

BELL SYSTEM PRACTICES
Teletypewriter and Manual
Telegraph Station and PBX
Installation and Maintenance

SECTION P36.904
Issue D, 12-1-49
Long Lines Department
Dist. Class. 602.02AC

NO. 15 TELETYPEWRITER

MODIFICATIONS FOR

TWO COLOR PRINTING

1. GENERAL

1.00 This issue supersedes Issue C. It is reissued to provide information for correcting interference between the spacing rack and the carriage spring drum housing which occurs in some units due to manufacturing differences.

1.01 This section outlines the procedure to be followed in modifying a 15-type typing unit to print lower case characters in black, and upper case characters in red.

1.02 These modifications will provide a full 72 character line on both friction and sprocket feed units.

2. MODIFICATION

2.01 (A) New parts required for Friction Feed Machines:

- 1 - TP6746 screw (to replace TP1196 shoulder screw)
- 1 - TP34432 washer (for use on TP74730 screw)
- 5 - TP3458 shims

2.01 (B) New parts required for Sprocket Feed Machines:

- 1 - TP6746 screw (to replace TP1196 shoulder screw)
- 1 - TP34432 washer (for use on TP74730 screw)
- 1 - TP103528 short pressure roller lever (left) to replace TP84079 pressure roller lever (left)
- 1 - TP103527 short pressure roller lever (right) to replace TP84081 pressure roller lever (right)
- 5 - TP3458 shims

2.02 Remove type basket.

2.03 Remove the following parts and discard those marked with an asterisk (see Piece Part Bulletin 1037):

A. Friction Feed Machines.

- *1 - TP74700 Spring (At end of TP74335 Shift Lever.)
 - *1 - TP1162 Screw
 - *1 - TP3640 Lock Washer
 - *1 - TP103-27 Washer
 - *1 - TP74726 Extension
 - *1 - TP1196 Shoulder Screw
 - 1 - TP2191 Lock Washer
 - 1 - TP3598 Nut
 - 1 - TP74730 Shoulder Screw
 - 1 - TP34432 Washer
 - 1 - TP2191 Lock Washer
 - 1 - TP74731 Nut
 - *1 - TP74330 Spring
 - 1 - TP74401 Oscillator
 - 1 - TP74335 Shift Lever
- Fastens TP74726 extension to TP74401 oscillator
- Fastens TP74335 Shift Lever to TP74379 Bracket
- Fastens TP74330 Spring to TP 74401 Oscillator and TP74335 Shift Lever

B. Sprocket Feed Machines.

All of items under Paragraph 2.03 A plus

- *1 - TP84081 Pressure Roller Lever (Right)
 - *1 - TP84079 Pressure Roller Lever (Left)
 - 2 - TP80413 Pressure Rollers (one from each lever)
 - 2 - TP80403 Screws
 - 2 - TP2191 Lock Washers
 - 2 - TP3598 Nuts
- Secures TP80413 Pressure Rollers to Pressure Roller Levers.

2.04 Remount the TP74335 shift lever on the TP74379 bracket using the new TP6746 screw in place of the TP1196 shoulder screw, and reusing the TP 2191 lock washer and TP3598 nut.

- 2.05 Assemble the TP74401 ribbon oscillator to the TP74335 shift lever, (omitting the TP74330 spring) using the TP74730 shoulder screw, TP34432 washer, TP2191 lockwasher and TP74731 nut previously removed, plus an additional TP34432 washer under the head of the shoulder screw.
- 2.06 On sprocket feed units also replace the left and right pressure roller levers with the TP 103528 and TP103527, left and right short pressure roller lever, respectively, using the original pressure rollers, screws, nuts and washers.
- 2.07 Replace type carriage assembly but do not re-engage the draw strap.
- 2.08 Tilt the type carriage forward until the lobe of the casting (where the draw strap post is fastened) touches the upper track and slide the carriage to the left.
- 2.09 If the spacing rack and the carriage spring drum housing interfere, add sufficient TP3458 shims to the casting as covered below, in order to obtain a clearance in the order of .05" between the upper surface of the spacing rack and the under surface of the drum.
- 2.10 The TP3458 shims shall be secured under the head of the TP8539 screw near the draw strap post and which secures the spacing rack, and the shims should extend over the lobe of the casting. Seat the screw firmly, then shape the shims closely over the lobe by tapping with the handle end of a screwdriver.

3. ADJUSTMENTS

- 3.01 Left and right pressure roller lever springs on sprocket feed units shall have tensions the same as those specified in Section P36.619, measured as directed in that section.
- 3.02 With the platen in the letters position adjust the position of the TP74335 shift lever so that the TP74010 roller does not contact the slide bar.

- 3.03 Install a red-black ribbon in the typing unit, with the red portion at the top.
- 3.04 With the platen in the lower case position adjust the position of the TP74401 ribbon oscillator so that the type pallet strikes the lower half of the ribbon and so that the character is fully printed.
- 3.05 Shift the platen to the upper case position and check that upper case characters are fully inked. If the characters are part black and part red, lower the ribbon carrier by readjusting the position of the ribbon oscillator. If the top portions of the characters are not inked, raise the ribbon carrier by readjusting the ribbon oscillator.