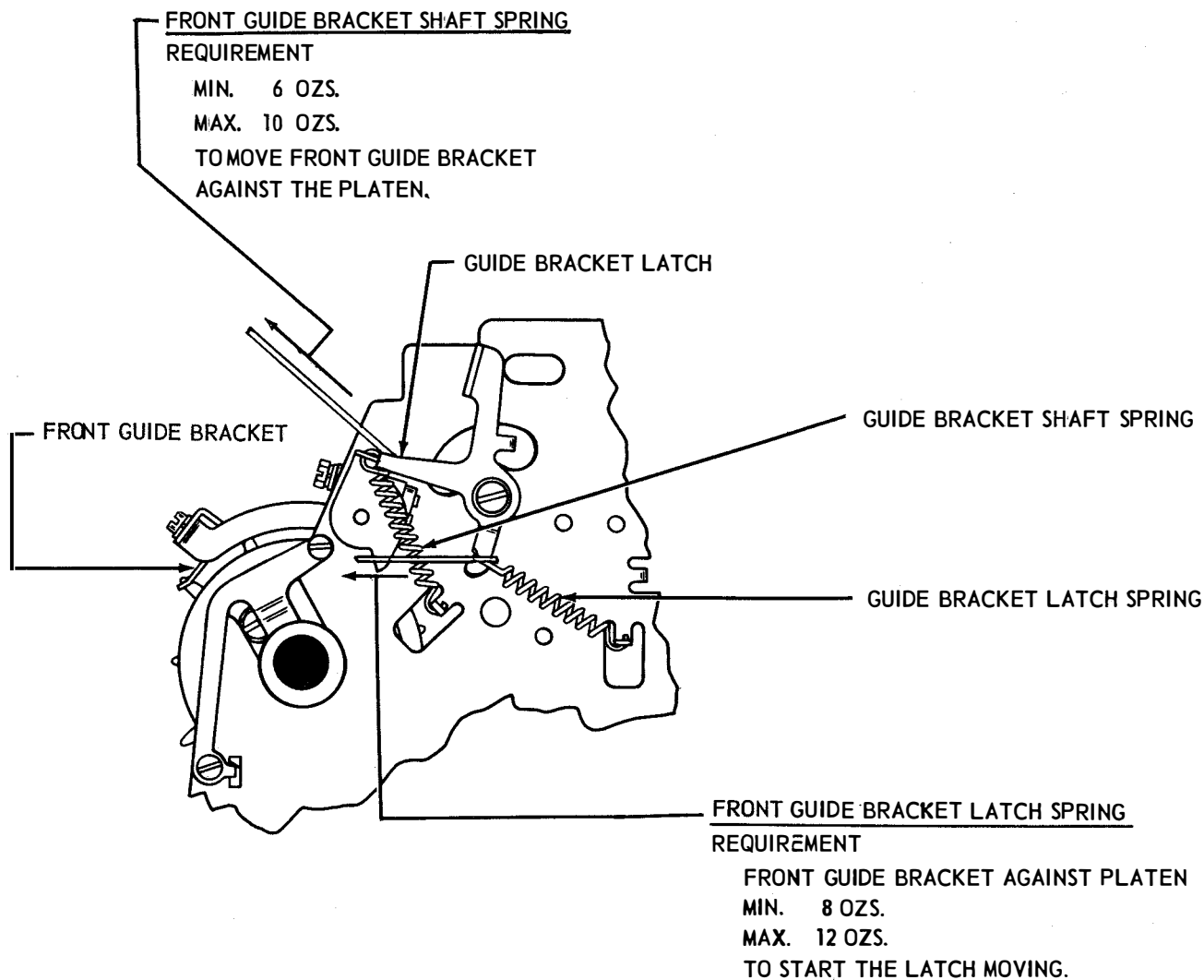
**NOTE**

IF STAPLED PAPER IS USED,  
STAPLES SHOULD PASS FREELY  
THROUGH SLOT. IF THEY DO NOT,  
INCREASE CLEARANCE AS REQUIRED.



(BOTTOM VIEW)

FIGURE 11. CABINET, FORM GUIDE AND COPY WINDOW



PLATEN DETENT BAIL SPRING TENSION

APPLY STANDARD ADJUSTING PROCEDURE AND REQUIREMENT

FIGURE 12. TYPING UNIT, SPROCKET FEED MECHANISM

