37 KEYBOARD UNIT

DISASSEMBLY AND REASSEMBLY

CONTENTS PAGE

1. GENERAL

1.01 This section provides disassembly and reassembly information for the late design, 11-contact 37 keyboard unit (Figure 1). It is reissued to incorporate engineering changes and other comments received on Issue 1. Since only a limited distribution was made on Issue 1, marginal arrows have been omitted.

1.02 Photographs are used to identify the mechanisms and specific parts mentioned in the procedures. Refer to the appropriate parts section for drawings showing the location of all parts and mechanisms.

1.03 Refer to Section 570-005-800TC, Maintenance Tools, for information on the tools necessary to perform the disassembly and reassembly procedures.

1.04 References in the procedures to left or right, up or down, top or bottom, etc refer to the unit viewed with the keytops and controls facing the front (Figure 1).

CAUTION: REMOVE POWER BEFORE DISASSEMBLING THE UNIT.

1.05 Most maintenance, lubrication and adjustments can be accomplished simply by removing the subject component from the cabinet. If possible, disassembly should be confined to subassemblies, which can, in some cases, be removed without disturbing adjustments. When reassembling the subassemblies, be sure to check all associated adjustments, clearances and spring tensions.

1.06 Retaining rings are made of spring steel and have a tendency to release suddenly when being removed. Loss of these retainers can be minimized as follows: Hold the retainer with the left hand to prevent it from rotating. Place the blade of a suitable screwdriver in one of the slots of the retainer. Rotate the screwdriver in a direction to increase the diameter of the retainer for removal.

1.07 Avoid loss of springs in disassembly by holding one spring loop with the left hand while gently removing the opposite loop with a spring hook. Do not stretch or distort springs in removing them.

2. DISASSEMBLY AND REASSEMBLY

CONTROL PANEL

2.01 To remove the control panel, remove the TP151630 screws from left and right sides and lift the panel out (Figures 2 and 4).

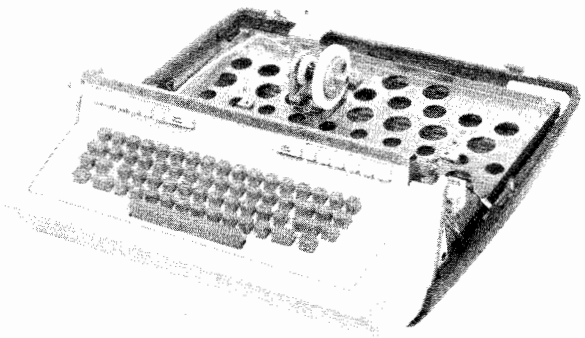


Figure 1 - 37 Keyboard Unit

2.02 To replace the control panel, reverse the removal procedure.

KEYBOARD HOUSING AND COVER

2.03 To remove the TP324035 keyboard housing, remove the two TP151631 screws (one on each side) and slide the keyboard housing forward (Figures 2 and 4).

2.04 To remove the TP315190 cover, proceed as follows:

(1) Pull the tab on the front of the TP315190 cover forward and remove it from the post.

(2) Slide the TP315190 cover toward the front while rotating the cover up and over keytops.

2.05 To assemble the keyboard housing and cover, reverse the removal procedure.

KEYBOARD

2.06 To remove the keyboard from the base assembly, proceed as follows (Figures 2 to 5):

(1) Loosen the four keyboard mounting screws (two on each side).

Note: Support the keyboard to prevent its falling when these screws are removed.

(2) Support the keyboard and remove the screws.

(3) Slowly lift the keyboard up and to the right side to disengage the TP315296 H-plate on the reset mechanism (or remove the TP119653 retaining ring on the H-plate and move the H-plate to the left).

(4) Refer to 2.08 through 2.10 for keyboard disassembly instructions.

2.07 To replace the keyboard, proceed as follows:

(1) Mount the keyboard to the base pan.

(2) Observe that the TP315296 H-plate on the reset mechanism engages the keyboard trip lever mechanism. (Install the TP315296 retaining if it was removed.)

(3) Secure the keyboard in place with its four mounting screws.

2.08 To remove the keytops and keylevers, proceed as follows:

Note: Before removing the SHIFT or CONTROL keylevers, remove their respective springs from the end brackets.

(1) Remove TP315190 keyboard cover (2.04).

(2) Remove the keylevers as required.

(3) Remove the keytops as required.

2.09 To remove the TP315370 contact block and TP324407 cable assembly, proceed as follows:

(1) Remove TP315190 keyboard cover (2.04).

(2) Pull the tab on the front of the keytop guide forward and remove it from the post.

(3) Rotate the TP315190 cover toward the rear and remove it.

(4) Remove the TP315484 trip arm spring.

(5) Remove the TP324414 right end bracket assembly by squeezing the frame lightly in rear assembly area or by applying slight pressure with a screwdriver inserted in the frame hole.

(6) Remove the two TP180031 compression springs from the TP315370 contact block.

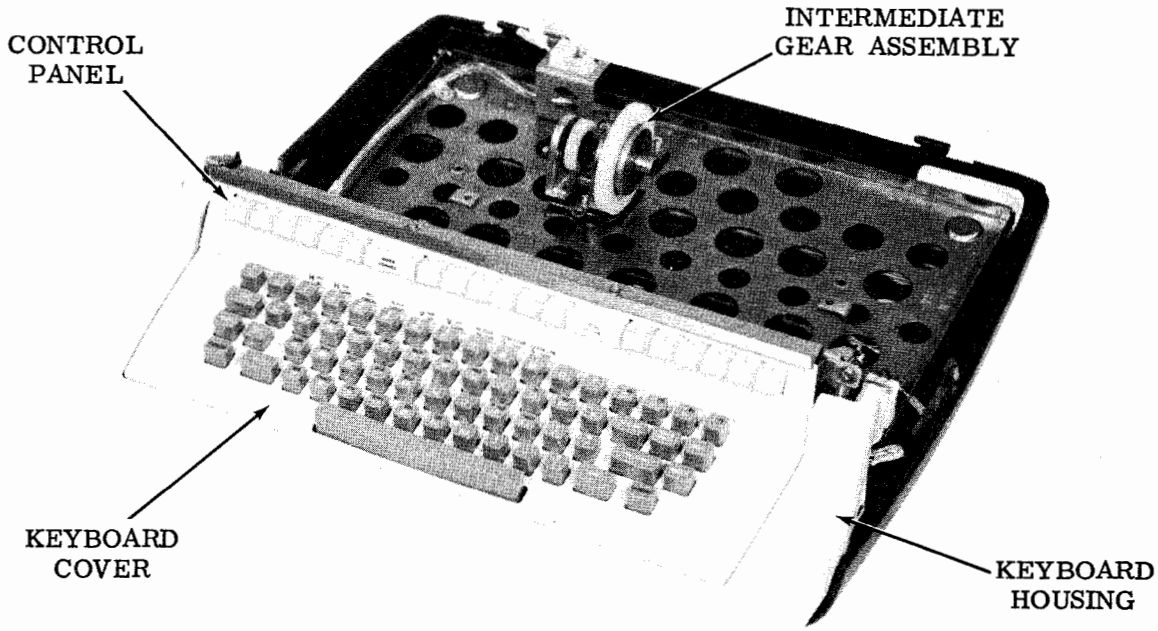
(7) Remove T-lever guide from right side of the unit.

(8) Remove the contact wires by detaching their springs.

(9) Remove the TP315370 contact block and TP324407 cable assembly.

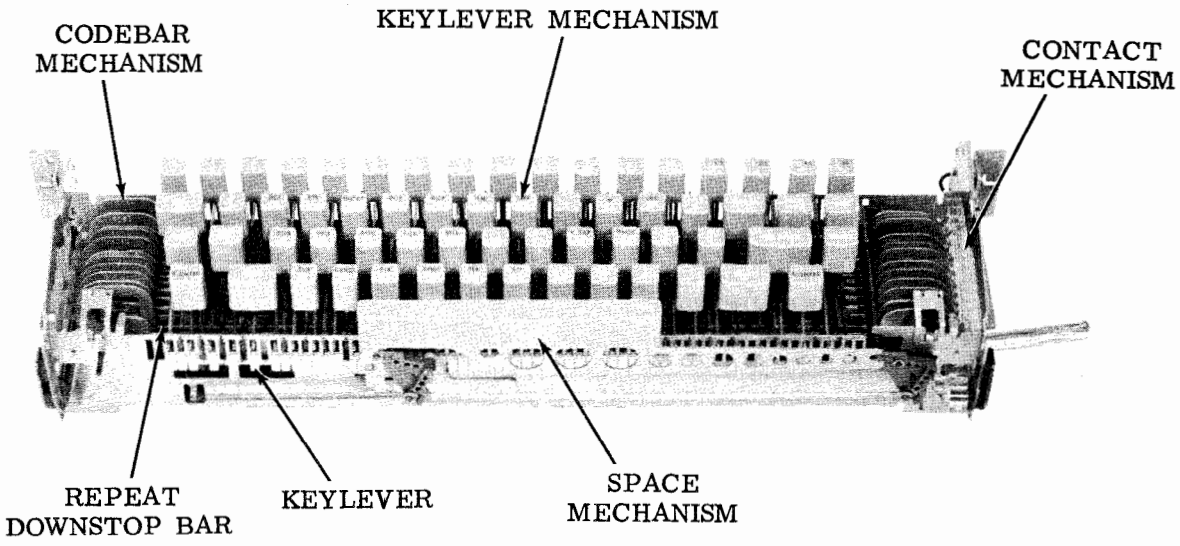
2.10 If further disassembly is required, proceed as follows to completely disassemble the keyboard.

(1) With keytops, keylevers, contact block, cable assembly and left and right end brackets removed, remove the spring from the space mechanism.



(Right Front View)

Figure 2 - 37 Keyboard Unit



(Front View)

Figure 3 - Keyboard (Cover Removed)

(2) Remove retaining rings from the space mechanism. Remove the L-levers, space keylever and tie link as a unit by rotating the space mechanism clockwise and forward.

(3) Rotate the L-levers until keylevers and tie link are separated.

(4) Release and remove the TP110436 spring on the TP315487 space bail.

(5) Remove the four TP315459 downstop springs.

(6) Remove the TP315445 latchlever spring and TP121923 nonrepeat lever spring.

(7) Remove the downstop spring brackets.

(8) Remove the codebars (snap fit on small end).

(9) Remove the universal TP315444 tie link spring from the frame.

(10) Remove the TP315401 universal codebar (snap fit on small end).

(11) Remove trip arm.

(12) Remove trip arm guide (snap fit).

(13) Remove T-lever shafts and T-lever assembly.

(14) Remove TP324391 downstop bar.

(15) Remove tie links, including the TP315493 universal tie link, by rotating T-levers until links are free.

(16) Remove TP119651 retaining rings and the T-levers on the left side as required.

(17) Remove the TP119651 retaining rings, T-levers, and trip mechanism bushing on right side as required.

(18) Remove retaining rings, TP315398 nonrepeat lever, washer, and latch from trip mechanism bushing as required.

(19) Remove TP315199 buffer upstop in front of frame.

(20) Remove the four TP315405 leaf springs from the underside of the frame.

(21) Remove the two TP315273 bushing strips from the frame.

2.11 To assemble the keyboard, reverse the disassembly procedure.

RESET MECHANISM

2.12 To remove the TP315100 reset mechanism, proceed as follows (Figures 4 and 5):

(1) Remove the TP315296 H-plate retaining ring and slide the H-plate out of the slots in the TP315399 keyboard trip arm lever and reset bail plate.

(2) Remove the keyboard (2.06).

(3) Disconnect the push-on cable terminals from the tabs on the auxiliary contacts.

(4) Unscrew the three reset mechanism frame mounting screws.

(5) Remove the reset mechanism by sliding it out.

2.13 Remove the TP315319 auxiliary contact bracket assembly by unscrewing the TP112626 shaft nut and removing the assembly.

2.14 To remove the driven gear clutch-sleeve-cam assembly, proceed as follows:

(1) Remove the TP2605 clutch stop arm spring.

(2) Loosen the TP112626 shaft nuts on each end of the shaft.

(3) Dislodge the gear backlash plate and contact bracket from their locating bosses.

(4) Lift the assembly from the frame.

2.15 Remove the driving gear-shaft-bracket assembly by unscrewing the two bracket mounting screws and removing the assembly.

2.16 To assemble the reset mechanism, reverse the disassembly procedures. Check that the H-plate is properly engaged with the keyboard trip lever mechanism.

INTERMEDIATE GEAR ASSEMBLY

2.17 Remove the intermediate gear assembly by removing the three TP104898 mounting screws (Figure 4).

2.18 Replace the intermediate gear by securing the mounting screws.

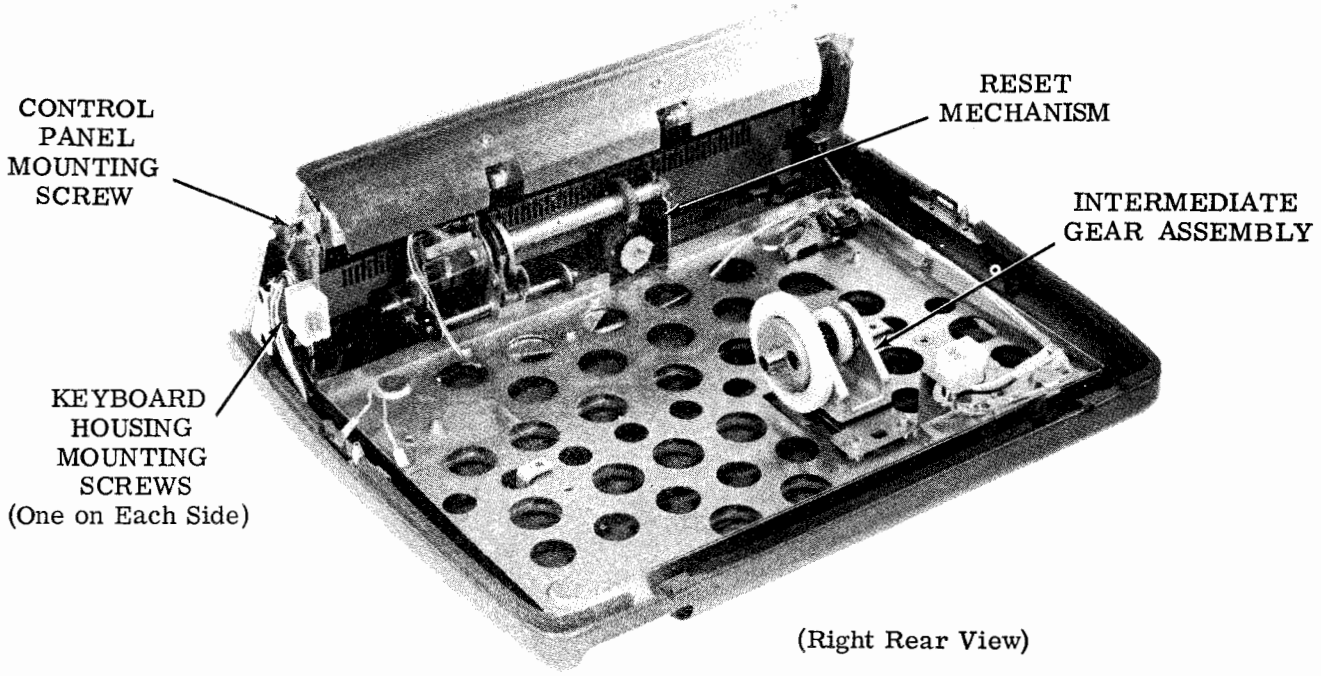


Figure 4 - Keyboard Unit

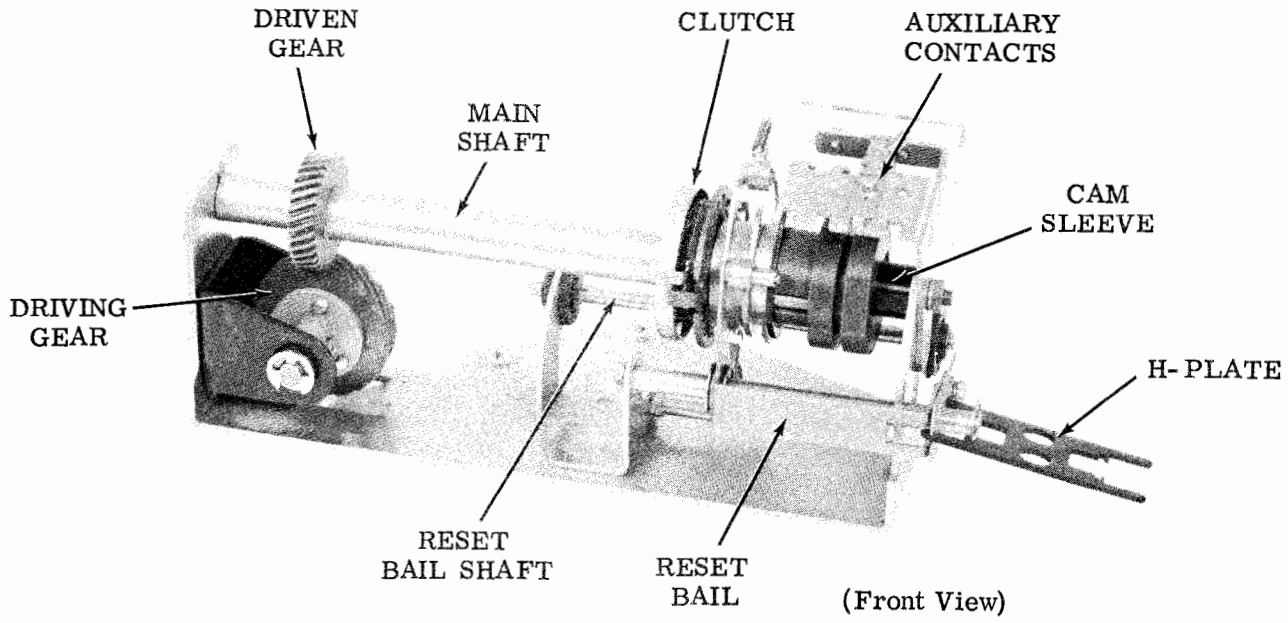


Figure 5 - Reset Mechanism