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INSTRUCTIONS FOR INSTALLING THE 152321 MODIFICATION KIT (WHICH INCLUDES THE 152309 ASSEMBLY AND 152319 MODIFICATION KIT) ON MODEL 28 CABINETS LAC200**, LAC201**, LAC202** TO PROVIDE A COPY LIGHTING SYSTEM (SIMILAR TO CABINETS LAC203**, LAC204**, LAC205**) THAT OPERATES ON 115 VOLTS DC ALSO INSTRUCTIONS FOR INSTALLING THE 152310 MARGIN INDICATOR MODIFICATION KIT FOR USE ON AC OR DC

The following chart pertains to Bell System only.

| UNIT | TELETYPE CODE | BELL SYSTEM ONLY |
|--|---|---|
| Electrical Service Unit Keyboard Typing Unit Receiving-Only Base Cabinet | LESU7 LK4, LK5 LP4 through LP9 LB4 LAC203** LAC204** | 28B 28C 28A,28A1,28A2,28B1, 28C,28G 28B 28C,28E 28B,28D |

1. GENERAL

a. The 152321 Modification Kit (which includes the 152309 and 152319 Modification Kit) when installed on a Teletype LAC200**, LAC201**, or LAC202**, Cabinet provides the electrical equivalent of an LAC203**, LAC204**, LAC205** Cabinet. This consists of the 152309 Light Shield Assembly for copy illumination, the 152319 Modification Kit which provides more electrical terminal connections for connecting external equipment, and additional parts that are required for conversion of a margin indicator light. The LAC203**, LAC204**, LAC205** Cabinets, or cabinets equipped with the 152321 Modification Kit operate with the following units.

Electrical Service Unit

Keyboard

Typing Unit

Receiving -Only Base

LESU7

LK4, LK5

LP4 through LP9

LB4

- b. The 152310 Modification Kit provides a 60 volt AC or DC margin indicator lamp which will light when the typing unit type box has reached a portion on the right hand side of the platen determined by the setting of the margin indicator cam disk.
- c. For information on the modification kit which provides an AC Copylight system see Specification 5853S.

d. The 152321 Modification Kit consists of:

| 2 | 3438 | Washer, Flat | 1 | 152309 | Light Shield Assembly |
|---|--------|--------------|----|--------|----------------------------|
| 2 | 3629 | Washer, Lock | 1. | 152319 | Modification Kit (Refer to |
| 2 | 6745 | Screw | | | Paragraph 1.e.) |
| 1 | 121245 | Clamp, Cable | 1 | 153400 | Lamp - 60V |

e. The 152319 Modification Kit consists of:

| 4 | 1268 | Screw | 2 | 153466 | Terminal Block Cover |
|---|--------|-------------------------|---|--------|------------------------|
| 8 | 2191 | Lock Washer | 2 | 153467 | Insulator |
| 4 | 6345 | Nut | 1 | 153468 | Left Insulator |
| 8 | 7002 | Flat Washer | 1 | 153469 | Strip w/screws - Right |
| 2 | 153459 | Terminal Block Assembly | 1 | 153470 | Right Insulator |
| 4 | 153465 | Nut | 1 | 153471 | Strip w/screws - Left |

f. The 152310 Modification Kit consists of:

| 1 | 2191 | Lock Washer | 1 | 153400 | Lamp |
|---|-------|--------------|---|--------|----------------|
| 1 | 3598 | Nut 6-40 | 1 | 153487 | Cable Assembly |
| 1 | 80444 | Screw 15/630 | | | • |

g. For parts referred to and for parts ordering information refer to Teletype Model 28 Printer Parts Bulletin 1149B.

2. INSTALLATION

Refer to Paragraph 2.b. when installing the 152309 Modification Kit only, to Paragraph 2.c. when installing the 152319 Modification Kit only.

- a. The 152321 Modification Kit
- (1) Remove the Keyboard and Typing Unit from the Cabinet. Remove the 151436 Terminal Block Covers.
 - (2) Disconnect all wires from the cabinet terminal blocks.
 - (3) Remove the Electrical Service Unit.
- (4) Remove the three 118759 Cabinet Terminal Blocks and their 151435 Insulators.
- (5) Remove, from the Cabinet, the applicable lamp parts listed below. Retain the cable guide wire in place.

(a) Fluorescent Lamp Parts:

| 1 | 6745 | Screw $(10-32 \times 1/2 \text{ Hex.})$ | 2 | 1179 | Screw |
|---|-----------------|---|---|--------|----------------|
| 1 | 121243 | Cable Clamp | 1 | 118119 | Starter Socket |
| 2 | 110 43 7 | Spring | 1 | 3598 | Nut |
| 1 | 151544 | Light Shield | 1 | 2191 | Lock Washer |
| 1 | 102617 | Fluorescent Lamp | 1 | 76099 | Washer |
| 2 | 7002 | Flat Washer | 2 | 78287 | Spacing Collar |
| 2 | 2191 | Lock Washer | 1 | 151531 | Starter Plate |
| 2 | 1263 | Screw | 1 | 76099 | Washer |
| 2 | 76099 | Washer | 1 | 78103 | Screw |
| 2 | 2191 | Lock Washer | 2 | 3639 | Lock Washer |
| 2 | 80342 | Screw | 2 | 6810 | Screw |
| 1 | 151550 | Cable Assembly | 1 | 151529 | Ballast Plate |
| 1 | 102620 | Starter | | | |

(b) Six Volt Incandescent Lamp Parts (Non-Bell):

| 1 | 151983 | Shield | 2 | 80444 | Screw |
|---|--------|----------------|---|--------|----------------------|
| 2 | 151982 | Lamp | 1 | 151981 | Cable Assembly |
| 1 | 151990 | Switch Bracket | 1 | 8254 | Cable Clamp |
| 2 | 3598 | Nut | 1 | 3639 | Lock Washer |
| 2 | 7002 | Washer | 1 | 6745 | Screw |
| 2 | 2191 | Lock Washer | 1 | 151984 | Transformer Assembly |

(6) Install the following items, contained in the 152319 Modification Kit, in the cabinet in the sequence shown.

| 1 | 153468 | Insulator-Left | 2 | 153467 | Insulator |
|---|--------|---------------------|---|--------|-------------------------|
| 1 | 153471 | Stripw/screws-Left | 2 | 153459 | Terminal Block Assembly |
| 2 | 1268 | Screw | 4 | 7002 | Flat Washer |
| 1 | 153470 | Insulator-Right | 4 | 2191 | Lock Washer |
| 1 | 153469 | Stripw/screws-Right | 4 | 153465 | Nut |
| 2 | 1268 | Screw | | | |

- (7) Install the 152309 Light Shield Assembly in the dome of the Cabinet as follows:
- (a) Mount the 153486 Bracket (part of the 153474 Copy Light Cable Assembly) in the dome of the Cabinet, immediately to the left of the copy window. Use the 6745 Screw remaing in the 151513 Copy Window Retainer to mount the bracket. Use the 6745 Screw, 3639 Lock Washer, and 3438 Flat Washer in the position vacated by the 78103 Starter Socket Mounting Screw (not necessary when converting from six volt systems).
- (b) Mount the lamp sockets to their cabinet brackets using the two 80444 Screws, 2191 Lock Washers, 7002 Washers, and 3598 Nuts furnished. Locate the cabinet mounting bracket between the 151540 Lampholder (with the 80444 Screw located in the oblong hole) and the 7002 Washer.

- (c) Route the cable back along the front and the right sides of the dome, and tie it to the 151536 Wire Cable Guide.
- (8) Remove the 121245 Cable Clamp, 6810 Screw, and 3639 Lock Washer which mount the margin indicator cable (if used) to the right hinge of the cabinet.
- (9) Route the copy light cable (and margin indicator cable, if used) behind the right hinge of the cabinet.
- (10) Secure the copy light cable to the hinge with the 121245 Clamp, 6745 Screw, 3639 Lock Washer, and 3438 Flat Washer. If a margin indicator is used, secure both cables to the hinge with the same cable clamp. Resistor for margin lamp is part of Electrical Service Unit LESU7.
- (11) Install the 153400 Copy Lamps in their sockets. Install the third 153400 Lamp in the margin indicator socket, if used. Otherwise, retain it as a spare copy lamp.
- (12) Slip the 151983 Light Shield onto the copy lamp sockets, then turn the 151983 Light Shield to attain desired illumination.
- (13) Make the following connections on the upper row of the cabinet terminal block (allow sufficient slack in cable near the terminals):
- (a) For the 153474 Cable Assembly (Part of 152309 Light Shield Assembly) wire as follows:
 - (1) Yellow (y) wire to No. 37 terminal
 - (2) Orange (o) wire to No. 38 terminal
 - (3) White (w) wire to No. 40 terminal
- (b) For the 153487 Cable Assembly (part of 152310 Margin Indicator Modification Kit) wire as follows, if used:
 - (1) Red (r) wire to No. 36 terminal
 - (2) White (w) wire to No. 40 terminal
- (14) Install the two 153466 Covers, four 7002 Washers, 2191 Lock Washers, and 6345 Nuts to cover the terminal blocks.
 - b. 152309 Light Shield Assembly
 - (1) Follow procedure in Paragraphs 2.a.(1),(2),(3),(5),(7) through (13) inclusive.
 - c. 152319 Modification Kit
 - (1) Follow procedure in Paragrapsh $2 \cdot a \cdot (2)$, (3), (4), (6), and (7).

d. 152310 Modification Kit

- (1) Mount the 151540 Lampholder (part of the 153487 Cable Assembly) on the bracket adjacent to the lower right-hand translucent button in the dome of the cabinet using the 80444 Screw, 2191 Lock Washer and 3598 Nut.
- (2) Route the cable back along the right side of the dome and tie to the 151536 Cable Guide.
- (3) Route the cable behind the right hinge of the cabinet and secure both copy lighting and margin indicator cables to the hinge with the 121245 Cable Clamp.
 - (4) Place the 153400 Lamp in its socket and make the Indicator Lamp adjustment.
- (5) Make connections to the cabinet terminal blocks as shown in wiring diagram 2876WD.

3. ADJUSTMENTS

For adjusting procedure refer to standardized adjustment information for other than Bell System Bulletin 217B.

Check the following:

- a. Copylamp
- b. Indicator Lamp

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MODIFICATION KIT: 152310

PART NUMBER 151630 SCREW 1 REPLACES 80444 SCREW 1

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