INSTRUCTIONS FOR INSTALLING THE 152322 AND 152335 MODIFICATION KIT OR THE 152348 MODIFICATION KIT TO PROVIDE AUTOMATIC CARRIAGE RETURN AND LINE FEED AND THE 153945 MODIFICATION KIT TO PROVIDE THE "O" CODE BAR AND BELL CRANK ON THE MODEL 28 TYPING UNIT LP4, LP5, LP6 THROUGH LP9 (BELL SYSTEM 28A, 28B, 28C, 28D)

1. GENERAL

a. The 152322 and 152335 modification kit when installed on a Model 28 typing unit (LP4, LP5; Bell System 28A) provide the automatic carriage return and the line feed function. The 152322 modification kit mounts on the spacing drum and on the front plate behind the spacing drum. The 152335 modification kit mounts on the stunt box.

b. The 152348 modification kit when installed on a Model 28 Typing Unit (LP6 through LP9; Bell System 28B, 28C, 28D) equipped with the 152335 modification kit provides the automatic carriage return and line feed function.

c. The 153945 modification kit when installed on a Model 28 Typing Unit LP6, LP9 (Bell System 28B, 28C, 28D) provides the "O" code bar and bell crank for selective calling. Bell System 28B, 28F, 28H Typewriter Units are factory equipped with this modification kit.

d. Refer to Teletype Model 28 Printer Description Bulletin for theory of operation for the automatic carriage return and line feed function.

e. The 152322 modification kit consists of:

   1 2191 Lock Washer
   1 8330 Flat Washer
   1 95827 Bushing
   1 110436 Spring
   1 150438 Bell Crank

1 151346 Screw 6-40 x 3/8 Fil.
1 152544 Code Bar "O"
1 152591 Arm
1 152634 Flat Washer

f. The 152335 modification kit consists of:

   2 4703 Spring
*2 72522 Wick
2 90517 Spring
*2 94693 Wick
2 152641 Lever
2 152653 Pawl

   2 152660 Spring Plate
2 152671 Function Bar (CR LF)
*2 157200 Spring
*2 157240 Spring

* Indicates Change
g. The modification kit consists of:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 95827</td>
<td>Bushing</td>
<td>1</td>
<td>x</td>
</tr>
<tr>
<td>1 110436</td>
<td>Spring</td>
<td>1</td>
<td>x</td>
</tr>
<tr>
<td>2 110743</td>
<td>Lock Washer</td>
<td>1</td>
<td>x</td>
</tr>
<tr>
<td>1 150438</td>
<td>Bell Crank</td>
<td>2</td>
<td>x</td>
</tr>
<tr>
<td>2 151152</td>
<td>Screw 4-40 x 3/16 Hex.</td>
<td>1</td>
<td>x</td>
</tr>
<tr>
<td>1 152634</td>
<td>Flat Washer</td>
<td>1</td>
<td>x</td>
</tr>
<tr>
<td>1 153315</td>
<td>Bracket Assembly</td>
<td>1</td>
<td>x</td>
</tr>
<tr>
<td>1 153319</td>
<td>Code Bar &quot;O&quot;</td>
<td>1</td>
<td>x</td>
</tr>
<tr>
<td>1 154626</td>
<td>Suppression Ring</td>
<td>1</td>
<td>x</td>
</tr>
</tbody>
</table>

h. For part numbers referred to, see Teletype Model 28 Printer Parts Bulletin.

2. INSTALLATION

NOTE: Refer to the Model 28 Printer Adjustment Bulletin for removal instructions of major components.

a. 152322 modification kit for Typing Units LP4, LP5.

(1) Remove the typing unit.
(2) Remove the front plate.
(3) Install all parts of the 152322 modification kit except the 152554 code bar. Refer to the parts bulletin for illustration.
(4) Remove the code bar assembly.
(5) Install the 152554 code bar.
(6) Reinstall the code bar assembly in accordance with the adjustment bulletin.
(7) Reinstall the front plate assembly in accordance with the adjustment bulletin.

b. 152335 modification kit for Typing Units LP4, LP5, (Figure 2-67). This modification kit is effective only if the spacing cutout for the right hand margin is disabled and a typing unit is equipped with the 152322 modification kit or an appropriate mechanism.

(1) Follow procedure in paragraph 2.e.(1).
(2) Remove the stunt box.

*(3) Install the 152335 modification kit in slots 4 and 39 of the stunt box. Use the 157200 spring and 94693 wick for LP4, LP5 and LP7 Typing Units and 157240 spring and 72522 wick for LP6, LP8, LP9 Typing Units.
(4) Reinstall the stunt box in accordance with the adjustment bulletin.

(5) Replace the stunt box mounting screws. Replace the remaining parts in the reverse order in which the parts were removed.

c. 152348 modification kit (Figure 2-42) for Typing Units LP6, through LP9 equipped with the 152335 modification kit (see paragraph 2.b.)

(1) Follow procedure in paragraph 2.a.(1) and (2).

(2) Install all parts of the 152348 modification kit except the 153319 code bar and the 154626 automatic CR-LF ring.

(3) Follow procedure in paragraph 2.a.(4).

(4) Install the 153319 code bar.

(5) Remove the spacing drum. To remove the spacing drum proceed as follows:

(a) Remove the following left and right printing carriage draw wire pulley assembly retainer parts after removing spring tension from left spacing drum.

\[
\begin{align*}
151632 \text{ Screw} & \quad (2) \\
2191 \text{ Lock Washer} & \quad (2) \\
7002 \text{ Washer} & \quad (2)
\end{align*}
\]

Remove the pulley assemblies.

(b) Remove the following printing track and pulley support plate retaining parts:

\[
\begin{align*}
112626 \text{ Nut} & \quad (2) \\
2669 \text{ Lock Washer} & \quad (2) \\
151657 \text{ or } & 151630 \text{ Screw} \quad (2) \\
2191 \text{ Lock Washer} & \quad (2) \\
7002 \text{ Washer} & \quad (2)
\end{align*}
\]

Remove the printing track and pulley support plate.

(c) Remove the carriage return latch bail assembly after first removing the 119652 retainer and disengaging the 125238 latch ball spring.

(d) Remove the following dashpot plunger assembly transfer slide stud retainers.

\[
\begin{align*}
112626 \text{ Nut} & \quad (1) \\
2669 \text{ Lock Washer} & \quad (1)
\end{align*}
\]

(e) Remove the following draw wire rope retaining parts from the spacing drum:

\[
\begin{align*}
151618 \text{ Screw} & \quad (2) \\
2191 \text{ Lock Washer} & \quad (2) \\
7002 \text{ Washer} & \quad (2)
\end{align*}
\]
(f) Remove the 150206 spacing sleeve, hold up the spacing pawls, push dashpot plunger to the right and pull the spacing drum slightly forward. Remove the dashpot plunger assembly and entirely remove the spacing drum.

(g) Replace the 154625 suppression ring (Figure 2-16) with the 154626 ring.

(h) Reassemble the spacing drum by reversing procedure used in removal.

(i) Follow procedure in paragraphs 2.a.(6) and (7).

(d) 153945 modification kit (Figure 2-42) for Typing Units LP6, LP9 not equipped with automatic CR-LF.

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

(2) Install the following parts on the front plate assembly:

<table>
<thead>
<tr>
<th>Part</th>
<th>Quantity</th>
<th>Part</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat Washer</td>
<td>1</td>
<td>Bushing</td>
<td>1</td>
</tr>
<tr>
<td>152634</td>
<td></td>
<td>95827</td>
<td></td>
</tr>
<tr>
<td>Bell Crank</td>
<td>1</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>150438</td>
<td></td>
<td>110436</td>
<td></td>
</tr>
</tbody>
</table>

(3) Follow procedure in paragraph 2.a.(4).

(4) Install the following parts in the code bar assembly:

<table>
<thead>
<tr>
<th>Part</th>
<th>Quantity</th>
<th>Part</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code Bar &quot;0&quot;</td>
<td>1</td>
<td>Lock Washer</td>
<td>2</td>
</tr>
<tr>
<td>153319</td>
<td></td>
<td>110743</td>
<td></td>
</tr>
<tr>
<td>Bracket Assembly</td>
<td>1</td>
<td>Screw</td>
<td>2</td>
</tr>
<tr>
<td>153315</td>
<td></td>
<td>151152</td>
<td></td>
</tr>
</tbody>
</table>

(5) Follow procedure in paragraphs 2.a.(6) and (7).

3. ADJUSTMENTS

For adjusting procedure refer to standardized adjustment information. Check the following:

(1) Spacing Gear Phasing

(2) Oscillating Rail Slide Position

(3) Carriage Wire Rope

(4) Carriage Return Spring Tension

(5) Carriage Return Latch Bail

(6) Carriage Return Lever

(7) Printing Carriage Position

(8) Left Hand Margin

(9) Right Margin (Does not apply on units equipped with the Automatic Carriage Return-line feed ring)

(10) Printing Track

(11) Automatic Carriage Return Arm

* * *
PART OF LP6, LP7 AND LP9
DOTTED PARTS APPEAR IN FIGURE 2-15
FIGURE 2-42: 152348 AUTOMATIC CARRIAGE RETURN AND LINE FEED SET OF PARTS AND 153945 "O" CODE BAR AND BELL CRANK SET OF PARTS

*PECULIAR TO 153945
**PECULIAR TO 152348
ONE EACH OF THE ABOVE PARTS SHOULD BE INSTALLED IN THE SLOTS IDENTIFIED BY THE ENCIRCLED NUMBERS

*LP4, LP5, LP7
**LP6, LP8, LP9

FIGURE 2-67 152335 STUNT BOX AUTOMATIC CARRIAGE RETURN AND LINE FEED SET OF PARTS