

INSTRUCTIONS FOR INSTALLING MODIFICATION KIT 315869
TO PROVIDE AN ELECTRICAL KEYBOARD LOCK FOR MODEL 28
OR 35 WALL MOUNTED KEYBOARD

1. GENERAL

- 1.01 This modification kit disables the keyboard to prevent typing on the reception of an electrical signal. The mechanism consists of a magnet coil that activates a lever which engages the clutch trip codebar and prevents the tripping of the keyboard clutch.
- 1.02 The magnet coil operates on 55 to 65 ma dc. The modification kit does not provide any voltage sources or limiting resistors. The coil resistance is 650 ohms. A minimum of 36 v dc is needed across the coil. If operated at 48 v dc, a 150 ohm resistor should be inserted in line with the magnet. If operated at 120 v dc, a 1350 ohm resistor should be used.
- 1.03 When the keyboard is locked a keylever can be depressed but the corresponding signal is not transmitted from the signal generator. The stored character signal is generated whenever the keyboard is unlocked.
- 1.04 The modification kit provides electrical wiring to the keyboard connector. Spare leads in the external keyboard cable must be wired to the desired terminations and proper voltage must be supplied from an external source.
- 1.05 Modification kit 315869 consists of:

1	1118	Screw	1	142867	Yoke
3	2191	Lockwasher	1	142998	Screw
1	3598	Nut	2	151152	Screw
2	7002	Flat Washer	4	155753	Vinyl Sleeve
	31902RM	Electrical Wire(0.5 ft)	2	156740	Screw
	31903RM	Electrical Wire(0.5 ft)	1	160087	Spring Post
	60024RM	Vinyl Tubing(0.5 ft)	1	304862	Bracket
1	90615	Spring	1	304864	Armature
2	110434	Screw	1	306607	Latch Pawl
1	110437	Spring	1	315870	Mounting Plate
3	110743	Lockwasher	1	315871	Mounting Bracket
1	124313	Magnet Assembly	1	315872	Adjusting Plate

2. INSTALLATION

- 2.01 Remove the cabinet from the set and remove the printer from the keyboard by removing the four studs 151678. Remove the keyboard from the set by removing the four 176933 studs. (On LK815 keyboard, remove the eight 151631 screws and 2191 lockwashers, which are associated with the four 153395 nut plates.)
- 2.02 Remove the lamp mounting bracket 176936 by removing the two screws 151632 and two lockwashers 2191 to facilitate installation.

SPECIFICATION 50491S

- 2.03 Replace the two screws 153817, securing the margin indicator switch assembly, with two screws 151152. Remove sensitive switch 158163 by removing the two screws 1210 and two lockwashers 93118.
- 2.04 Remove connector bracket 152461 from bracket 176945 by removing the two screws 151630 and the two lockwashers 2191.
- 2.05 Remove the bracket 176945 by removing the one screw 151630, one screw 151632, two lockwashers 2191, and two flat washers 7002. Discard bracket 176945.
- 2.06 Preassemble the magnet assembly for Model 35 equipment as shown in Figure 1 and for Model 28 equipment as shown in Figure 2. Check spring tensions at this time. Refer to Par. 3.04 through 3.06.
- 2.07 Solder the two provided leads to the magnet coil using two sleeves 155753 to cover the magnet terminals.
- 2.08 Install the magnet assembly into the keyboard. (Trip the keyboard clutch to ease installation.) Insert the rear of the assembly into the frame, keeping the margin indicator and break switch cable under the magnet assembly. Lower the left side of the assembly into the frame until the magnet mounting screws slip slightly under the frame. Lower the right side of the assembly into position. Fasten the assembly and bracket 315871 to the keyboard frame with one screw 151630, one screw 151632, two lockwashers 2191, and two flat washers 7002.
- 2.09 Adjust magnet assembly per Section 3 of this specification at this time. (To insure adjustment stability bracket 315871 should be temporarily fastened to the mounting plate 315870 during adjustments.)
- 2.10 Reinstall lamp mounting bracket 176936 with the two screws 151632 and two lockwashers 2191.
- 2.11 Reinstall the sensitive switch 158163 with two screws 1210 and two lockwashers 93118.
- 2.12 Wire the two magnet leads to the keyboard connector per 4484WD for 28 type equipment or per 6005WD for 35 type equipment.
- 2.13 Attach connector bracket 152461 and bracket 315871 to the mounting plate with two screws 151630 and two lockwashers 2191.
- 2.14 Determine the keyboard cable in the LESU and locate the spares in that cable which are the magnet leads. (See 4486WD or 6002WD.) Pull out the two proper spares and wire for proper customer operation.
- 2.15 Reinstall the keyboard into the set by reconnecting the keyboard cable and securing keyboard with four studs 176933. (On LK815 keyboard, secure with the eight 151631 screws and 2191 lockwashers, and the four associated 153395 nut plates.) Reinstall the printer on the keyboard and the cabinet on the set.

3. ADJUSTMENTS AND LUBRICATION

ADJUSTMENTS

3.01 Requirement: With clutch disengaged and armature held against the magnet core, there should be some to 0.006 inch clearance between the latching surface of the latch pawl and the engaging surface of the clutch trip codebar (Figure 3).

To Adjust: Loosen the mounting plate screws friction tight. Position the locking assembly mounting plate. Tighten screws.

3.02 Requirement: With the armature adjusting bracket disengaged from the armature, manually hold the armature against the magnet core and depress keylever "A". There should be 0.012 inch to 0.020 inch clearance between the latch pawl and the clutch trip codebar at the closest point as shown in Figure 3.

To Adjust: Loosen the two magnet assembly mounting screws friction tight. Position magnet assembly to meet the requirements. Tighten screws.

3.03 Requirement: With keyboard clutch engaged and the armature released, there should be some to 0.005 inch clearance between the latch pawl and the clutch trip codebar (Figure 1).

To Adjust: Loosen the adjusting plate mounting screw friction tight. Position the armature backstop to meet requirements. Tighten screws.

3.04 Spring tensions (Figure 1).

3.05 Armature return spring 7 to 9- $\frac{1}{2}$ ounces to pull to installed length.

3.06 Latch pawl spring $\frac{3}{4}$ to 1- $\frac{3}{4}$ ounce to pull spring to installed length with the armature held against the magnet core.

LUBRICATION

3.07 Apply one drop of KS7470 oil on each of the following:

- (a) Latch pawl spring (both ends).
- (b) Armature return spring (both ends).
- (c) Latch pawl pivot screw.
- (d) Magnet armature yoke pivot points. (Wipe off excessive oil.)

3.08 Apply thin film of KS7471 grease on the two engaging surfaces of the latch pawl.

SPECIFICATION 50491S

4. THEORY OF OPERATION

4.01 When the magnet coil is energized, the coil attracts armature 304864 which drives the left side of the latch pawl 306607 toward the rear of the keyboard. Latch pawl 306607 pivots about shoulder screw 1118 which moves the right side of the pawl toward the front of the unit and into the path of the clutch trip codebar. If a keylever is now depressed, the numbered codebars are free to move to the right as usual but, the clutch trip codebar will move to the right only until it engages the latching surface of the latch pawl 306607. This movement is not sufficient to allow the keyboard clutch to be tripped. The selected character is now stored in the keyboard and no further depressions of the keylever are permitted and the keyboard is locked.

4.02 The magnet is de-energized when the latch pawl is released by the armature and the latching surface of the pawl moves to the rear of the unit, by the force of spring 90615, and disengages from the clutch trip codebar. The clutch trip codebar now moves to the right and trips the keyboard which transmits the stored character.

4.03 With the magnet de-energized keyboard operation is normal.

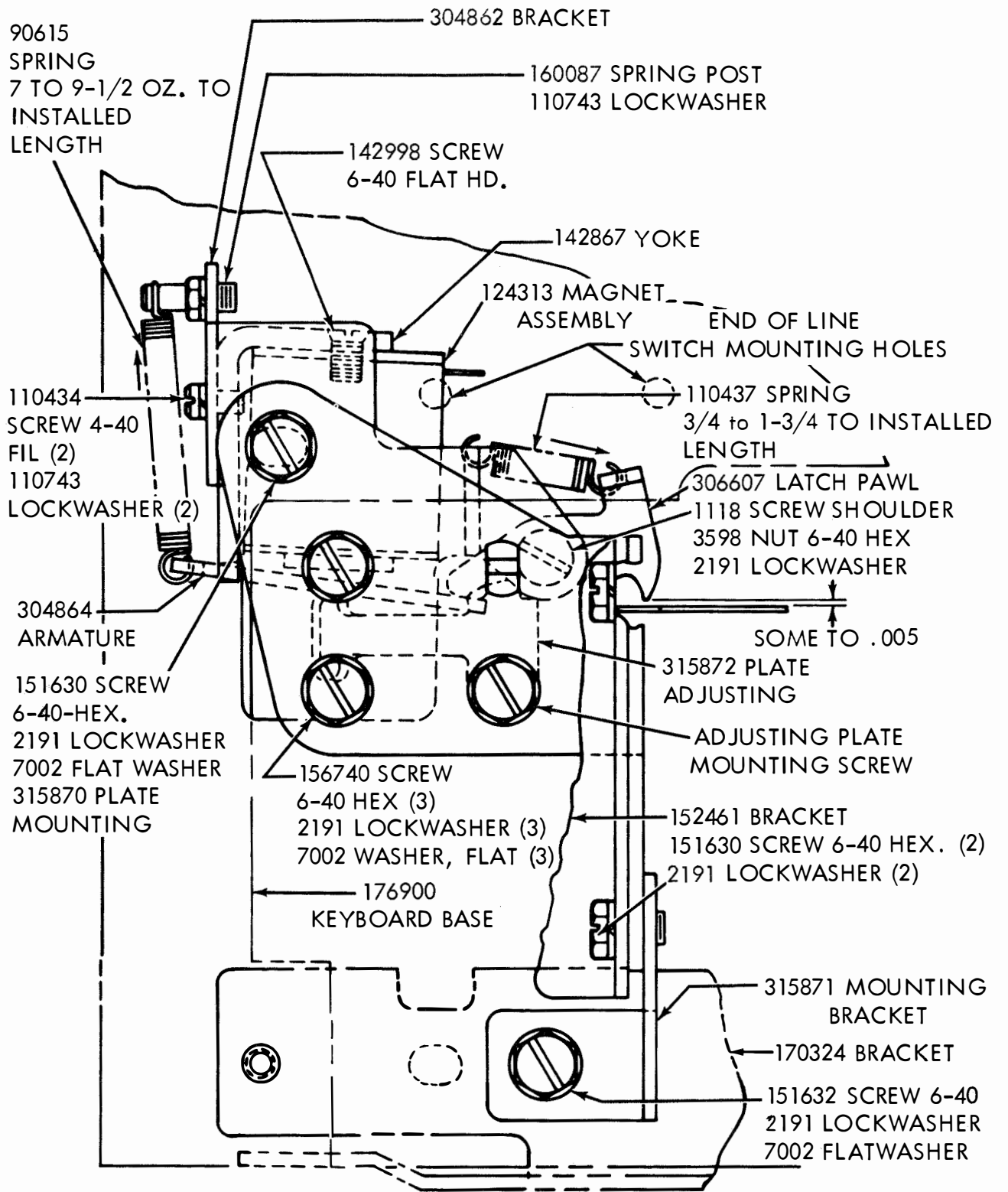


Figure 1 - Typical 35 Type Assembly

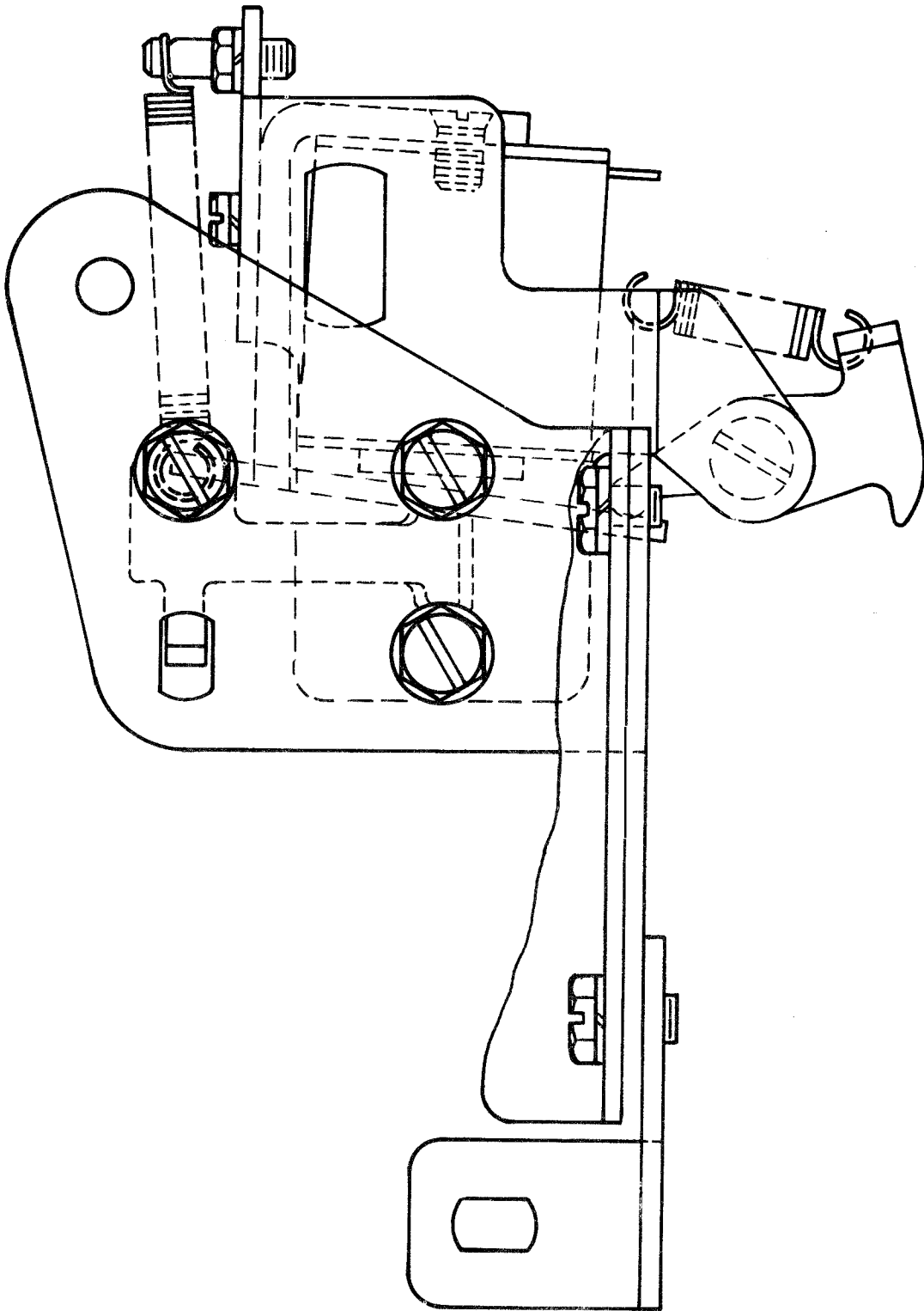


Figure 2 - Typical 28 Type Assembly

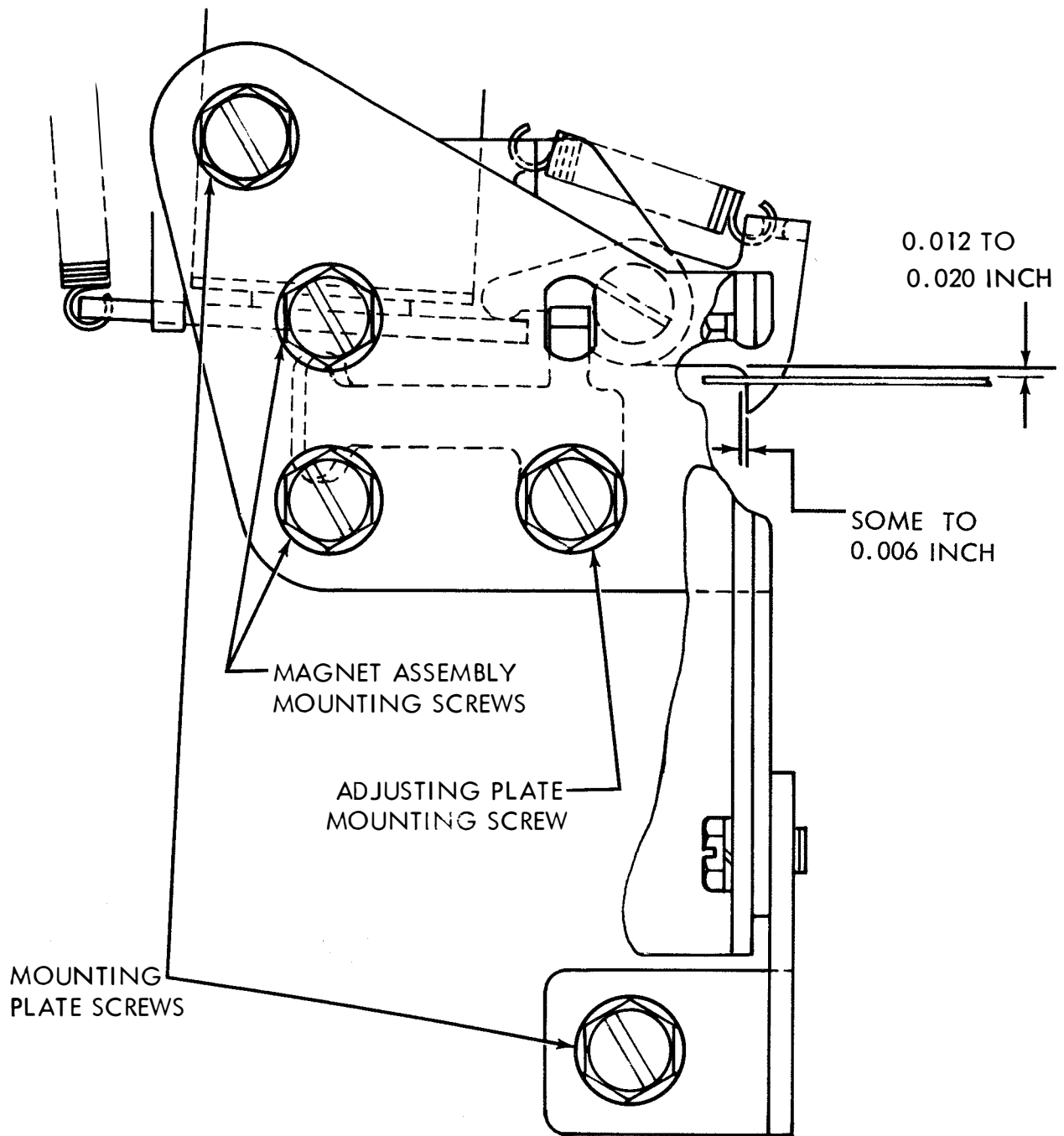


Figure 3 - Latch Pawl and Adjusting Plate Clearances

