

LPW300\*\* PAPER WINDER

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1. GENERAL

1.01 This section provides description, installation, adjustments, lubrication, principles of operation, and wiring information for the LPW300 (Bell 1A) paper winder.

1.02 The paper winder, in conjunction with a copy display rack, is capable of winding page copy from friction feed 28, 32, 33, or 35 Console Teletypewriter Set (KSR, RO, or ASR), or 28 Table Model Teletypewriter Set using LPC204, LPC205 (Bell 28A), or LPC206 cover.

Note: The paper winder is not to be used with sprocket feed sets.

1.03 The following copy display racks are used in conjunction with the paper winder and should be ordered as separate items:

- (a) TP193950 copy display rack - For 28 or 35 application.
- (b) TP195259\*\* modification kit (includes copy display rack) - For 32 or 33 application. The kit provides for easy removal of the winder for access to the removable cabinet back panel.

1.04 For parts ordering information, refer to appropriate set parts publication. Double asterisk (\*\*) denotes suffix indicating paint finish.

2. DESCRIPTION  
CONFIGURATION

2.01 The paper winder (Figure 1) consists, basically, of a mounting bracket, motor, paper spindle assembly, mercury switch with associated paper-slack bail, and ON-OFF switch.

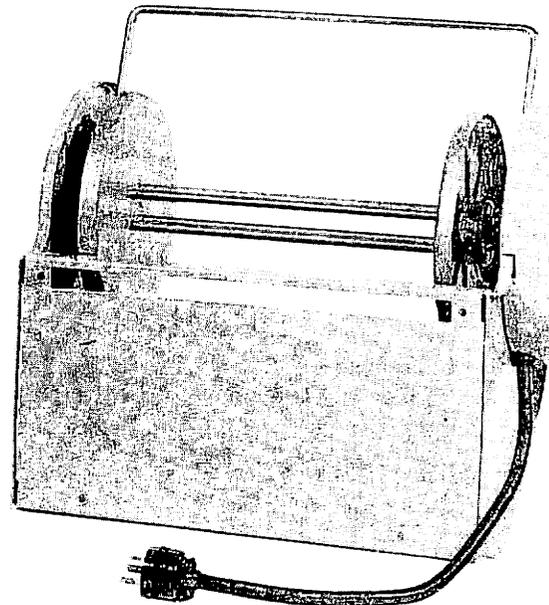


Figure 1 - LPW300 (Bell 1A) Paper Winder  
(Right Rear View)

Figure 2 shows the winder mounted on the back of a 28 console cabinet.

TECHNICAL DATA

A. Electrical

Power Requirements ----- 115  $\pm$ 10 percent volts ac, 50/60 cycle

Note: The mercury switch controls the motor current.

B. Capacity

Note: At 15 percent (or less) relative humidity.

28 or 35 Set ----- 400 feet, 8-1/2 inch wide (0.0034- to 0.0043-inch thick) KS1920 paper

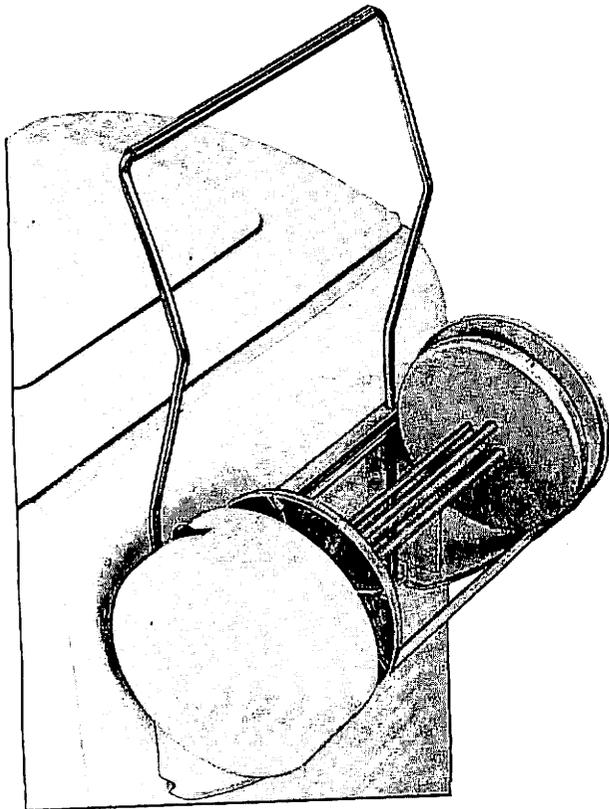


Figure 2 - Paper Winder (With Copy Display Rack) Mounted on Back of 28 Console Cabinet (Left Rear View)

32 or 33 Set ----- 320 feet, 8-1/2 inch wide (0.0034- to 0.0043-inch thick) KS8483 paper

Note: The winder accommodates paper widths from 4-1/4 to 8-1/2 inches. Since pull-back operation of narrow width paper may require the use of an additional modification kit, it is recommended that copy pull-back be restricted to use with 8-1/2 inch width paper.

3. INSTALLATION

Note: For parts referred to, other than the loose parts furnished with the paper winder, components of the paper winder, or of the TP195259 modification kit, refer to appropriate set parts publication.

LOOSE PARTS

3.01 The following loose parts are furnished (in bag) with the paper winder:

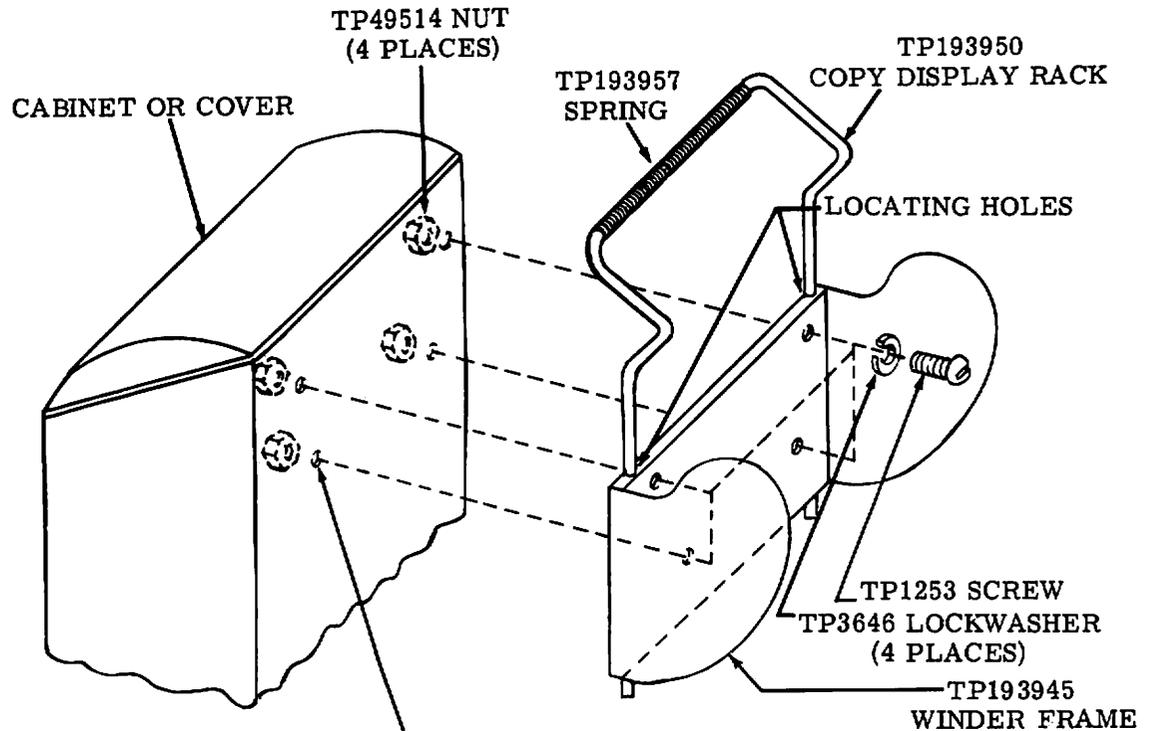
4	TP1253	Screw
4	TP3646	Lockwasher
1	5830WD	Diagram, Wiring
4	TP49514	Nut
2	TP49612	Screw
4	TP78469	Foot, Rubber
3	TP82474	Terminal (Spade)
1	TP97347	Screw, Set
1	TP114466	Connector, Receptacle
2	TP165255	Screw, Sheet Metal
2	TP192007	Terminal
1	TP193951	Guide, Paper

Note: The TP114466 receptacle connector, furnished with the paper winder, mates with the connector on the winder power cord which is approximately 18 inches long. The customer must furnish the wiring between the connector and an ac power source. Three TP82474 terminals (spade) and two TP192007 terminals (one is a spare) are provided for use in making wiring connections.

28 EQUIPMENT

3.02 Install paper winder on 28 console cabinet or 28 LPC204, LPC205 (Bell 28A), or LPC206 cover as follows (Figure 3):

- (1) Remove TP152797 plate w/screws and TP151532 cover w/plate from rear of cabinet by removing two TP6345 nuts, TP2191 lockwashers, and TP7002 washers. Discard the parts and mounting hardware.



Note: Hole must be added for LPC covers.  
Winder is mounted with three screws, lockwashers, and nuts on LPC covers.

Figure 3 - Installing Paper Winder on 28 Console Cabinet (LAC or LAAC) or 28 LPC204, LPC205 (Bell 28A), or LPC206 Cover

(2) Mount the paper winder at the rear of the cabinet, using two holes made available in preceding Paragraph (1), two lower holes present in the cabinet, four TP1253 screws, TP3646 lockwashers, and TP49514 nuts.

(3) Mount the paper winder on 28 LPC204, LPC205 (Bell 28A), or LPC206 cover using two TP1253 screws, TP3646 lockwashers, and TP49514 nuts to secure the upper portion of the paper winder bracket to the rear of the cover. Using the winder bracket as a template, drill a 0.172 inch diameter hole (11/64 inch drill) in the LPC cover coinciding with the lower left mounting hole of the winder bracket. Secure the lower portion of the winder bracket with a TP1253 screw, TP3646 lockwasher, and TP49514 nut.

(4) For 28 console cabinet - The three TP82474 terminals may be used when power is to be obtained from the "C" terminal board of the cabinet.

(5) For 28 LPC cover - The three TP82474 terminals may be used when power is to be obtained from the "T" terminal board of the cover.

(6) Insert appropriate copy display rack into its locating holes on the paper winder frame (Figure 3).

### 32 AND 33 EQUIPMENT

3.03 Install paper winder on 32 or 33 console cabinet as follows. A TP195259 modification kit (Paragraph (1) below) is required (Figure 4).

(1) The TP195259 modification kit consists of:

4	TP2191	Lockwasher
4	TP6345	Nut
4	TP195180	Bumper, Rubber
1	TP195253	Rack, Copy Display
2	TP195256**	Hanger

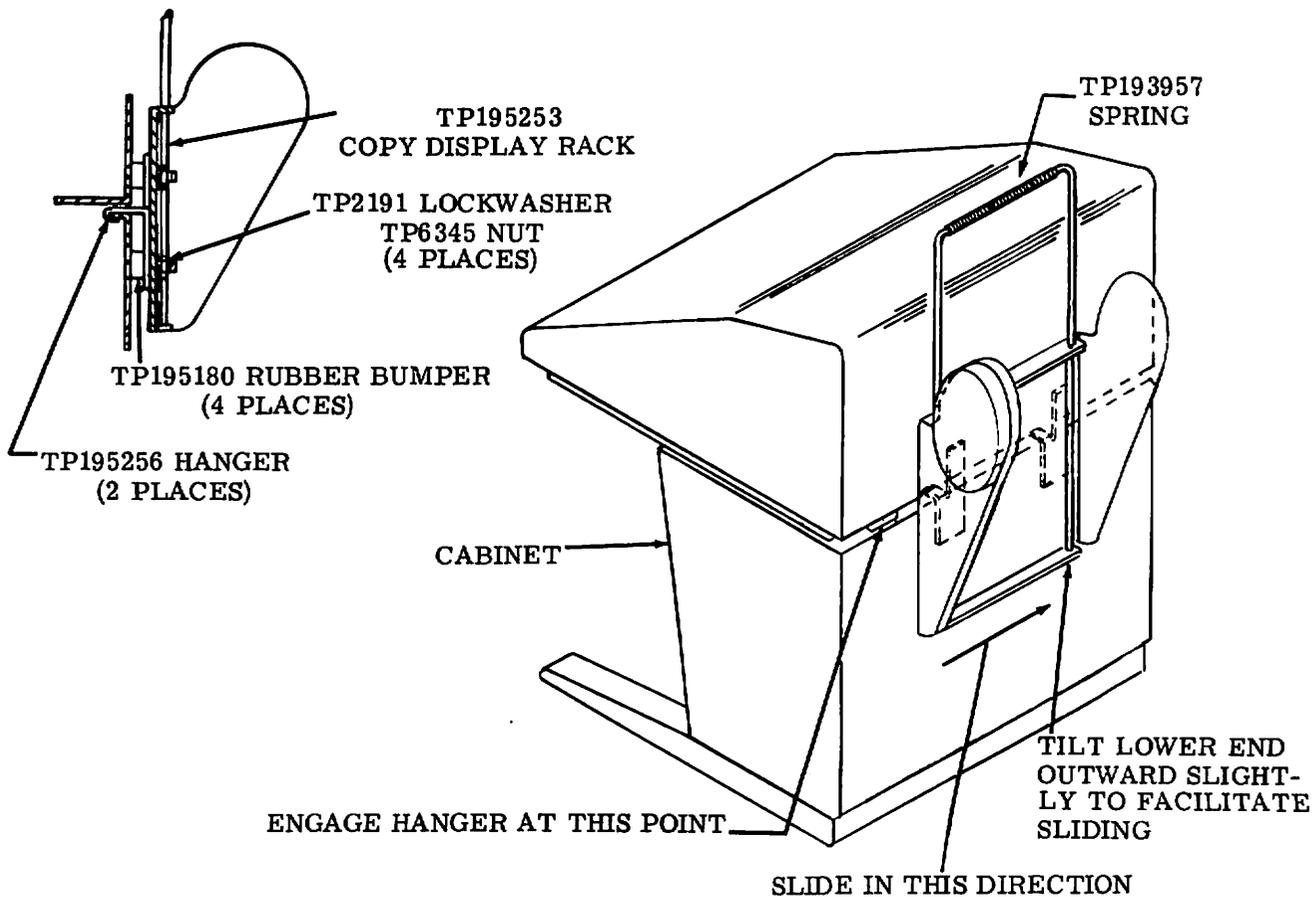


Figure 4 - Installing Paper Winder on 32 or 33 Console Cabinet Using TP195259 Modification Kit

- (2) Loosen the screw securing the TP193953 motor housing to the winder and remove the housing.
- (3) Remove the two resistor leads from the terminal block assembly and tape the resistor leads from interference with other wiring and moving parts.
- (4) Adjust the winder mercury switch (Figures 7 and 8). Replace the TP193953 motor housing and tighten the retaining screw.
- (5) Secure the two TP195256 hangers to the paper winder using four TP195180 rubber bumpers, TP2191 lockwashers, and TP6345 nuts.
- (6) Looking at the rear of the cabinet, hook the right hanger over the top ledge of the removable panel. Tilt the lower end of the

winder outward slightly and slide the winder to the right until the left hanger engages the ledge of the panel. Position winder for alignment of winder spindle with typing unit platen.

Note: When TP195259 modification kit is installed on 32 or 33 console cabinet equipped with three thumb screws (used to fasten rear of cover), remove and discard the center thumb screw.

- (7) The three TP82474 terminals may be used when power is to be obtained from the set at terminals 1 and 2 of the "TS" terminal board and terminal 4 of the motor control relay.
- (8) Insert appropriate copy display rack into its locating holes on the paper winder frame (Figure 3).

## 35 EQUIPMENT

## 3.04 Install paper winder on 35 console cabinet as follows (Figure 5):

- (1) Remove TP152797 plate w/screws and TP192116 cover w/plate from rear of cabinet by removing two TP6345 nuts, TP2191 lockwashers, and TP7002 washers. Discard the parts and mounting hardware.
- (2) Mount the paper winder at the rear of the cabinet using two holes made available in preceding Paragraph (1), two TP78469 rubber

feet, TP49612 screws, TP3646 lockwashers, TP49514 nuts, two lower holes present on later cabinet, two TP78469 rubber feet, and TP165255 sheet metal screws.

Note: If the cabinet does not have the two lower holes they must be added. Use the frame of the paper winder as a template and spot or mark the location of the two lower mounting holes of the winder on the cabinet. Drill two 0.125 inch diameter holes (1/8 inch drill) in the cabinet. Make certain that no metal chips get into the winder and printer set mechanisms.

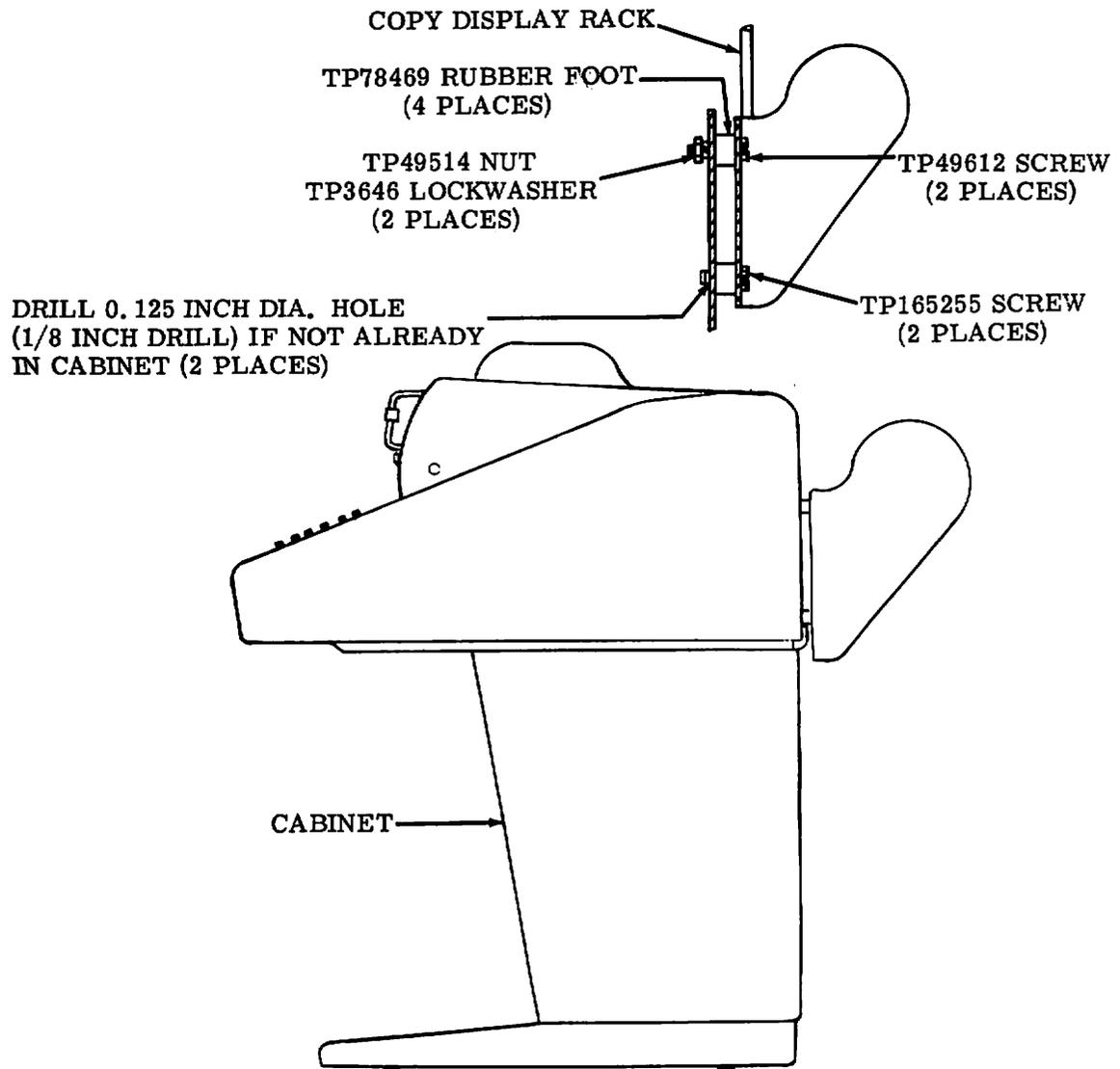


Figure 5 - Installing Paper Winder on 35 Console Cabinet

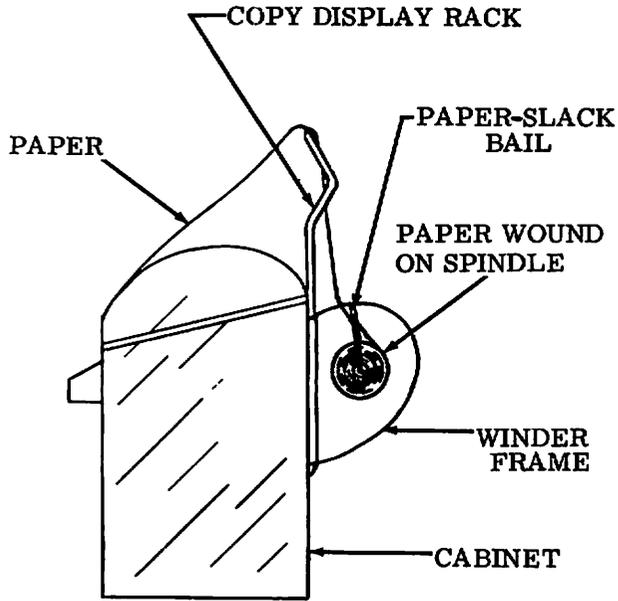


Figure 6 - Path of Paper from Printer Unit to Paper Winder Spindle

(3) Two of the TP82474 terminals and a TP192007 terminal may be used when power is to be obtained from terminals 1 and 2 of the "K" terminal board of the call control unit and terminal AA5 of the electrical service unit.

(4) Insert appropriate copy display rack into its locating holes on the paper winder frame (Figure 3).

**GENERAL INSTRUCTIONS AND CHECKS**

Note: The paper winder is factory adjusted for operation with 28 or 35 Set. For 32 or 33 Set application, it will be necessary to re-make the Mercury Switch Position Adjustment (Figures 7 and 8).

3.05 The operation of the paper winder ON-OFF switch should be checked to determine whether the slack bail and its associated mercury switch activate the winder spindle. If necessary, check the mercury switch position adjustment (Figures 7 and 8).

3.06 See Figure 6 for path of paper from printer unit to paper winder spindle.

3.07 Check alignment of paper with paper winder spindle. If necessary, adjust paper in typing unit. Make certain that the paper fingers on the typing unit are in the proper location.

3.08 For narrow paper, assemble the TP-193951 paper guide to the slack bail for the applicable width of paper and secure the paper guide using the TP97347 set screw.

**SPINDLE AND PAPER REMOVAL**

3.09 To remove the spindle, shut off the power with the paper winder ON-OFF switch, grasp the spindle (or the roll of paper, if any, on the spindle) at the end which is farthest away from the motor and pull upward (assuming winder is mounted on cabinet).

3.10 To remove the roll of paper from the spindle, pull the spindle flanges outward.

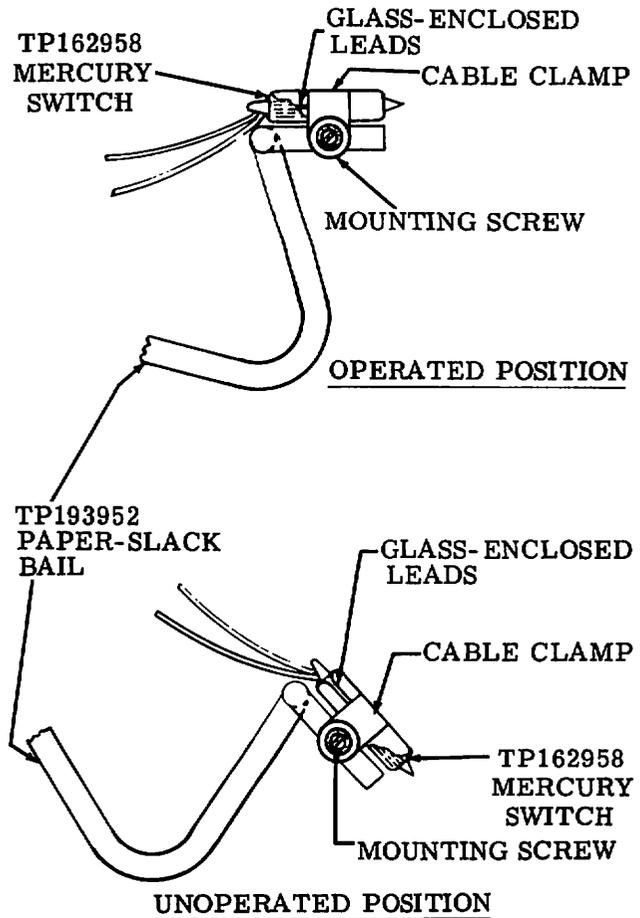
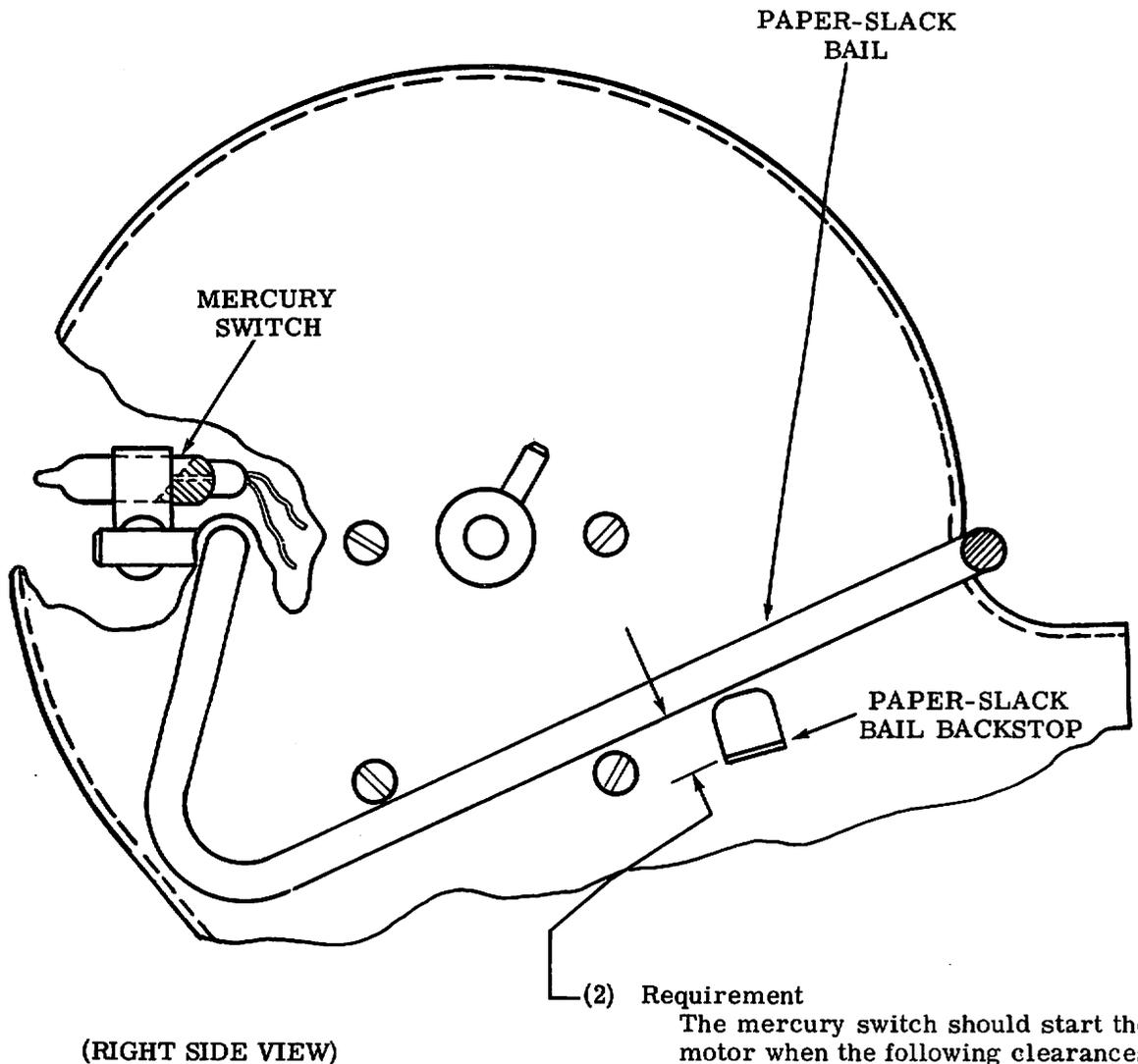


Figure 7 - Operation of the Mercury Switch on Paper Winder (Left Side View)



(RIGHT SIDE VIEW)

MERCURY SWITCH POSITION ADJUSTMENT

(1) Requirement  
 The two glass-enclosed leads of the switch must be positioned such that the mercury makes contact with the leads simultaneously when the switch is activated (Figure 7).

(2) Requirement  
 The mercury switch should start the motor when the following clearances are present:

For 28 or 35 Set:  
 3/4 to 1-1/4 inches (factory adjustment).  
 For 32 or 33 Set, readjust to:  
 1/8 to 5/8 inch.

To Adjust  
 Position the switch with its mounting screw loosened (Figure 7).

Figure 8 - Paper Winder Mercury Switch Position

3.11 To reassemble the spindle, engage the two pins on each of the flanges with the two holes in each opposite flange.

3.12 To replace the spindle, first engage the bearing hole in the spindle with the bearing on the motor shaft (see that the ends of the spindle pins are on either side of the post in the bearing) then press the opposite end of the spindle down (assuming winder is mounted on cabinet) until the spindle bearing post slips past the retaining spring.

#### 4. ADJUSTMENTS

4.01 See Figures 7 and 8 after paper winder is installed. Reposition the mercury switch, if necessary.

#### 5. LUBRICATION

Note: Frequency consistent with Set lubrication schedule.

5.01 Paper-Slack Bail - One drop KS7470 oil at each pivot point.

#### 6. PRINCIPLES OF OPERATION

6.01 The paper is guided over the copy display rack, underneath the paper-slack bail, to the paper winder spindle. The paper-slack bail will be in the lowermost position. Consequently the mercury switch mounted on the paper-slack bail will be ON and the motor will be operating. The drive pin on the motor shaft will engage the flange rod, thereby winding the paper. As the paper winds, the slack bail will be raised and the mercury switch will tilt to the OFF position. Current will then be interrupted (32 or 33 application) or will flow through a resistor connected across the mercury switch (28 or 35 application). Further operation of the motor is prevented, thereby minimizing the pull on the printer paper-feeding mechanism. Approximately ten lines (single space) will have to be fed out before the slack bail will again be in position to start the winder motor through the action of the mercury switch.

#### 7. SERVICING

CAUTION: DISCONNECT POWER TO PAPER WINDER BEFORE SERVICING.