

INSTRUCTIONS FOR INSTALLING THE 311456 MODIFICATION  
KIT TO PROVIDE A UNIVERSAL PAPER JAM ALARM FOR  
MODEL 28, 29 OR 35 SPROCKET FEED TYPING UNITS

1. GENERAL

a. The 311456 modification kit is used on the Model 28, 29, and 35 Sprocket Feed Typing Units to sense malfunctions of the paper travel which results in paper jams. It will not sense a torn sprocket hole condition unless the tearing results in buckling of the paper.

b. The 311456 modification kit is a universal kit for use with the following papers widths: 9", 8-1/2", 8", 7-1/2", 7", 6-1/2", 6-3/8", 6-1/4", 6", 5-3/4", 5-1/2", 5", 4-1/2", 4-5/16", 4-1/4", 4", and 3-5/8".

c. This kit is not compatible with the old style 153772 paper guide bracket. It is necessary to replace the 153772 guide and associated 153721 and 153722 arms with the new style 155896 and 155897 paper fingers, 155565 and 155566 arms and 153685 paper strippers (See Bulletin 1149B).

NOTE

Maximum current carrying capacity of Paper Jam Alarm circuitry is 1 ampere.

d. This kit replaces the 193995 and 199245 modification kits for 8-1/2" and 6-1/4" paper width respectively and is compatible with the improved manual platen line feed modification kits.

e. The 311456 modification kit is not compatible with Model 35 Sprocket Feed Typing Units equipped with high-speed form-out.

f. Customer supplied electrical components used to complete the paper jam alarm circuitry must not draw more than one ampere.

g. The 311456 kit consists of:

|   |       |              |   |        |              |
|---|-------|--------------|---|--------|--------------|
| 3 | 2191  | Lockwasher   | 2 | 93117  | Lockwasher   |
| 2 | 3624  | Washer, Flat | 2 | 102999 | Screw        |
| 1 | 3640  | Lockwasher   | 2 | 130663 | Lockwasher   |
| 1 | 6807  | Screw        | 1 | 150436 | Bushing      |
| 3 | 7002  | Washer, Flat | 1 | 151152 | Screw        |
| 1 | 83877 | Spring       | 3 | 151657 | Screw        |
| 1 | 90581 | Collar       | 1 | 152425 | Post, Spring |

|   |        |                               |   |        |                     |
|---|--------|-------------------------------|---|--------|---------------------|
| 2 | 156971 | Screw                         | 1 | 195000 | Lever, Operating    |
| 1 | 170282 | Nut                           | 3 | 195001 | Insulator           |
| 1 | 194998 | Plate, Mounting               | 1 | 306098 | Wire, Guide         |
| 1 | 194999 | Cable Assembly,<br>w/Switches | 1 | 311457 | Bracket, Bail       |
|   |        |                               | 1 | 312980 | Bail, Right         |
|   |        |                               | 1 | 312981 | Bail w/Tubing, Left |

h. For parts ordering information see appropriate Teletype Parts Bulletins.

## 2. INSTALLATION (Figures 1 and 2)

- a. Remove and save the 55063 spring from the 153678 paper finger shaft.
- b. Remove and save the 76800 spring and the 154519 latch.
- c. Remove and save the 128357 retaining ring from the 153678 paper finger shaft.
- d. Loosen the 153839 clamping screws on the paper finger arms.
- e. Remove the stripper arms and the paper fingers from the shaft by withdrawing the shaft to the right. Do not completely remove the shaft from the right frame.
- f. Insert the shaft into the right side of the 304779 or 304778 bail assembly. The wire portion of the bail is to the front.
- g. Place the 90581 collar on the shaft.
- h. Typing Unit using 3-5/8" to 8-1/2" wide paper: Insert the shaft into the right side of the 312980 right bail. Re-install the 155565 right paper finger arm and the right side 153685 paper strippers. Continue to push the shaft to the left through the left side of the 312981 left bail with tubing. Re-install the left side 153685 paper strippers and the 155566 left paper finger arm on the 153678 shaft in that order by pushing the shaft to the left across the top of the platen making certain that the shaft passes through the slotted ends of the 153699 and 153698 feed cams. Assemble the 311457 bail with tubing to the 312980 bail using two 102999 screws and 130663 lockwashers. The tubular portions of the 312981 and 311457 bails with tubing should be above the paper finger arm assemblies.

NOTE

Typing Units using 8-1/2" or 9" wide paper: When assembling the 311457 bail with tubing to the 312980 bail or the 312981 bail, insert the desired length of 306098 guide wire into the tubular portion of the 312980 left bail with tubing and into the 311457 right bail with tubing.

i. Typing Units using 9" wide paper: Same as Paragraph 2. h. above except discard the 312980 bail, the 151152 mounting screw, 3640 lockwasher, and 7002 flat washer. Mount the 311457 bail w/tubing to the 312981 left bail w/tubing using two 102999 screws and 130663 lockwashers.

j. Continue to push the 153678 shaft to the left and into the hole in the left side frame. Replace the 128357 retaining ring at the right end of the shaft.

k. Replace the 55063 spring on the shaft and the 76800 spring on the latch.

l. Position the 90581 collar so one tapped hole is upward and the other is to the front of the unit. Place the 6807 set screw in the upper hole.

m. Place the 170282 nut on the 152425 spring post. Thread the spring post into the forward hole in the 90581 collar and run it in as far as possible without securing the collar to the shaft. Tighten the nut against the collar.

n. Tighten the 6807 set screw in the collar. Install the 83877 spring between the 152425 spring post and 312981 bail w/tubing.

o. Assemble the two switches to the 194998 plate using the 156971 screws, 93117 lockwashers, and the 3624 flat washers. Place a 195001 insulator between the switches, between the inner switch and the plate, and on the outside of the outer switch.

p. Assemble the 195000 operating lever to the 194998 mounting plate, the 150346 shoulder bushing, 151657 screw, and 2191 lockwasher.

q. Fasten the plate with switches and lever to the right-side frame of the typing unit with two 151657 screws, 2191 lockwashers, and 7002 flat washers using the hole at the upper rear corner of the frame and the rearmost of the two tapped holes which are approximately in line with the 154519 latch mounting hole.

r. On Model 35 units equipped with paper-out alarm, route the main body of the cable along the 151627 tie rod to the 192336 paper-out alarm and the single white wire to the receptacle on the right frame. Remove the pin

with the orange wire from Position 35 on this receptacle and replace with the white wire. Cut off or tape the orange wire removed. At the paper-out alarm, remove and tape the orange wire from 4. Connect the yellow wire in the cable to 4. Connect the white-brown wire to 6, the yellow-green wire to 8, and the white-green wire to 9. Tie the cable as necessary to the tie rod. (Figure 3)

s. On units other than above; route the cable to the main receptacle on the right frame, cut the wires to length, and connect to the desired terminals. (Customer must supply own alarm circuitry.)

t. Cut the 306098 guide wire to length according to paper width of typing unit that kit is being used on. (Figure 1)

u. Insert left end of 306098 guide wire into the tubular portion of the 312981 bail w/tubing and right end into the tubular portion of 311457 bail w/tubing.

v. Typing Units using 8-1/2" to 3-5/8" wide paper: Take up end play in wire by moving the 311457 bail to the left and fasten bail to 312981 bail by means of the 151152 screw, 3640 lockwasher, and 7002 flat washer.

### 3. ADJUSTMENTS AND LUBRICATION

a. For standard adjustments and lubrication procedures refer to Teletype Bulletin 217B.

(1) Make the paper finger adjustment right and left.

b. Make the following new adjustments:

c. Conditioning

(1) Loosen the switch plate mounting screws and rotate the switch and latch to a position where they do not interfere with the bail.

(2) Position the spring post by means of the set collar so that the spring has some initial tension. The spring post shall be approximately 30° from vertical.

d. Wire Bail

(1) The wire bail shall rest on the paper fingers approximately in the radius of the fingers. The bail shall touch at least one finger with not more than 0.015 gap from the other.

(2) To Adjust - Bend the wire bail.

e. Switch Position

(1) With the wire bail held against the paper fingers and the operating lever latched behind the operating bail, there shall be 0.035 to 0.065 between the top of the bail and the bottom of the step in the lever and the lever shall depress the switch plungers sufficiently to operate the switches.

(2) Position the switch plate by means of the mounting screws.

f. Bail Spring Tension

(1) It shall require 1/2 to 1-1/2 ozs. to lift the bail sufficiently high enough to release the operating lever and operate the switches when a 8 oz. scale is hooked to the center of the bail and pulled vertically upward.

(2) To Adjust - Position the spring post by means of the set collar at the same time positioning the collar laterally to provide some to 0.006 end play for the bail.

(3) Check that with the play of the bail taken to the right that the left side of the bail clears the left paper finger arm. Refine the left paper finger arm adjustment if necessary.

NOTES

With the typing unit installed in its cabinet, check that when the bail is lifted to its maximum upward position that there is some clearance between the bail and the operating lever.

Adjustments 2. e. and 2. d. may be refined to make the mechanism more or less sensitive to paper buckling.

g. Lubricate the following places with one drop of oil:

(1) Bail pivots.

(2) Spring eyes.

(3) Point of contact of bail with lever.

(4) Point of contact of lever with switch buttons.

\*

\*

\*

50375S

NOTE

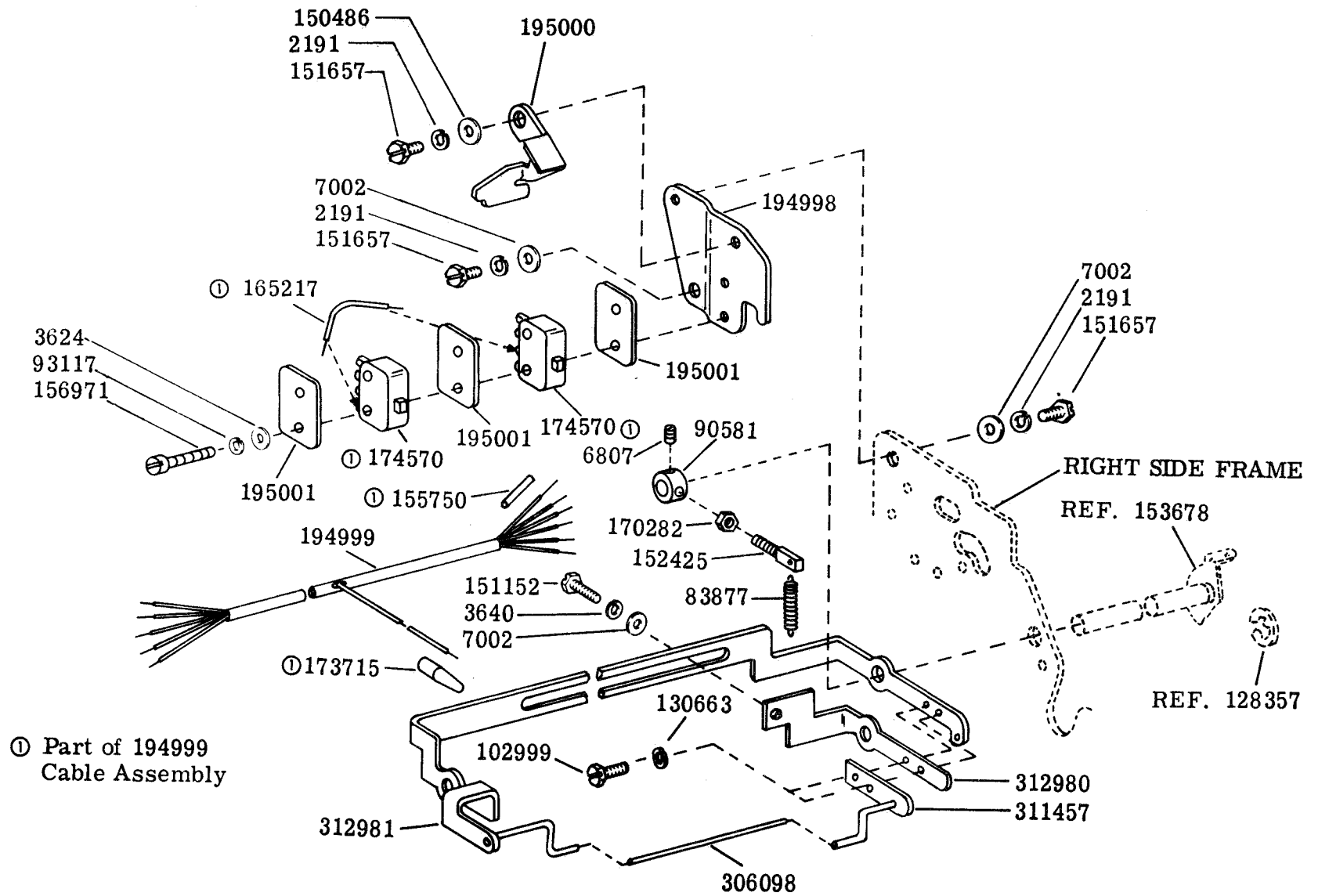
Cut piano wire with proper instrument.

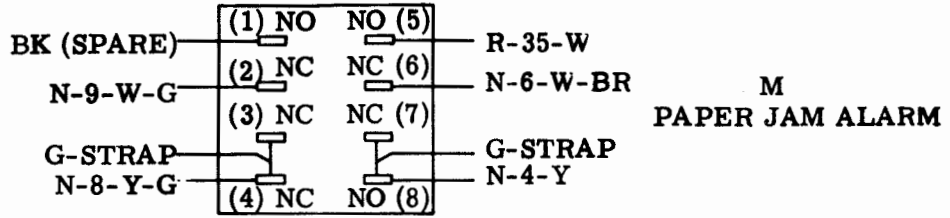
| PAPER WIDTH | WIRE LENGTH REQUIRED |
|-------------|----------------------|
| 3-5/8"      | 2-1/16"              |
| 4"          | 2-7/16"              |
| 4-1/4"      | 2-3/4"               |
| 4-5/16"     |                      |
| 4-1/2"      | 2-15/16"             |
| 5"          | 3-7/16"              |
| 5-1/2"      | 3-15/16"             |
| 5-3/4"      | 4-3/16"              |
| 6"          | 4-7/16"              |
| 6-1/4"      | 4-11/16"             |
| 6-3/8"      | 4-13/16"             |
| 6-1/2"      | 4-15/16"             |
| 7"          | 5-7/16"              |
| 7-1/2"      | 5-15/16"             |
| 8"          | 6-7/16"              |
| 8-1/2"      | 6-15/16"             |
| 9"          | NO CUT REQ'D.        |

306098 GUIDE WIRE CHART

FIGURE 1

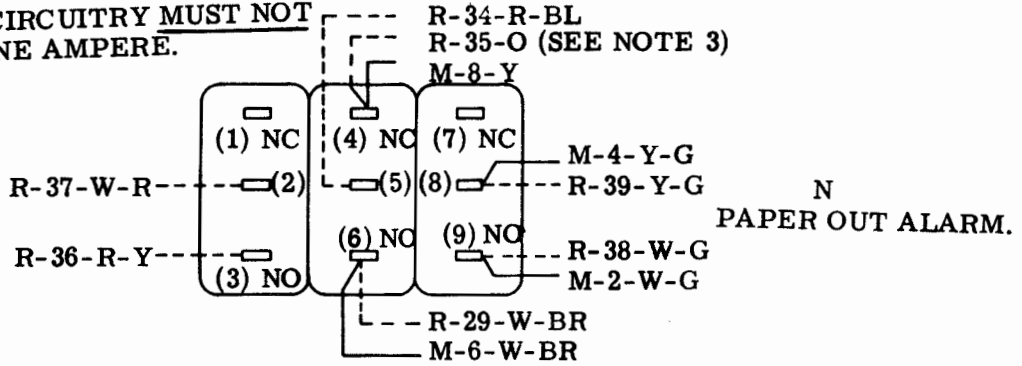
FIGURE 2



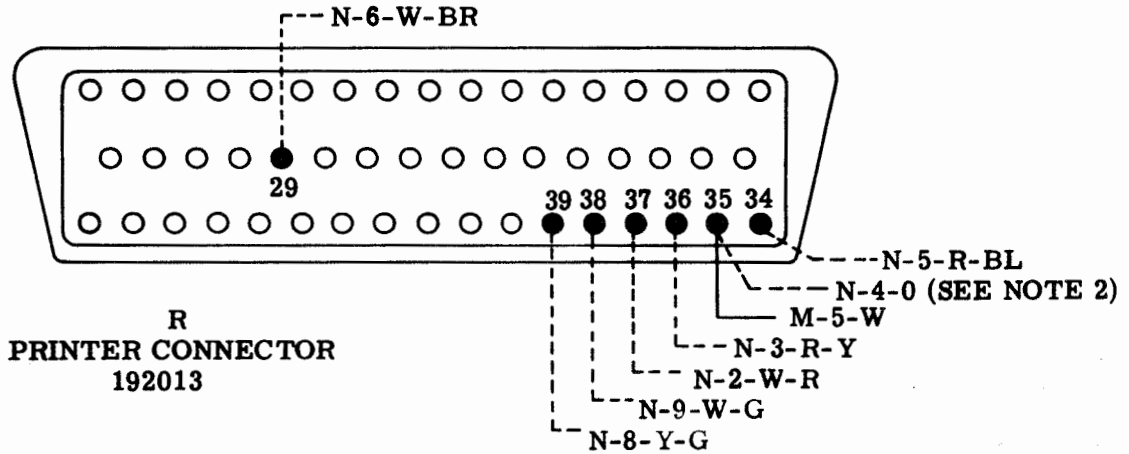


NOTE

PAPER JAM ALARM CIRCUITRY MUST NOT  
DRAW MORE THAN ONE AMPERE.



1. WIRES SHOWN DOTTED ARE NOT PART OF THE 311456 MODIFICATION KIT BUT ARE INCLUDED FOR REFERENCE PURPOSES ONLY.
2. REMOVE PIN WITH ORANGE WIRE FROM POSITION 35 ON THE PRINTER CONNECTOR AND REPLACE WITH THE WHITE WIRE. CUT OFF OR TAPE BACK THE ORANGE WIRE.
3. AT THE PAPER OUT ALARM REMOVE AND CUT OFF OR TAPE BACK THE ORANGE WIRE ON TERMINAL 4.



311456 MODIFICATION KIT-PAPER JAM ALARM  
WIRING INSTRUCTIONS FOR MODEL 35 LP UNITS ONLY

FIGURE 3