T-5 to NAVSHIPS 91393
T-6 to NAVSHIPS 91713
T-3 to NAVSHIPS 92361

10 February 1963

TEMPORARY CORRECTION
T-5 TO INSTRUCTION BOOK FOR TELETYPEWRITERS TT-47/UG, TT-48/UG, TT-69/UG, AND TT-70/UG, NAVSHIPS 91393
T-6 TO INSTRUCTION BOOK FOR TELETYPEWRITERS TT-47A/UG, TT-48A/UG, TT-69A/UG, TT-70A/UG, TT-171/UG, NAVSHIPS 91713
T-3 TO INSTRUCTION BOOK FOR TELETYPEWRITER TT-176/UG, NAVSHIPS 92361

The following pages of Bulletin 217B; Pages 7-36, 59-70 inclusive.

The following pages of Bulletin 1149B; Pages 38-58 inclusive.

T-5 to NAVSHIPS 91393
T-6 to NAVSHIPS 91713
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This temporary correction, when used with the applicable instruction book, covers Modification Kits MK-698/UG which includes Keyboard Teletype No. LK35ARN, TT-388/UG and MK-699/UG which includes Keyboard Teletype No. LK30ARN, TT-357/UG.

Modification Kits MK-698/UG, MK-699/UG modify the teletypewriter from 7.42 unit code to 7.00 unit code with synchronous pulsed transmission and 45.5, 50, or 75 Baud speed. In addition the keyboard connector on Power Distribution Panel SB-154/UG has been changed. Installation information for these kits are covered in Teletype Specification 50122S, NAVSHIPS 981560. Basically all references to Keyboards MX-1114/UG, MX-1114A/UG, MX-1677/UG apply equally to Keyboards TT-357/UG and TT-388/UG except for the additions to Sections 6 and 7, and where designated herein.

Make the following pen and ink corrections. Insert this temporary correction in the technical manual immediately after the front cover and on top of the previous Temporary Correction.

PAGE. NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION
		Section 3, Installation	At the end of this section add "See T-5 (NAVSHIPS 91393)", "T-6 (NAVSHIPS 91713)" or "T-3 (NAVSHIPS 92361)" for reference to the following paragraphs.

1. Modification Kit MK-698/UG, MK-699/UG (includes 194033 Modification Kit).

a. The 194033, MK-698/UG, MK-699/UG Modification Kits consists of:

			194033	MK-698/UG	MK-699/UG
1	152465	Connector	X		
1	163459	Gear	X		
1	163503	Gear	X		
1	163504	Gear Set		X	X
1	163505	Gear Set		X	X
1	173595	Gear Set		X	X
1	194033	Modification Kit (listed herein)		X	X
1	194342	Plate, Identification	X		
1	LK30ARN (TT-357/UG) Keyboard				X

PAGE NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION MK-698/UG	ACTION MK-699/UG
		194033		
1	LK35ARN (TT-388/UG) Keyboard		X	X
1	50122S Specification		X	X

b. Replace the present keyboard with Keyboard LK30ARN (TT-357/UG) or LK35ARN (TT-388/UG).

c. Remove the AC Motor and install it on the keyboard supplied.

d. Replace the present gear set with the 173795 (45.5 Baud), 163504 (50 Baud), or 163505 (75 Baud) Gear Set.

e. For aerological weather service, keyboards.

(1) Remove the keyboard arrangement 151739*** screw (located on the right side of the keyboard, just above the keyboard keys). Install this screw on the keyboard supplied in place of the present screw.

(2) Use a keylever remover to remove the weather aerological keylevers and install these on the keyboard supplied in place of the present keylevers.

f. Replace the 150441 and 150439 Gears with the 163503 and 163459 Gears respectively.

g. For electrical service unit not equipped with the 152465 Connector replace the 151815 Connector with the 152465 Connector in accordance with Figure 1-28.

h. Remove backing from the 194342 Identification Plate and apply plate (on clean surface) below the present overall set plate.

All affected pages	Sections 6 and 7	To these pages add "See T-5 (NAVSHIPS 91393)", "T-6 (NAVSHIPS 91713)" or "T-3 (NAVSHIPS 92361)" for information on Keyboard TT-388/UG or TT-357/UG

1. REMOVAL AND REPAIR

a. KEYBOARD MECHANISMS (NEW DESIGN)

(1) SIGNAL GENERATOR

(a) To remove the signal generator assembly, proceed as follows:

PAGE. NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION

1. Remove the typing unit if it is present.

2. Remove the 154131 Contact Box cover, and disconnect the signal line leads from the 154042, 154043 Contact Terminals.

3. Remove the two 153841 hold-down screws at the front of the 154200 signal generator frame, and the 74805 screw at the right rear of the frame.

4. Lift the signal generator carefully, while holding the universal bail back so that the non-repeat lever clears and its spring will not be excessively stretched.

5. See applicable figure for disassembly of signal generator.

CAUTION

If the non-repat lever gets pulled down approximately 90 degrees from normal position, its spring might be stressed beyond elastic limits which will result in assembly malfunction.

(b) To replace the signal generator, reverse the procedure used in removing it.

(2) KEYBOARD LABELS, KEYBOARD HOOK, KEYBOARD FRONT SEAL AND KEYBOARD SEAL PLATES

(a) To remove the plastic windows and labels, hood, seal, and seal plates, proceed as follows:

1. Remove the four 154202 screws which secure the 154198 windows and label sets.

2. Remove the two 151632 Screws underneath the 154110 hook that hold the hood to the 154203 hood mounting bracket; and remove the four 151659 Screws on top of the hood which hold it to the 154210, 154211 left and right frame mounting brackets.

3. Pull the hood forward to remove.

4. Stretch the 154020 Rubber Keyboard Seal off its 154057 154058 plates.

5. Remove the four 151442 Screws and two 154203 Hood Mounting Brackets.

PAGE. NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION

6. Remove the 154058 Upper Seal Plate by unscrewing the three 151722 Screws at its rear.

7. Remove the 154057 Lower Seal Plate by unscrewing the two 151632 Screws at its front.

8. See applicable figure.

(b) To replace the keyboard labels, reverse the procedure used in removing it.

(3) KEYBOARD

(a) To remove the keyboard assembly, proceed as follows:

1. Remove the typing unit and signal generator assembly.

2. Remove the plastic windows and labels, hood, seal, and seal plate.

3. Remove the four 151631 Screws that hold the 154210, 154211 left and right frame-mounting brackets to the front of the 154000 base.

4. Remove the two 151632 Screws which hold the 154068, 154069 right and left code lever guide brackets on the top of the base, and the two 151632 Screws at the extreme right and left of the 154055 Front Bracket which hold it on the base.

5. When these four screws in front and four on top of the base have been removed, tip up the front of the keyboard assembly and pull it forward, disengaging the function levers.

6. Not that all function levers are under their corresponding function bails - except the keyboard lock function lever - which fits on top of its function bail.

7. When reassembling, depress the keyboard lock keylever so that the lock function lever will go in over its bail, instead of under as the other function levers should.

8. Disassembly of the Keyboard is shown in the temporary correction.

NOTE

It is easier to disassemble and reassemble the keyboard assembly with the base standing up on its rear side.

PAGE. NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION

(b) To replace the keyboard assembly reverse the procedure used in removing it.

(4) SIGNAL GENERATOR CONTACT BOX ASSEMBLY

(a) To remove the contact box assembly, proceed as follows:

1. Remove the 154131 Contact Box cover and disconnect the signal line leads.

2. Unhook the 86304 Toggle Drive Link Spring.

3. Unscrew the two 151632 Screws at the front of the 154009 Front Plate that hold the contact box assembly.

4. Disengage the 156644 Drive Link from the transfer bail and lift off the assembly. It is most economical to replace the entire contact assembly if contacts need replacement.

5. Disassembly of the contact box is shown in herein.

(b) To replace the contact box, reverse the procedure used in removing it.

(5) TRANSFER LEVER LOCKING BAIL

(a) To remove the transfer lever locking bail, proceed as follows:

1. Remove the signal generator assembly from the keyboard.

2. Remove the contact box assembly.

3. Remove the 70388 Transfer lever locking bail spring.

4. Take out the 154140 Lock Bail by unlatching the clutch and rotating the shaft to position the cam in such a way so that the locking bail can be unhooked and dropped down from its guide post. Turn the locking bail clockwise until it forms a right angle with its guide and remove it through the bottom of the frame.

5. See applicable figure for disassembly of the mechanism.

(b) To replace the transfer lever locking bail, reverse the procedure used in removing it.

PAGE. NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION

NOTE

It may be necessary to move the shaft back and forth to position the cam for maximum clearance.

(6) SIGNAL GENERATOR SHAFT

(a) To remove the cam, clutch, and shaft assembly, proceed as follows:

1. Remove the transfer lever locking bail.

2. Remove the two 151631 Screws which mount the 154101 Clutch Shaft rear mounting plate to the 154200 signal generator frame, and remove the 112626 Nut which locks the shaft to the front of the frame.

3. Hold the 154033 Clutch Latch Lever and the 154034 Clutch Stop Lever away and pull back on the clutch shaft rear mounting plate to disengage the shaft from the front plate.

4. Remove the entire cam, clutch, and shaft assembly by rotating it to clear the various transfer levers. The 154019 code bar bail eccentric follower, the 154138 Felt Washer, and the 154083 Cam Spacer will all fall free. These must be repositioned before reassembly.

5. To take the cam (with clutch assembly) off the shaft, disengage the clutch by holding the clutch shoe lever against the stop lug and slide the cam and clutch off.

6. See applicable figure for disassembly of the shaft assembly.

(b) To replace the shaft assembly, reverse the procedure used in removing it.

(7) KEYTOP GUIDE PLATE

(a) To remove the keytop guide plate, proceed as follows:

1. Remove the plastic windows and labels, and hood.

2. Remove the 151045 Space Bar by unscrewing the two 151223 Shoulder Screws that fasten it to the 154117 Space Bar Bail.

PAGE. NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION

3. Remove the 151659 Screw on the keytop guide plate under the space bar and the two 151659 Screws in the upper corners of the plate which hold the plate to the frame.

4. Work the guide plate off the keytops and let them fall free.

5. See applicable figure for disassembly of the mechanism.

(b) To replace the guide plate over the keylevers, flop all levers to the rear. Place the front end of the guide plate down on the frame; and push the keylevers into their respective holes, starting with the bottom row and proceeding upward to the top row.

2. LUBRICATION (Keyboard)

a. GENERAL

(1) Lubricate the equipment as directed in the figures herein. These figures indicate the points to be lubricated and the type and quantity of lubricant to be used. On new equipment, after a few weeks of service, relubricate to make certain that all points receive lubricant.

(2) Follow this lubrication schedule:

OPERATING SPEED		LUBRICATING INTERVAL
BAUD	WPM	
45.5 (65 WPM)	60	3,000 hours or 1 year
50.0 (71 WPM)	75	2,400 hours or 9 months
75.0 (106 WPM)	100	1,500 hours or 6 months

(3) For normal or high temperatures (5° to 55° C; 41° to 131° F) use Teletype KS-7470 oil at all locations where the use of oil is indicated. For lower temperatures, dilute the KS-7470 oil with kerosene (half and half). Use KS-7471 grease on all surfaces where grease is indicated, except the motor bearings. Apply two drops of KS-7470 oil to motor bearings every four months (depress oiler with metal object). If the motor is disassembled at any time, repack the bearings with KS-7471 grease.

PAGE. NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION

(4) The equipment should be thoroughly lubricated, but over-lubrication which might allow oil to drip or grease to be thrown on other parts should be avoided. The following general instructions supplement the specific lubricating points shown on the following pages:

(a) Apply one drop of oil to all spring hooks.

(b) Apply a light film of oil to all cam surfaces.

(c) Apply a thick coat of grease to all gears.

(d) Saturate all felt washers, oilers, etc.

(e) Apply oil to all pivot points.

(f) Apply oil to all sliding surfaces.

NOTE

Exercise special care to prevent any oil or grease from getting between the armatures and the pole pieces of the selector magnets, the transmitter distributor clutch magnets or the tape-feed out magnets.

(5) Apply a thick film of grease to all gears and to the spacing clutch reset cam. When gear changes are made to change operating speed of the components, lubricate the replacement pinion and gear when the change is made.

(6) Specific lubrication requirements and the amount of lubricant are indicated at each lubrication point in accordance with the following code:

0 Apply one drop of oil.

02 Apply two drops of oil.

03 Apply three drops of oil.

G Apply thin coat of grease.

SAT Saturate with oil (felt washers, etc.)

(7) Lubricate according to the applicable lubrication instructions whenever parts or assemblies are removed and reassembled, or when handling the equipment for adjustment purposes may have removed some or all of the lubricant.

PAGE. NO.	CHANGE IN EFFECT	PARA. & LINE OR FIG. & LOCATION	ACTION

NOTE

During each lubrication period, check the following adjustments:

Carriage draw wire rope.

Printing carriage position.

Printing hammer bearing stud.

Printing hammer stop bracket.

Printing arm.

Printing trip link.

Typewheel.

Print hammer.

Dashpot vent screw and check transfer slide for binds.

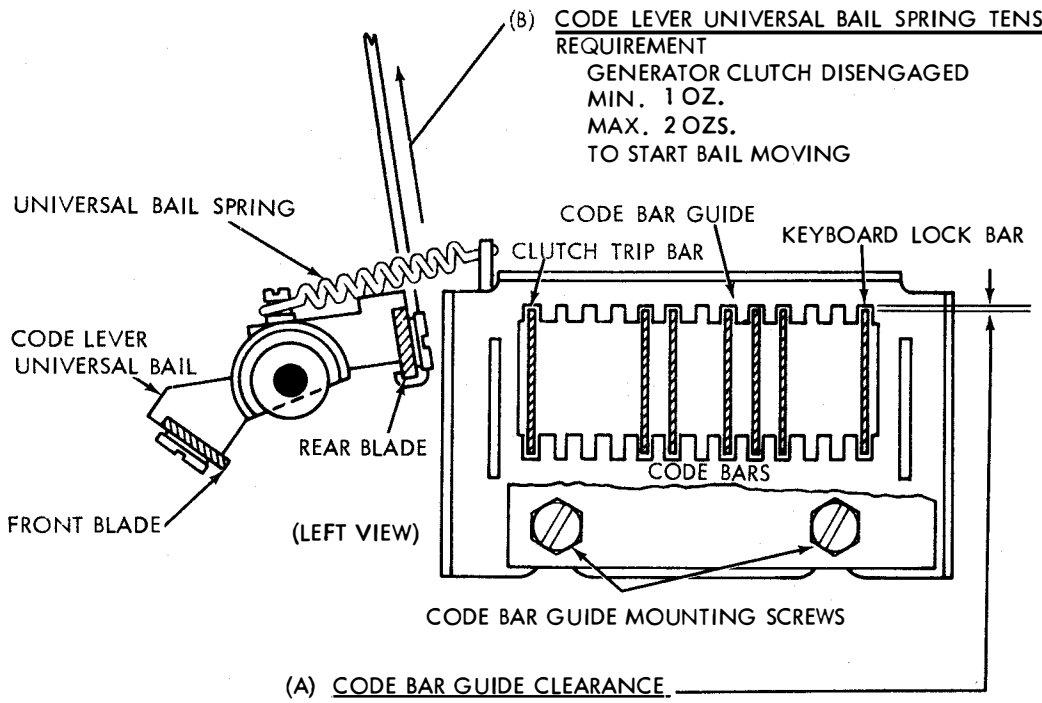
3. SYNCHRONOUS PULSED TRANSMISSION MECHANISM (Figure 2-5).

The synchronous pulsed transmission mechanism provides a means of initiating signal transmission from the keyboard, at a predetermined rate, upon reception of a 0.050 ampere external clocking pulse of 20 millisecond duration.

(1) When any green key on the keyboard is depressed, the reset bail moves right and releases all selected code bars. Also released is the universal code bar which moves right and closes the clutch magnet conditioning contacts setting up the clutch trip magnet to receive the external clocking pulse.

(2) Upon reception of the external clocking pulse, the clutch trip magnet energizes and unblocks the clutch trip bar. As the clutch trip bar moves to the right it engages the clutch trip bail extension and trips the signal generator clutch allowing the signal generator cam shaft to rotate and transmit the proper sequential signal. After one complete revolution of the signal generator cam shaft, the reset bail returns to its starting position resetting all code bars and the clutch trip bar.

KEYBOARD (NEW DESIGN



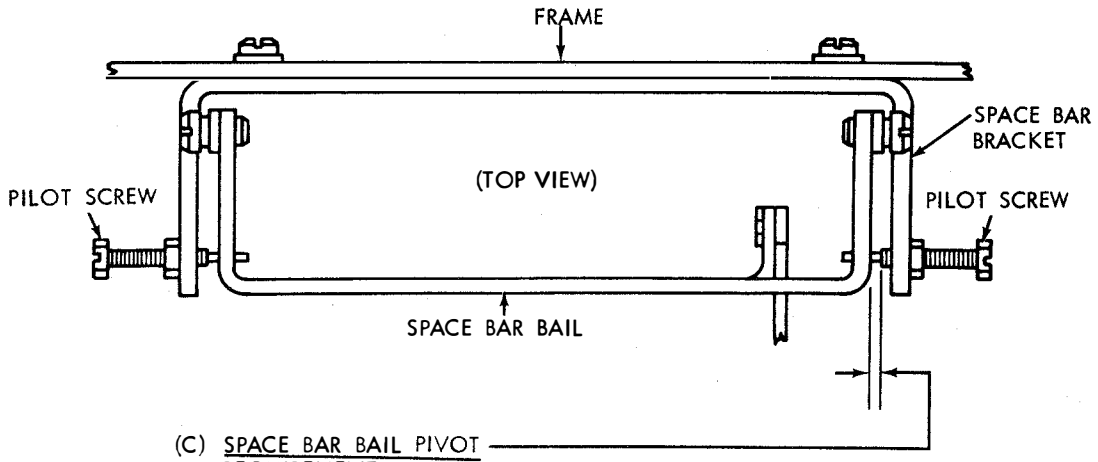
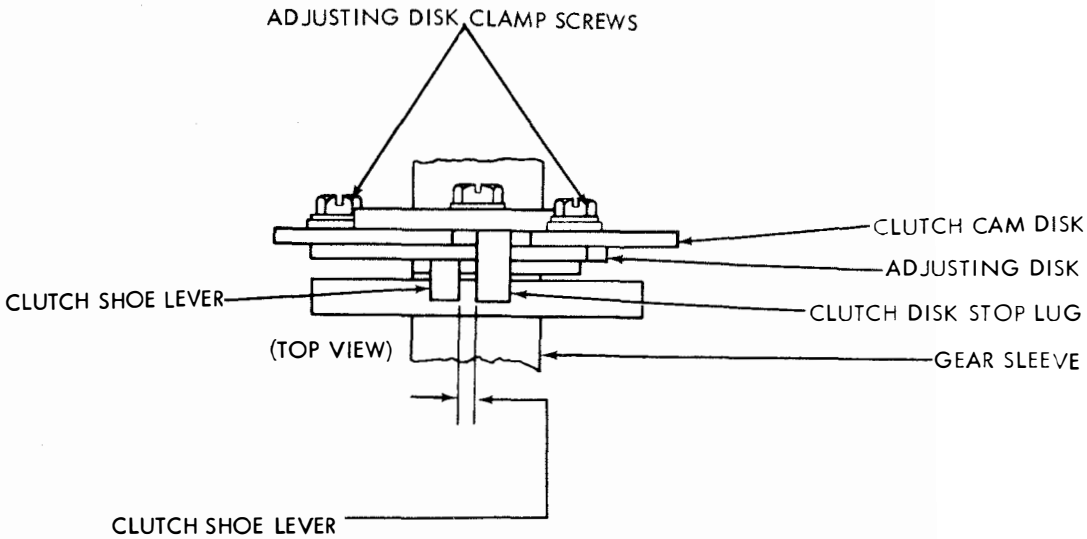


FIGURE 1-1 KEYBOARD, CODE BAR AND SPACE BAR MECHANISMS



REQUIREMENT

CLEARANCE WHEN CLUTCH IS DISENGAGED SHOULD BE 0.055 INCH TO 0.085 INCH LESS THAN WHEN CLUTCH IS ENGAGED.

TO CHECK

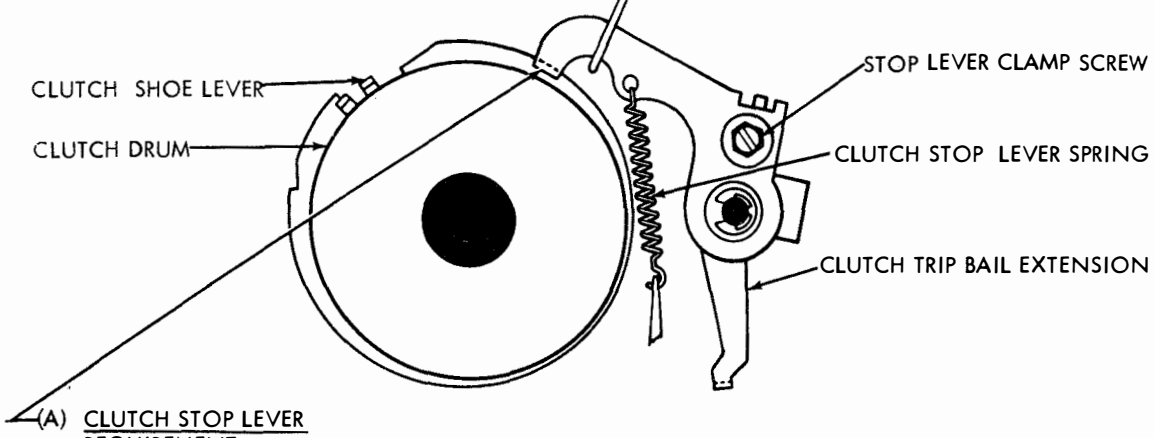
LATCH CLUTCH IN DISENGAGED POSITION AND MEASURE CLEARANCE. ROTATE GEAR UNTIL OIL HOLE IS UPWARD. ENGAGE CLUTCH AND MEASURE CLEARANCE.

TO ADJUST

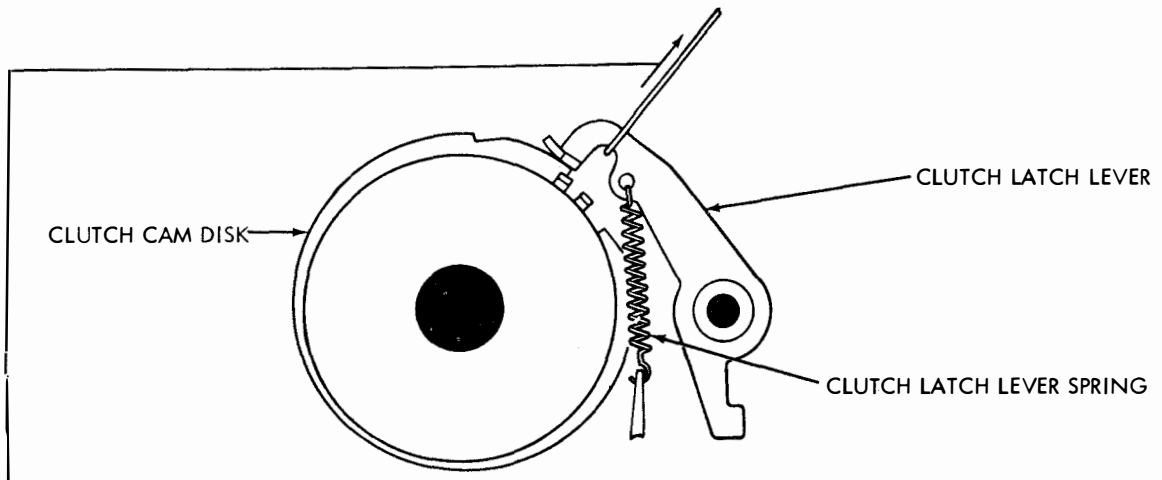
LOOSEN THE TWO ADJUSTING DISK CLAMP SCREWS TO POSITION DISK.

FIGURE 1-2 KEYBOARD, SIGNAL GENERATOR CLUTCH AND GEAR MECHANISM

(B) CLUTCH STOP LEVER SPRING TENSION
REQUIREMENT
CLUTCH ENGAGED AND ROTATED 1/4 TURN.
MIN. 2 OZS.
MAX. 3 OZS.
TO START LEVER MOVING.

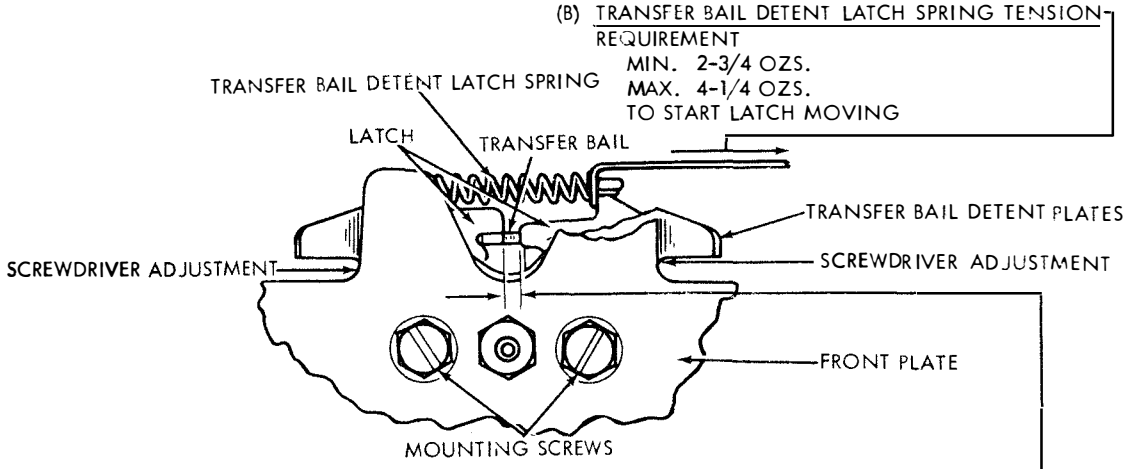


(A) CLUTCH STOP LEVER
REQUIREMENT
SHOULD FULLY ENGAGE CLUTCH SHOE LEVER
DURING ROTATION, THE LEVER SHOULD NOT TOUCH THE CLUTCH DRUM AT ANY POINT.
TO ADJUST
POSITION STOP LEVER WITH ITS CLAMP SCREW LOOSENED.



(C) CLUTCH LATCH LEVER SPRING TENSION
REQUIREMENT
CLUTCH LATCH LEVER RESTING ON THE HIGHEST POINT OF CLUTCH DISK.
MIN. 2 OZS.
MAX. 3 OZS.
TO START LATCH LEVER MOVING.

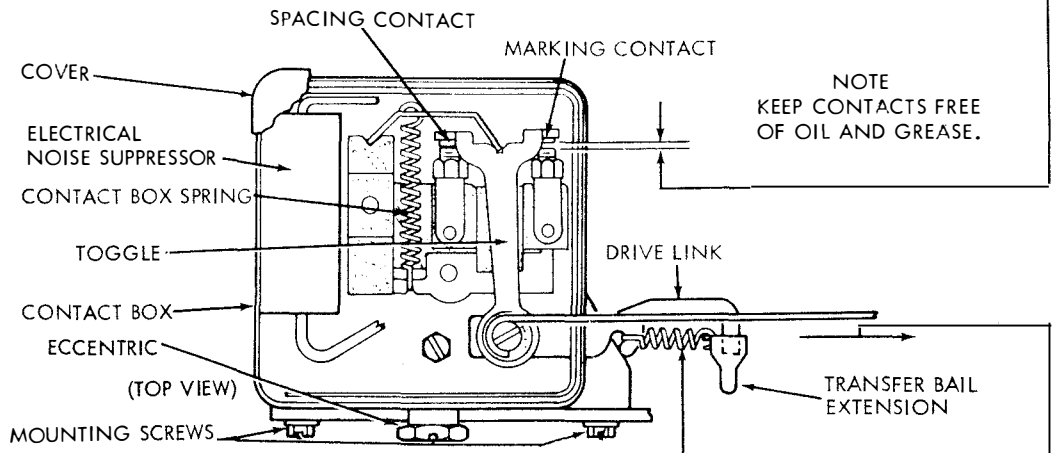
FIGURE 1-3. KEYBOARD, SIGNAL GENERATOR CLUTCH AND LEVER MECHANISM



(B) TRANSFER BAIL DETENT LATCH SPRING TENSION
REQUIREMENT
MIN. 2-3/4 OZS.
MAX. 4-1/4 OZS.
TO START LATCH MOVING

(A) TRANSFER BAIL DETENT PLATE
REQUIREMENT
EQUAL L. H. AND R. H. CLEARANCE WITHIN .002
TO ADJUST
ROTATE DETENT PLATE RIGHT OR LEFT BY MEANS OF SCREWDRIVER WITH MOUNTING SCREWS LOOSENED.

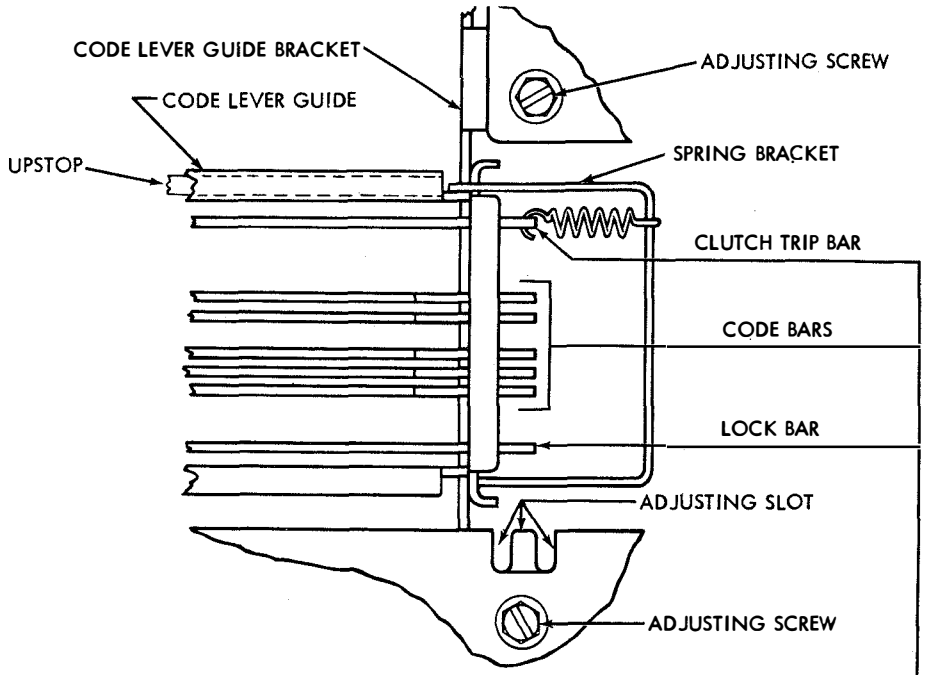
(C) SIGNAL CONTACT CLEARANCE
REQUIREMENT
MARKING AND SPACING GAPS SHOULD BE EQUAL WITHIN 0.001 INCH.
TO CHECK
DEPRESS "Y" KEYLEVER AND ROTATE SIGNAL GENERATOR CAM SLEEVE UNTIL EACH CONTACT HAS FULLY OPENED.
TO ADJUST
LOOSEN MOUNTING SCREWS AND MOVE CONTACT BOX BY MEANS OF ECCENTRIC.
NOTE
CHECK BY MEANS OF SIGNAL CHECKING DEVICE WHERE POSSIBLE, AND CAREFULLY REFINE THE ADJUSTMENT TO ELIMINATE ALL BIAS FROM THE SIGNALS BY EQUALIZING THE CURRENT-ON AND CURRENT-OFF INTERVALS.



(D) SIGNAL CONTACT DRIVE LINK SPRING
REQUIREMENT
WITH MAINSHAFT IN STOP POSITION AND TRANSFER BAIL DETENT LATCH SPRING UNHOOKED (SEE FIG. ABOVE), MOVE LATCHES AWAY FROM TRANSFER BAIL EXTENSION. HOLD THE TOGGLE FIRMLY AGAINST CONTACTS.
MIN. 6 OZS.
MAX. 9 OZS.
TO START TRANSFER BAIL EXTENSION MOVING.

(E) SIGNAL CONTACT SPRING
REQUIREMENT
WITH MAIN SHAFT IN STOP POSITION AND COVER OF CONTACT BOX REMOVED, UNHOOK THE DRIVE LINK SPRING AND HOLD TRANSFER BAIL CLEAR OF DRIVE LINK.
MIN. 2 OZS.
MAX. 3 OZS.
TO START LINK MOVING

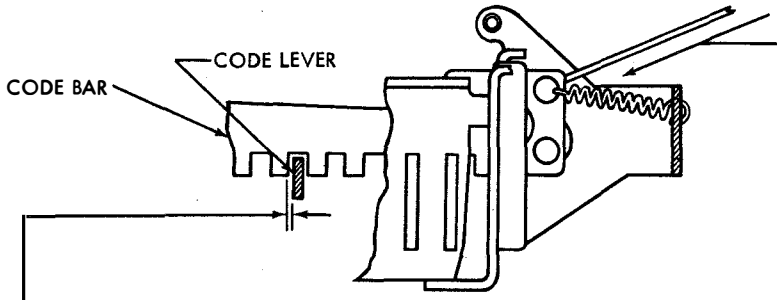
FIGURE 1-4 KEYBOARD, TRANSFER BAIL AND CONTACT BOX MECHANISM



(A) CLUTCH TRIP BAR SPRING TENSION
REQUIREMENT
CLUTCH DISENGAGED, POWER OFF.
MIN. 9 OZS.
MAX. 12 OZS.
TO MOVE BAR.

(B) CODE BAR SPRING TENSION
REQUIREMENT
LETTERS KEYLEVER DEPRESSED.
MIN. 3 OZS.
MAX. 5 OZS.
TO START CODE BAR MOVING.

(C) LOCK BAR SPRING TENSION
REQUIREMENT
CLUTCH DISENGAGED. KEYBOARD LOCK KEYLEVER DEPRESSED.
MIN. 2-1/2 OZS.
MAX. 6 OZS.
TO START LOCK BAR MOVING.



(D) CODE BAR AND CODE LEVER CLEARANCE
REQUIREMENT
CARRIAGE RETURN KEY DEPRESSED BUT NOT ENOUGH TO TRIP OFF UNIVERSAL BAIL LATCH OR CLUTCH BAR.
MIN. 0.006 INCH.
MAX. 0.017 INCH.
MEASURED AT CODE BAR #3.
TO ADJUST
POSITION GUIDE BY ADJUSTING SLOT WITH (4) MOUNTING SCREWS LOOSENED.

FIGURE 1-5 KEYBOARD, CODE BAR AND CODE LEVER MECHANISM

(A) FUNCTION BAIL AND CODE LEVER CLEARANCE

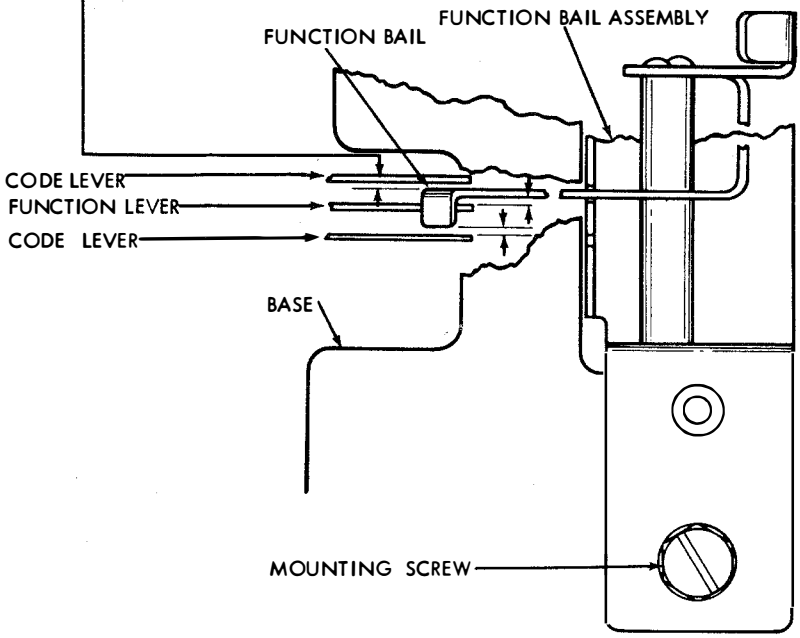
REQUIREMENT

MIN. 0.015 INCH

BETWEEN ANY FUNCTION BAIL AND ITS ADJACENT CODE LEVER

TO ADJUST

POSITION FUNCTION BAIL ASSEMBLY WITH MOUNTING SCREWS LOOSENED.

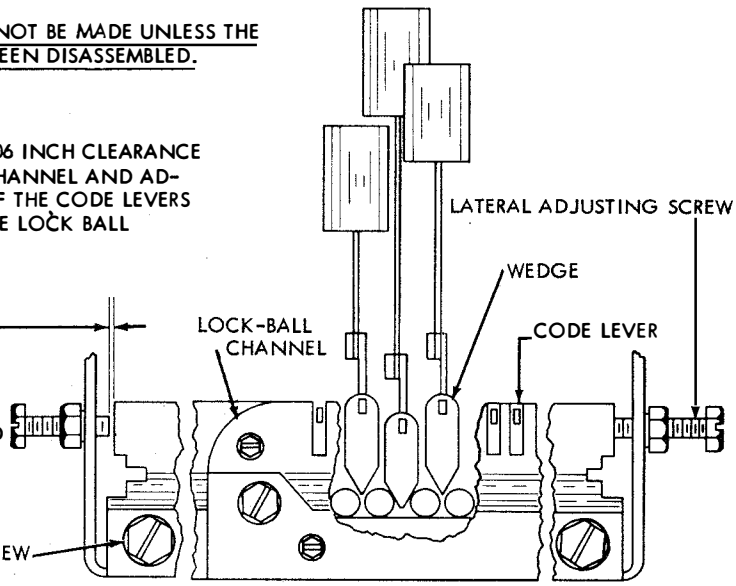


NOTE: THIS ADJUSTMENT SHOULD NOT BE MADE UNLESS THE LOCK BALL CHANNEL HAS BEEN DISASSEMBLED.

(B) LOCK BALL CHANNEL

REQUIREMENT

THERE SHOULD BE SOME TO 0.006 INCH CLEARANCE BETWEEN END OF LOCK BALL CHANNEL AND ADJUSTING SCREW WHEN MOST OF THE CODE LEVERS ARE CENTRALLY LOCATED IN THE LOCK BALL CHANNEL SLOTS.



TO CHECK

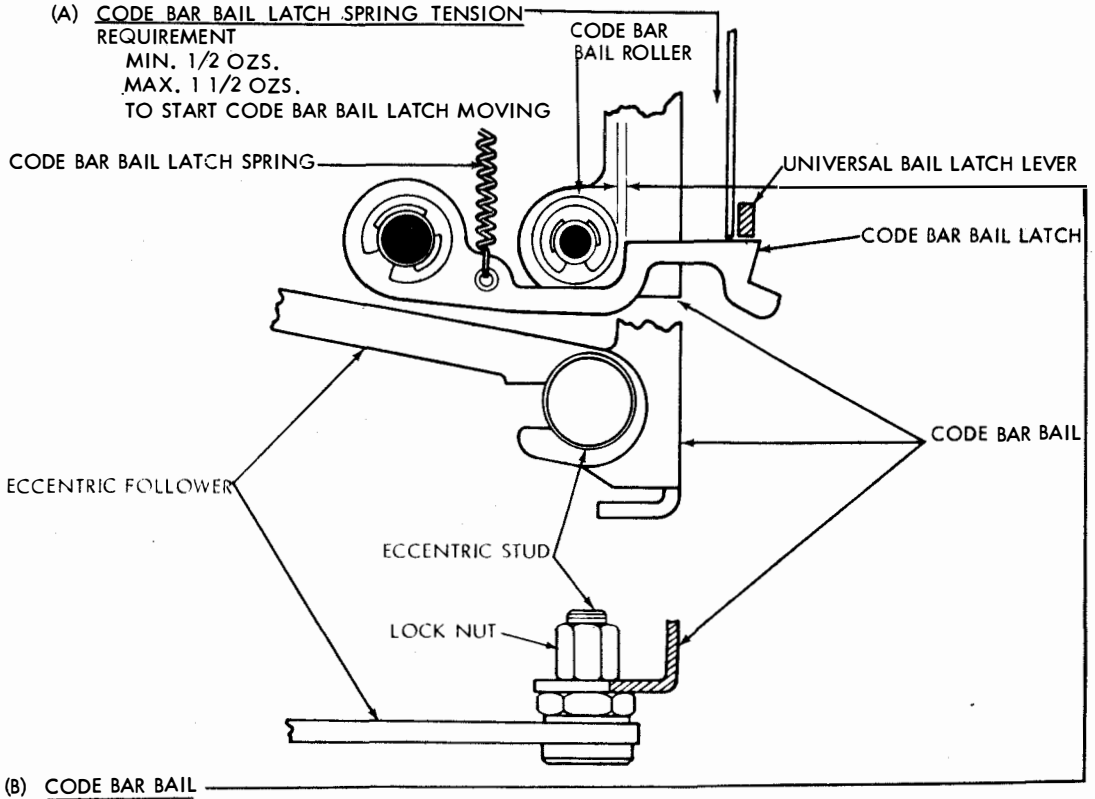
REMOVE THE LOCK BALL RETAINER. REMOVE A WEDGE FROM EACH END AND ONE FROM THE CENTER IN ORDER TO VIEW THE POSITION OF THE CODE LEVER.

TO ADJUST

LOOSEN THE LOCK BALL CHANNEL MOUNTING SCREWS. BACK OFF LATERAL ADJUSTING SCREWS AND POSITION CHANNEL. TURN ONE ADJUSTING SCREW IN AGAINST THE END OF THE CHANNEL AND LOCK IT. TURN THE OTHER ADJUSTING SCREW IN TO THE END OF THE CHANNEL AND BACK IT OFF 1/4 TURN. LOCK THE SCREW. REPLACE THE WEDGES AND CHECK THEIR POSITION WITH RESPECT TO THE BALLS. PULL CHANNEL ASSEMBLY DOWNWARD UNTIL ALL CODE LEVERS STRIKE THEIR UPSTOP WITHOUT WEDGES JUMPING OUT OF POSITION. REPLACE LOCK-BALL RETAINER. BACK OFF BALL END PLAY ADJUSTING SCREW.

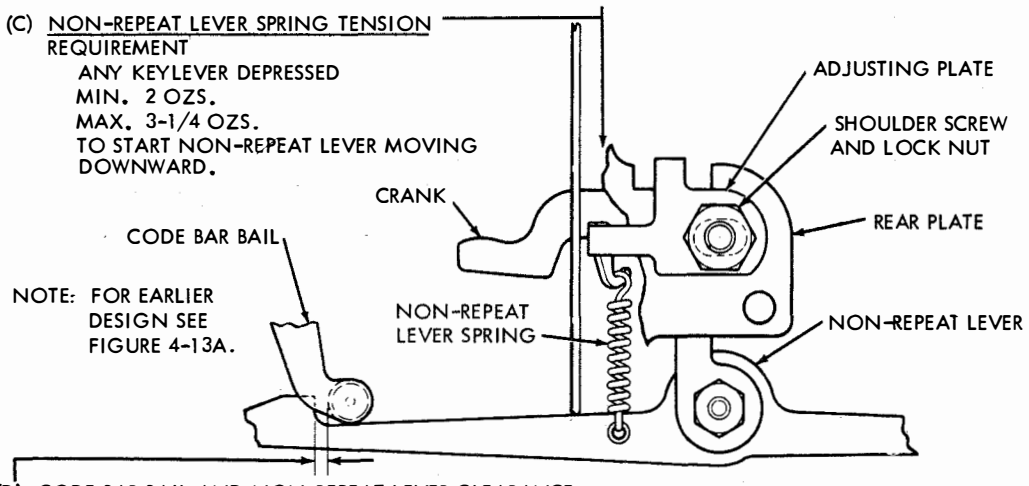
FIGURE 1-6 KEYBOARD, FUNCTION BAIL AND LOCK BALL TRACK MECHANISMS

(A) CODE BAR BAIL LATCH SPRING TENSION
REQUIREMENT
MIN. 1/2 OZS.
MAX. 1 1/2 OZS.
TO START CODE BAR BAIL LATCH MOVING



(B) CODE BAR BAIL
REQUIREMENT
CAM ECCENTRIC AND ARM WHICH HOLD THE BAIL IN EXTREME RESET POSITION TO THE LEFT.
MIN. 0.004 INCH
MAX. 0.012 INCH
BETWEEN CODE BAR BAIL ROLLER AND CODE BAR BAIL LATCH
TO ADJUST
ADJUST ECCENTRIC STUD WITH LOCK NUT LOOSENED.

(C) NON-REPEAT LEVER SPRING TENSION
REQUIREMENT
ANY KEYLEVER DEPRESSED
MIN. 2 OZS.
MAX. 3-1/4 OZS.
TO START NON-REPEAT LEVER MOVING DOWNWARD.



(D) CODE BAR BAIL AND NON-REPEAT LEVER CLEARANCE
REQUIREMENT
MECHANISM IN INITIAL TRIP-OFF POSITION, ANY KEY DEPRESSED, NO POWER.
MIN. 0.010 INCH
MAX. 0.020 INCH
BETWEEN ROLLER OF CODE BAR BAIL AND NON-REPEAT LEVER PICK-UP STEP.
TO ADJUST
LOOSEN LOCK NUT AND SHOULDER SCREW AND MOVE MECHANISM LEFT OR RIGHT.

(FRONT VIEW)

FIGURE 1-7. KEYBOARD, CODE BAR BAIL AND NON-REPEAT LEVER MECHANISMS.

NOTE: REMOVE KEYBOARD HOOD IN ORDER TO MAKE THIS ADJUSTMENT. SEE DISASSEMBLY AND REASSEMBLY

(A) BALL WEDGELOCK AND BALL TRACK CLEARANCE (PRELIMINARY)

REQUIREMENT

CLEARANCE BETWEEN TIP OF WEDGE AND THE BALL TRACK
MIN. 0.005 INCH --- MAX. 0.015 INCH
AND EQUAL WITHIN 0.005 INCH.

TO CHECK

DEPRESS "Q" AND "P" KEYLEVER ALTERNATELY WITH 32 OZS. PRESSURE AND MEASURE CLEARANCE IN EACH INSTANCE. THERE SHOULD BE NO CLEARANCE BETWEEN LOWER EDGE OF CODE LEVER EXTENSIONS AND BOTTOM OF SLOTS IN WEDGES.

TO ADJUST

POSITION BALL TRACK UP OR DOWN WITH THE TWO MOUNTING SCREWS LOOSENED.

(B) LOCK BALL END PLAY (PRELIMINARY)

REQUIREMENT

CLEARANCE BETWEEN BALLS SHOULD BE MINIMUM.

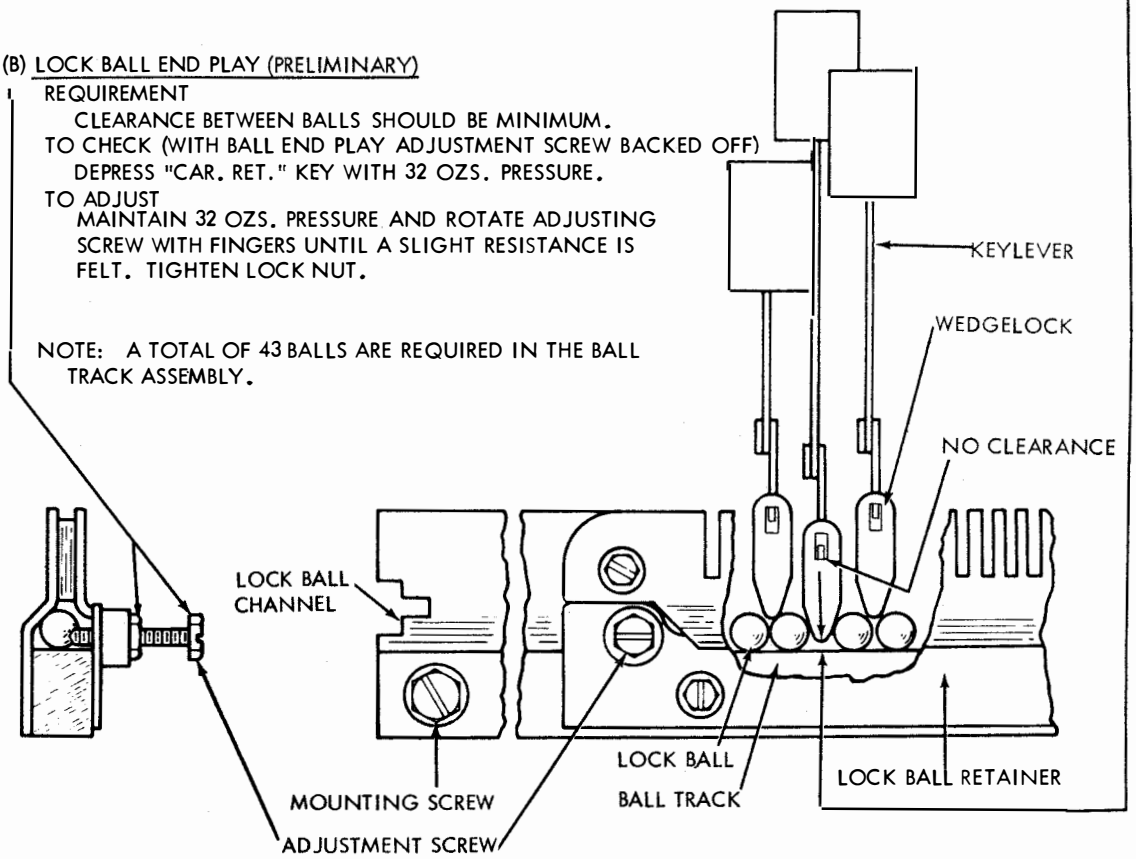
TO CHECK (WITH BALL END PLAY ADJUSTMENT SCREW BACKED OFF)

DEPRESS "CAR. RET." KEY WITH 32 OZS. PRESSURE.

TO ADJUST

MAINTAIN 32 OZS. PRESSURE AND ROTATE ADJUSTING SCREW WITH FINGERS UNTIL A SLIGHT RESISTANCE IS FELT. TIGHTEN LOCK NUT.

NOTE: A TOTAL OF 43 BALLS ARE REQUIRED IN THE BALL TRACK ASSEMBLY.



(F) BALL-LOCK-WEDGE, BALL END-PLAY AND UNIVERSAL BAIL LATCH (FINAL) PERFORM THIS ADJUSTMENT FOLLOWING (E) ON PAGE 1-11

REQUIREMENT (UNDER POWER)

1. TRIP-OFF PRESSURE OF ANY CENTER ROW KEY SHOULD BE MIN. 2 OZS. --- MAX. 5 OZS.
2. APPLY 5-1/2 OZS PRESSURE PERPENDICULAR TO "A" KEY, DEPRESS EACH KEY IN THIRD ROW. THE "A" KEY SHOULD TRIP EACH TIME A KEY IS RELEASED.
3. REPEAT 2 WITH THE 5-1/2 OZS. PRESSURE ON "CAR. RET." KEY.
4. THE CLUTCH SHOULD NOT TRIP WHEN TWO KEYS ARE DEPRESSED SIMULTANEOUSLY.
5. APPLY 4-1/4 OZS. TO "SPACE BAR," DEPRESS "CAR. RET." KEY AND LIFT FINGER FROM KEY HORIZONTALLY. THE "SPACE BAR" SHOULD TRIP EACH TIME "CAR. RET." IS RELEASED.
   NOTE --- IF UNIT IS EQUIPPED FOR REPEAT-SPACE OPERATION, DISREGARD MULTIPLE SPACE OPERATIONS.

TO ADJUST

IF NECESSARY, REFINE BALL WEDGE LOCK AND BALL TRACK CLEARANCE (PRELIMINARY), LOCK BALL END PLAY (PRELIMINARY), UNIVERSAL BAIL LATCH LEVER (PRELIMINARY) AND UNIVERSAL BAIL EXTENSION.

FIGURE 1-8. KEYBOARD, WEDGELOCK AND BALL TRACK MECHANISM

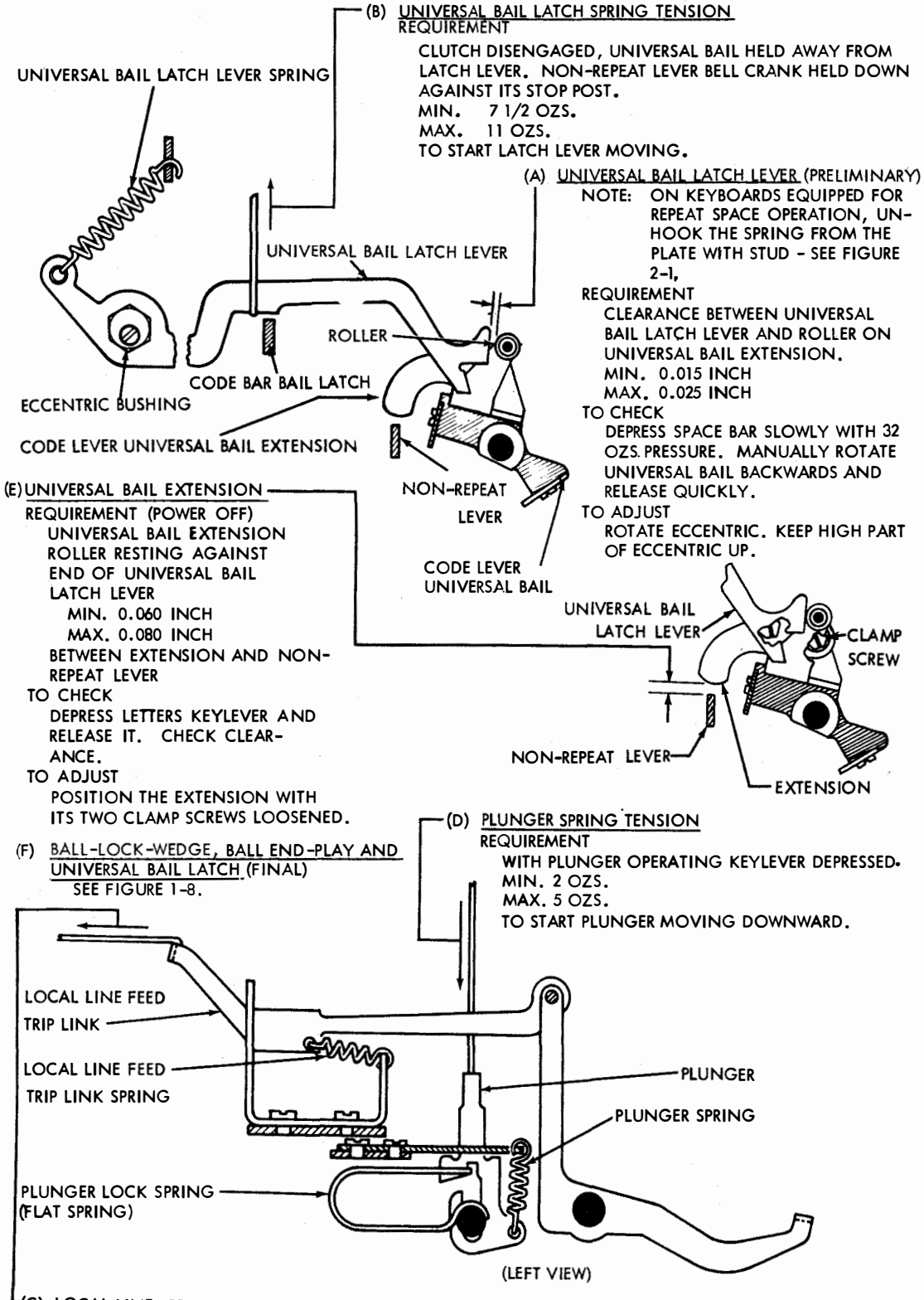
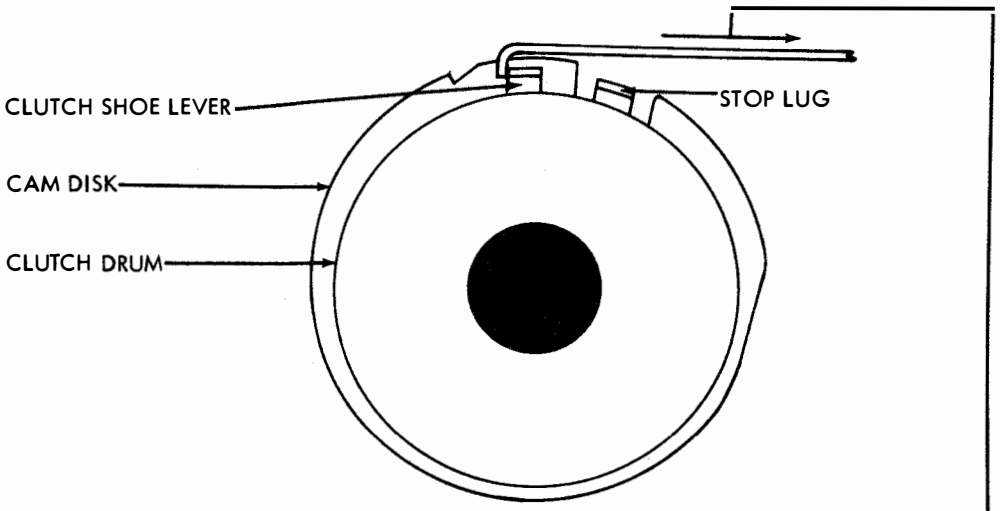


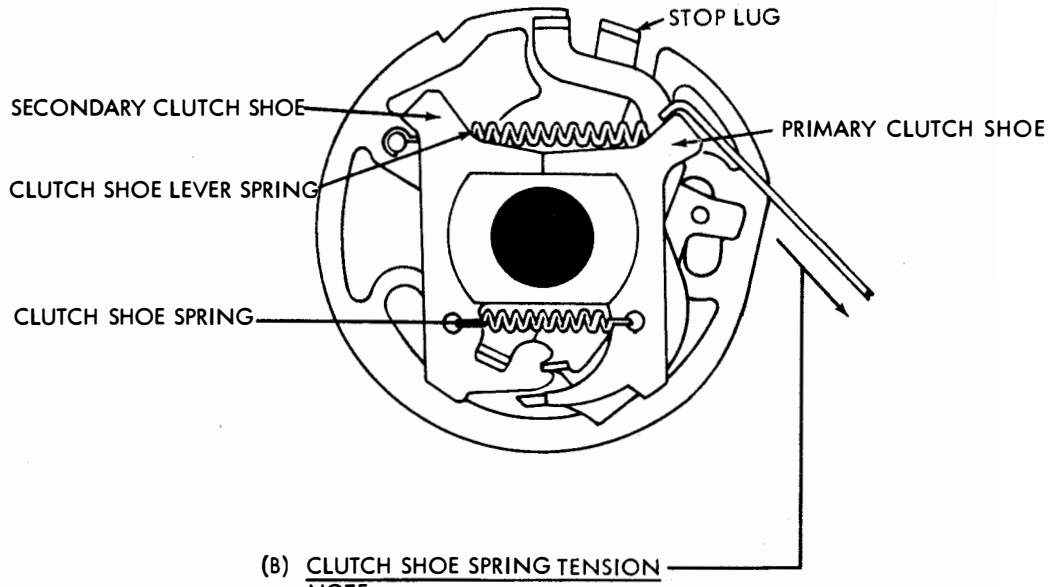
FIGURE 1-9. KEYBOARD, UNIVERSAL BAIL LATCH LEVER AND LOCAL LINE FEED TRIP LINK MECHANISMS



(A) CLUTCH SHOE LEVER SPRING TENSION

REQUIREMENT

CLUTCH ENGAGED.
CAM DISK HELD TO PREVENT TURNING.
MIN. 15 OZS.
MAX. 20 OZS.
TO MOVE SHOE LEVER IN CONTACT WITH STOP LUG.



(B) CLUTCH SHOE SPRING TENSION

NOTE

IN ORDER TO CHECK THIS SPRING TENSION, IT IS NECESSARY TO REMOVE THE CLUTCH FROM THE MAIN SIGNAL GENERATOR DRIVE SHAFT. THEREFORE, IT SHOULD NOT BE CHECKED UNLESS THERE IS GOOD REASON TO BELIEVE THAT IT DOES NOT MEET ITS REQUIREMENT.

REQUIREMENT

CLUTCH DRUM REMOVED.
MIN. 3 OZS.
MAX. 5 OZS.
TO START PRIMARY SHOE MOVING AWAY FROM SECONDARY SHOE AT POINT OF CONTACT.

FIGURE 1-10. KEYBOARD, SIGNAL GENERATOR CLUTCH MECHANISM

(2) REQUIREMENT

THERE SHOULD BE A BARELY PRECEPTIBLE AMOUNT OF BACKLASH BETWEEN THE INTERMEDIATE DRIVING GEAR AND THE INTERMEDIATE DRIVEN GEAR AT THE POINT WHERE THE BACKLASH IS THE LEAST.

TO ADJUST

RAISE OR LOWER THE FRONT END OF THE INTERMEDIATE GEAR BRACKET BY MEANS OF THE FILLISTER HEAD ADJUSTING AND CLAMPING SCREWS LOCATED AT THE FRONT END OF THE BRACKET. REFINE REQUIREMENTS IF NECESSARY.

INTERMEDIATE GEAR BRACKET

(1) REQUIREMENT

THERE SHOULD BE A BARELY PERCEPTIBLE AMOUNT OF BACKLASH BETWEEN THE TYPING UNIT DRIVEN GEAR AND THE TYPING UNIT DRIVING GEAR AT THE POINT WHERE BACKLASH IS THE LEAST.

TO ADJUST

POSITION THE COMPLETE INTERMEDIATE GEAR MECHANISM BRACKET BY UTILIZING THE ADJUSTING SLOTS WITH THE THREE HEXAGON HEAD SCREWS LOOSENED. ALIGN THE GEARS AT THIS TIME.

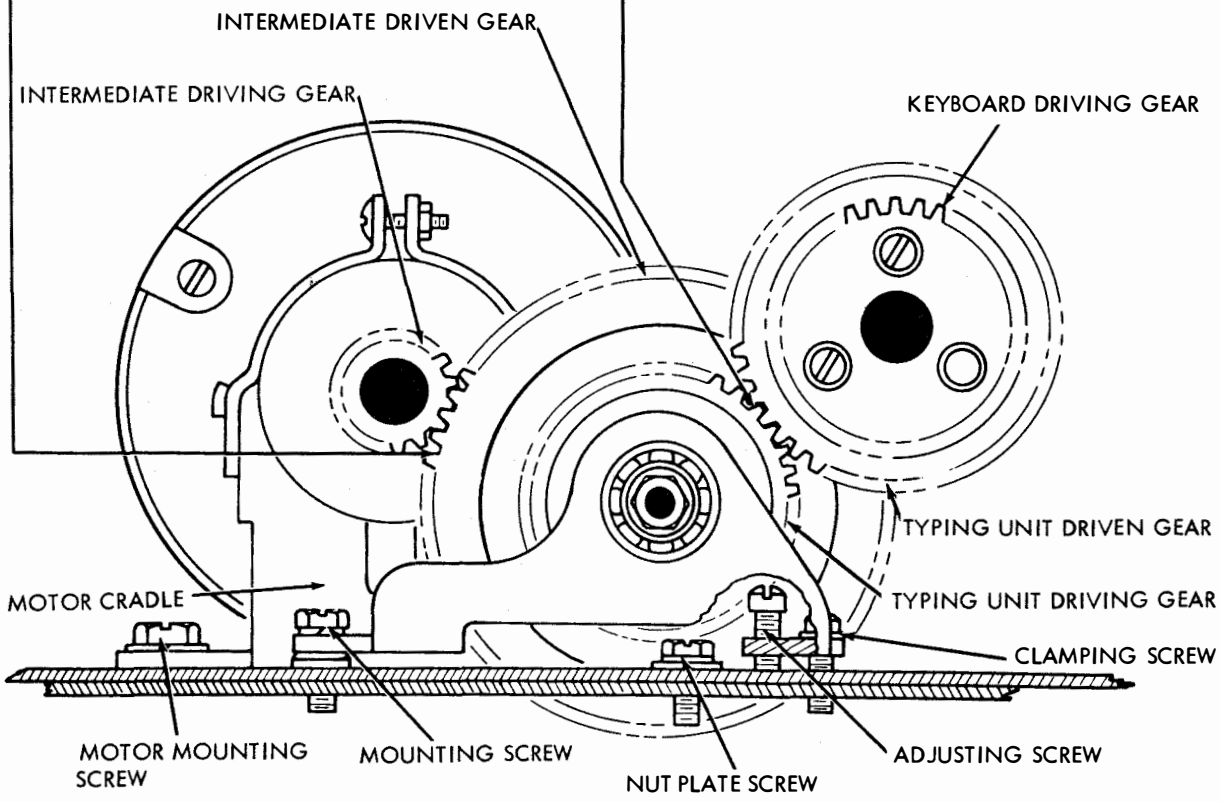
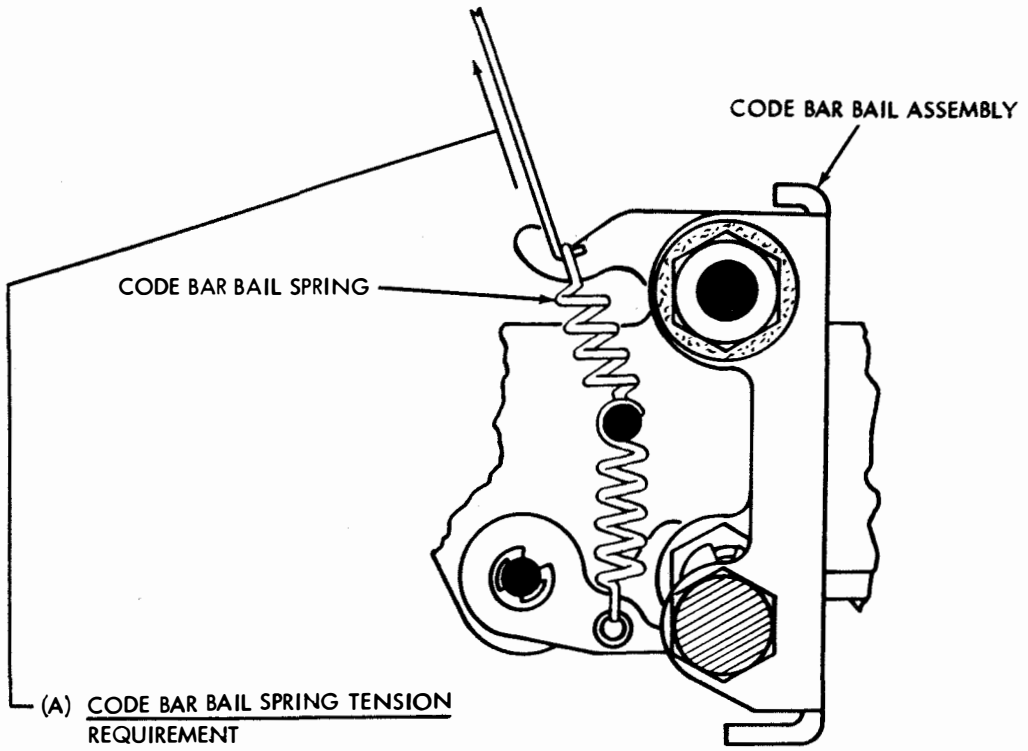


FIGURE 1-11 KEYBOARD OR BASE, MOTOR AND TYPING UNIT GEARING, LEFT SIDE VIEW



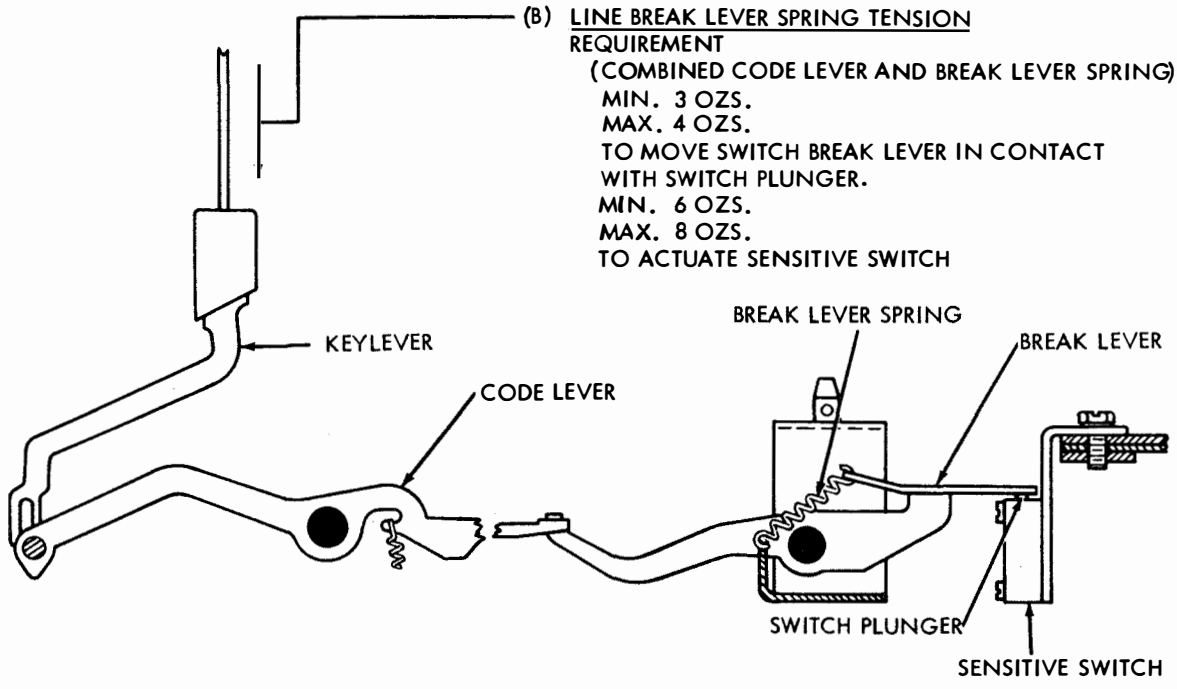
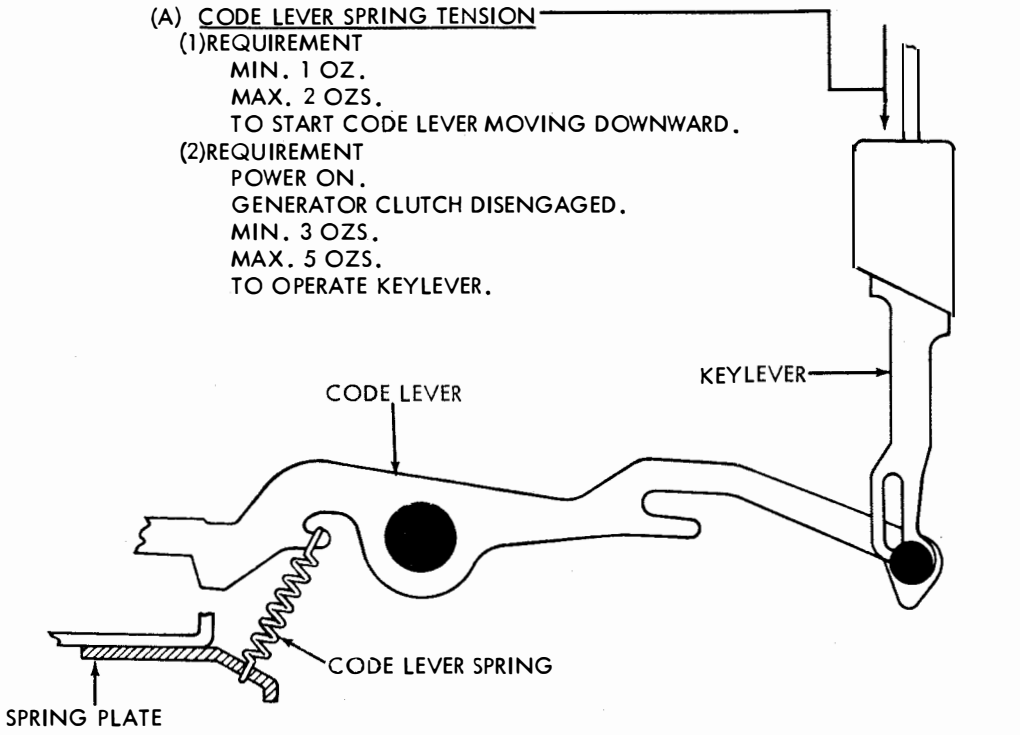


FIGURE 1-12. KEYBOARD, CODE BAR BAIL AND LINE BREAK LEVER



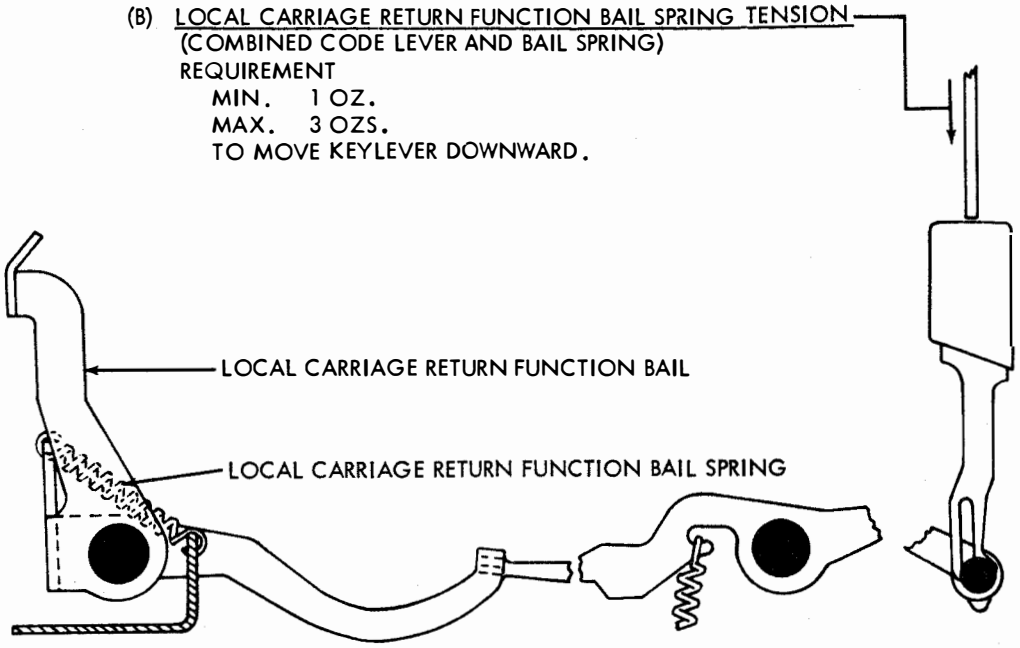


FIGURE 1-13. KEYBOARD, CODE LEVER AND LOCAL CARRIAGE RETURN FUNCTION BAIL MECHANISM

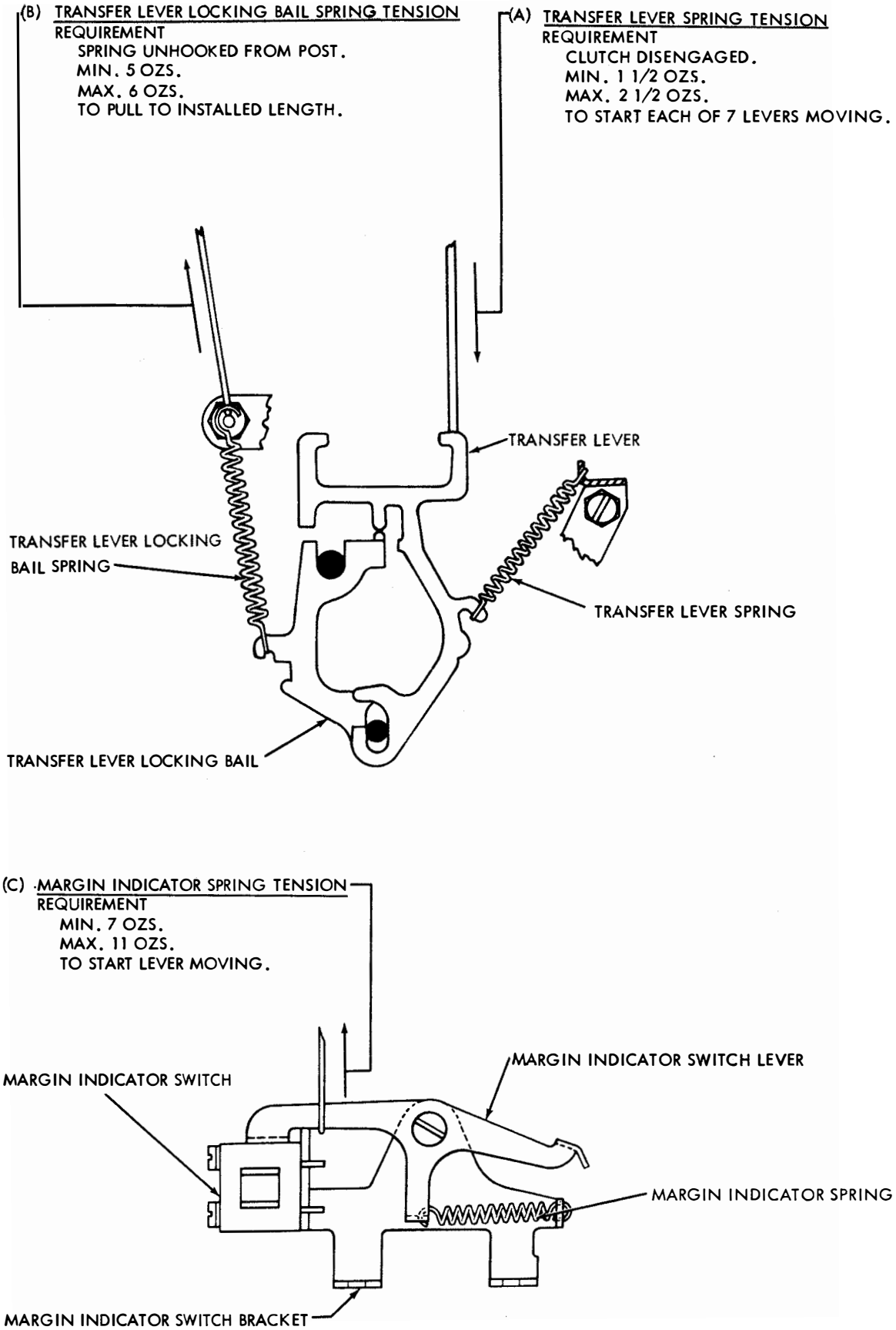
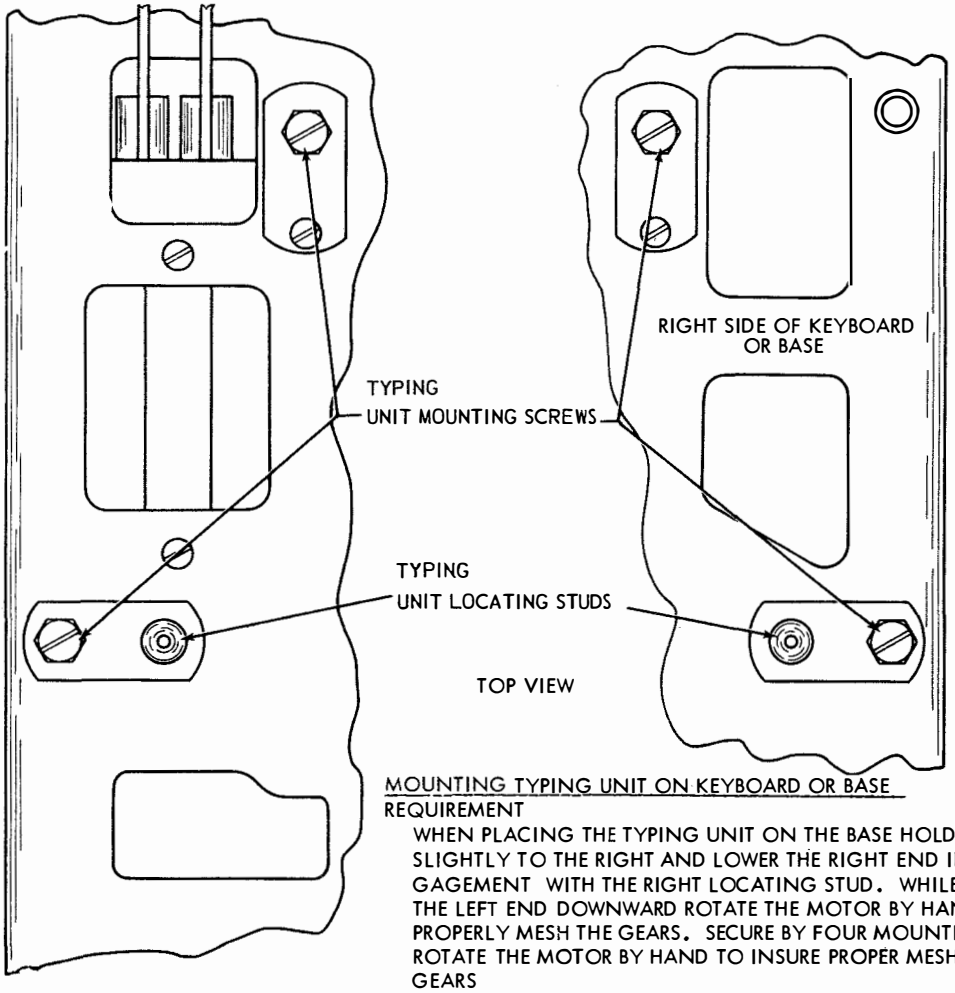


FIGURE 1-14. KEYBOARD, TRANSFER LEVER AND MARGIN INDICATOR MECHANISM



MOUNTING TYPING UNIT ON KEYBOARD OR BASE

REQUIREMENT

WHEN PLACING THE TYPING UNIT ON THE BASE HOLD IT TILTED SLIGHTLY TO THE RIGHT AND LOWER THE RIGHT END INTO ENGAGEMENT WITH THE RIGHT LOCATING STUD. WHILE EASING THE LEFT END DOWNWARD ROTATE THE MOTOR BY HAND TO PROPERLY MESH THE GEARS. SECURE BY FOUR MOUNTING SCREWS. ROTATE THE MOTOR BY HAND TO INSURE PROPER MESHING OF GEARS

SIGNAL GENERATOR FRAME

REQUIREMENT

WITH TYPING UNIT MOUNTED IN POSITION, THERE SHOULD BE A PERCEPTIBLE AMOUNT OF BACKLASH BETWEEN THE SIGNAL GENERATOR DRIVEN GEAR AND THE SIGNAL GENERATOR DRIVING GEAR AT THE POINT WHERE BACKLASH IS THE LEAST.

TO ADJUST

REMOVE THE SIGNAL GENERATOR FRAME REAR MOUNTING SCREW AND LOOSEN THE SHIM SCREW. ADD OR SUBTRACT SHIMS AS REQUIRED.

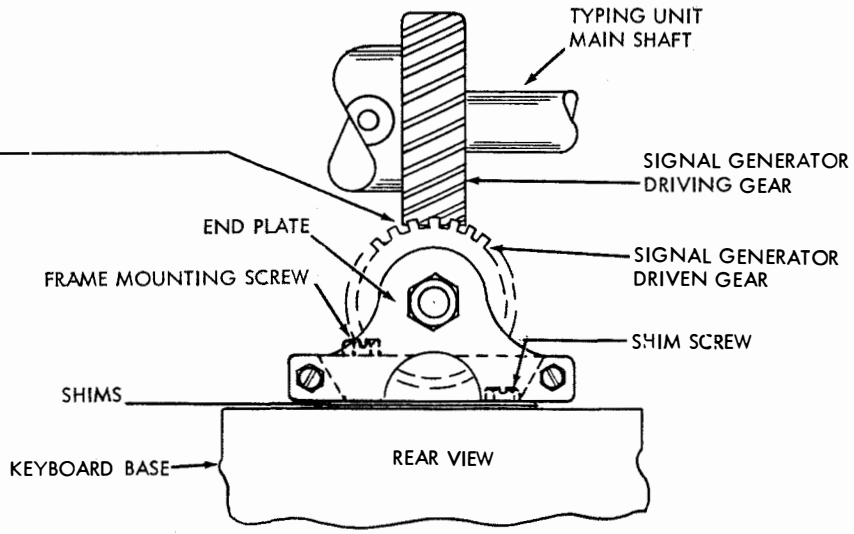
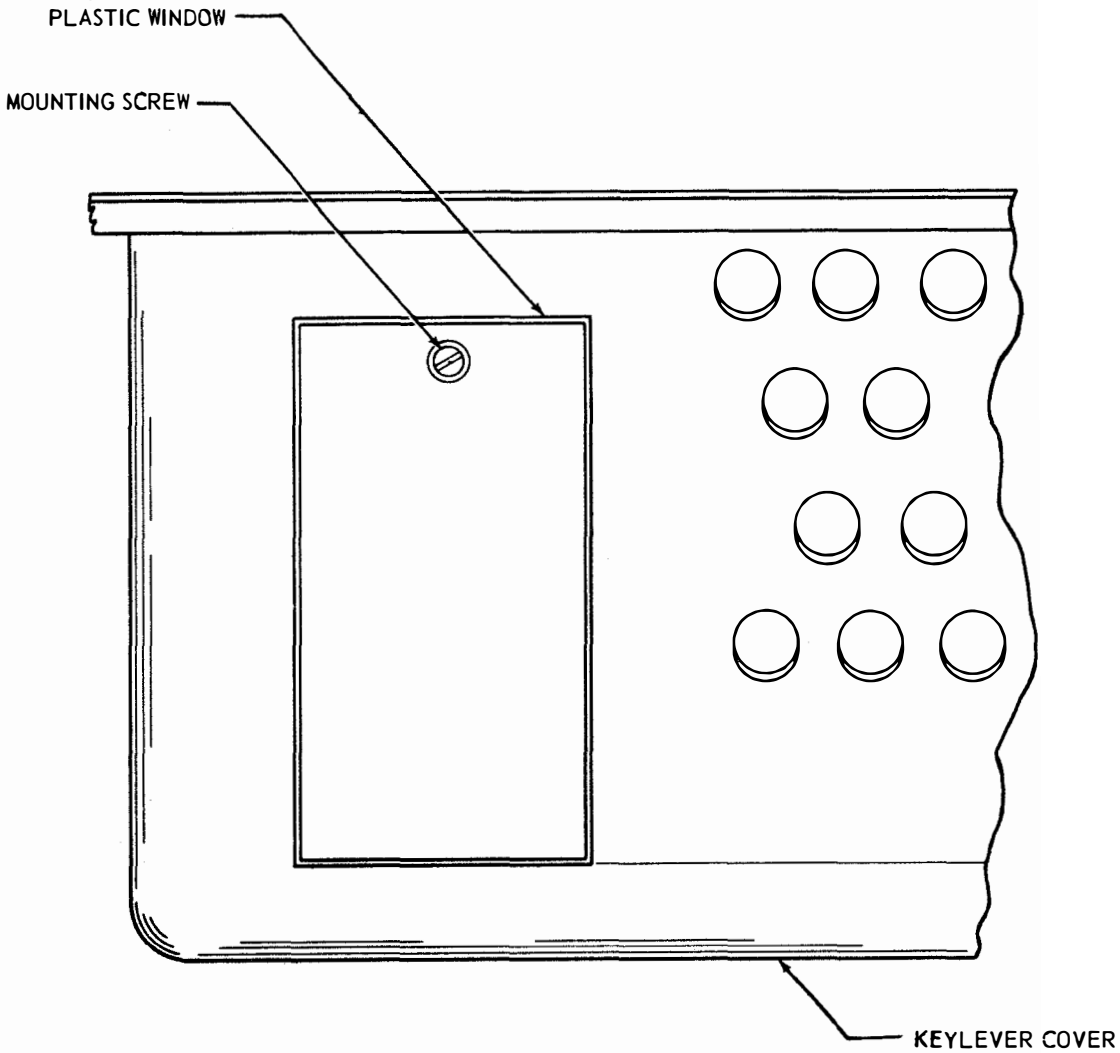


FIGURE 1-15. MOUNTING TYPING UNIT ON KEYBOARD OR BASE



PLASTIC WINDOW

REQUIREMENT

PLASTIC WINDOW SHOULD BE FULLY SEATED IN POSITION BEFORE TIGHTENING MOUNTING SCREW.

TO ADJUST

POSITION WINDOW WITH MOUNTING SCREW LOOSENED.

FIGURE 1-16. KEYBOARD, PLASTIC WINDOW

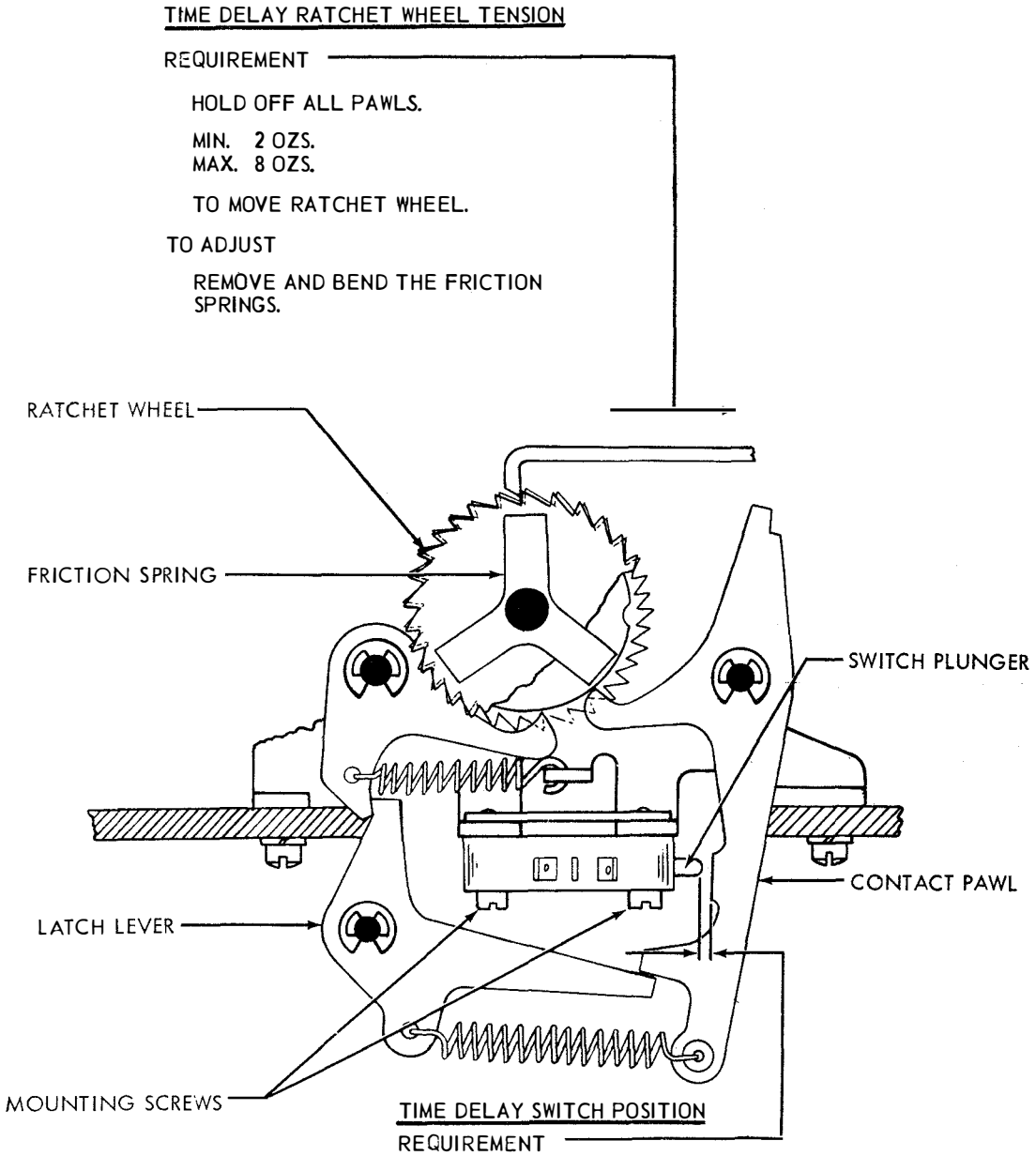
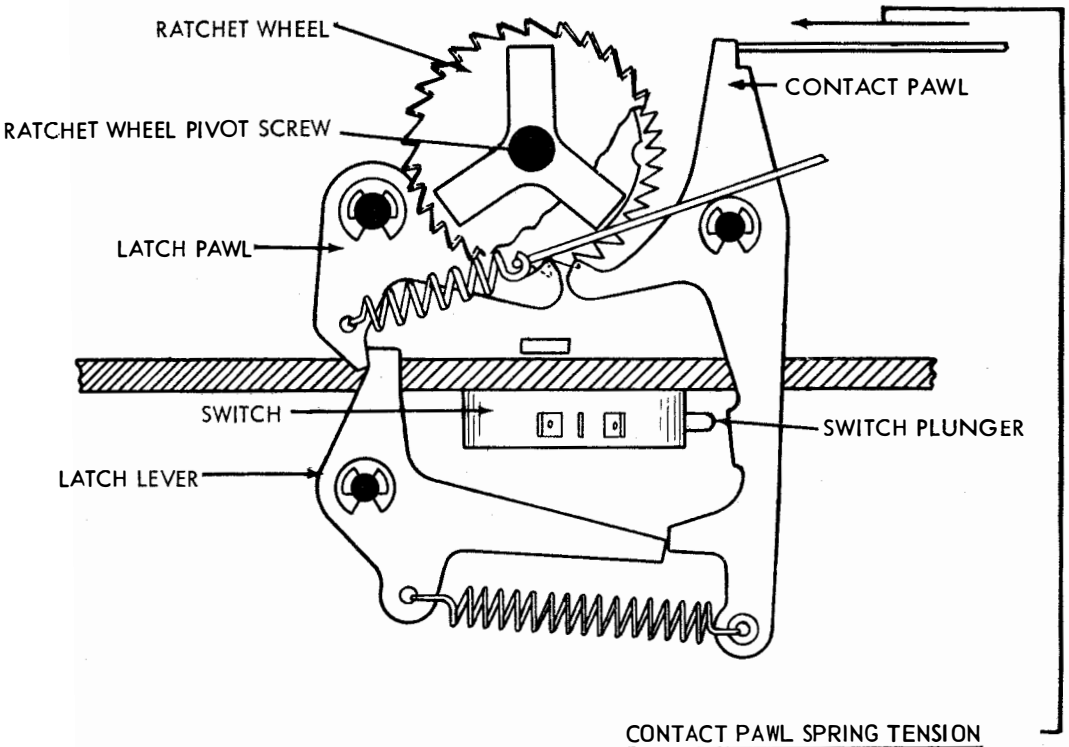


FIGURE 1-17. KEYBOARD OR BASE, TIME DELAY MECHANISM

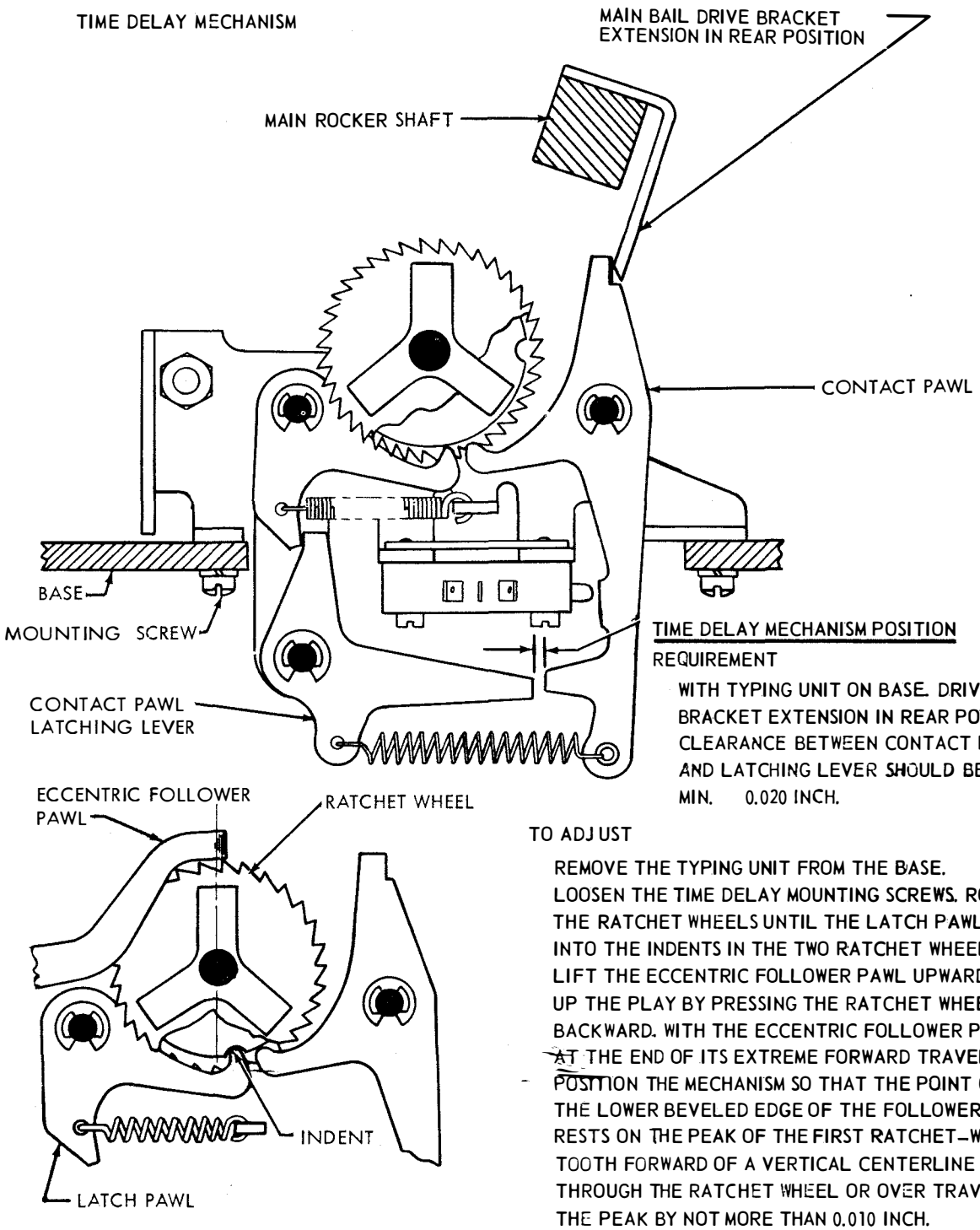
TIME DELAY MECHANISM

CONTACT LATCH PAWL SPRING TENSION
REQUIREMENT
LATCH PAWL SPRING UNHOOKED AT ANCHOR
MIN. 12 OZS.
MAX. 15 OZS.
TO STRETCH SPRING TO INSTALLED LENGTH AS SHOWN.



CONTACT PAWL SPRING TENSION
REQUIREMENT
CONTACT PAWL LATCHED ON END OF LATCH LEVER.
MIN. 8 OZS.
MAX. 12 OZS.
TO START THE PAWL MOVING.

FIGURE 1-18. KEYBOARD OR BASE, TIME DELAY MECHANISM, LEFT SIDE VIEW



TIME DELAY MECHANISM POSITION

REQUIREMENT

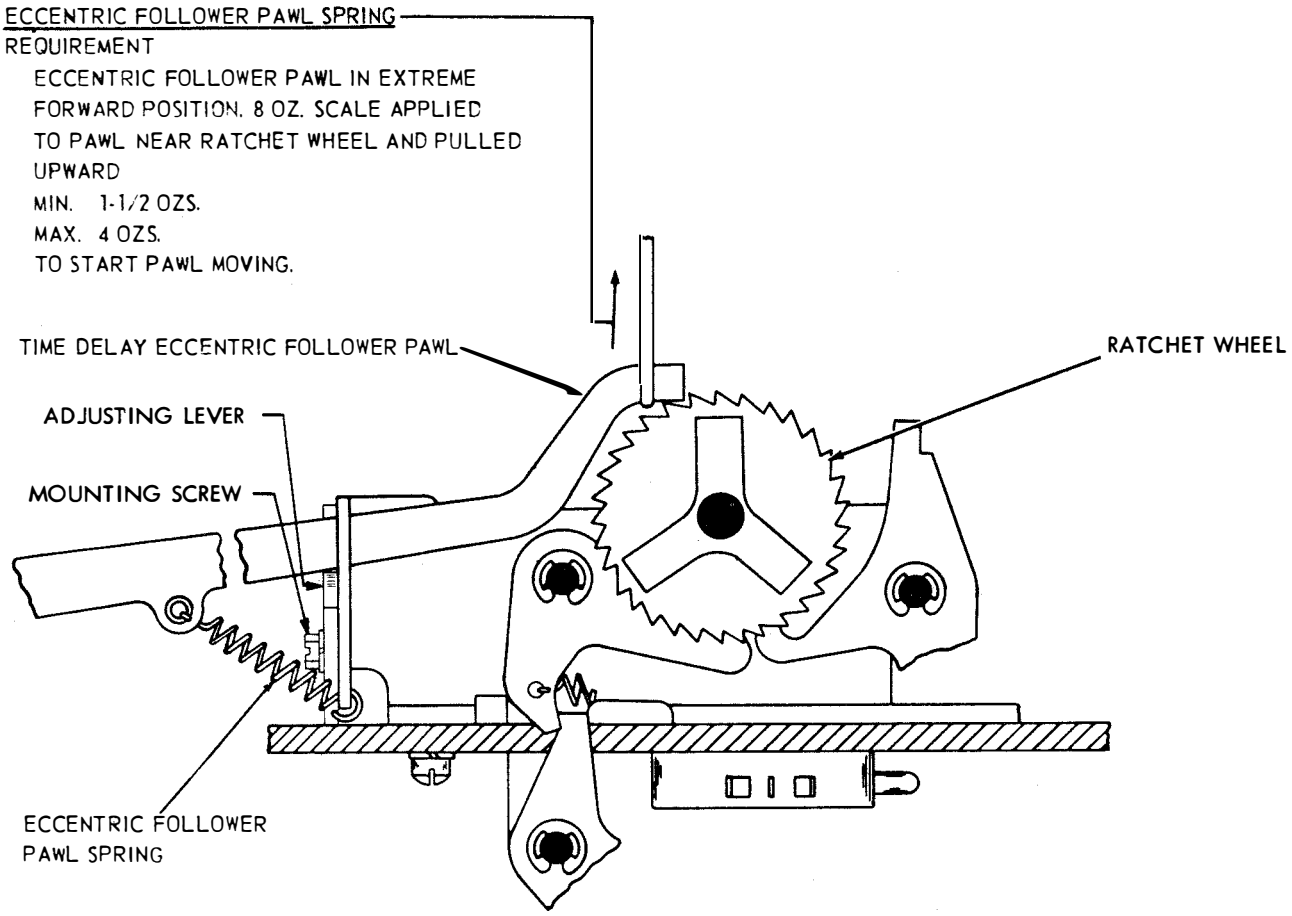
WITH TYPING UNIT ON BASE. DRIVE BRACKET EXTENSION IN REAR POSITION. CLEARANCE BETWEEN CONTACT PAWL AND LATCHING LEVER SHOULD BE MIN. 0.020 INCH.

TO ADJUST

REMOVE THE TYPING UNIT FROM THE BASE. LOOSEN THE TIME DELAY MOUNTING SCREWS. ROTATE THE RATCHET WHEELS UNTIL THE LATCH PAWL DROPS INTO THE INDENTS IN THE TWO RATCHET WHEELS. LIFT THE ECCENTRIC FOLLOWER PAWL UPWARD. TAKE UP THE PLAY BY PRESSING THE RATCHET WHEELS BACKWARD. WITH THE ECCENTRIC FOLLOWER PAWL AT THE END OF ITS EXTREME FORWARD TRAVEL, POSITION THE MECHANISM SO THAT THE POINT OF THE LOWER BEVELED EDGE OF THE FOLLOWER PAWL RESTS ON THE PEAK OF THE FIRST RATCHET-WHEEL TOOTH FORWARD OF A VERTICAL CENTERLINE THROUGH THE RATCHET WHEEL OR OVER TRAVELS THE PEAK BY NOT MORE THAN 0.010 INCH. RECHECK MINIMUM CLEARANCE OF 0.020 INCH WITH TYPER ON KEYBOARD BASE. IF NECESSARY, REFINE ADJUSTMENT

FIGURE 1-19. KEYBOARD OR BASE, TIME DELAY MECHANISM, LEFT SIDE VIEW

TIME DELAY MECHANISM



TIME DELAY DISABLING DEVICE
REQUIREMENT
DISABLE THE TIME DELAY MECHANISM WHEN NOT REQUIRED.
TO ADJUST
LOOSEN THE ADJUSTING LEVER MOUNTING SCREW AND PRESS DOWNWARD ON THE LEVER TO RAISE ECCENTRIC FOLLOWER OUT OF ENGAGEMENT WITH ITS RATCHET WHEEL.

NOTE: FOR ADJUSTMENT OF EARLIER DESIGN MECHANISMS SEE FIGURE 4-44

FIGURE 1-20. KEYBOARD OR BASE, TIME DELAY DISABLING DEVICE

LOCAL BACK SPACE MECHANISM

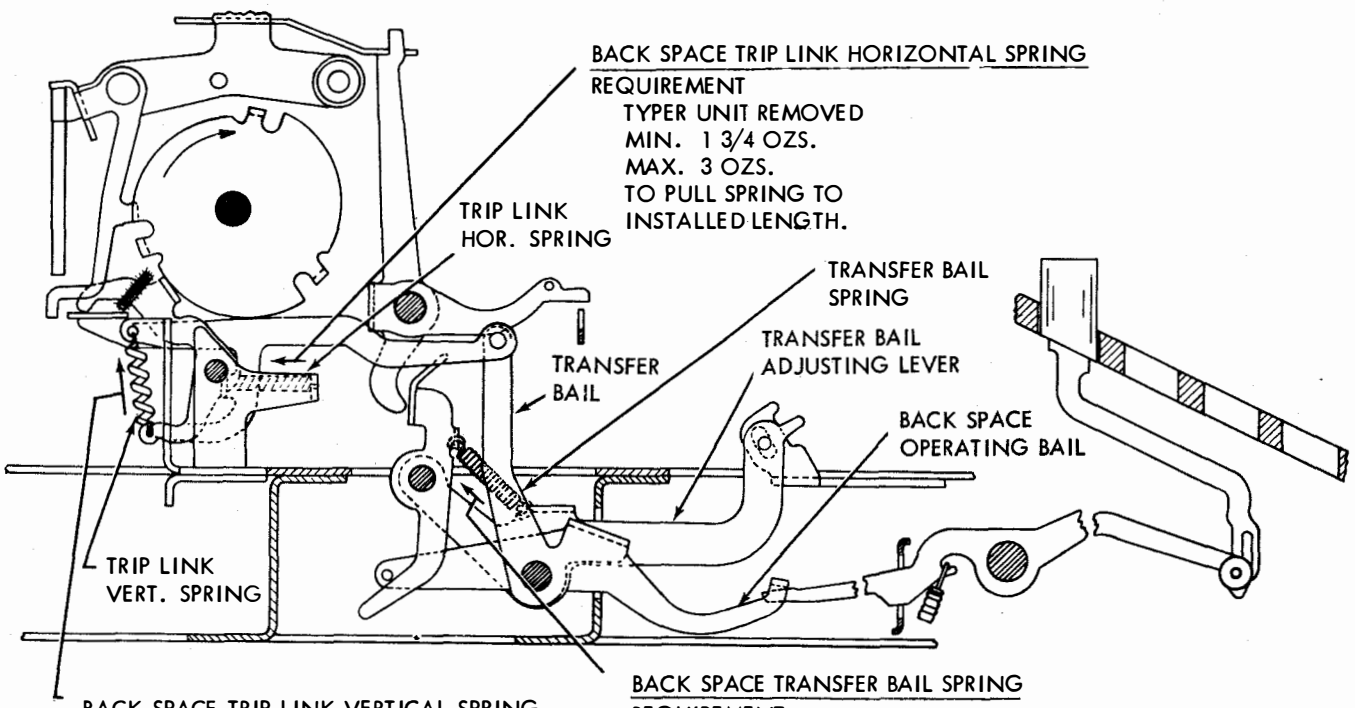
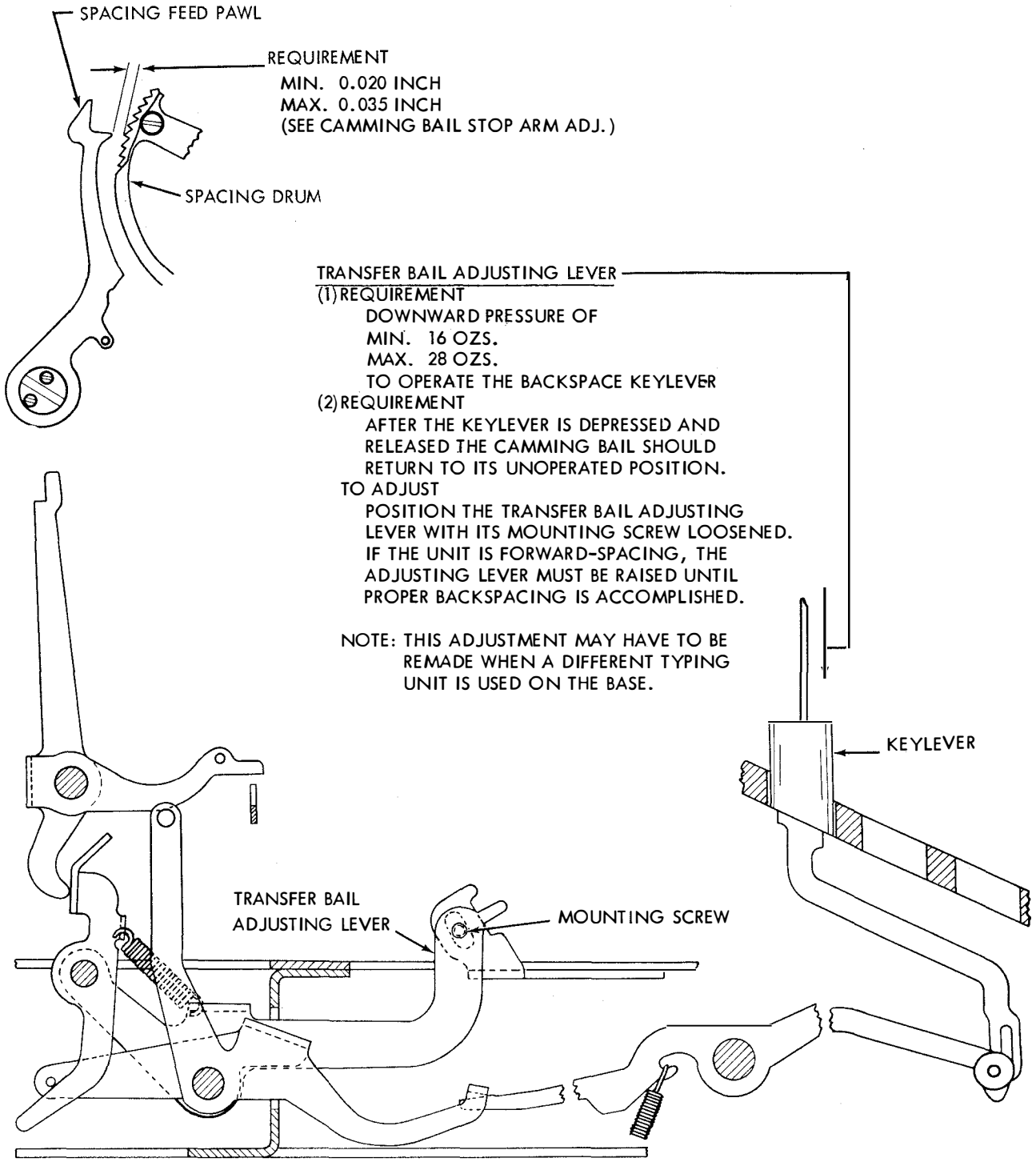


FIGURE 1-21. KEYBOARD, BACK SPACE MECHANISM

LOCAL BACK SPACE MECHANISM



NOTE: FOR EARLIER DESIGN SEE FIGURE 4-47.

FIGURE 1-22. KEYBOARD, BACK SPACE MECHANISM

LOCAL BACK SPACE MECHANISM

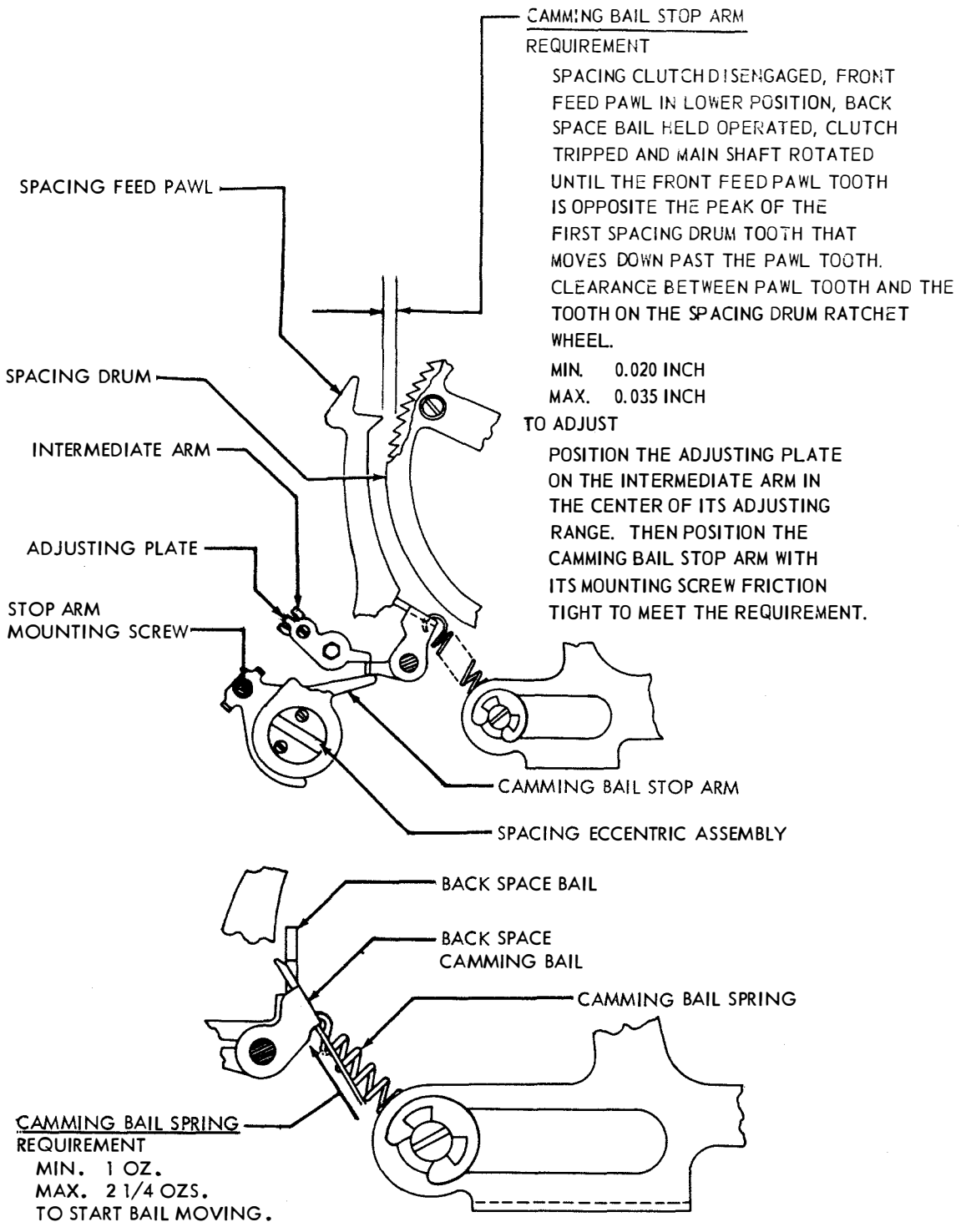


FIGURE 1-23. TYPING UNIT, BACK SPACE MECHANISM

REVERSE LINE FEED MECHANISM

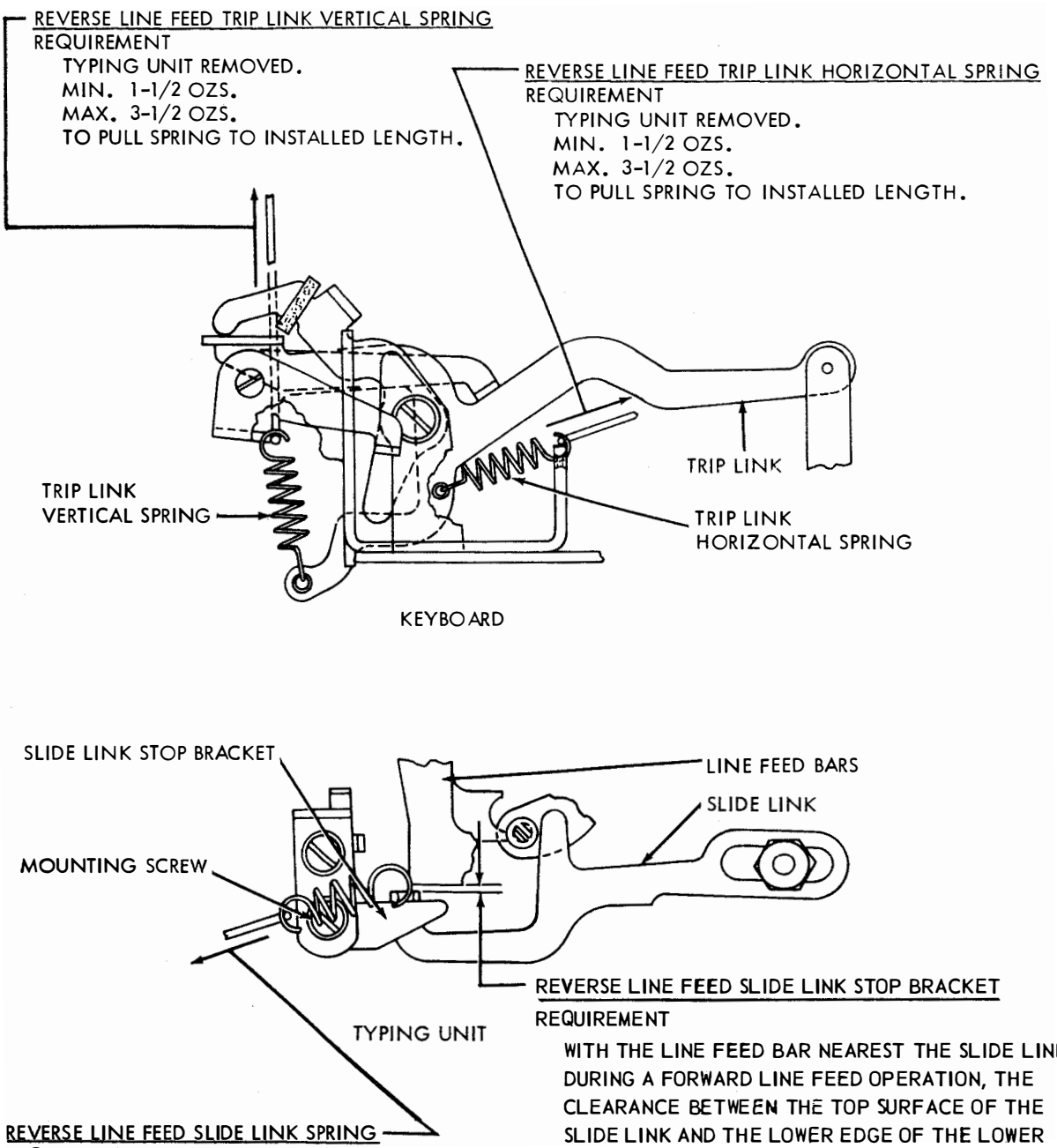


FIGURE 1-24. LOCAL REVERSE LINE FEED MECHANISM, LEFT VIEW

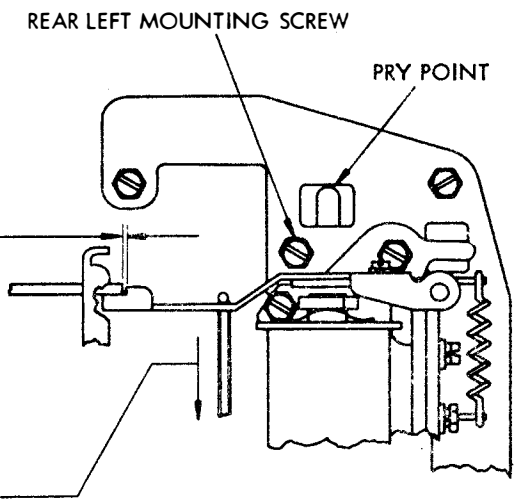
MOUNTING BRACKET (A)

TO CHECK
WITH MAGNET NOT ATTRACTED AND CLUTCH TRIP BAR IN FURTHEST LEFT POSITION.

REQUIREMENT
MIN. 0.005 INCH --- MAX. 0.015 INCH BETWEEN CLUTCH TRIP BAR AND ARMATURE LEVER.

TO ADJUST
POSITION MOUNTING BRACKET WITH THREE MOUNTING SCREWS LOOSE BY MEANS OF PRY POINT.

NOTE
TIGHTEN REAR LEFT MOUNTING SCREW AND MAKE MOUNTING BRACKET ADJUSTMENT (B).



MAGNET ARMATURE

TO CHECK
CLUTCH TRIP BAR IN EXTREME LEFT POSITION. HOOK 32 OZ. SCALE TO ARMATURE LEVER AS SHOWN. MEASURE AT RIGHT ANGLE TO ARMATURE LEVER AS INDICATED.

REQUIREMENT
MIN. 3 OZS. --- MAX. 5 OZS.
TO PULL ARMATURE LEVER FROM CLUTCH TRIP BAR.

MOUNTING BRACKET (B)

TO CHECK
WITH ARMATURE LEVER HELD AGAINST MAGNET POLE FACE AND CLUTCH TRIP BAR IN FURTHEST RIGHT POSITION.

REQUIREMENT
MIN. 0.005 INCH --- MAX. 0.015 INCH BETWEEN CLUTCH TRIP BAR AND ARMATURE LEVER.

TO ADJUST
WITH RIGHT REAR AND LEFT FRONT MOUNTING BRACKET SCREWS LOOSE POSITION MOUNTING BRACKET BY MEANS OF PRY POINT.

ARMATURE HINGE

REQUIREMENT
WITH ARMATURE IN ATTRACTED POSITION ARMATURE FLUSH WITH POLE FACE AND MAGNET BRACKET EXTENSION.

TO ADJUST
POSITION ARMATURE WITH HINGE BRACKET MOUNTING SCREW AND SPRING POST LOOSE.

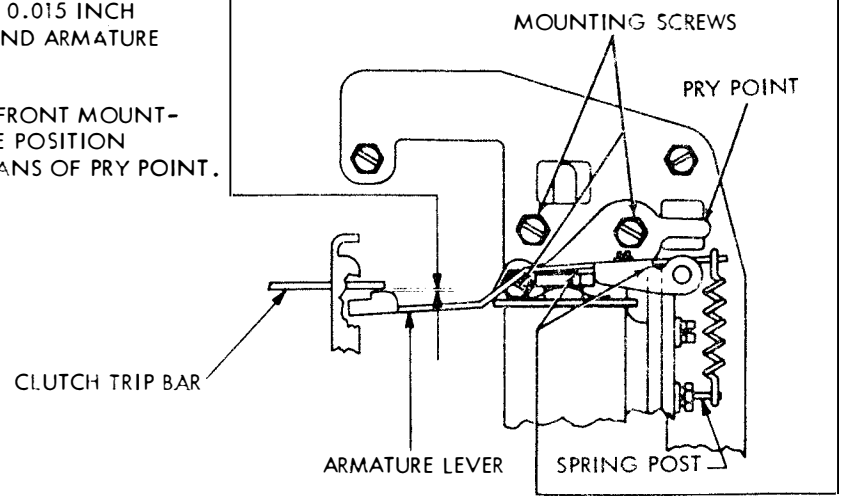


FIGURE 1-25. Keyboard, Synchronous Pulsed Magnet Mechanism

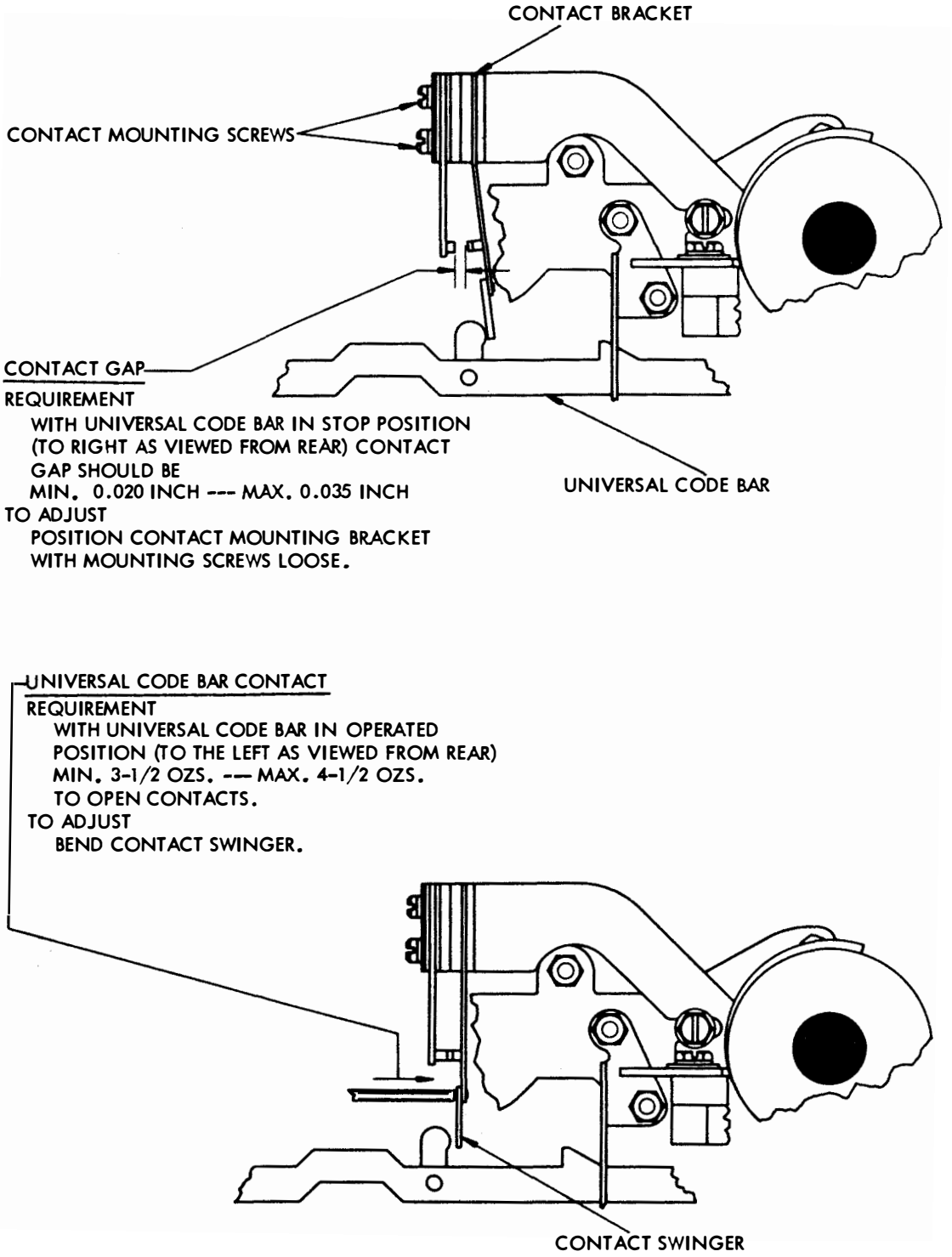
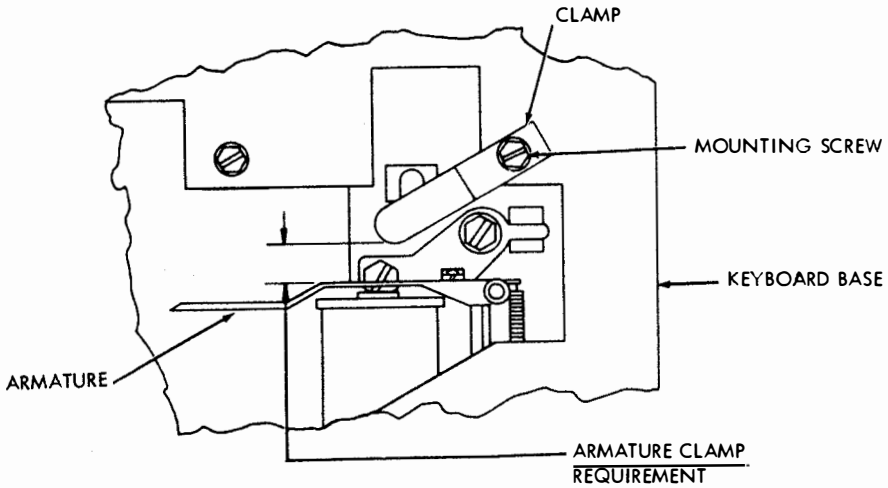


FIGURE 1-26. Keyboard, Conditioning Contact Mechanism



REQUIREMENT
WITH ARMATURE OPERATED, CLEARANCE BETWEEN ARMATURE CLAMP AND ARMATURE APPROX. 3/8 INCH

TO ADJUST
POSITION CLAMP WITH ITS MOUNTING SCREW LOOSENED.

FIGURE 1-27.

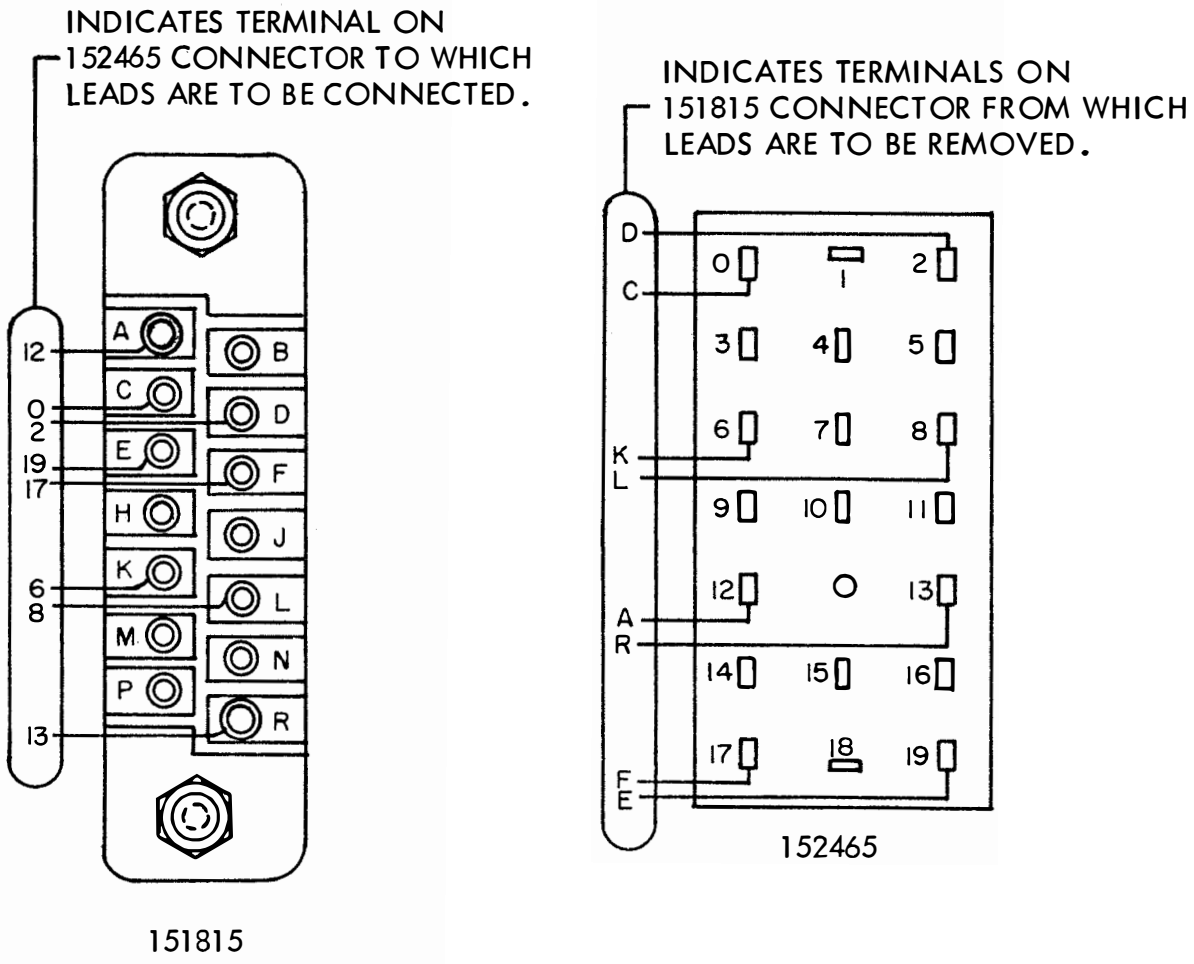


FIGURE 1. WIRING CHANGES FOR POWER DISTRIBUTION PANEL SB-154/UG

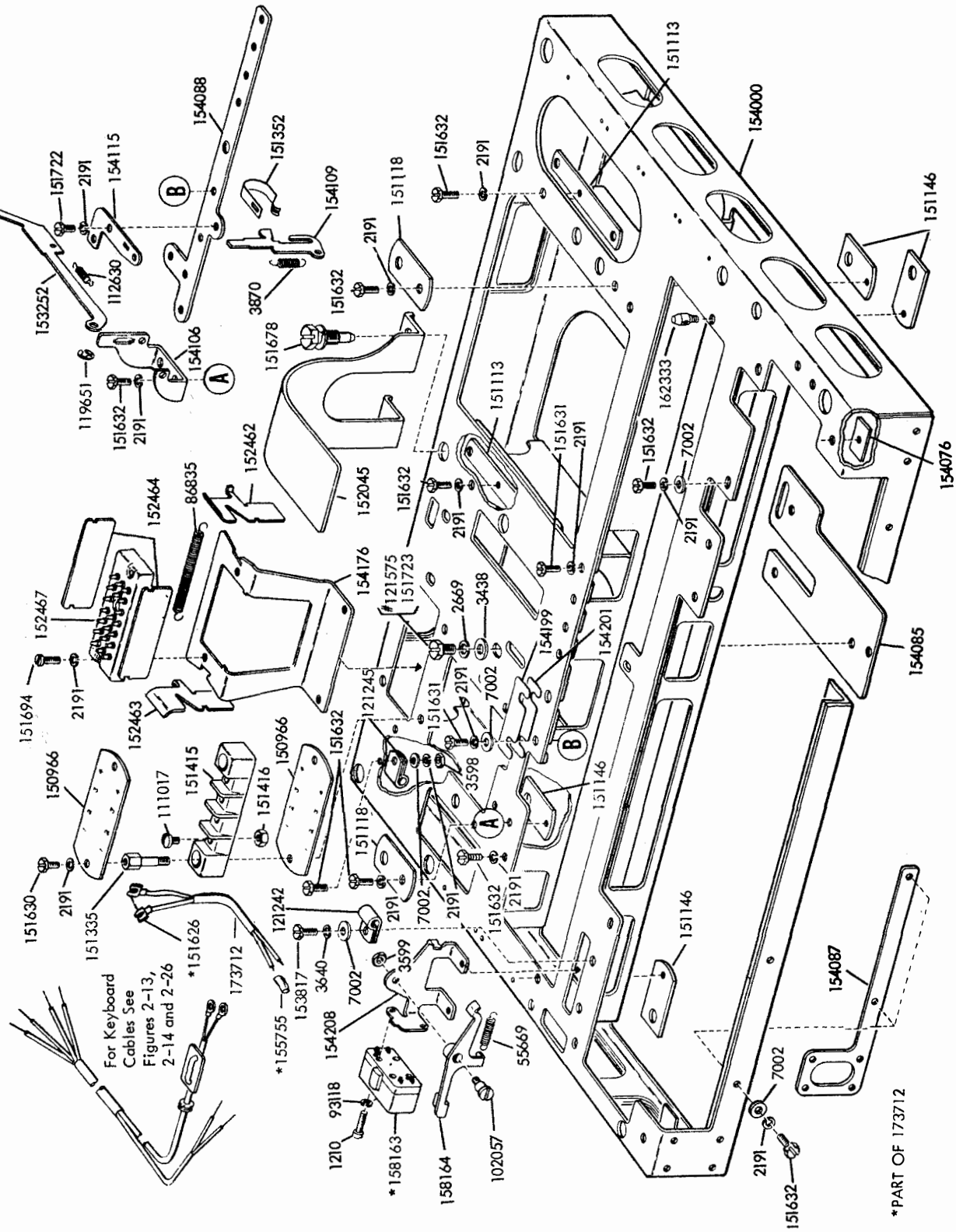


FIGURE 2-1. KEYBOARD BASE MECHANISM

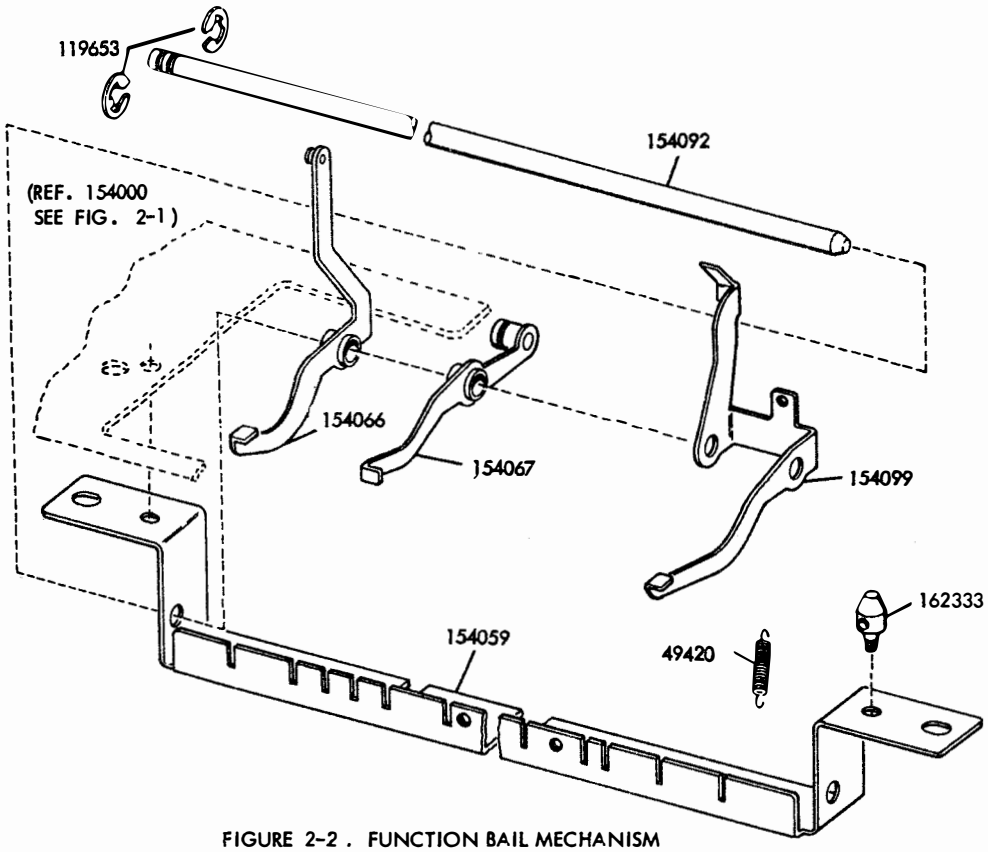
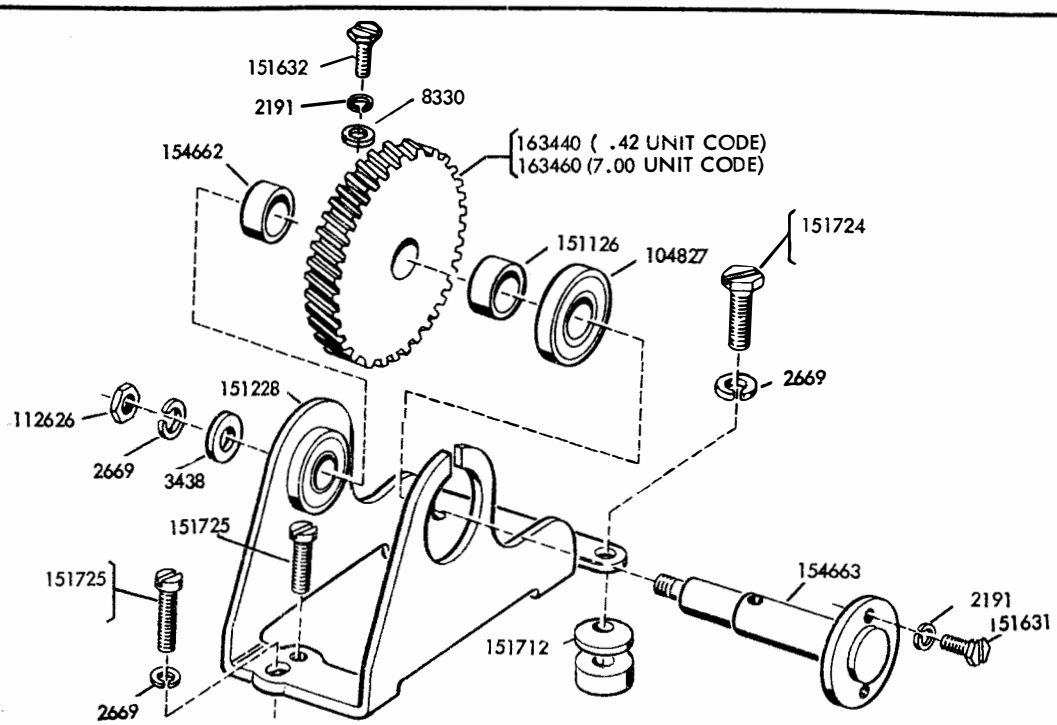


FIGURE 2-2 . FUNCTION BAIL MECHANISM



FOR DRIVING GEAR SEE CHART IN TABLE 2.

FIGURE 2-3 INTERMEDIATE GEAR MECHANISM

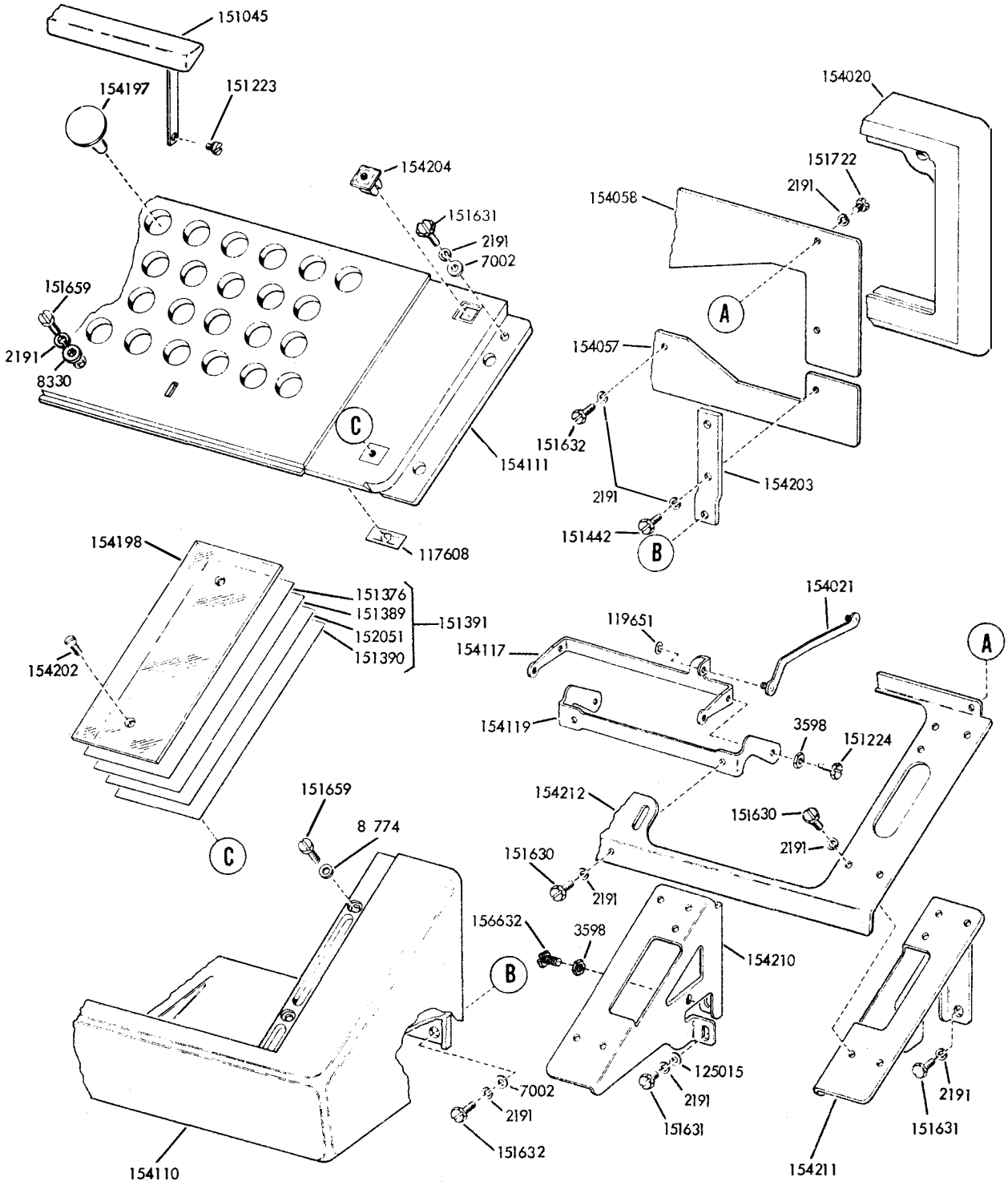


FIGURE 2-4. KEYBOARD MECHANISM

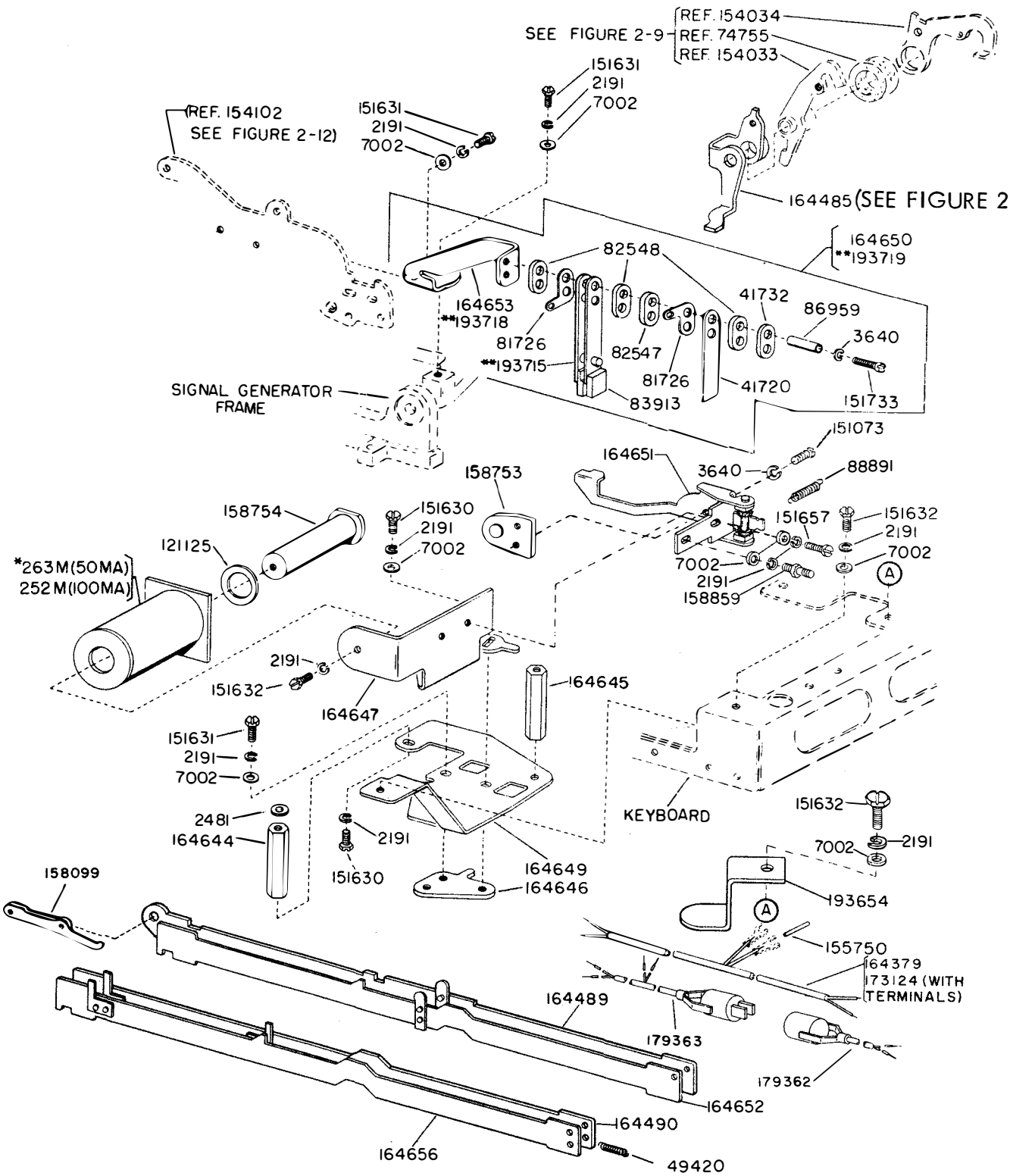

REF. 154034
REF. 74755
REF. 154033
SEE FIGURE 2-9
151631
2191
7002
(REF. 154102
SEE FIGURE 2-12)
164485 (SEE FIGURE 2-9)
164650
**193719
82548
41732
86959
3640
164653
**193718
81726
**193715
82547
81726
41720
83913
151733
SIGNAL GENERATOR
FRAME
151073
164651
3640
88891
158753
158754
151630
2191
7002
151657
151632
121125
*263M(50MA)
252M(100MA)
158859
2191
151632
164647
164645
KEYBOARD
2481
164644
2191
151630
164649
164646
158099
193654
155750
164379
173124 (WITH
TERMINALS)
164489
179363
179362
164652
164490
164656
49420

FIGURE 2-5.

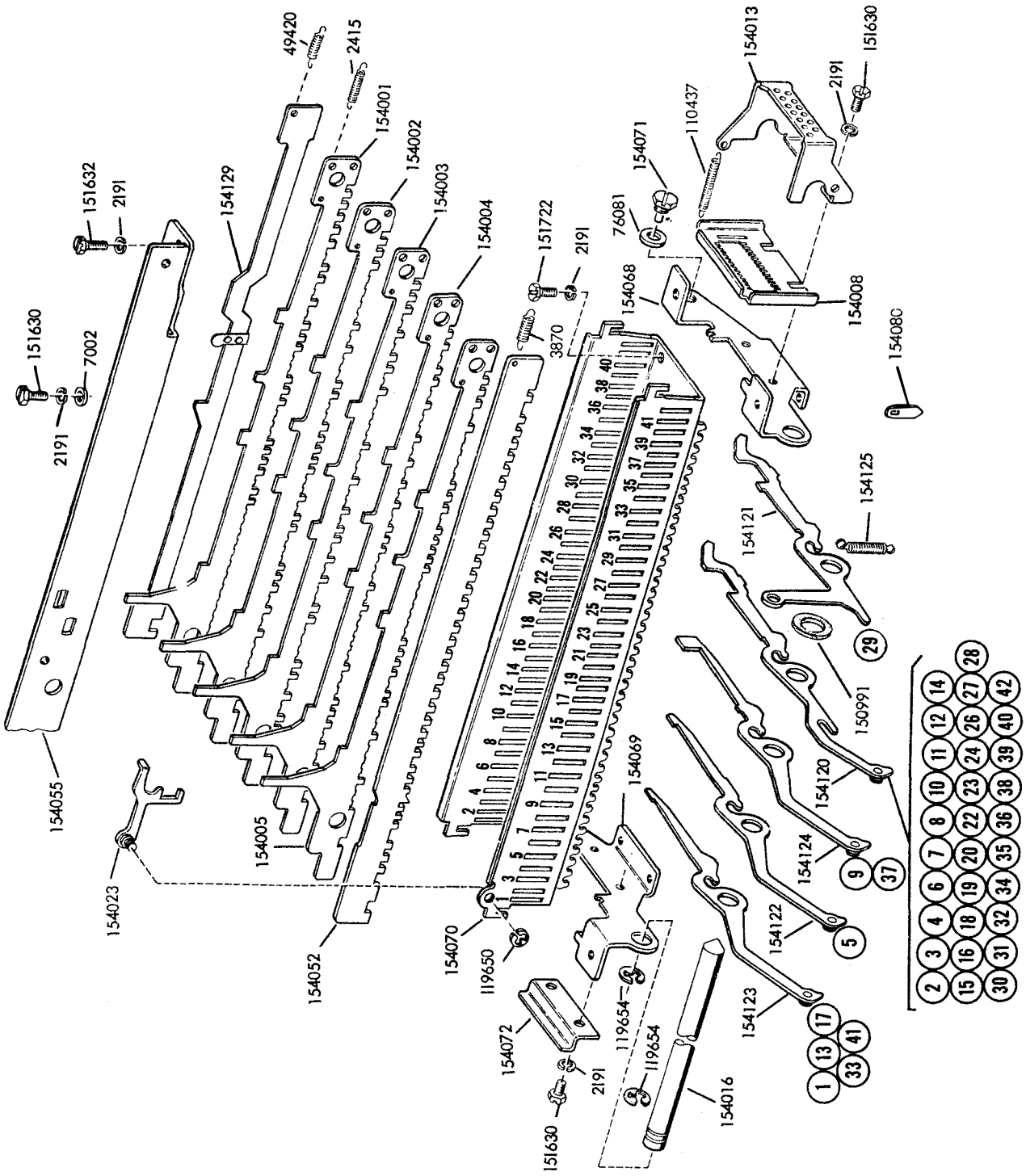


FIGURE 2-6. CODE BAR MECHANISM

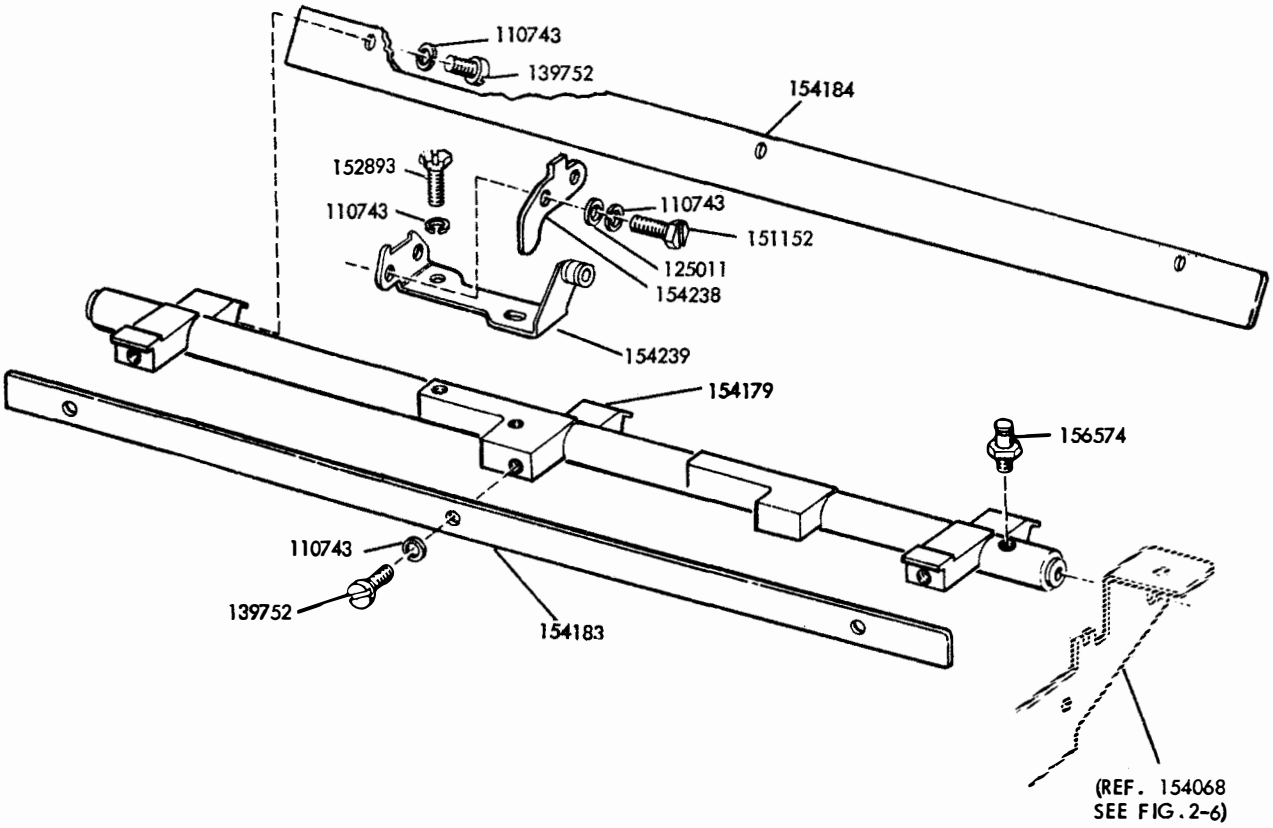


FIGURE 2-7. UNIVERSAL BAIL MECHANISM

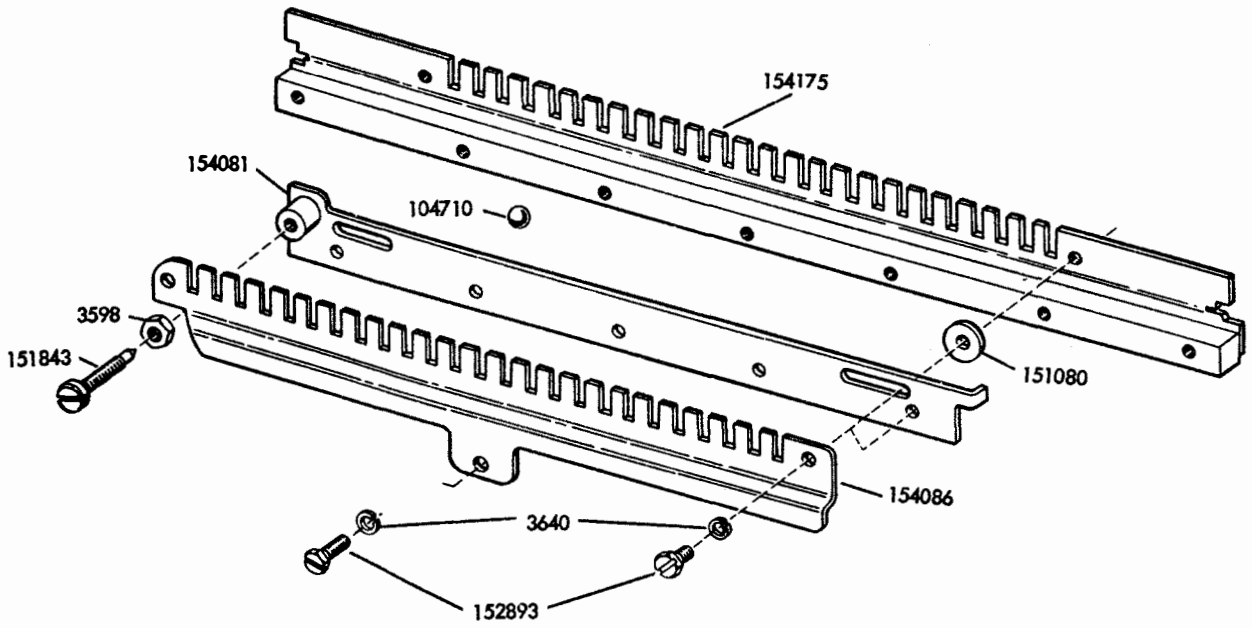
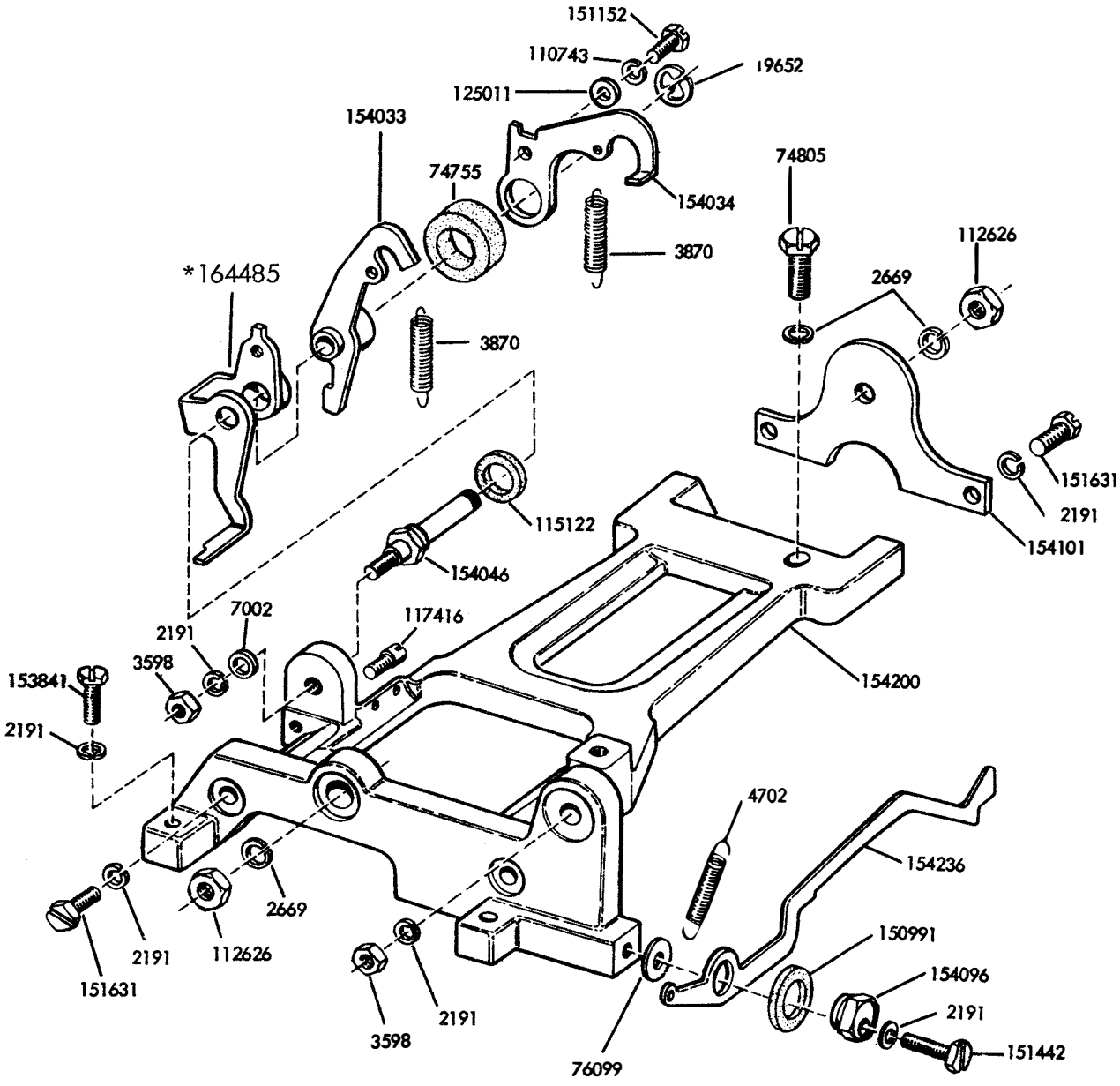


FIGURE 2-8. BALL LOCK MECHANISM



*SEE FIGURE 2-5

FIGURE 2-9. SIGNAL GENERATOR FRAME MECHANISM

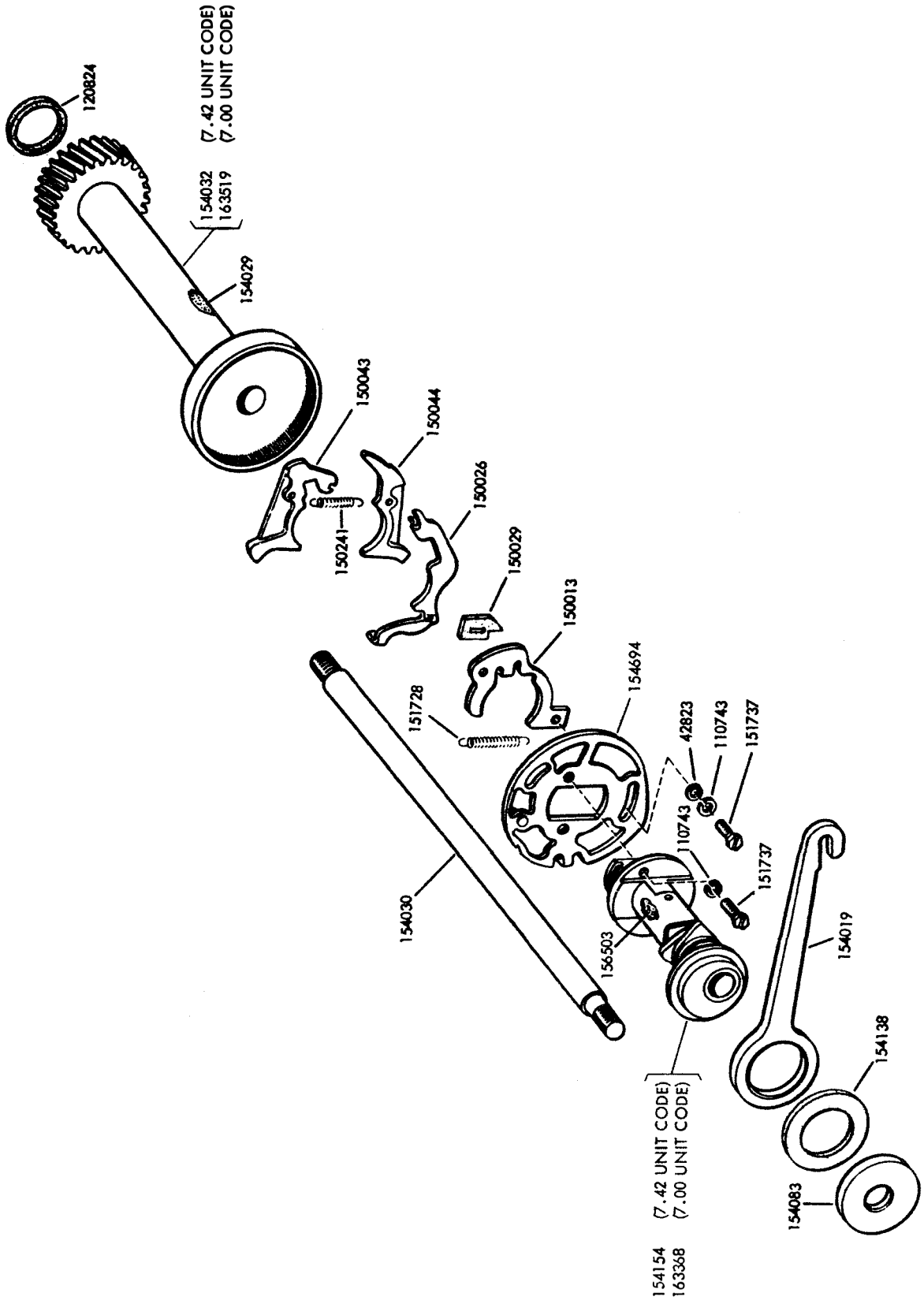


FIGURE 2-10. SIGNAL GENERATOR SHAFT MECHANISM

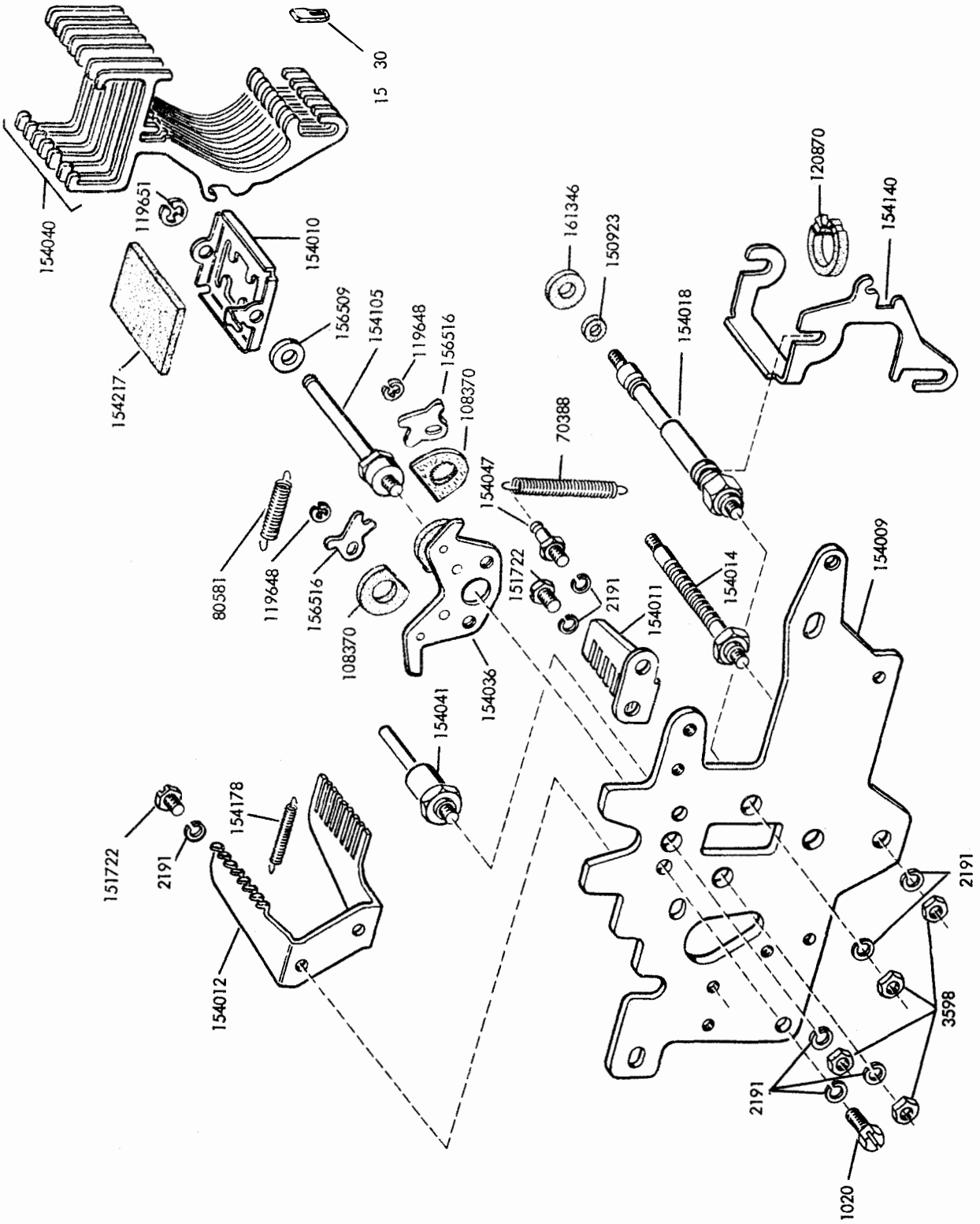


FIGURE 2-11. SIGNAL GENERATOR FRONT PLATE MECHANISM.

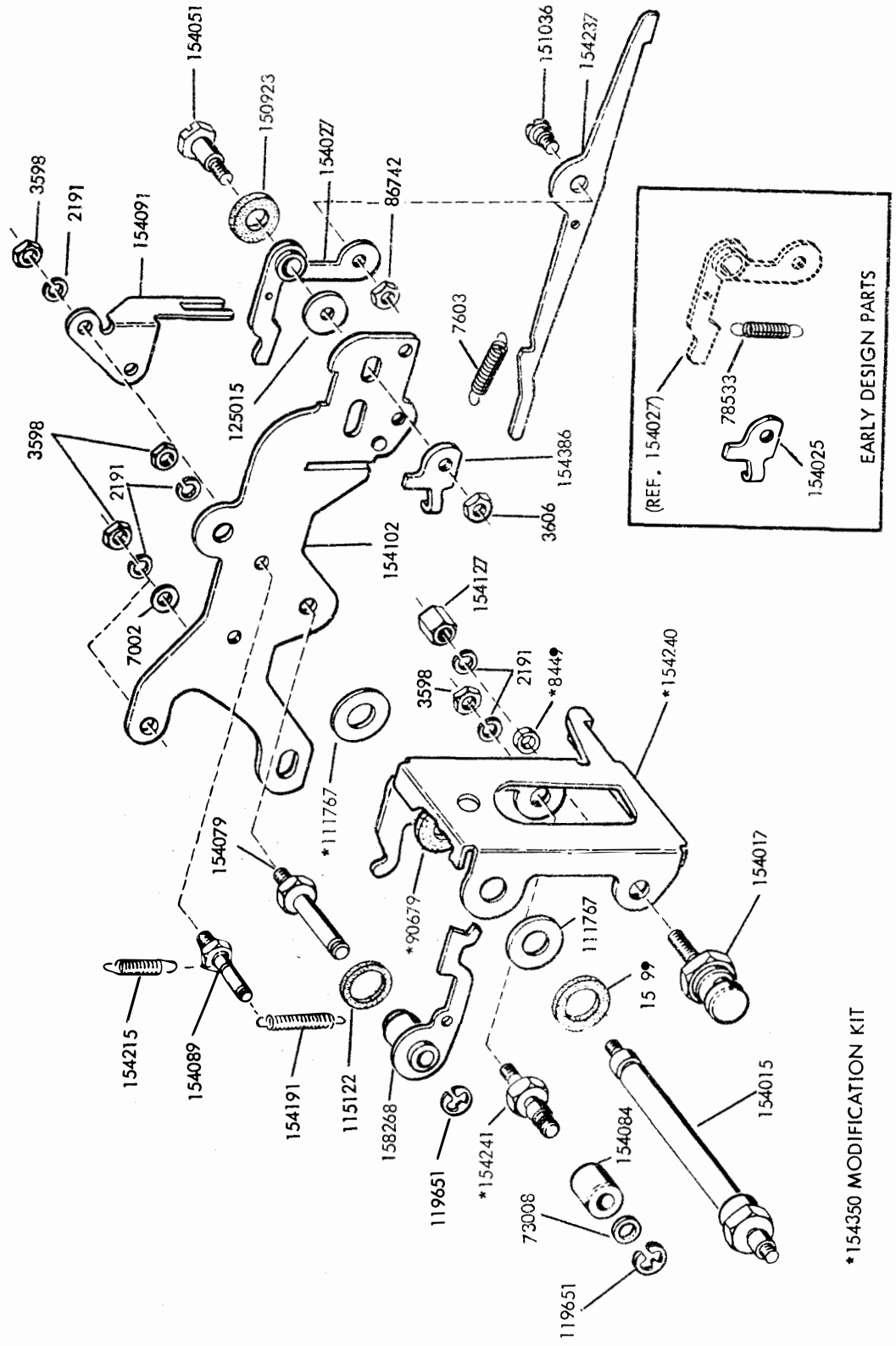
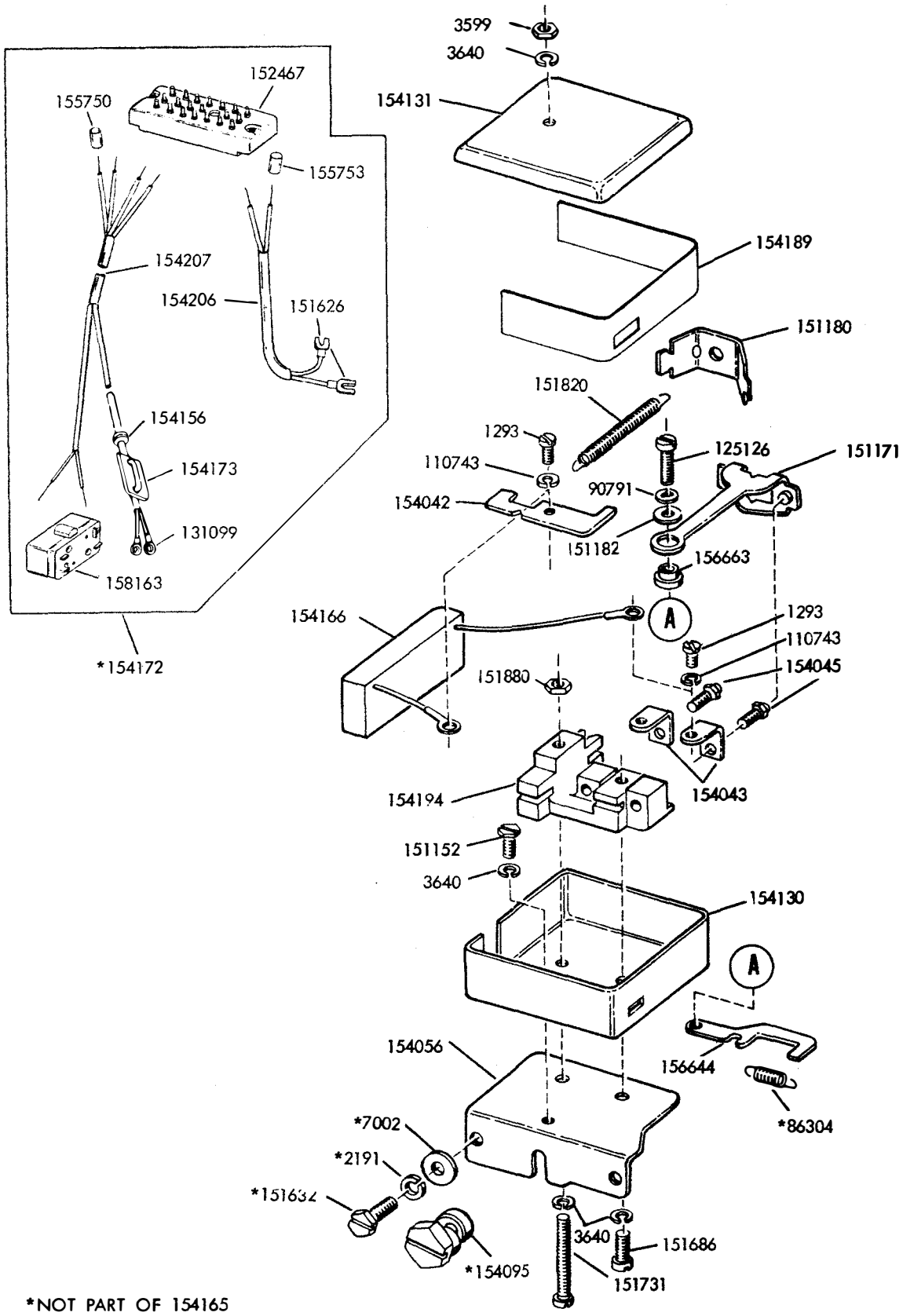


FIGURE 2-12. SIGNAL GENERATOR REAR PLATE MECHANISM



*NOT PART OF 154165

FIGURE 2-13. 154165 CONTACT BOX ASSEMBLY WITH ARC SUPPRESSION - NEUTRAL TRANSMISSION

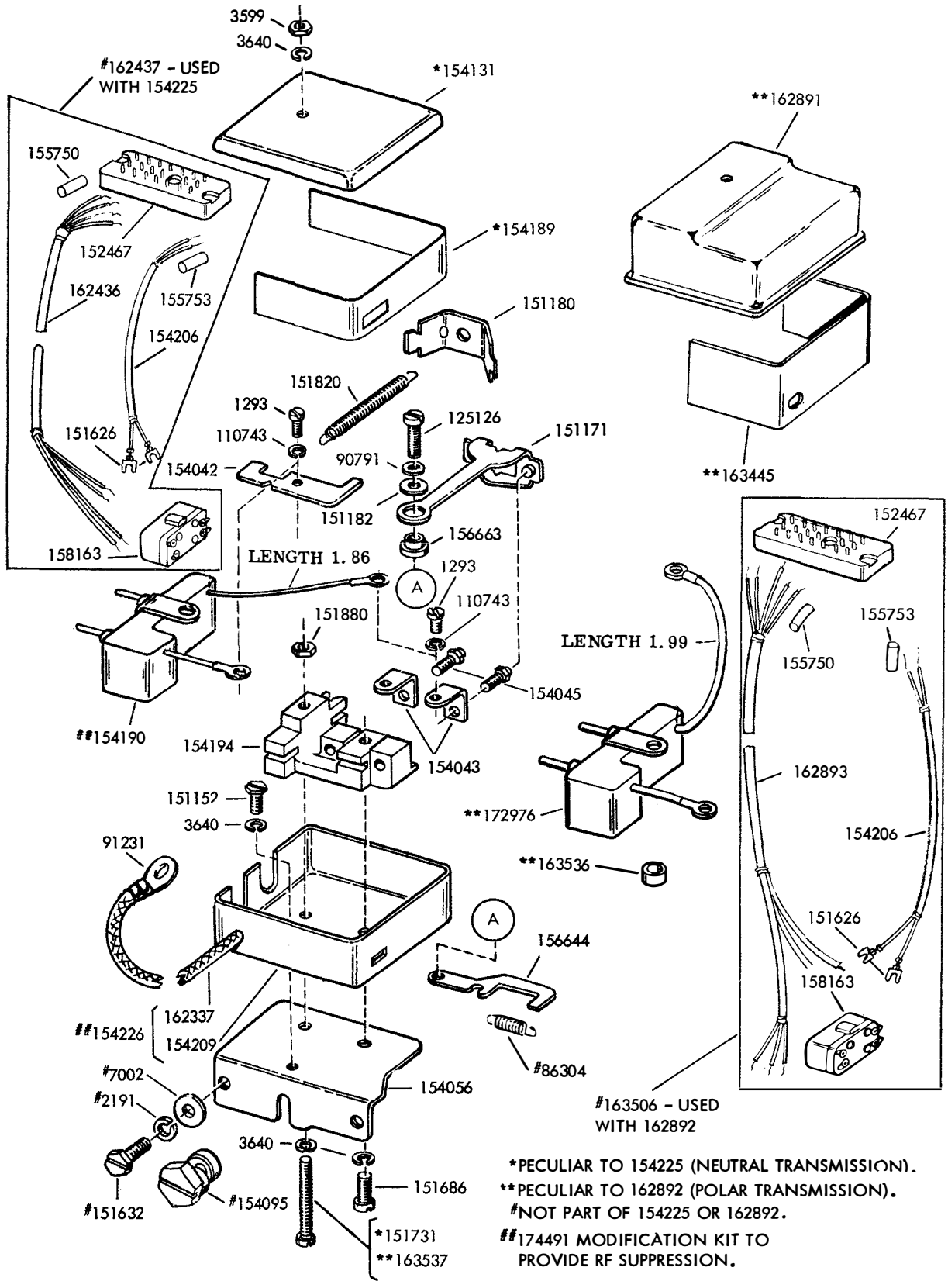


FIGURE 2-14. 154225 AND 162892 CONTACT BOX ASSEMBLIES WITH RF SUPPRESSION - NEUTRAL AND POLAR TRANSMISSION

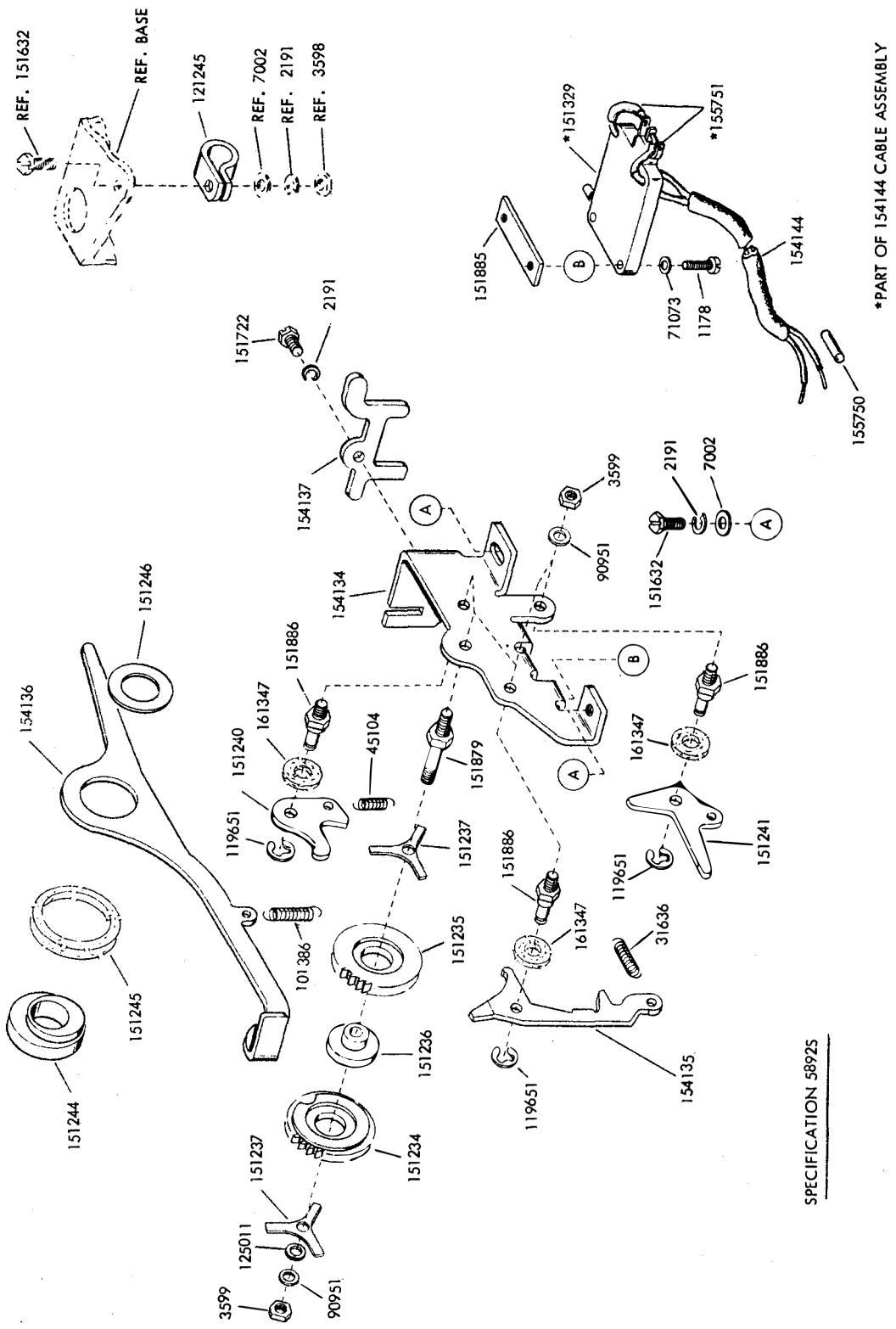


FIGURE 2-15 154142 MODIFICATION KIT TO PROVIDE KEYBOARD WITH TIME DELAY MECHANISM

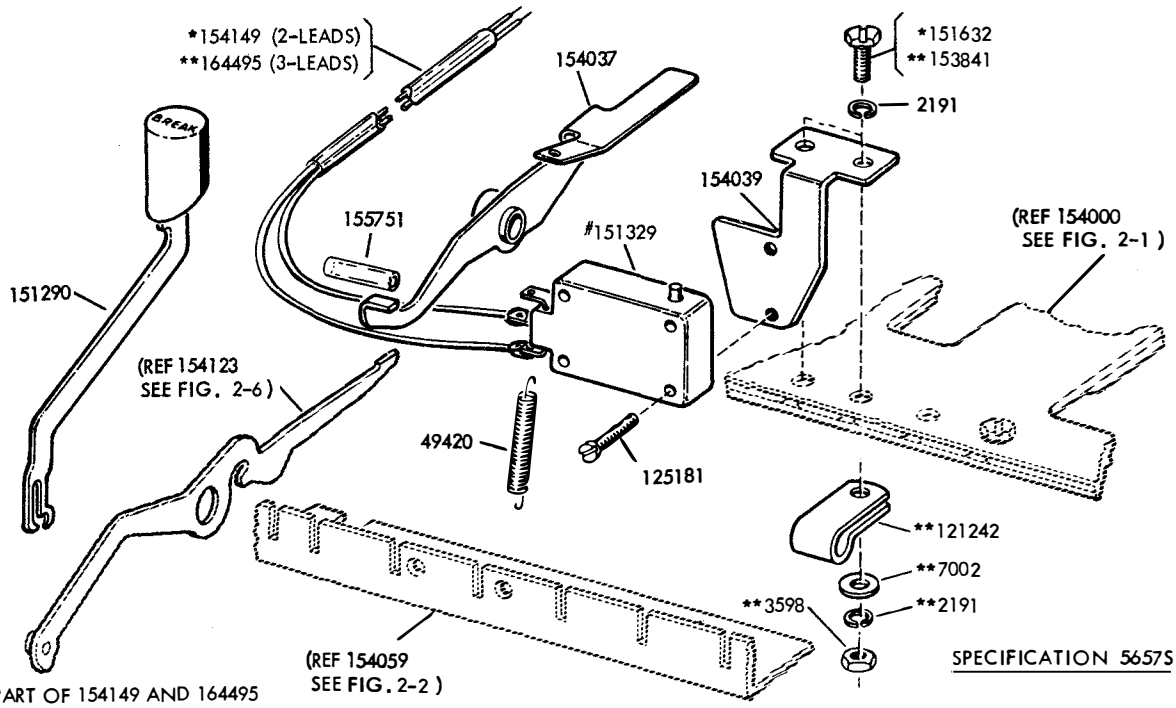
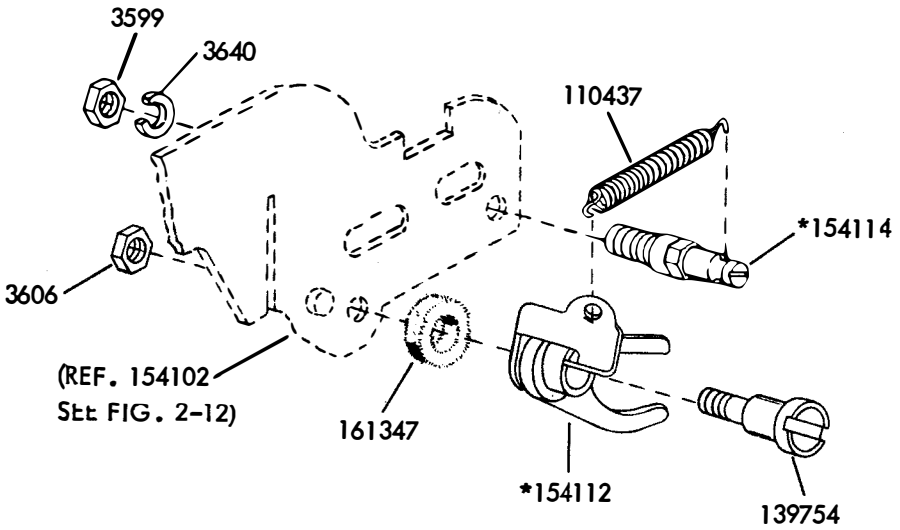


FIGURE 2-16. 154141 AND 164494 MODIFICATION KIT TO PROVIDE ELECTRICAL SIGNAL LINE BREAK MECHANISM



*NOT AVAILABLE (ORDER 163775).

FIGURE 2-17. OLD STYLE REPEAT ON SPACE MECHANISM

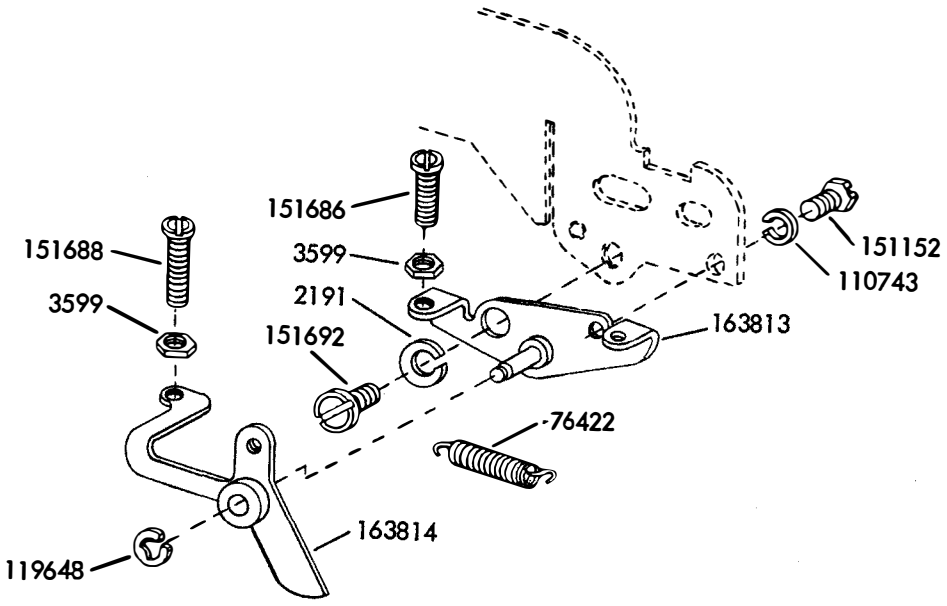


FIGURE 2-18. 163775 MODIFICATION KIT TO PROVIDE REPEAT ON SPACE MECHANISM

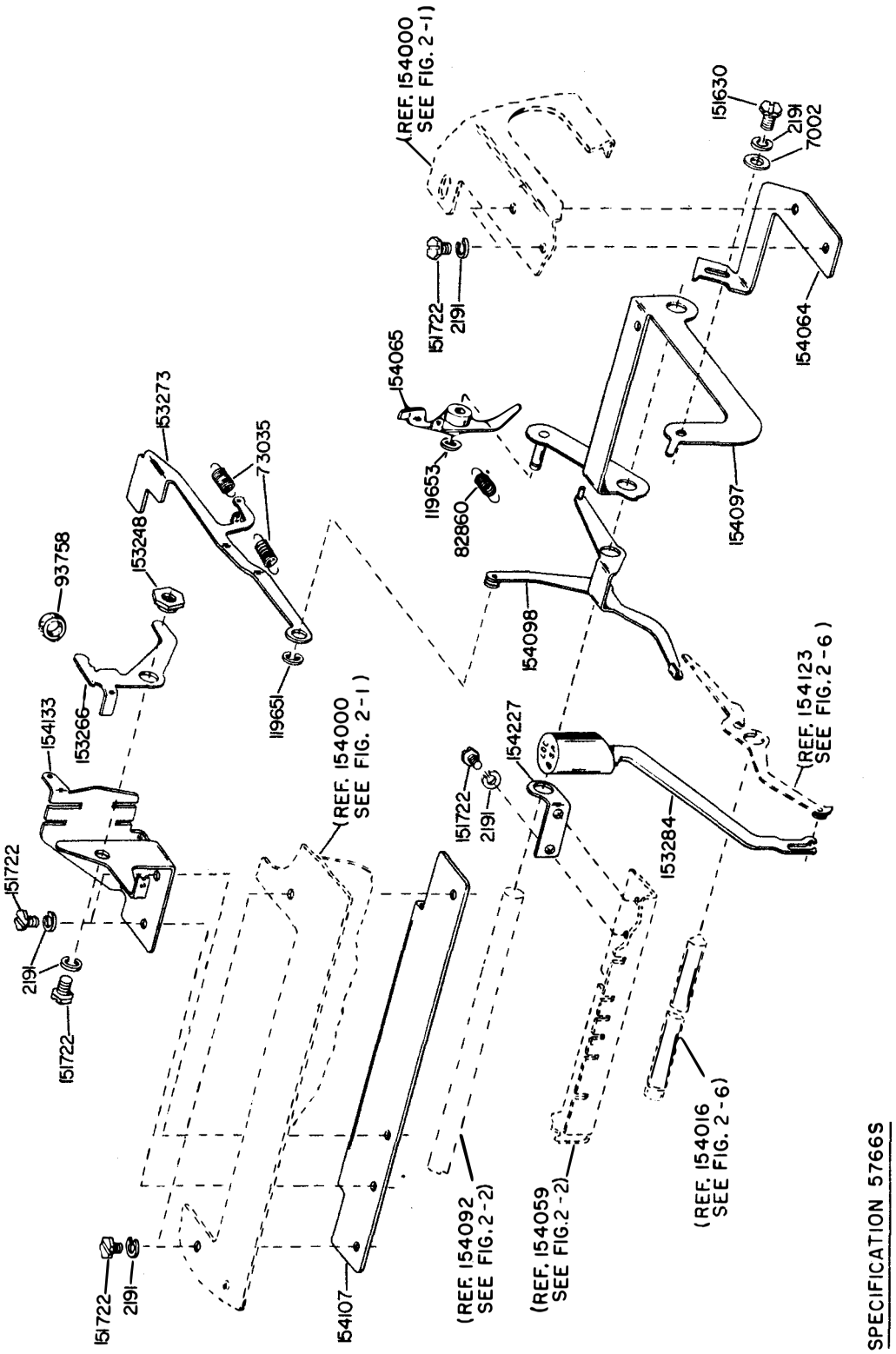


FIGURE 2-19. 154146 MODIFICATION KIT TO PROVIDE LOCAL BACK SPACE MECHANISM

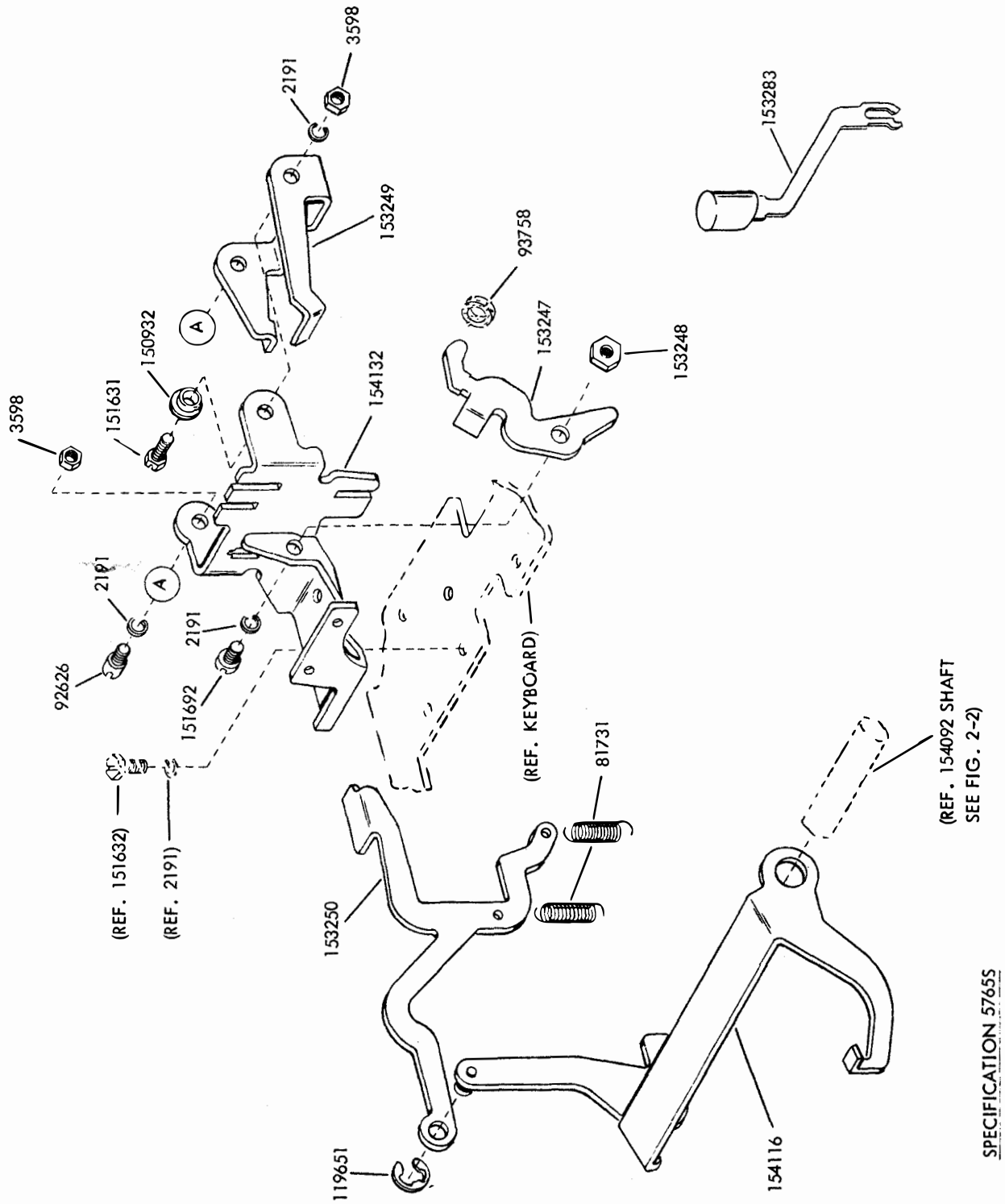
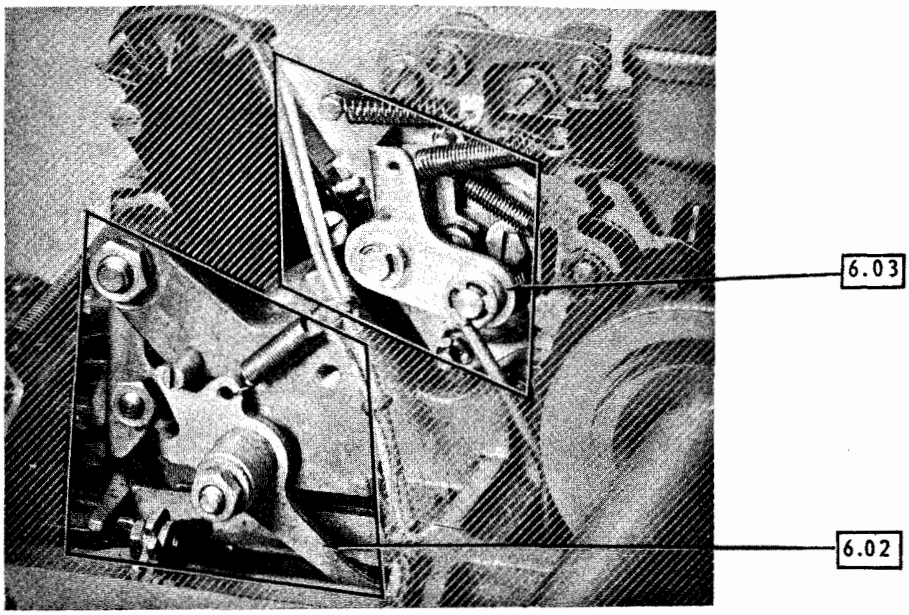


FIGURE 2-20. 154145 MODIFICATION KIT TO PROVIDE LOCAL REVERSE LINE FEED MECHANISM

NUMERICAL INDEX - SECTION 2 (Page Numbers Do Not Apply)

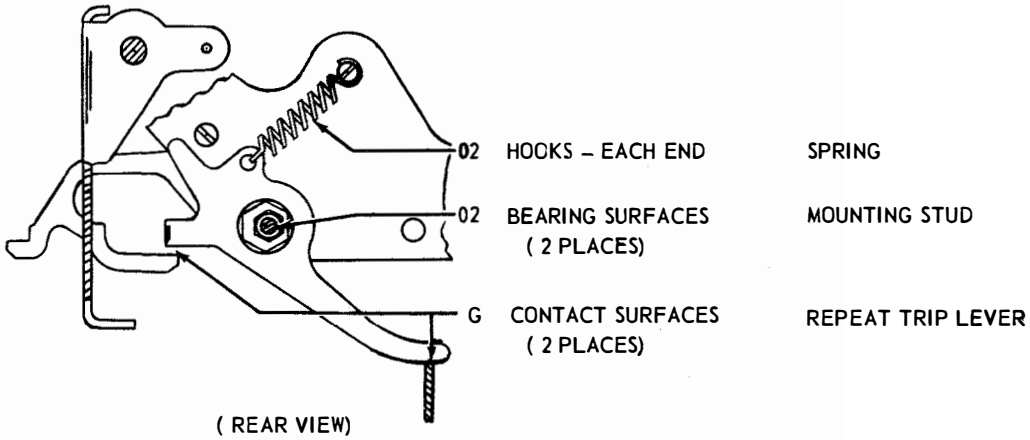
6. VARIABLE FEATURES

6.01 REST KEYBOARD IN UPRIGHT POSITION



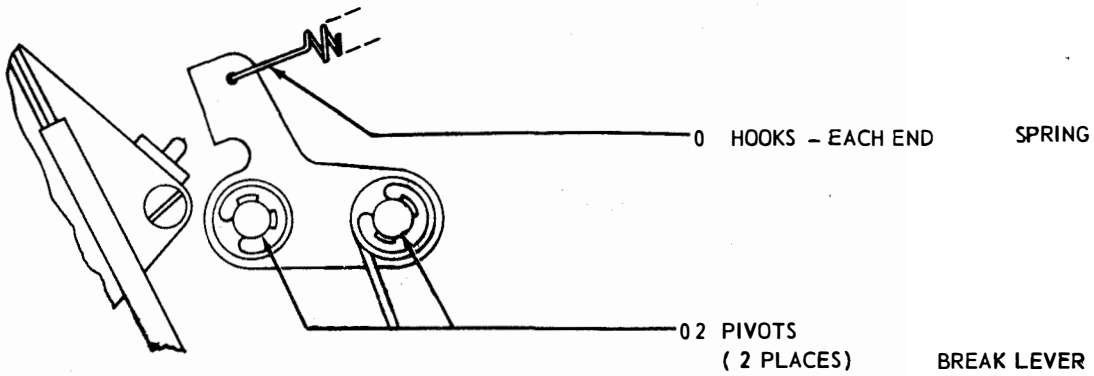
(REAR VIEW)

6.02 REPEAT ON SPACE MECHANISM



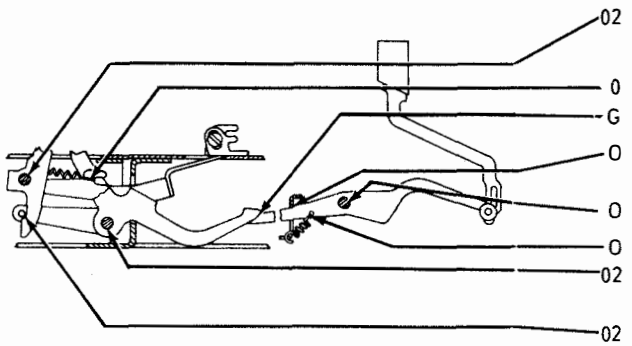
(REAR VIEW)

6.03 SIGNAL LINE BREAK MECHANISM (ELECTRICAL)



(REAR VIEW)

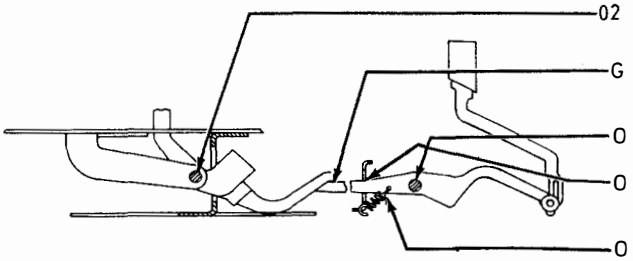
6.23 LOCAL BACK SPACE MECHANISM



02	BEARING SURFACE	LOCAL BACK SPACE TRANSFER BAIL
0	HOOKS–EACH END	SPRING
G	ENGAGING SURFACE	FUNCTION LEVER
0	GUIDE SLOTS (2 PLACES)	GUIDE BRACKET
0	BEARING SURFACE	FUNCTION LEVER
0	HOOKS–EACH END	SPRING
02	BEARING SURFACES (2 PLACES)	OPERATING BAIL
02	ENGAGING SURFACE	OPERATING BAIL

(LEFT SIDE VIEW)

6.24 LOCAL REVERSE LINE FEED MECHANISM

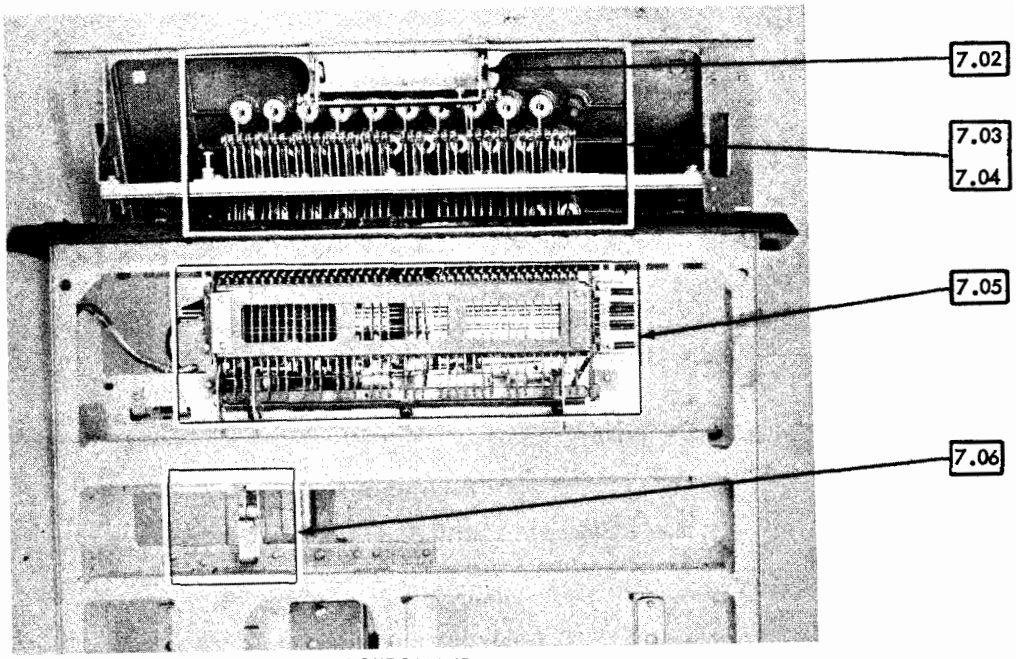


02	BEARING SURFACE	LOCAL REVERSE LINE FEED OPERATING BAIL
G	ENGAGING SURFACE	FUNCTION LEVER
0	BEARING SURFACE	FUNCTION LEVER
0	GUIDE SLOTS (2 SLOTS)	FUNCTION LEVER
0	HOOKS–EACH END	SPRING

(LEFT SIDE VIEW)

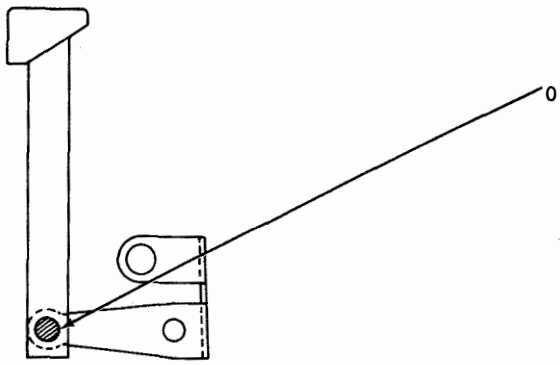
7. NEW DESIGN KEYBOARD

7.01 REST KEYBOARD BOTTOM SIDE UP

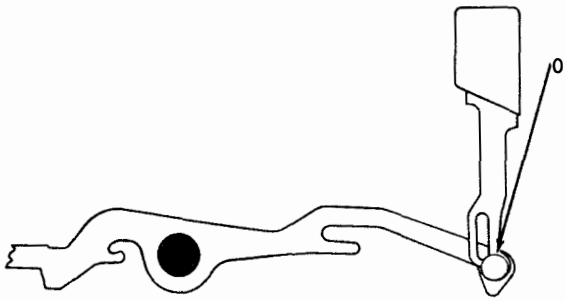


BOTTOM VIEW

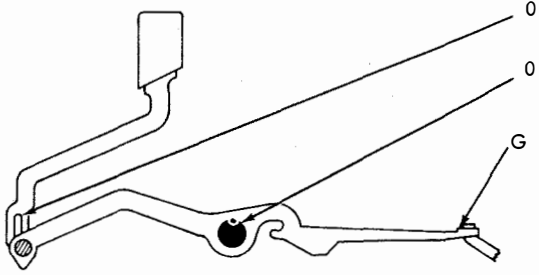
7.02 SPACE BAR MECHANISM



7.03 KEYLEVER MECHANISM

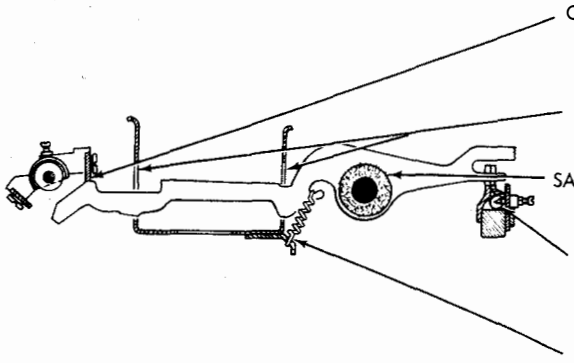


7.04 BREAK LEVER MECHANISM



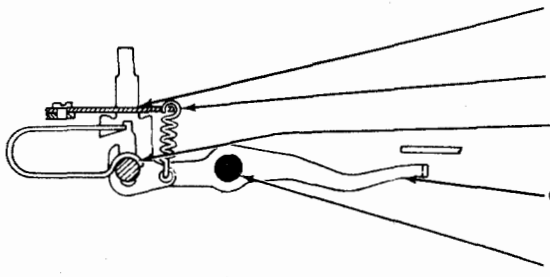
0	ENGAGING SURFACE	BREAK KEYLEVER
0	BEARING SURFACE	FUNCTION LEVER
G	CONTACT SURFACE	BREAK LEVER

7.05 CODE LEVER MECHANISM



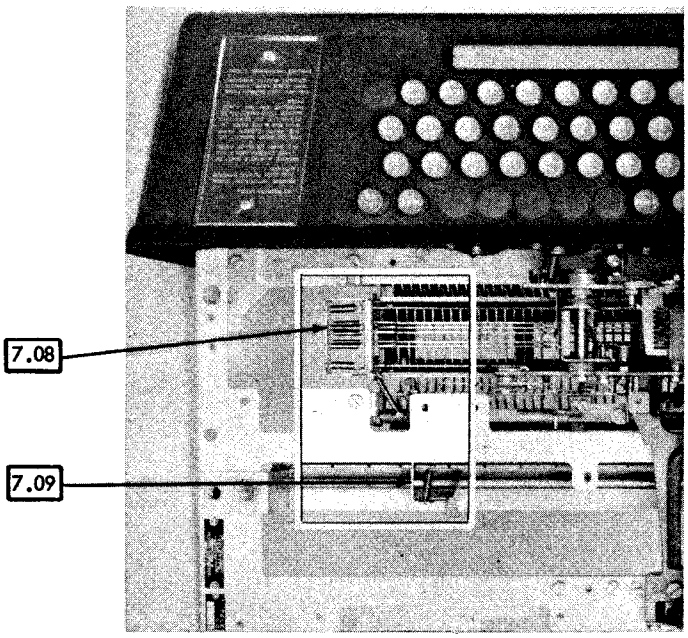
G	CONTACTING SURFACE (32 LEVERS)	CODE LEVER UNIVERSAL BAIL
0	GUIDE SLOTS (32 LEVERS)	CODE LEVERS
SAT	FELT WASHERS (6 WASHERS)	CODE LEVER SHAFT
0	BEARING SURFACE (32 WEDGES)	LOCK BALL TRACK
0	HOOKS-EACH END (40 SPRINGS)	SPRING

7.06 KEYBOARD LOCK MECHANISM



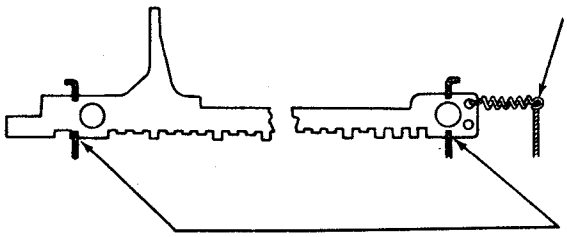
0	GUIDE SLOT	KEYBOARD LOCK PLUNGER
0	HOOKS-EACH END	SPRING
0	BEARING SURFACE	KEYBOARD LOCK LEVER
G	ENGAGING SURFACE	KEYBOARD LOCK FUNCTION LEVER
0	BEARING SURFACE	FUNCTION BAIL

7.07 REST KEYBOARD IN UPRIGHT POSITION



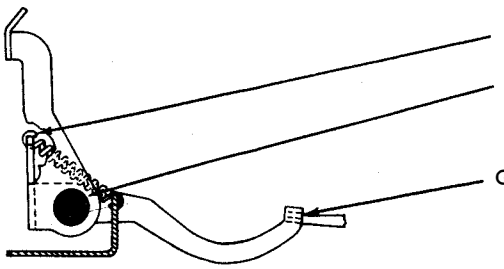
TOP VIEW

7.08 CODE BAR MECHANISM



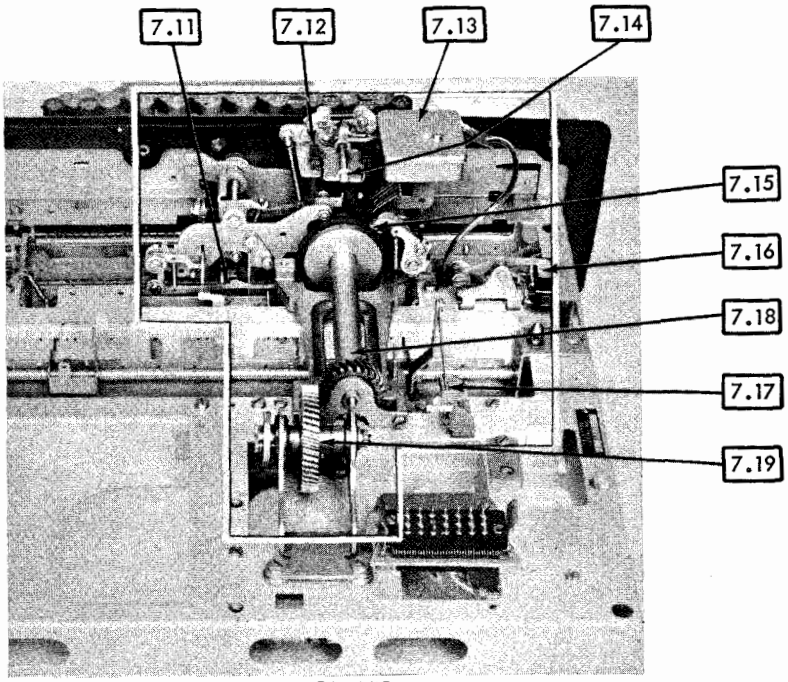
0	HOOKS-EACH END (7 SPRINGS)	SPRING
0	GUIDE SLOTS (LEFT AND RIGHT-TOP AND BOTTOM)	CODE BAR GUIDES

7.09 LOCAL CARRIAGE RETURN MECHANISM



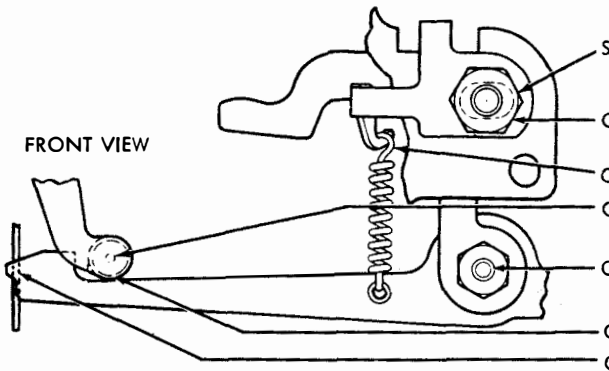
0	HOOKS-EACH END	SPRING
0	BEARING SURFACE (2 PLACES)	LOCAL CARRIAGE RETURN FUNCTION BAIL
G	ENGAGING SURFACE	LOCAL CARRIAGE RETURN FUNCTION LEVER

7.10 SIGNAL GENERATOR MECHANISM REST KEYBOARD IN UPRIGHT POSITION



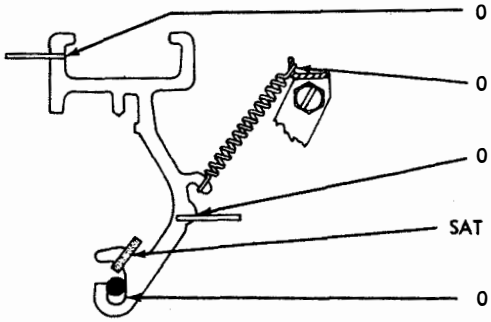
REAR VIEW

7.11 NON-REPEAT LEVER MECHANISM



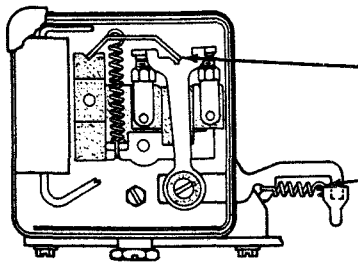
SAT	FELT WASHER (REAR VIEW)	NON-REPEAT LEVER CRANK
O2	BEARING SURFACE	NON-REPEAT LEVER CRANK
O	HOOKS - EACH END	SPRING
O	BEARING SURFACE	CODE BAR BAIL ROLLER
O2	BEARING SURFACE	NON-REPEAT LEVER
G	ENGAGING SURFACE	NON-REPEAT LEVER
C2	GUIDE SLOT	NON-REPEAT LEVER

7.12 TRANSFER LEVER MECHANISM



0	GUIDE SLOTS	TRANSFER LEVERS (7 LEVERS)
0	HOOKS-EACH END (7 SPRINGS)	SPRING
0	GUIDE SLOTS	TRANSFER LEVERS (7 LEVERS)
SAT	FELT WASHERS (4 WASHERS)	CAMMING SURFACES
0	GUIDE SLOTS	TRANSFER LEVERS (7 LEVERS)

7.13 CONTACT BOX

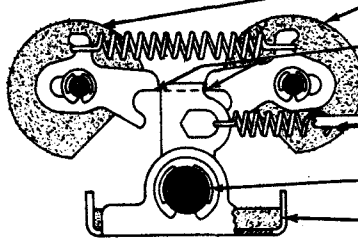


G	ENGAGING SURFACE	CONTACT TOGGLE
0	HOOKS-EACH END	SPRING

DISASSEMBLY: REMOVE NUT AND LOCK WASHER SECURING CONTACT BOX COVER AND REMOVE COVER.

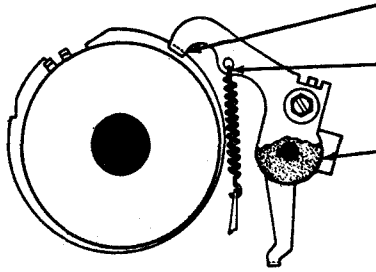
CAUTION: GREASE SPARINGLY - KEEP CONTACTS FREE OF OIL OR GREASE.

7.14 TRANSFER BAIL MECHANISM



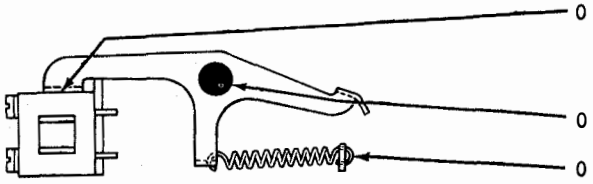
SAT	FELT WASHERS (2 WASHERS)	LATCHES
G	ENGAGING SURFACE	TRANSFER BAIL
0	HOOKS-EACH END (2 SPRINGS)	SPRING
02	BEARING SURFACE	TRANSFER BAIL
SAT	OIL WICK	TRANSFER BAIL

7.15 FUNCTION CLUTCH MECHANISM



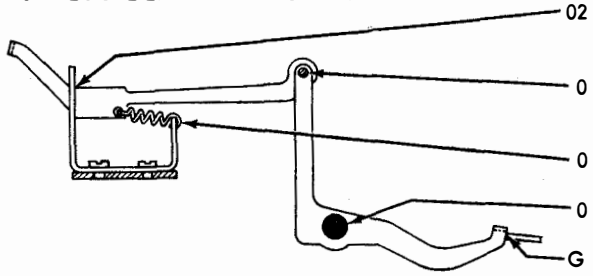
02	LATCHING SURFACE	CLUTCH STOP LEVER AND CLUTCH LATCH LEVER
0	HOOKS-EACH END (2 SPRINGS)	SPRING
SAT	FELT WASHERS (2 FRONT & REAR)	CLUTCH TRIP BAIL

7.16 MARGIN INDICATING MECHANISM



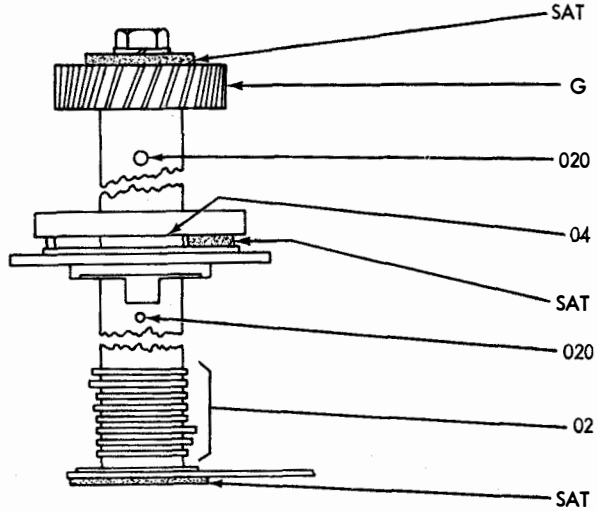
0	ENGAGING SURFACE	MARGIN INDICATOR SWITCH
0	BEARING SURFACE	SWITCH LEVER
0	HOOKS-EACH END	SPRING

7.17 LOCAL LINE FEED MECHANISM



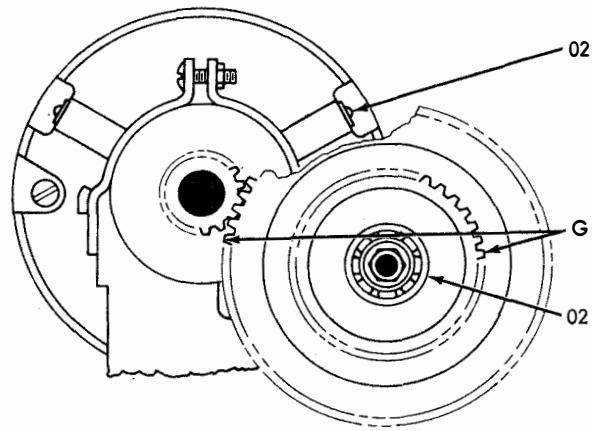
02	GUIDE SLOT	LOCAL LINE FEED TRIP LINK
0	BEARING SURFACE	LOCAL LINE FEED FUNCTION LEVER
0	HOOKS-EACH END	SPRING
0	BEARING SURFACE	FUNCTION BAIL
G	ENGAGING SURFACE	LOCAL LINE FEED FUNCTION LEVER

7.18 SHAFT MECHANISM



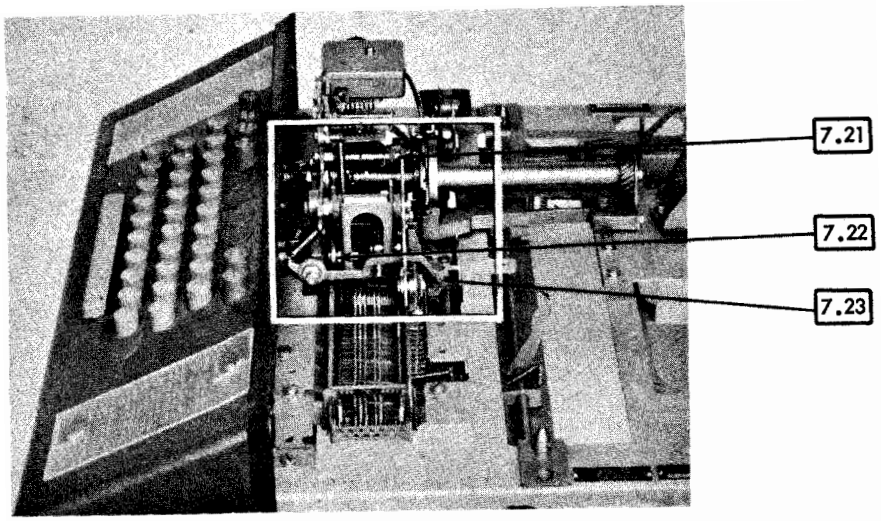
SAT	FELT WASHER	SIGNAL GENERATOR SHAFT
G	GEAR TEETH	SIGNAL GENERATOR SHAFT
020	OIL HOLE	SIGNAL GENERATOR SHAFT
04	INTERNAL MECHANISM	KEYBOARD CLUTCH
SAT	FELT WICK	
020	OIL HOLE	SIGNAL GENERATOR CAM
02	CAMMING SURFACE EACH CAM	SIGNAL GENERATOR CAM
SAT	FELT WASHER	SIGNAL GENERATOR SHAFT

7.19 INTERMEDIATE GEAR MECHANISM



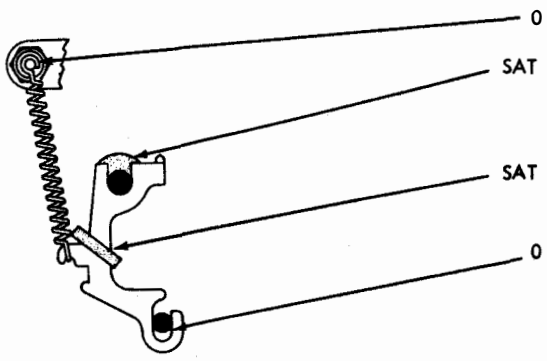
02	OILER-EACH END (RIGHT & LEFT)	MOTOR SHAFT
G	TEETH (2 GEARS)	INTERMEDIATE GEARS
02	BALL BEARING (2 BEARINGS)	INTERMEDIATE GEAR SHAFT

7.20 SIGNAL GENERATOR MECHANISM (continued) REST KEYBOARD IN UPRIGHT POSITION



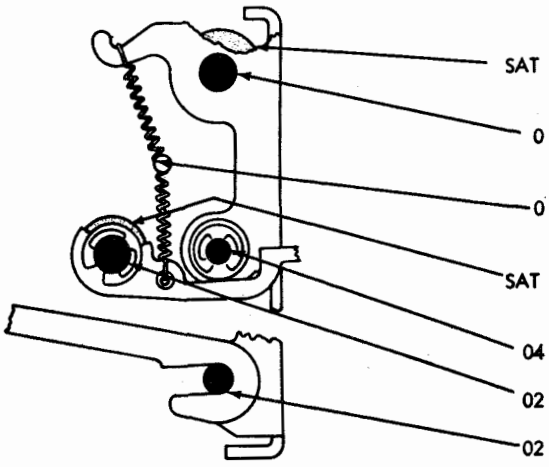
RIGHT SIDE VIEW

7.21 LOCKING BAIL MECHANISM



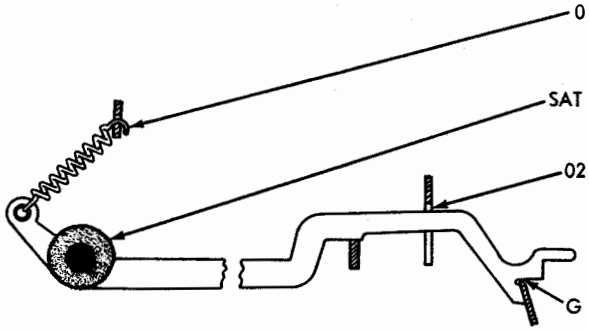
0	HOOKS-EACH END	SPRING
SAT	FELT WASHERS (2 WASHERS - FRONT AND REAR)	LOCKING BAIL POST
SAT	FELT WICK	CAMMING SURFACES
0	GUIDE SLOTS (3 SLOTS)	LOCKING BAIL

7.22 CODE BAR BAIL MECHANISM



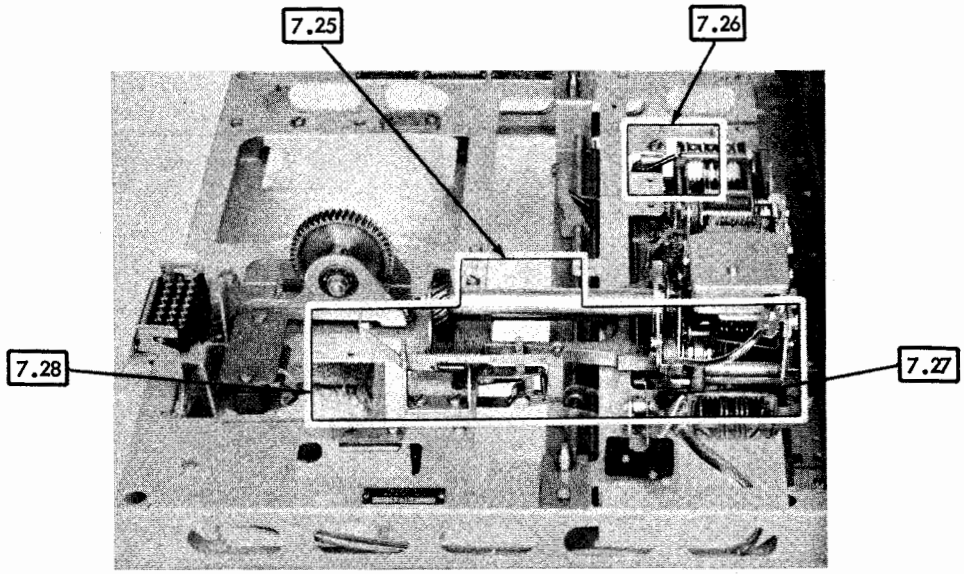
SAT	FELT WASHERS (TWO WASHERS)	CODE BAR BAIL
0	BEARING SURFACE (2 PLACES)	CODE BAR BAIL
0	HOOKS-EACH END (2 SPRINGS)	SPRING
SAT	FELT WASHER	CODE BAR BAIL LATCH
04	BEARING	CODE BAR BAIL
02	BEARING SURFACE	CODE BAR BAIL LATCH
02	ENGAGING SURFACE	ECCENTRIC FOLLOWER

7.23 UNIVERSAL BAIL LATCH LEVER



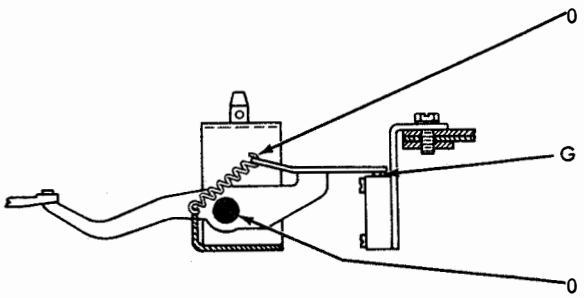
0	HOOKS (EACH END)	SPRING
SAT	FELT WASHER	UNIVERSAL BAIL LATCH LEVER
02	GUIDE SLOT (EACH SIDE OF SLOT)	UNIVERSAL BAIL LATCH LEVER
G	ENGAGING SURFACE	RESET BAIL LATCH

7.24 NEW DESIGN KEYBOARD AND VARIABLE FEATURES
REST KEYBOARD IN UPRIGHT POSITION



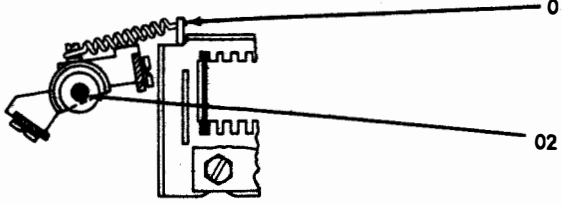
LEFT SIDE VIEW

7.25 ELECTRICAL LINE BREAK MECHANISM



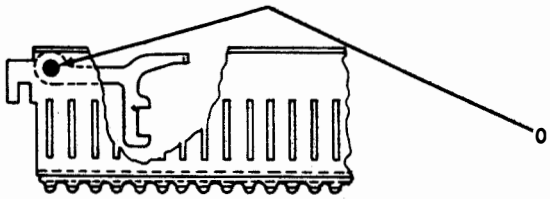
0	HOOKS-EACH END	SPRING
G	CONTACT SURFACE	SENSITIVE SWITCH
0	BEARING SURFACE	BREAK LEVER

7.26 CODE LEVER UNIVERSAL BAIL MECHANISM

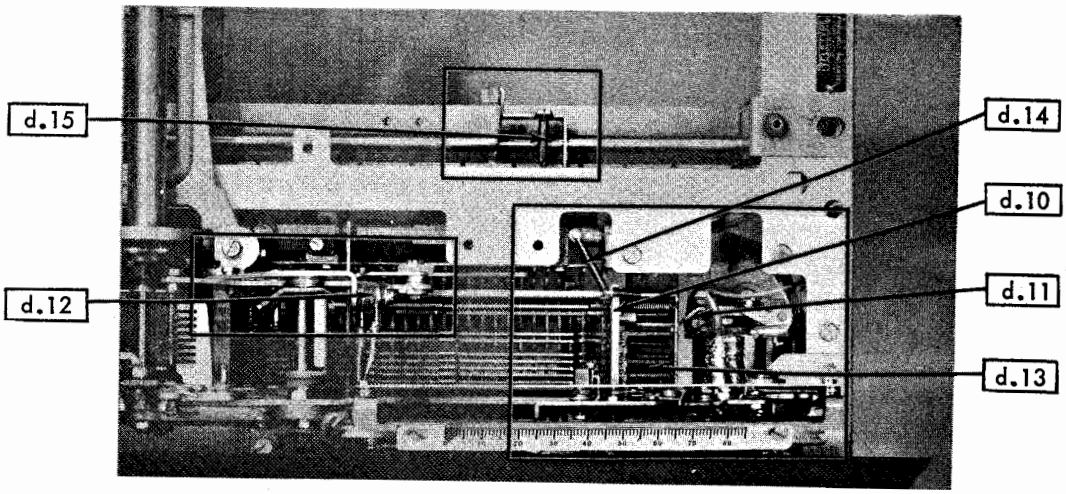


0	HOOKS-EACH END	SPRING
02	BEARING SURFACE	CODE LEVER UNIVERSAL BAIL

7.27 LOCK BAR LATCH MECHANISM

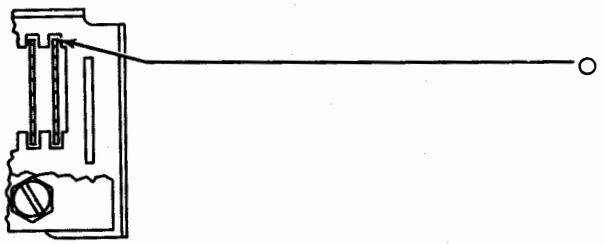


0	BEARING SURFACE	LOCK BAR LATCH



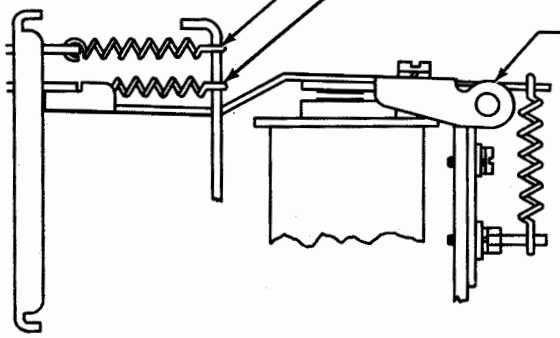
FRONT

d.10 CODE BAR GUIDE



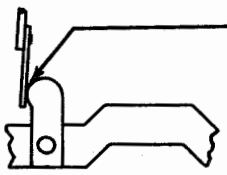
O GUIDE SLOTS (LEFT, RIGHT, TOP AND BOTTOM)

d.11 SYNCHRONOUS PULSED MAGNET MECHANISM



O	HOOKS-EACH END	UNIVERSAL CODE BAR SPRING
O	HOOKS-EACH END	CLUTCH TRIP BAR SPRING
SAT	FELT WASHERS	ARMATURE-PIVOT

d.12 CONTACT SWINGER



G ENGAGING SURFACE

TABLE 1. TRANSMISSION PATTERNS

TRANSMISSION PATTERN	OPERATIONS PER MINUTE	BAUD	PULSE LENGTH (SECONDS)	FREQUENCY (CYCLES PER SECOND)	CHARACTERS PER SECOND
7.42 7.00	368 390	45.5 45.5	0.022 0.022	22.75 22.75	6 6.5
7.42 7.00	404 428	50 50	0.020 0.020	25 25	6.7 7.1
7.42	460	56.9	0.0175	28.45	7.7
7.42 7.00	600 636	74.2 74.2	0.0135 0.0135	37.1 37.1	10 10.6

TABLE 2. MOTOR AND KEYBOARD OR BASE GEAR SETS FOR VARYING OPERATING SPEEDS

GEAR SETS - 5 LEVEL CODE											
			UNIT	SET NUMBER		PINION			GEAR		
WPM	OPM	BAUD	CODE	FIBER	NYLON	TEETH	STEEL	NYLON	TEETH	FIBER	NYLON
60	368	45.45	7.42	151060	161293	14	151130	159278	96	151131	159279
65	390	45.45	7.00		173795			173794			173793
67	404	50	7.42	152766		13	152765		81	152764	
71	428	50	7.00		163504	18		163461	117		163462
75	460	56.88	7.42	151075	161294	17	151132	159281	93	151133	159282
100	600	74.2	7.42	151100	161295	20	151134	159284	84	151135	159285
107	643	75	7.00		163505	24		163463	104		163464

T-5 to NAVSHIPS 91393
T-6 to NAVSHIPS 91713
T-3 to NAVSHIPS 92361

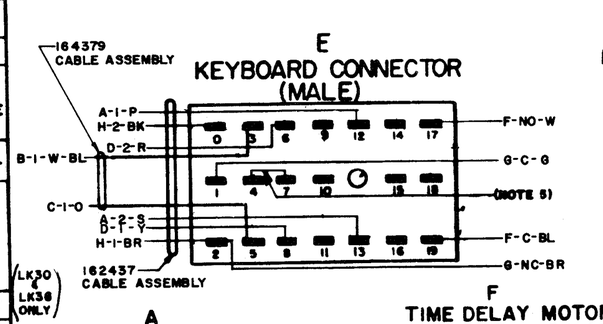
NOTES

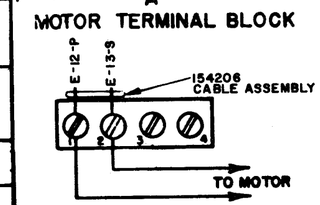
1. POWER CIRCUITS WIRED FOR 115V. AC OR DC OPERATION.
2. WIRE COLOR CODE

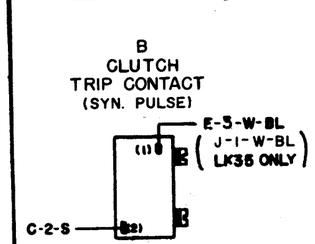
BK	BLACK	BL	BLUE	BR	BROWN
R	RED	Y	YELLOW	S	SLATE
P	PURPLE	O	ORANGE	W BL	WHITE BLUE
G	GREEN	W	WHITE		

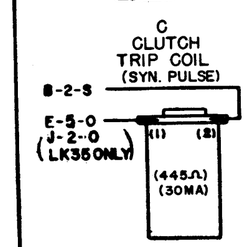
3. CONNECTORS VIEWED FROM SOLDER TERMINAL ENDS.
4. WIRING LEGEND
   - DISTANT TERMINATING AREA
   - DISTANT TERMINAL DESIGNATION
   - WIRE COLOR CODE

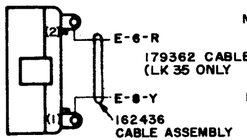
   (C-8-R)
5. STRAP NECESSARY FOR OPERATION WITH LESU 2
6. GROUND STRAP TERMINATES AT TOP OF KEYBOARD BASE LOWER PLATE BY MEANS OF LEFT FRONT 151549 KEYBOARD SPECIAL MOUNTING SCREW.
7. (LK35 ONLY) UNCOIL ROUTE, AND CONNECT 179362 CABLE TO TWO OPEN CABINET TERMINALS, TYING UP ANY SLACK.
8. MOUNT THE 179363 CABLE TO THE KEYBOARD WITH THE 121242 CABLE CLAMP. (LK35 ONLY)

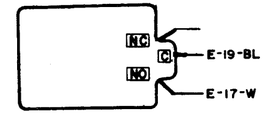


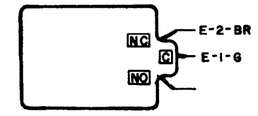


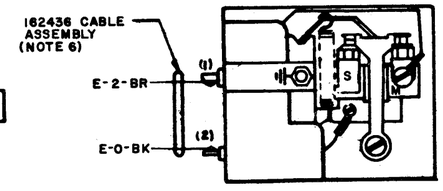


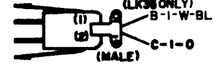


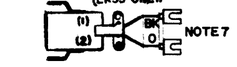


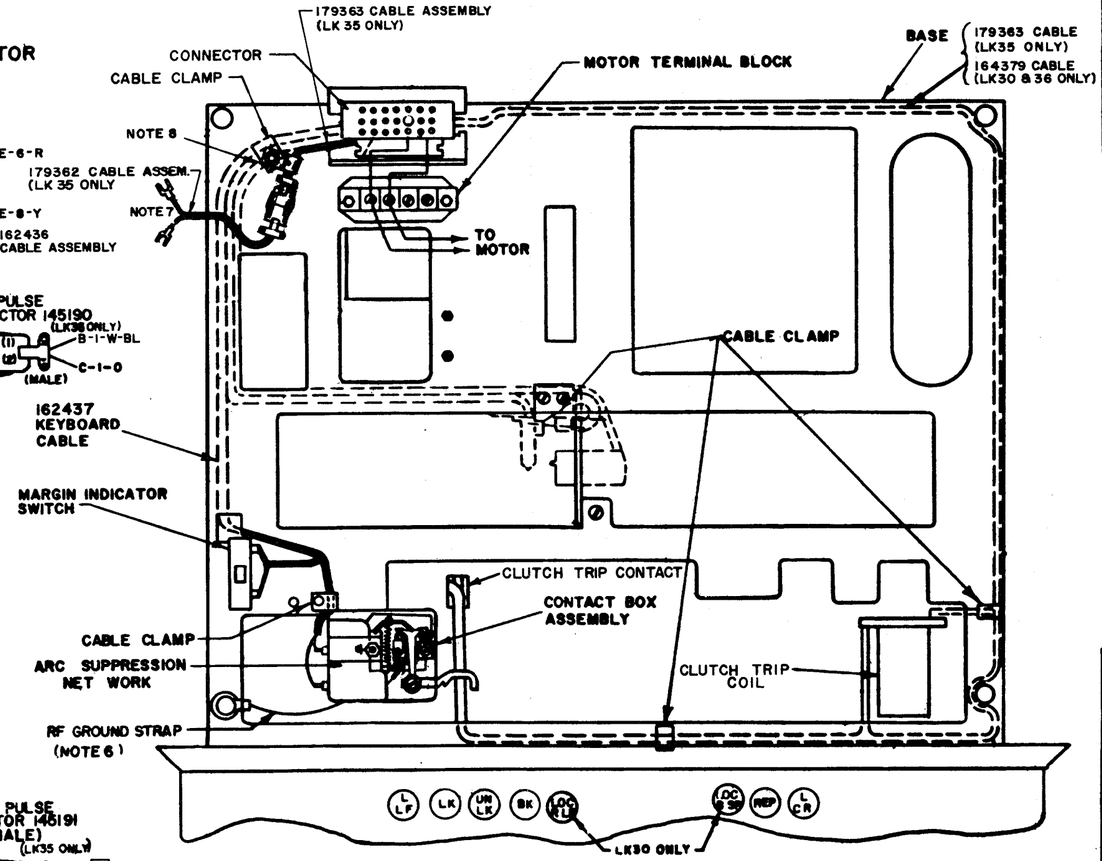












CABLE ROUTING
TOP VIEW

4718WD REVISIONS		
ISSUE	DATE	AUTH. NO.
A	4-10-62	73652
B	8-29-62	74368
C	11-29-62	75189

APPROVALS
R ANG D | E OF M

E-NUMBER
PROD. NUMBER 4718WD

ACTUAL WIRING DIAGRAM FOR MODEL 28 KEYBOARD LK30, 35, 36

DATE 12-[illegible]-61
PD. FILE NO. 2-18.63AA
DRAWN G.F.M. | CHKD
ENG. DAK. | APPD

TELETYPE CORPORATION
4718WD

73/74

TEMPORARY CORRECTION T-4 TO TECHNICAL MANUAL FOR TELETYPEWRITERS TT-47/UG, TT-48/UG, TT-69/UG AND TT-70/UG NAVSHIPS 91393

This temporary correction supplements T-3 to the manual to reflect the equipment changes made by Field Change 2-TT-47/UG, 2-TT-48/UG, 2-TT-69/UG or 2-TT-70/UG; NAVSHIPS 981424. The purpose of this field change is to change teletypewriters used for communication service to teletypewriters for aerological weather service.

No further corrections need be made if the corrections in T-3 have been made. Symbol designations N-2500 through N-2511 should be disregarded when making this change. Insert this temporary correction in the manual immediately after the front cover and preceding T-3.

1 June 1953

T-3 to NAVSHIPS 91393
T-3 to NAVSHIPS 91713

Temporary correction T-3 to instruction book for Teletypewriters

1. TT-47/UG, TT-48/UG, TT-69/UG, TT-70/UG (NAVSHIPS 91393)

2. TT-47A/UG, TT-48A/UG, TT-69A/UG, TT-70A/UG, (NAVSHIPS 91713)

Temporary correction T-3 to instruction book covering Teletypewriters TT-47/UG, TT-48/UG, TT-69UG and TT-70/UG, TT-47A/UG, TT-48A/UG, TT-69A/UG, TT-70A/UG, that have been modified by Navy Field Change No.1-TT47/UG, 1-TT-48/UG, 1-TT-69/UG, 1-TT-70/UG, 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG, 1-TT-70A/UG.

The changing of Teletypewriters used for communication service to teletypewriters used for aerological weather service does not affect the installation instructions, or the maintenance practice of the equipment.

Make the following pen and ink corrections in the instruction book and then insert the temporary correction in front of the title page.

Items designated 1 apply to NAVSHIPS 91393; items designated 2 apply to NAVSHIPS 91713.

1. Page 2-10, Par. 3.i.

2. Page 2-10, Par. 3.i.

Include an asterisk in front of the second sentence and include the following footnote:

"* This sentence does not apply if:

1. Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG, or 1-TT-70/UG has been installed."

2. Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG, or 1-TT-70A/UG has been installed."

1. Page 2-20, Fig. 2-43.

2. Page 2-20, Fig. 2-43.

Staple Figures 1 and 2 of temporary correction T-3 adjacent to Figure 2-43 of the respective Instruction Book.

1. Pages 2-30, 2-31, Figs. 2-57, 2-58.

2. Pages 2-31, 2-32, Figs. 2-57, 2-58.

Include an asterisk in front of the words "BLANK" and "KEYBOARD LOCK" and include the following footnote: "*This does not apply if:

1. Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG or 1-TT-70/UG has been installed."

2. Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG or 1-TT-70A/UG has been installed."

Include a double asterisk and the word "**BLANK" below the words "KEYBOARD LOCK" and include the following footnote; "**This applies if:

1. Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG or 1-TT-70/UG has been installed."

2. Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG or 1-TT-70A/UG has been installed."

1. Page 2-39, Par. 4.i (8), Fig. 2-74.

2. Page 2-40, Par. 4.i (8), Fig. 2-74.

Include an asterisk in front of paragraph 4.i (8), and Fig. 2-74 and include the following footnote: "*This does not apply if:

1. Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG or 1-TT-70/UG has been installed."

2. Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG or 1-TT-70A/UG has been installed."

1. Page 2-40, Fig. 2-75.

2. Page 2-41, Fig. 2-75.

Include an asterisk in front of Fig. 2-75 and include the following footnote: "*This does not apply if:

1. Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG or 1-TT-70/UG has been installed."

2. Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG or 1-70A/UG has been installed."

1. Page 4-2, Par. 2. g.

2. Page 4-2, Par. 2. g.

Include an asterisk in front of paragraph 2. g. and include the following footnote: "*This does not apply if:

1. Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG or 1-TT-70/UG has been installed."

2. Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG or 1-TT-70A/UG has been installed."

1. Page 7-104, Fig. 7-96

Include an asterisk in front of symbol designations 0-167 to 0-176, 0-177 to 0-187; and below this add the following: "**0-168, 0-176, 0-2514 through 0-2521; **0-177, 0-184 through 0-186, 0-2522 through 0-2527; and include the following footnotes: "*This does not apply or **This applies if Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG or 1-TT-70/UG has been installed.

2. Page 7-106, Fig. 7-98

Include an asterisk in front of symbol designations 0-231 to 0-240, 0-241 to 0-251 and below this add the following: "**0-232, 0-240, 0-2514 through 2521; **0-241, through 0-250, 0-2522 through 0-2527; and include the following footnotes: "*This does not apply or **This applies if Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG, or 1-TT-70A/UG has been installed.

1. Page 7-122, Fig. 7-117

Include an asterisk in front of symbol designations 0-1413, 0-1431, 0-1436 and symbol Ⓖ; and 0-1412, 0-1450 to 0-1453, and symbol Ⓗ, to these add **0-2528, **0-1451 to 0-1454, *Ⓖ respectively; and include the following footnotes: "*This does not apply or **This applies if Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG or 1-TT-70/UG has been installed.

2. Page 7-124, Fig. 7-119

Include an asterisk in front of symbol designations 0-1432, 0-1466, 0-1468 and symbol Ⓖ; and 0-1431, 0-1451 to 0-1454 and symbol Ⓗ, to these add **0-2529, **0-1452 to 0-1455, *Ⓖ respectively; and include the following footnotes: "*This does not apply or **This applies if Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG or 1-TT-70A/UG has been installed.

1. Page 7-131, Fig. 7-126

Include an asterisk in front of symbol designations H-1864: 0-1858 to 0-1908; and add **H-2500; 0-1858 through 0-1893, 0-1898, 0-1901, 0-1907, 0-2501 through 0-2513 respectively; add *0-2138, **0-2500 to indicate the type pallet set; and include the following footnote: "*This does not apply or **This applies if Field Change 1-TT-47/UG, 1-TT-48/UG, 1-TT-69/UG or 1-TT-70/UG has been installed.

2. Page 7-135, Fig. 7-130

Include an asterisk in front of symbol designations H-1964; 0-1946 to 0-1995; 0-1943; and add H-2500; 0-1946 through 0-1981, 0-1986, 0-1988, 0-1994, 0-2501 through 0-2513; 0-2500 respectively; and include the following footnotes: "*This does not apply or **This applies if Field Change 1-TT-47A/UG, 1-TT-48A/UG, 1-TT-69A/UG or 1-TT-70A/UG has been installed.

Table 8-4 Combined Parts and Spare Parts List

Make the following notation beside the affected symbol designation to indicate the presence of the information contained in pages 4 to 6 of this temporary correction: "See T-3".

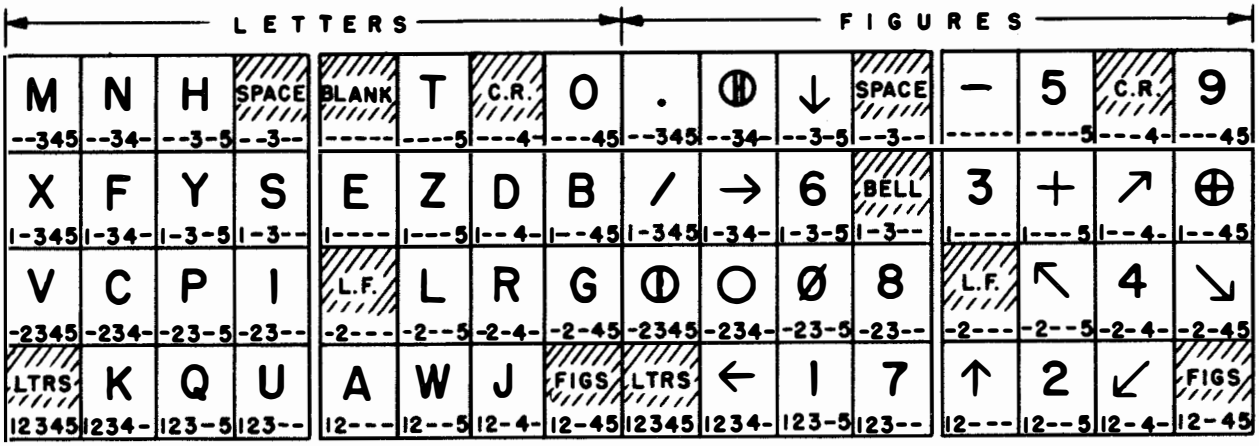
TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
					MANUFACTURERS				EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
H-2500	SCREW, machine: wrench drive; Hex H; stainless steel; 4-40; approx 1/4" lg o/a; 3/16" lg threaded portion; head 1/16 thk x 3/16"across flats; character "RE" stamped on head	Holds and identifies type pallet arrangement			CTT	151738 RE	151738RE	H-2500	1				
N-2500	PLATE, identification: aluminum; approx 1-1/2" wd x 0.032" thk; inscribed w/code designation "MX-1421/UG", unit name, contract & serial numbers and space for stamp approval; letters, figures, border & stamping areas are raised, background etched and filled w/black lacquer, dull clear lacquer applied to raised surface and background; 3/32" mtg hole ea end	Identifies Automatic Typer			CTT	152791	152791	N-2500	1				
N-2501	Same as N-2500 except inscribed w/code designation, "MX-1422/UG"	Identifies Keyboard			CTT	152792	152792	N-2501	1				
N-2502	PLATE, identification: aluminum; approx 3" lg x 1" wd x 0.032" thk material; inscribed w/ code designation, "TT-128/UG", unit name, contract & serial numbers and space for stamp approval; letters, figures, border & stamping areas are raised, background etched and filled w/black lacquer applied to raised surface and background; 1/8" mtg hole ea end.	Identifies Teletypewriter Set			CTT	152793	152793	N-2502	1				
N-2503	Same as N-2502 except inscribed w/code designation, "TT-129/UG"	Identifies Teletypewriter Set			CTT	152794	152794	N-2503	1				
N-2504	Same as N-2502 except inscribed w/code designation, "TT-130/UG"	Identifies Teletypewriter Set			CTT	152795	152795	N-2504	1				
N-2505	Same as N-2502 except inscribed w/code designation, "TT-131/UG"	Identifies Teletypewriter Set			CTT	152796	152796	N-2505	1				
N-2506	Same as N-2500 except inscribed w/code designation, "MX-1421A/UG"	Identifies Automatic Typer			CTT	153085	153085	N-2506	1				
N-2507	Same as N-2500 except inscribed w/code designation, "MX-1422A/UG"	Identifies Keyboard			CTT	153086	153086	N-2507	1				
N-2508	Same as N-2502 except inscribed w/code designation "TT-128A/UG"	Identifies Teletypewriter Set			CTT	153087	153087	N-2508	1				
N-2509	Same as N-2502 except inscribed w/code designation "TT-129A/UG"	Identifies Teletypewriter Set			CTT	153088	153088	N-2509	1				
N-2510	Same as N-2502 except inscribed w/code designation "TT-130A/UG"	Identifies Teletypewriter Set			CTT	153089	153089	N-2510	1				
N-2511	Same as N-2502 except inscribed w/code designation "TT-131A/UG"	Identifies Teletypewriter Set			CTT	153090	153090	N-2511	1				

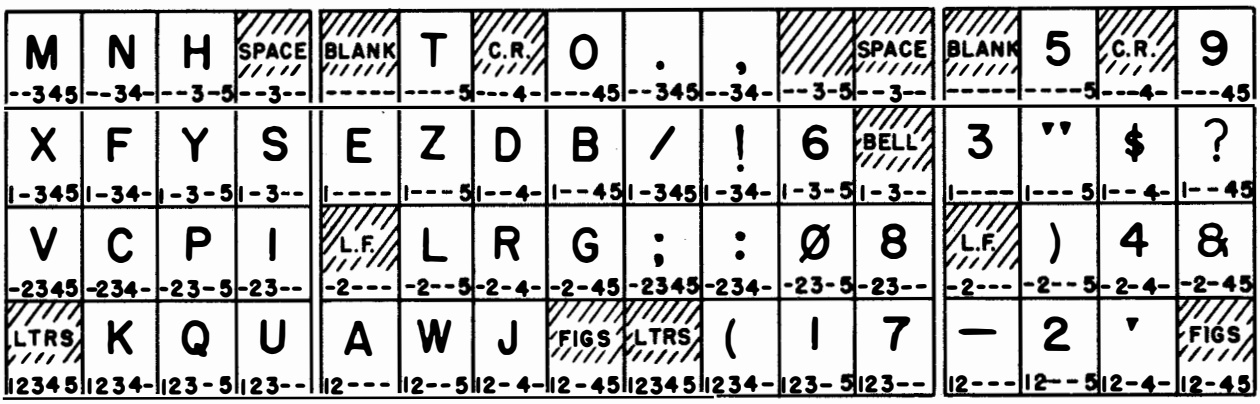
0-2500	**PALLET** SET, type: c/o 64 pallets, 64 springs, front plate, rear plate, cover, 2 screws, 2 lock washers, 2 flat washers, stud & shoulder nut; approx 3-7/16" lg x 1" h x 3/4" wd o/a dimen of assem; "RE" stamped in head of one screw for identification of pallet arrangement	Types copy				CTT	151683	151683	0-2500	1				
0-2501	PALLET, type: character; (←) steel, nickel pl; Murray style type; approx 5/8" lg x 3/32" wd x 3/16" h o/a; mts by shaft w/spring mtg hole near shoulder; curved type on 7/8" rad	Makes impression of character (←) on paper		350016-196	CTT	151941	151941	0-2501	1				
0-2502	Same as 0-2501 except character (→)	Makes impression of character (→) on paper		350016-201	CTT	151942	151942	0-2502	1				
0-2503	Same as 0-2501 except character (↑)	Makes impression of character (↑) on paper		350016-200	CTT	151943	151943	0-2503	1				
0-2504	Same as 0-2501 except character (↓)	Makes impression of character (↓) on paper		350016-204	CTT	151944	151944	0-2504	1				
0-2505	Same as 0-2501 except character (↖)	Makes impression of character (↖) on paper		350016-203	CTT	151945	151945	0-2505	1				
0-2506	Same as 0-2501 except character (↗)	Makes impression of character (↗) on paper		350016-198	CTT	151946	151946	0-2506	1				
0-2507	Same as 0-2501 except character (↘)	Makes impression of character (↘) on paper		350016-176	CTT	151947	151947	0-2507	1				
0-2508	Same as 0-2501 except character (↙)	Makes impression of character (↙) on paper		350016-189	CTT	151948	151948	0-2508	1				
0-2509	Same as 0-2501 except character (+)	Makes impression of character (+) on paper		350016-202	CTT	151949	151949	0-2509	1				
0-2510	Same as 0-2501 except character (○)	Makes impression of character (○) on paper		350016-177	CTT	151950	151950	0-2510	1				
0-2511	Same as 0-2501 except character (◐)	Makes impression of character (◐) on paper		350016-180	CTT	151951	151951	0-2511	1				
0-2512	Same as 0-2501 except character (◍)	Makes impression of character (◍) on paper		350016-179	CTT	151952	151952	0-2512	1				
0-2513	Same as 0-2501 except character (⊕)	Makes impression of character (⊕) on paper			CTT	151953	151953	0-2513	1				
0-2514	KEYLEVER: steel, nickel pl lever w/cellulose acetate butyrate (tenite II) top; irregular shape, round keytop concave on top & tapered to point on bottom, pressed on one end of lever; approx 2-1/4" lg x 1/2" diam keytop o/a, 0.042" thk material; mts by irregular shape elongated slot in lower end of lever; green keytop w/white characters "↓,A"	Operates 0-330		350016-194	CTT	152001	152001	0-2514	1				
0-2515	Same as 0-2514 except characters "↙,D"	Operates 0-332		350016-187	CTT	152004	152004	0-2515	1				
0-2516	Same as 0-2514 except characters "→,F"	Operates 0-333		350016-186	CTT	152005	152005	0-2516	1				
0-2517	Same as 0-2514 except characters "↘,G"	Operates 0-334		350016-193	CTT	152006	152006	0-2517	1				
0-2518	Same as 0-2514 except characters "↓,H"	Operates 0-335		350016-308	CTT	152008	152008	0-2518	1				
0-2519	Same as 0-2514 except characters "↙,J"	Operates 0-336		350016-307	CTT	152010	152010	0-2519	1				

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
					MANUFACTURERS				EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
0-2520	Same as 0-2514 except characters "←,K"	Operates 0-337		350016-205	CTT	152011	152011	0-2520	1				
0-2521	Same as 0-2514 except characters "↖,L"	Operates 0-338		350016-199	CTT	152012	152012	0-2521	1				
0-2522	KEYLEVER: steel, nickel pl lever w/cellulose acetate butyrate (tenite II) top; irregular shape, round keytop concave on top & tapered to point on bottom, pressed on one end of lever; approx 1-5/8" lg x 1-1/4" wd x 0.042" thk material o/a, 1/2" diam keytop; mts by irregular shape elongated slot in lower end of lever; green keytop w/white characters "+,Z"	Operates 0-341		350016-209	CTT	152015	152015	0-2522	1				
0-2523	Same as 0-2522 except characters "Q,C"	Operates 0-343		350016-185	CTT	152003	152003	0-2523	1				
0-2524	Same as 0-2522 except characters "◐,V"	Operates 0-344		350016-208	CTT	152014	152014	0-2524	1				
0-2525	Same as 0-2522 except characters "⊕,B"	Operates 0-345		350016-197	CTT	152002	152002	0-2525	1				
0-2526	Same as 0-2522 except characters "◍,N"	Operates 0-346		350016-182	CTT	152013	152013	0-2526	1				
0-2527	Same as 0-2522 except character "_"	Operates 0-350		350016-206	CTT	152016	152016	0-2527	1				
0-2528	BAR, function: steel,nickel pl; irregular shape, formed wing & ear on wd end, notched ear at center; approx 2 15/16" lg x 1 1/4" h x 1/8" wd o/a, 0.048" thk material; mts by cutout in narrow end; "LC BL" stamped in wd end	Operates 0-1454 (NAVSHIPS 91393)		350016-181	CTT	150610	150610	0-2528	1				
0-2529	BAR, function: steel,nickel pl; irregular shape, formed wing & ear on wd end, squared & elongated cutouts other end, notched ear at ctr; approx 2 15/16" lg x 1 1/4" h x 1/8" wd o/a, 0.048" thk material; mts by cutout in narrow end; "LC BL" stamped in wd end	Operates 0-1455 (NAVSHIPS 91713)			CTT	152675	152675	0-2529	1				



TYPE ARRANGEMENT "RE" (WEATHER)



TYPE ARRANGEMENT "RN" (COMMUNICATION)

FIGURE 1

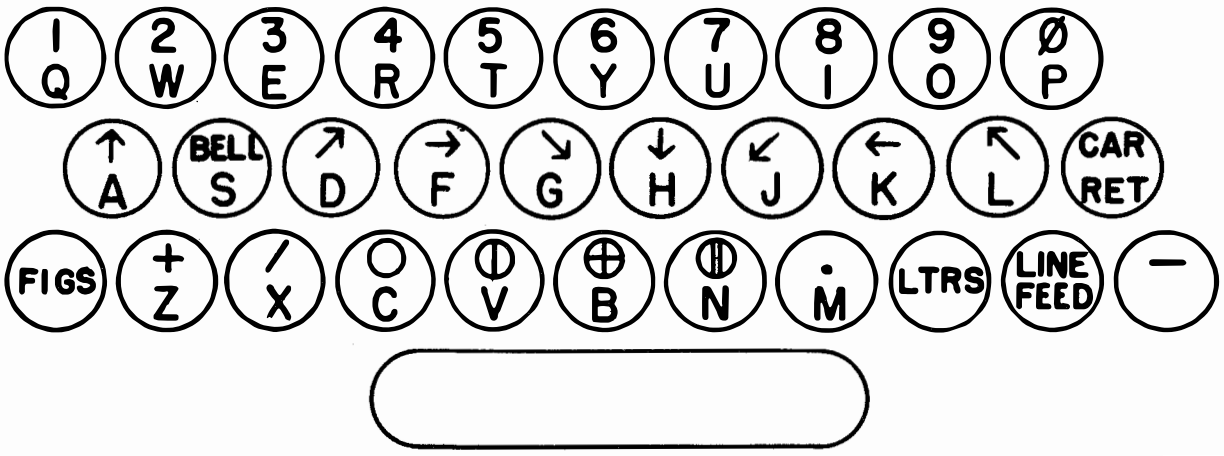


FIGURE 2

20 June 1951

Temporary Correction T-2 to Instruction Book for Teletypewriter TT-47/UG, TT-48/UG, TT-69/UG, and TT-70/UG (NAVSHIPS 91393)

Title Page. Add Contracts: NObsr 49182, NObsr 52088 and NObsr 52089

Page 1-1. After paragraph 2.b.(1)(f) add the following note:

NOTE

AC Motor Type PD-17/U is replaced by AC Motor Type PD-17A/U starting with Serial Number 76 of Teletypewriter TT-47/UG.

After paragraph 2.b.(3)(f) add the following note:

NOTE

AC Motor Type PD-17/U is replaced by AC Motor Type PD-17A/U starting with Serial Number 76 of Teletypewriter TT-69/UG.

Page 1-3. Delete paragraph 3.c.(2) and substitute the following:

(2) AC MOTOR (GOVERNED) PD-18/U. (See figure 1.)

(a) The AC Motor, PD-18/U is series wound and is similar to the synchronous motor in its mounting arrangement.

(b) A combined governor and fan are positioned on the motor shaft extension. The fan aids in controlling the temperature rise by drawing cooling air through the motor. A target for speed checking purposes is painted on the governor cover. The cover also serves to protect the governor mechanism. A screwdriver opening is provided in the cover to facilitate speed adjustments. Brush filter capacitors are provided within the motor end bells.

(c) The entire AC Motor, PD-18/U is shielded to minimize radio interference. A shielded compartment on the underside of the motor, houses the governor resistor and capacitor, as well as a power leads electrical noise suppressor. A number of screened cutouts are provided in the motor shield housing through which air may circulate and the target may be viewed. A threaded plug in the housing may be removed to permit entry of a screwdriver when making speed adjustments.

Add paragraph 3.c.(3) as follows:

(3) AC MOTOR (SYNCHRONOUS) PD-17A/U. (See figure 2.)

(a) The AC Motor, PD-17A/U, is a wound stator, two pole, single phase, capacitor start, synchronous motor. A combination handwheel and fan is mounted on one end of the motor shaft. A motor starting relay and capacitor, together with a thermal cutout switch are mounted in a compartment on the underside of the motor. The thermal

cutout switch (manually reset) serves to protect the motor windings from excessive heating.

(b) The motor proper is supported by a cradle to which it is held by straps at each end. Resilient mounts on the hubs of the motor end bells reduce transmission of vibration to the Keyboard.

Page 1-10. Delete figure 1-10.

Page 2-40. Change paragraph 5.b. to read as follows:

(b) AC MOTOR (GOVERNED) PD-18/U. (See figures 1 and 3) The series governed motor is for use with single phase, 115 volts (plus or minus 10 per cent) alternating current, at a frequency of 50 to 60 cycles per second. It is a 1/20 horsepower, 3600 rpm ball bearing motor which depends on an electro-mechanical governor for its speed regulation. The armature E-609, with a 48 segment commutator is wired in series with the two field windings, and the governor contacts E-606 and E-617. A 250 ohm, 40 watt resistor R-601 and a 0.5 mf capacitor C-602, are connected in parallel with the governor contacts. When the contacts are closed the resistor is shorted out. When the contacts are open the resistor is in series with the motor, to limit its operating current, and thus reduce its speed. The capacitor serves as a spark suppressor for the governor contacts. The combination fan and governor is mounted on one end of the motor shaft. The fan draws cooling air through the motor housing, and also serves as a mounting plate for the governor slip rings and for the governor contact mechansim (mounted on opposite sides of the fan). Connections to the two slip rings, which are wired to the

governor contacts, are made by means of two brushes E-601 and E-602, mounted on the ends of the motor housing. Normally the governor contact spring holds the governor contact E-606 against the contact screw E-617 (figure 2-78). When the motor shaft exceeds a predetermined speed, the centrifugal force developed on the governor contact overcomes briefly the pull of the governor spring, and the governor contact leaves the contact screw until the motor slows down. The tension on the contact spring may be adjusted to maintain the motor speed at 3600 rpm. In order to make this adjustment, means are provided to compare the motor speed with a standard. An aluminum cover fits against the side of the fan and encloses the governor contact mechanism. The outside of the cover is finished in white, with four black stripes equally spaced about its periphery. This serves as a target which should appear to stand almost still at 3600 rpm, when viewed through the moving shutter of a 120 vibrations per second tuning fork. The two motor brushes E-607 and E-608 are protected by 800 mmf capacitors C-601 and C-603 which are connected between the brushes and the grounded frame of the motor. These tend to by-pass any electrical noise created by the brushes as they make and break contact with the various segments of the armature commutator. The motor is wired in such a manner that the armature rotates counterclockwise when viewed from the governor end. The method of mounting the series motor is similar to the method of mounting the synchronous motor. The housing provided on the underside of the mounting bracket contains both the 250 ohm resistor

and 0.5 mf capacitor in the governor circuit as well as a power leads electrical noise suppressor. The purpose of the electrical noise suppressor in the motor power input circuit is to prevent any radio interference which may be generated by the motor from being radiated by the motor power leads. To prevent this disturbance from being radiated directly from any of the motor components or wiring, the entire AC Motor PD-18/U is enclosed by grounded metal housings with screened openings. The screening is to permit the circulation of cooling air through the motor and across the governor resistor and also to permit the target to be viewed when checking motor speed. A threaded plug which is provided in the governor shield housing may be removed to permit the insertion of a screwdriver when necessary to adjust the motor speed. Access to the compartment on the underside of the motor may be gained by removing a screw and lockwasher and sliding the bottom cover plate aside.

Page 2-43. Add the following paragraph after paragraph 5.b.

(c) AC MOTOR (SYNCHRONOUS) PD-17A/U. (See figures 2 and 4) The synchronous motor is for use with single phase, 115 volt (plus or minus 10 per cent) alternating current, at a frequency of 60 cycles per second (plus or minus 0.5 cycle). It is a 1/20 horsepower, 3600 rpm, two pole, wound stator, ball bearing motor, with a squirrel cage type rotor. The stator has two windings, a main operating winding, and an auxiliary winding. The auxiliary winding is in series with a 43 mf a.c. electrolytic capacitor C-501, and with a current operated motor starting relay K-501. The initial

starting current causes the relay to pull up and its contacts close the auxiliary winding circuit. As the rotor gains speed, the current flowing through the motor (and also the relay coil), decreases. When a predetermined current value is reached the relay armature is released, the relay contacts are opened, and the auxiliary winding circuit is disconnected from the line. The rotor E-501 continues to accelerate until it reaches synchronous speed (3600 rpm). The motor is wired in such a manner that the rotor rotates counterclockwise when viewed from the fan end. The starting relay and capacitor together with a thermal cutout switch S-501 are mounted in a compartment on the underside of the motor. The thermal cutout switch is in series with both the main and auxiliary motor windings, and if excessive current is drawn by the motor, (due, for example, to a blocked rotor), the switch will open the circuit. This is to prevent overheating and possible damage to the motor if it is stalled. The switch may be manually reset if tripped, by depressing its red button which projects upward through the motor mounting plate. There are two fans located within the motor housing, one at each end of the rotor. These draw cooling air in through the slots in the end bells and exhaust it through the slots in the motor housing. The end bells have rubber vibration mounts by means of which the motor sets in the ends of its mounting bracket. The rubber mounts are held in the bracket by means of mounting straps. The motor shaft has a tapped hole for use in fastening the intermediate shaft driving

helical gear. All end play in taken up by means of a conical shaped spring which bears against the outer race of one of the ball bearings. The motor mounting bracket is fastened to the Keyboard by means of four screws and lockwashers.

Page 7-10. Figure 7-1. Under SELECTOR LEVER GUIDE Change the requirement to read: With signal generator clutch disengaged, there should be some clearance between each selector lever and the low part of its cam.

Max. 0.010 inch

Page 7-11. Figure 7-2. Delete figure 7-2 and substitute therefor figure 5 of this temporary correction.

Page 7-12. Figure 7-3. Change the name ROCKER BAIL EXTENSION to read ROCKER EXTENSION in five places.

Under INTERMEDIATE LEVER SPRING TENSION change the requirement to read:

CLUTCH DISENGAGED.

Min. 2 ozs.

Max. 4 ozs.

On the marking intermediate lever pull horizontally and as nearly parallel as possible to the path of the lever.

Under ROCKER [illegible] EXTENSION change the "To Check" portion to read: With generator shaft in stop position, gauge clearance at spacing intermediate lever. Rotate the shaft until the marking intermediate lever engages the flutter lever. Gauge the clearance at the marking intermediate lever.

Page 7-13. Figure 7-4. Under DETENT TOGGLE STOP BRACKET change the requirement to read: Clearance between engaging surfaces of spacing and marking intermediate levers and associated surfaces of oscillating lever should be equal within 0.004 inch.

Change the "To Check" to read: Rotate shaft until flutter lever is on high part of first cam and check clearance at marking intermediate lever. Continue rotation of shaft until flutter lever is on high part of next cam and check clearance at spacing intermediate lever.

Add the names ROCKER EXTENSION and MARKING INTERMEDIATE LEVER to the left figure.

Add the name SPACING INTERMEDIATE LEVER to the right figure.

Page 7-14. Figure 7-5. Change the name DETENT TOGGLE LEVER to DETENT LEVER in three places.

Add the name MARKING STOP just under the name SPACING STOP. Add the name MARKING INTERMEDIATE LEVER.

Under INTERMEDIATE LEVER STOP PLATE change the "To Check" to read: With clutch in stop position, measure clearance at spacing intermediate lever. Manually move oscillating lever to other position and check at marking intermediate lever.

Page 7-15. Figure 7-6. Under FLUTTER LEVER SPRING TENSION change the requirement to read: With the generator mechanism in stop position and the spacing intermediate lever held away from flutter lever, insert gauge between casting and break rod.

Min. 1 oz.

Max. 2-1/4 ozs.

to start the flutter lever moving.

Add the following names to the top part of the figure: OSCILLATING LEVER, SPACING INTERMEDIATE LEVER, and MARKING INTERMEDIATE LEVER.

Add the following names to the bottom part of the figure: OSCILLATING LEVER and FLUTTER LEVER.

Page 7-16. Figure 7-7. After the "To Adjust" instructions add: USE GAUGE 151379

Page 7-17. Delete figure 7-8 and substitute therefor figure 6 of this temporary correction.

Page 7-18. Figure 7-9. Change CLUTCH THROWOUT PAWL SPRING TENSION to read: CLUTCH THROWOUT BAIL PAWL SPRING TENSION. Immediately below the requirement change the name THROWOUT PAWL to read: THROWOUT BAIL PAWL in two places. Under CLUTCH THROWOUT BAIL change the requirement to read: With the clutch in its stop position, throwout bail pawl in the bottom of its notch, clutch stop lever against clutch shoe lever, and clutch held disengaged. Some clearance between clutch shoe lever and clutch disk stop lug

Max. 0.020

Page 7-19. Figure 7-10. Under GENERATOR CONTACT change the words in parenthesis to read: (RIGHT AS VIEWED FROM REAR) After the adjusting instructions add: REPLACE CONTACT BOX COVER.

Page 7-20. Figure 7-11. Change the name: CODE BAR RESET BAIL and/or

RESET BAIL to read: CODE BAR BAIL in eight places.

Change the title to read: CODE BAR BAIL MECHANISM.

Change the RESET BAIL ADJUSTING SCREW adjustment to read as follows:

CODE BAR BAIL ADJUSTING SCREW

REQUIREMENT

Clutch engaged. Rotate clutch 1/2 turn until eccentric follower is in extreme left hand position. Clearance between the code bar bail latch lever and code bar bail roller

Min. 0.004 inch

Max. 0.008 inch

TO ADJUST

Position the code bar bail adjusting screw with its lock nut loosened.

Page 7-21. Figure 7-12. Change the name: RESET BAIL to read: CODE BAR BAIL in nine places.

Change: RESET BAIL LATCH SPRING TENSION adjustment to read as follows:

CODE BAR BAIL LATCH SPRING TENSION

REQUIREMENT

Hold code bar bail to left to provide some clearance between code bar bail roller and latching surface of the code bar bail latch

Min. 1-1/2 ozs.

Max. 2 oz.

to start the latch moving.

Page 7-22. Figure 7-13. In the lower part of the figure change the

name: CODE LEVER BAIL EXTENSION to read: CODE BAR BAIL EXTENSION.

Under NON-REPEAT LEVER requirement delete the following lines: GAUGE THE CLEARANCE WHILE ROTATING THE GENERATOR SHAFT WITH A KEY HELD DEPRESSED, and substitute the following therefor: DEPRESS A KEY. ROTATE SHAFT ONCE UNTIL CLUTCH DISENGAGES. LET UP ON KEYLEVER UNTIL SURFACES TO BE MEASURED ARE IN LINE.

Page 7-23. Figure 7-14. Delete figure 7-14 and substitute therefor figure 7 of this temporary corredtion.

Page 7-24. Figure 7-15. Change the name: RESET BAIL to read: CODE BAR BAIL in four places. Also change title to read CODE BAR MECHANISM.

Under CODE BAR SPRING TENSION requirement change the first two lines to read: LETTERS KEYLEVER DEPRESSED. GENERATOR CLUTCH ENGAGED.

Under CLUTCH TRIP BAR SPRING TENSION change the requirement to read: LETTERS KEYLEVER DEPRESSED. GENERATOR CLUTCH ENGAGED

MIN. 2 ozs.

MAX. 5 ozs.

TO START CLUTCH TRIP BAR MOVING

Add the following to Figure 7-15, With a line also connected to the indicating arrow for spring tension.

LOCK BAR SPRING

Requirement

Generator Clutch disengaged

Lock Bar Keylever held depressed

Min. 5 ozs.

Max. 9 ozs.

to start the lock bar (front) moving.

Page 7-26. Figure 7-17. Change the requirement to read: THE SPACE BAR SHOULD BE FREE ON ITS PIVOTS AND HAVE SOME END PLAY, ALSO FREE FROM BINDING IN SLOTS OF KEYTOP GUIDE PLATE. MAX. 0.010 inch

Page 7-27. Figure 7-18. Delete figure 7-18 and substitute therefor figure 8 of this temporary correction.

Page 7-29. Figure 7-20. Under TIME DELAY LATCH LEVER AND CONTACT PAWL change the number (2) adjusting instruction to read: IF THE REQUIREMENT CANNOT BE MET WITH RATCHET WHEEL MOVEMENT, MOVE THE LATCH PAWL TO FRONT OR REAR WITH ITS PIVOT SCREW NUT LOOSENED.

Page 7-32. Figure 7-23. Under INTERMEDIATE GEAR BRACKET add the following sentence to the adjusting instructions: ALIGN GEARS AT THIS TIME.

Page 7-35. Figure 7-26. Under LOCK FUNCTION ARM begin the requirement as follows: WITH KEYBOARD LOCK LEVER UP, LOCK PLUNGER.....IN ITS GUIDE.

Page 7-39. Figure 7-30. Delete figure 7-30 and substitute therefor figure 9 of this temporary correction.

Page 7-40. Figure 7-31. Delete figure 7-31 and substitute therefor figure 10 of this temporary correction.

Page 7-41. Delete page 7-41 and substitute therefor figures 11 and 12 of this temporary correction.

Page 7-42. Figure 7-33. Under SELECTOR MAGNET BRACKET change the

clearance values to read:

Min. 0.010 inch

Max. 0.025 inch

Under LOCK LEVER GUIDE requirement change the requirement to read: CLEARANCE BETWEEN BOTTOM OF SLOT IN MARKING LOCK LEVER GUIDE AND TOP EDGE OF MARKING LOCK LEVER

MIN. 0.004INCH

MAX. 0.015 INCH

Page 7-43. Figure 7-34. Change the requirement to read: SELECTOR CLUTCH DISENGAGED, CAM SLEEVE ASSEMBLY SHOULD HAVE SOME END PLAY

MAX. 0.008 INCH

TO CHECK

HOLD CLUTCH DISENGAGED WITH FINGER AND THUMB AND NOTE END PLAY AT CLUTCH MEMBER BY ALTERNATELY PUSHING AND PULLING WITH SAME FINGERS.

Page 7-44. Figure 7-35. Under COMMON TRANSFER LEVER SPRING TENSION requirement, the first statement should read as follows: TRANSFER LEVERS IN SPACING POSITION (TOWARD FRONT OF UNIT) Under TRANSFER LEVER SPRING TENSION requirement, the first statement should read: TRANSFER LEVERS HELD IN SPACING POSITION (TOWARD FRONT OF UNIT)

Page 7-45. Figure 7-36. At the top left side of the figure directly under the name SHIFT BAR INNER STEP add the name TRANSFER LEVERS. On top of the six vertical levers from left to right add the numbers 1, 2, C, 3, 4, 5.

Under the requirement for SELECTOR LEVER SPRING TENSION,

add the following statement: CHECK ALL FIVE SELECTOR LEVER SPRINGS.

Under the requirement for SELECTOR PUSH LEVER SPRING TENSION add the following: CHECK ALL FIVE PUSH LEVER SPRINGS.

Page 7-46. Figure 7-37. Immediately above the six vertical levers add the name: TRANSFER LEVERS. From left to right number the levers as follows: 1, 2, C, 3, 4, 5.

Under the requirement for SHIFT LEVER DRIVE ARM, change the clearance to read: SOME CLEARANCE MAX. 0.025 INCH ON CLOSEST LEVER.

Page 7-47. Figure 7-38. Change the name "Y" LEVERS to read: TRANSFER LEVERS

From left to right add the following numbers at the top of the six transfer levers 1, 2, C, 3, 4, 5.

Under SHIFT LEVER LINK GUIDE change the "To Check" portion to read: MOVE THE SHIFT BARS TO THE SPACING POSITION (FRONT). MOVE THE SHIFT LEVER LINK SO THAT THE FRONT SHIFT LEVER IS WITHIN

MIN. 0.006 INCH

MAX. 0.020 INCH

FROM THE SHOULDER OF THE NEAREST SHIFT BAR. MANUALLY HOLD THE SHIFT BARS TO THE MARKING POSITION (REAR) AND MOVE THE CODE BARS TO THE MARKING POSITION. THE REAR SHIFT LEVER SHOULD BE WITHIN

MIN. 0.006 INCH

MAX. 0.020 INCH

FROM THE SHOULDER ON THE NEAREST SHIFT BAR.

Page 7-48. Figure 7-39. Delete figure 7-39 and substitute therefor figure 13 of this temporary correction.

Page 7-49. Figure 7-40. Under STOP ARM YIELD SPRING requirement add the following: SELECTOR CLUTCH ENGAGED.

Page 7-50. Figure 7-41. Under CODE BAR CLUTCH LATCH LEVER SPRING TENSION change the requirement to read: CLUTCH TURNED TO STOP POSITION AND LATCH LEVER UNLATCHED

MIN. 5 ozs.

MAX. 6-3/4 ozs.

TO MOVE LATCH LEVER FROM LUG. THIS REQUIREMENT ALSO APPLIES TO THE FUNCTION CLUTCH, SPACING CLUTCH, LINEFEED CLUTCH, AND TYPEBOX CLUTCH.

Under TRIP SHAFT LEVER SPRING TENSION, change the requirement to read: TRIP SHAFT LEVER ON LOW PART OF CAM. CODE BAR CLUTCH ENGAGED. ROTATE 1/4 TURN

MIN. 1 oz.

MAX. 2 ozs.

TO START LEVER MOVING.

Page 7-51. Figure 7-42. Add the name ROLLER to the roller on the cam follower arm.

Page 7-52. Figure 7-43. Delete figure 7-43 and substitute therefor figure 14 of this temporary correction.

Page 7-53. Figure 7-44. Under SPACING CLUTCH TRIP LEVER SPRING TENSION, change the first sentence of the requirement to read: SPACING CLUTCH ENGAGED. ROTATE CLUTCH UNTIL TRIP LEVER CLEARS STOP LUG.

Page 7-54. Figure 7-45. Delete figure 7-45 and substitute therefor figure 15 of this temporary correction (note that the typebox clutch is a one stop clutch)

Page 7-55. Figure 7-46. Change the TYPEBOX CLUTCH TRIP LEVER adjustment to read:

(1) REQUIREMENT

CLUTCH TRIP SHAFT CAM FOLLOWER ROLLER (SEE FIGURE 7-42.) ON THE LOWEST SURFACE OF CAM (LOCATED ON CODE BAR CLUTCH). CLEARANCE BETWEEN INNER FACE OF TYPEBOX CLUTCH TRIP LEVER AND THE CLUTCH DISK STOP LUG

MIN. 0.065 INCH

MAX. 0.080 INCH

TO ADJUST

LOOSEN CLAMP SCREW AND POSITION STOP

(2) REQUIREMENT

WHEN POSITIONING THE TRIP ARM DETERMINE THAT THE LATCH HAS SOME SIDE PLAY

MAX. 0.008 INCH

TO ADJUST

POSITION THE CLUTCH TRIP ARM ON ITS SHAFT WITH THE CLAMP SCREW LOOSENED.

Figure 7-47. In requirement (1) change the required clearances to read: 0.055 inch to 0.075 inch. Change requirement (2) to read: WITH THE CLUTCH ENGAGED, THE SMALLEST GAP BETWEEN ANY CLUTCH SHOE LEVER AND ITS STOP LUG SHOULD BE 0.055 INCH TO 0.075 INCH GREATER THAN THE LARGEST GAP WHEN THE CLUTCH IS DISENGAGED.

Page 7-56. Figure 7-48. Under CLUTCH SHOE LEVER SPRING TENSION requirement, change the second sentence of the requirement to read: HOLD CAM DISK TO PREVENT TURNING.

Page 7-60. Figure 7-52. Add the following name to the unnamed code bars beginning at top: SUPPRESSION BAR, #1 CODE

BAR, #2 CODE BAR.

Change the name EXTENSION to read: LINK EXTENSION

Under VERTICAL POSITIONING LEVER SPRING TENSION requirement change the name: UPPER CODE BAR, in the second line, to read SUPPRESSION CODE BAR.

Page 7-64. Figure 7-56. In the bottom part of the figure, change the name: SHIFT SLIDE DRIVE LINKAGE REVERSING SLIDE to read: HORIZONTAL MOTION REVERSING SLIDE.

Page 7-67. Figure 7-59. Under SPACING DRUM STOP ARM change the "To Adjust" portion to read: POSITION THE STOP ARM ON THE RATCHET WHEEL, APPROXIMATELY IN THE MIDDLE OF ITS ADJUSTING RANGE, WITH ITS MOUNTING SCREWS LOOSENED.

Page 7-68. Figure 7-60. Change the 3/16 inch clearance to read: 5/32 inch, in two places on the figure.

Page 7-70. Figure 7-62. Under CARRIAGE RETURN LATCH BAIL, change the requirement to read: CARRIAGE FULLY RETURNED.

SOME CLEARANCE BETWEEN RIGHT HAND SIDE OF CARRIAGE RETURN LEVER AND LEFT EDGE OF THE CARRIAGE RETURN LATCH MAX. 0.010 INCH

Page 7-71. Figure 7-63. In the left-hand upper portion of the figure add names to the four remaining unnamed function bars from left to right: UNSHIFT ON SPACE, FIG., LTRS., AUTO. CR.

Under the name: RIGHT SIDE FRAME, add: (REAR VIEW)

Page 7-72. Figure 7-64. Under TRANSFER SLIDE SPRING TENSION, change the spring tensions to read:

MIN. 3-1/2 ozs.

MAX. 4-1/2 ozs.

Page 7-74. Figure 7-66. Change the name: SPACING CUTOUT BAIL to read: SPACING CUTOUT TRANSFER BAIL.

Change the RIGHT MARGIN adjustment to read:

(1) REQUIREMENT

(WITHOUT AUTOMATIC CR-LF TRIP ARM)

TYPEBOX CARRIAGE IN POSITION TO PRINT CHARACTER ON WHICH SPACING IS DESIRED.

(2) REQUIREMENT

(WITH AUTOMATIC CR-LF TRIP ARM)

TYPEBOX CARRIAGE IN POSTION TO PRINT ONE SPACE AFTER CHARACTER ON WHICH AUTOMATIC CR-LF IS DESIRED.

CLEARANCE BETWEEN UPPER EDGE OF SPACING CUTOUT LEVER AND CUTOUT TRANSFER BAIL WHEN THE CUTOUT TRANSFER BAIL IS HELD IN ITS EXTREME UPPER POSITION.

MIN. 0.010

MAX. 0.025

Under DECELLERATING SLIDE BELL CRANK SPRING TENSION requirement add the following: CHECK LEFT AND RIGHT.

Page 7-77. Figure 7-69. Under PRINTING TRACK change the clearance to read:

MIN. 0.010

MAX. 0.020

Page 7-78. Figure 7-70. Under PRINTING HAMMER STOP BRACKET, change the requirement to read: HAMMER OPERATING BAIL AGAINST ITS STOP. PLAY IN THE PRINTING CARRIAGE AND TYPEBOX TAKEN UP TOWARD THE REAR. CLEARANCE BETWEEN TYPE PALLETS AND END OF PRINTING HAMMER IN THREE POSITIONS,

LEFT, MIDDLE, AND RIGHT OF UNIT.

MIN. 0.015 INCH

MAX. 0.050 INCH

Add the name : PRINTING HAMMER BAIL PIVOT STUD

Page 7-80. Figure 7-72. Under RIBBON FEED LEVERS SPRING TENSION change the requirement to read: FEED LEVERS DISENGAGED

MIN. 3/4 oz.

MAX. 2 ozs.

TO START LEVERS MOVING CHECK LEFT AND RIGHT

Under RIBBON UNIT FEED LEVER BAIL BRACKET change the first part of the requirement to read: TYPEBOX CLUTCH DISENGAGED. LEFT RIBBON REVERSE LEVER IN ITS UPPER POSITION. STOP BRACKET IN ITS EXTREME REAR POSITION. INNER FEED LEVER .....THE STOP BRACKET.

Under RIBBON RATCHET WHEEL FRICTION SPRING TENSION, change the requirement to read: FEED LEVER DISENGAGED

MIN. 3-1/2 ozs.

MAX. 4-1/2 ozs.

TO START RATCHET WHEEL ROTATING. CHECK LEFT AND RIGHT.

Page 7-86. Figure 7-79. Under HORIZONTAL STOP SLIDE SPRING TENSION requirement, change the second line of the spring tensions to read: MIN. 2 ozs; MAX. 3 ozs.

FOR MIDDLE SLIDE

Under AUTOMATIC CARRIAGE RETURN ARM, change the first and second line of the requirement to read: CARRIAGE IN POSITION TO PRINT THE 72nd. CHARACTER.

Page 7-87. Figure 7-80. Under PAPER STRAIGHTENER LEVER SPRING TENSION, change the requirement to read: Min. 1-1/2 ozs.

MAX. 3 ozs.

Page 7-96. Figure 7-90. Under START MAGNET CORE requirement change the clearance to read:

MIN. 0.0015 INCH

MAX. 0.005 INCH

Page 7-98. Figure 7-92. Delete figure 7-92 and substitute therefor figure 16 of this temporary correction.

Page 7-100. Table 7-3 For Teletype part number change the winding data as follows: Wire Size - Change to No. 34; Turns - Change to 4000; D-C Res. Ohms - Change to 190

Page 7-143 & 7-144 Figure 7-136. In the upper left-hand corner of the figure under AC Motor, Synchronous, add the following code:

PD-17/U

At the left-hand center portion of the figure delete the drawing under AC Motor, Series Governed, and substitute therefor figure 17 of this temporary correction.

Add to figure 7-136, figure 18 of this temporary correction.

Page 7-145 & 7-146. Figure 7-137 At the lower right-hand corner of the figure under the circular drawing with the 500 series numbers representing a motor, add the title and code:

AC MOTOR (SYNCHRONOUS) PD-17/U

Delete the circular drawing with 600 series numbers and substitute therfor figure 19 of this temporary correction.

Add to the figure, figure 20 of this temporary correction.

Page 7-111. Add figure 21 of this temporary correction to this page.

Page 7-112. Figure 7-107. Delete this figure and substitute therefor figure 22 of this temporary correction.

Change items in Table 8-4 in accordance with pages 40 through 47 of this temporary correction.

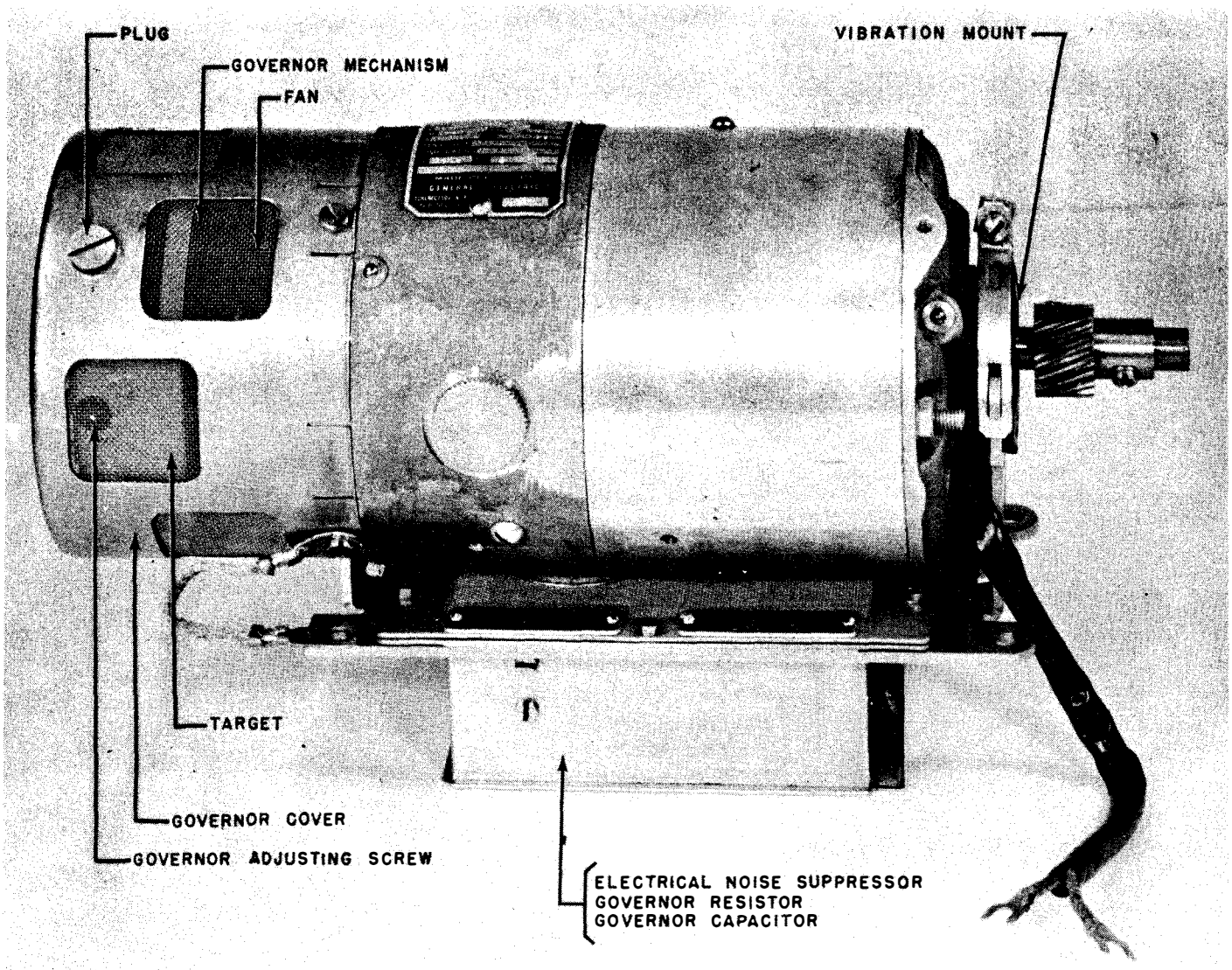


FIGURE I. A C MOTOR (GOVERNED) PD-18/U

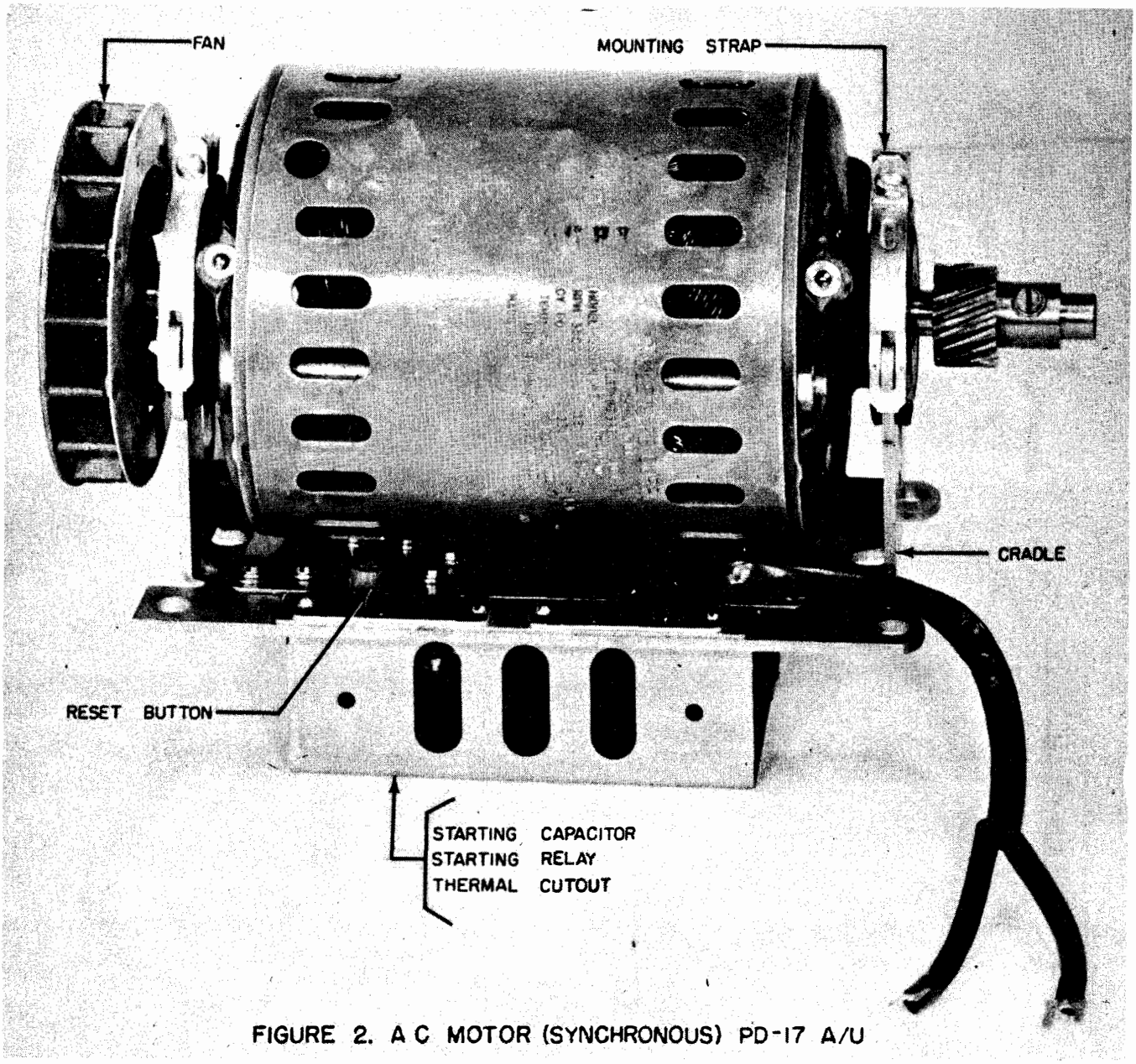


FIGURE 2. A C MOTOR (SYNCHRONOUS) PD-17 A/U

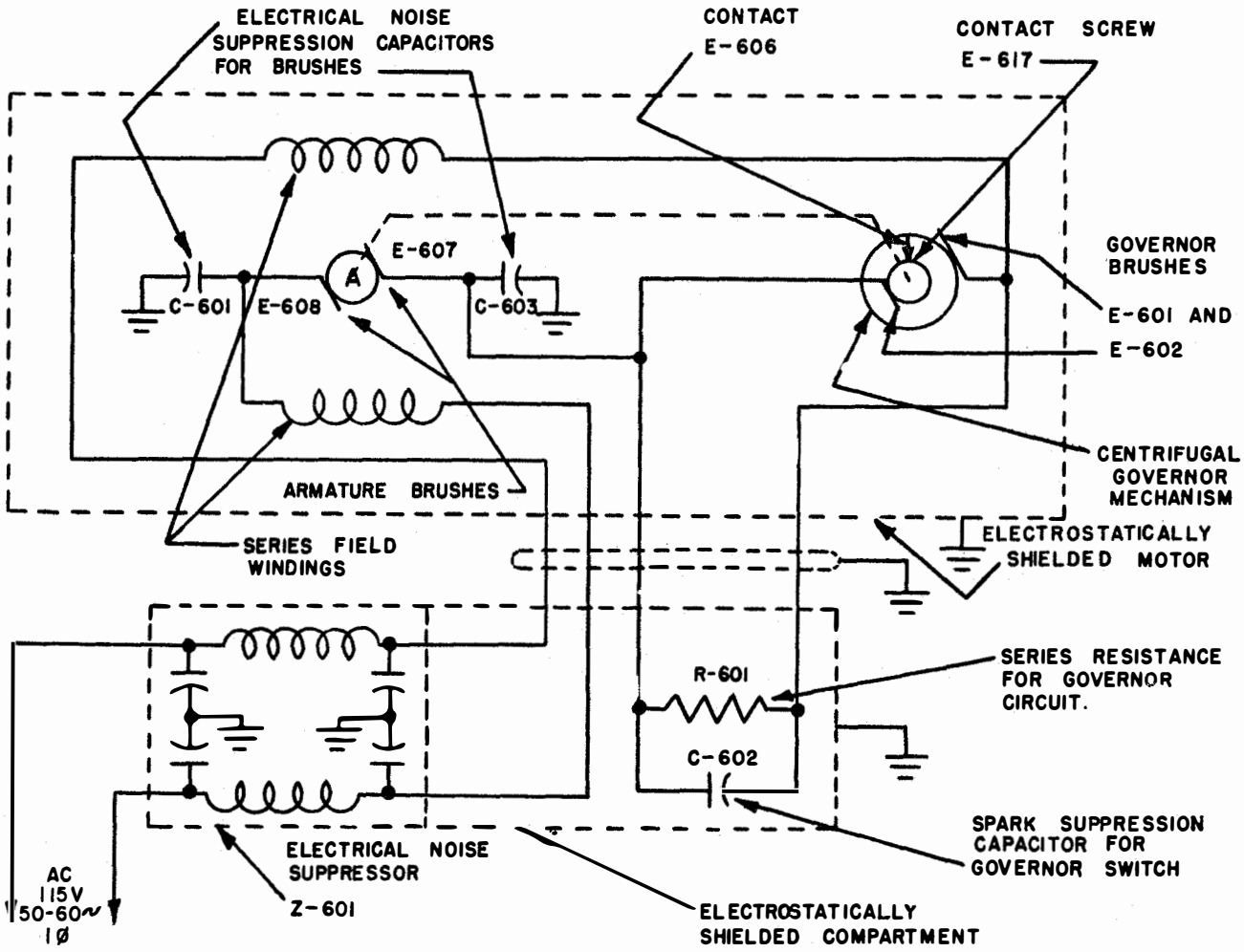


FIGURE 3. AC MOTOR (GOVERNED) PD-1870, SCHEMATIC WIRING DIAGRAM

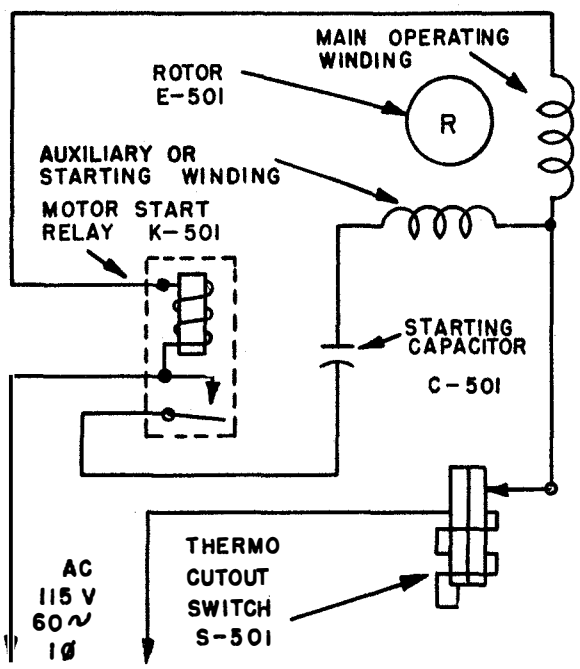
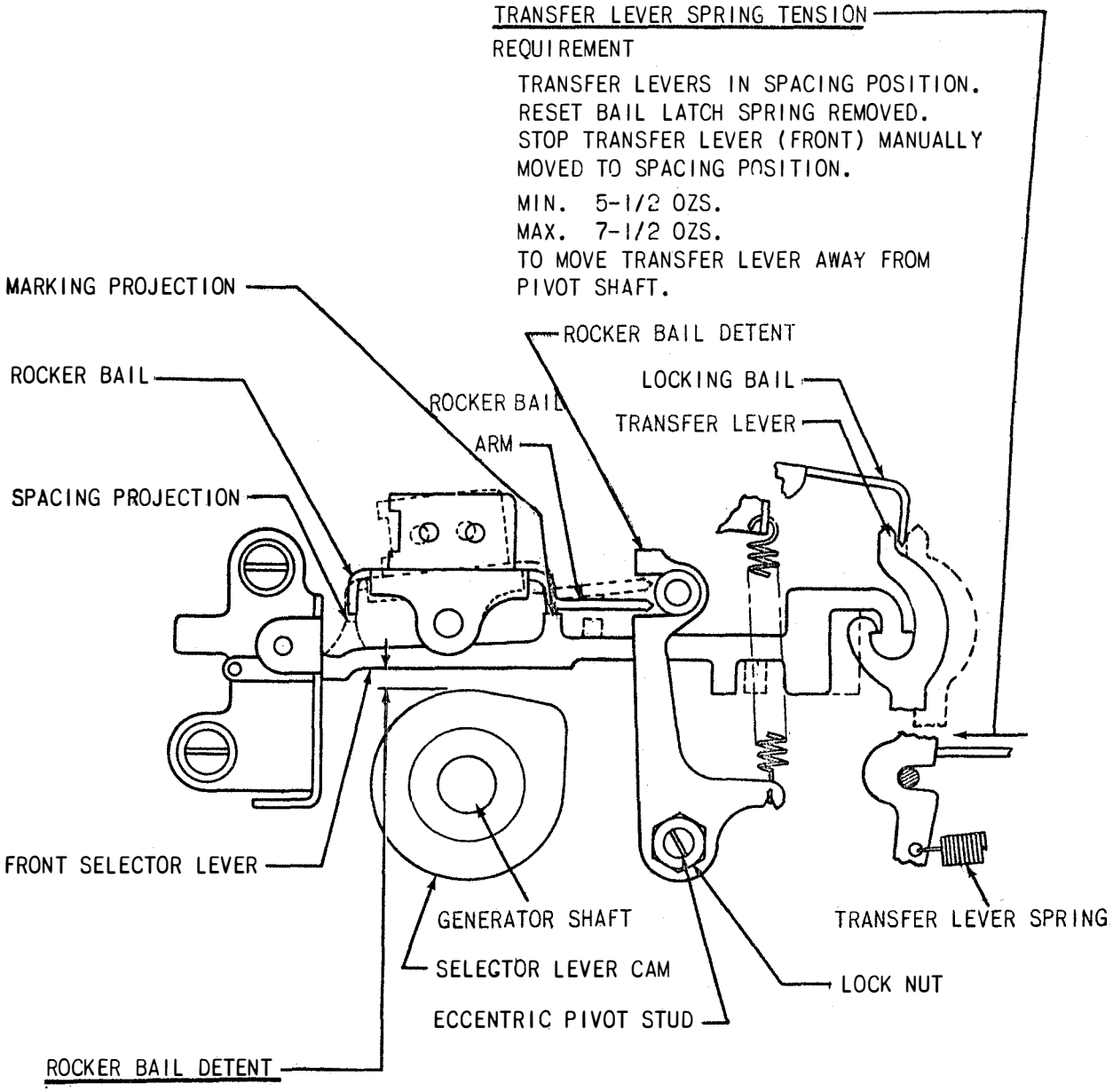


FIGURE 4. AC MOTOR(SYNCHRONOUS)
PD-17A/U SCHEMATIC WIRING DIAGRAM



CLEARANCE BETWEEN THE ROCKER BAIL ARM AND BOTH THE MARKING AND THE SPACING PROJECTIONS OF THE SELECTOR LEVERS SHOULD BE EQUAL WITHIN 0.005 INCH.

TO CHECK

ROTATE THE CAM SLEEVE UNTIL THE FRONT SELECTOR LEVER IS OPPOSITE THE LOW PART OF THE CAM. WITH THE FRONT SELECTOR LEVER IN THE MARKING (LEFT) POSITION, AND THE ROCKER BAIL ARM AGAINST THE LOWER STOP OF ITS DETENT, HOLD THE SELECTOR LEVER LIGHTLY UP AGAINST THE ROCKER BAIL AND GAUGE THE CLEARANCE BETWEEN THE SELECTOR LEVER AND THE CAM. SHIFT THE ROCKER BAIL ARM AGAINST THE UPPER STOP OF ITS DETENT AND HOLD THE FRONT SELECTOR LEVER TO THE RIGHT AND UP SO THAT THE SPACING PROJECTION TOUCHES THE ROCKER BAIL. GAUGE THE CLEARANCE BETWEEN THE SELECTOR LEVER AND THE CAM. THESE TWO CLEARANCES SHOULD BE EQUAL WITHIN 0.005 INCH.

TO ADJUST

EQUALIZE CLEARANCES BY ROTATING THE ECCENTRIC PIVOT STUD OF THE DETENT WITH ITS LOCK NUT LOOSENED. KEEP THE HIGH PART OF THE ECCENTRIC TOWARD GENERATOR SHAFT.

FIGURE 5

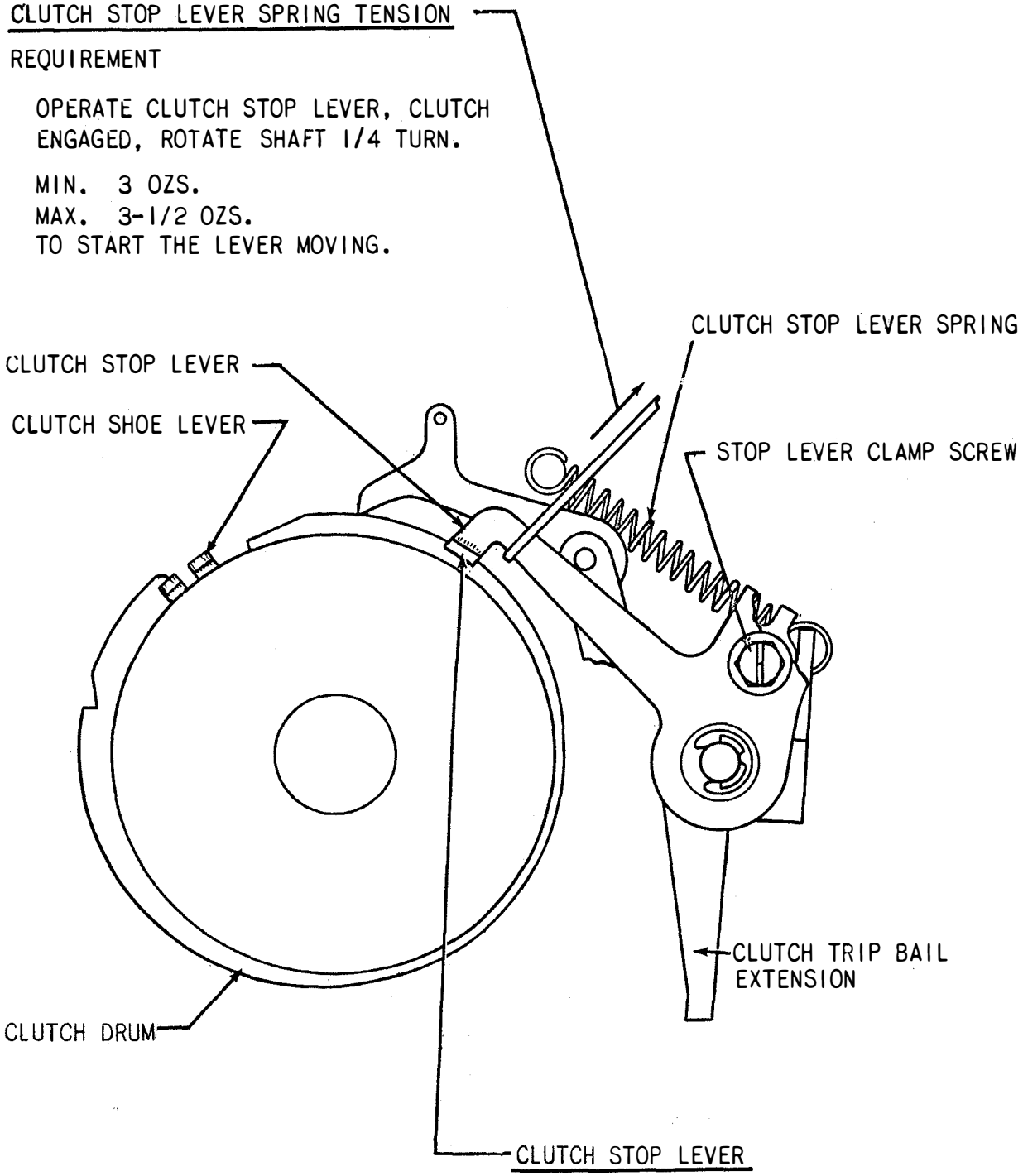
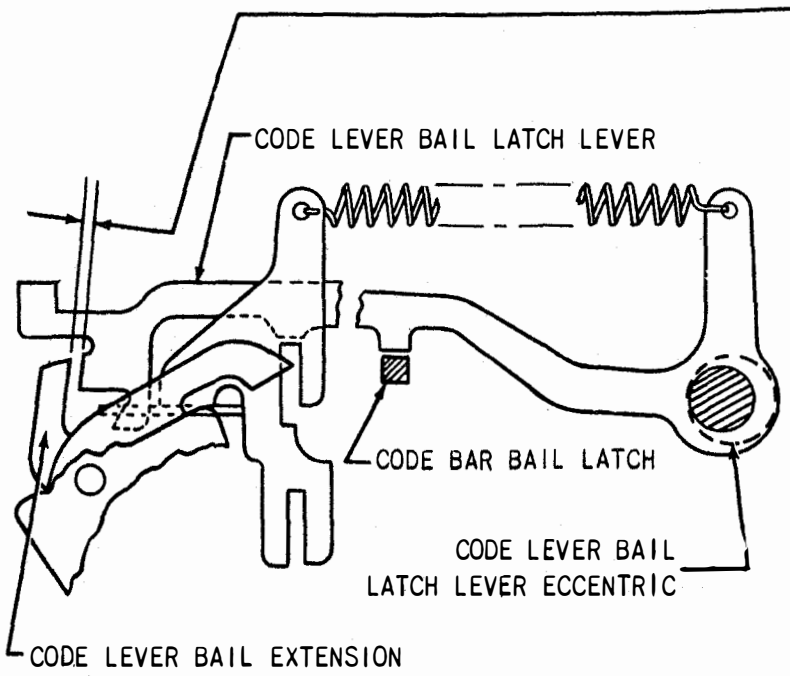

CLUTCH STOP LEVER SPRING TENSION
REQUIREMENT
OPERATE CLUTCH STOP LEVER, CLUTCH ENGAGED, ROTATE SHAFT 1/4 TURN.
MIN. 3 OZS.
MAX. 3-1/2 OZS.
TO START THE LEVER MOVING.
CLUTCH STOP LEVER SPRING
CLUTCH STOP LEVER
CLUTCH SHOE LEVER
STOP LEVER CLAMP SCREW
CLUTCH TRIP BAIL EXTENSION
CLUTCH DRUM
CLUTCH STOP LEVER
REQUIREMENT
CLUTCH STOP LEVER SHOULD FULLY ENGAGE THE CLUTCH SHOE LEVER VERTICALLY.
TO ADJUST
POSITION THE STOP LEVER WITH ITS CLAMP SCREW LOOSENED.

FIGURE 6



CODE LEVER BAIL LATCH LEVER ECCENTRIC

REQUIREMENT

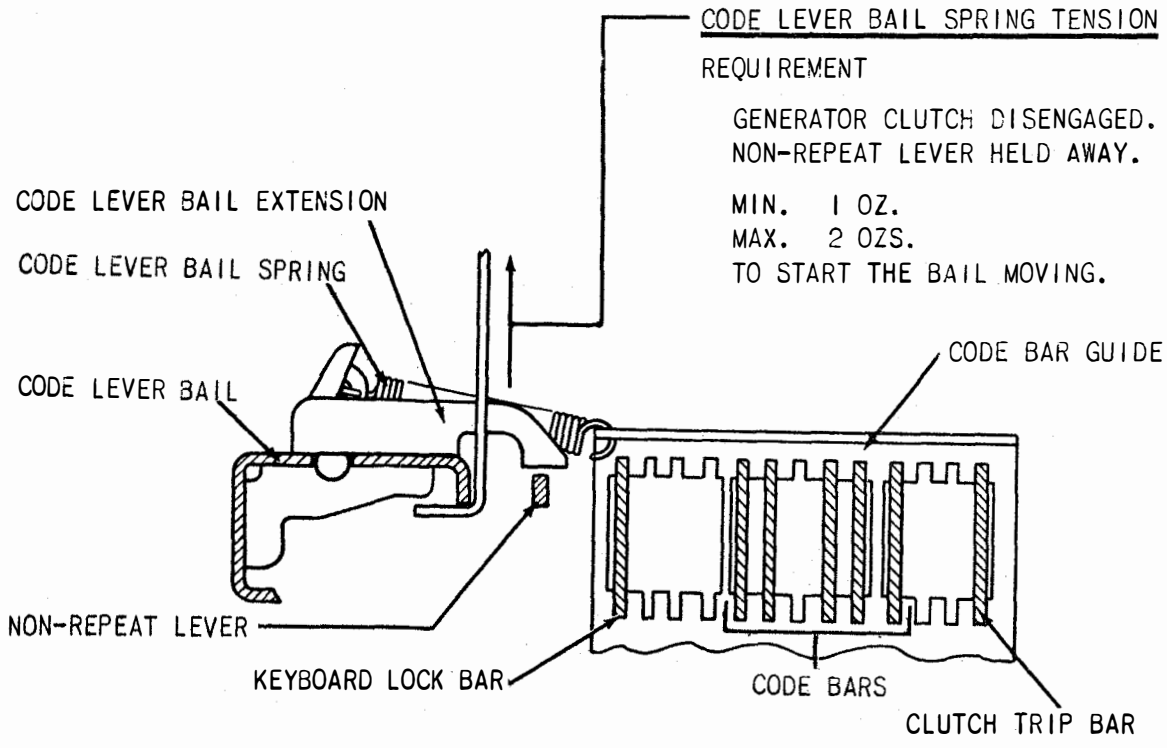
KEY LEVER WITH SHORTEST DOWNWARD STROKE FULLY DEPRESSED. CLEARANCE BETWEEN FRONT VERTICAL SURFACE OF THE CODE LEVER BAIL EXTENSION AND THE STEP ON THE REAR END OF THE CODE LEVER BAIL LATCH LEVER.

MIN. 0.025 INCH
MAX. 0.050 INCH

TO ADJUST

ROTATE THE CODE LEVER BAIL LATCH LEVER ECCENTRIC. KEEP HIGH PART OF ECCENTRIC UPWARD AND TOWARD THE FRONT. MAKE CERTAIN THERE IS SOME CLEARANCE BETWEEN THE CODE BAR BAIL LATCH LEVER AND THE CODE BAR BAIL LATCH.

FIGURE 13A. KEYBOARD, NON-REPEAT MECHANISM



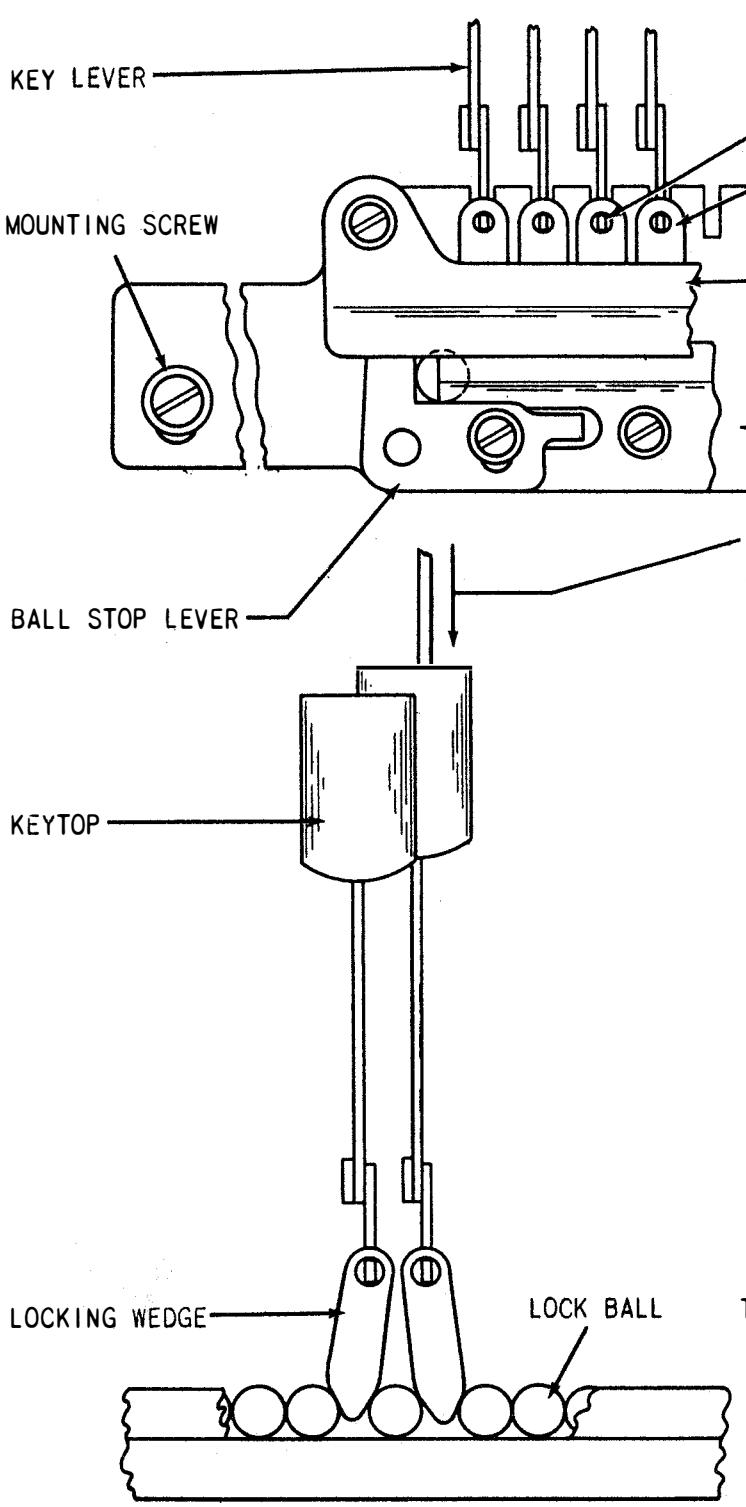
CODE LEVER BAIL SPRING TENSION

REQUIREMENT

GENERATOR CLUTCH DISENGAGED. NON-REPEAT LEVER HELD AWAY.

MIN. 1 OZ.
MAX. 2 OZS.
TO START THE BAIL MOVING.

FIGURE 7



KEY LEVER LOCK BALL TRACK

REQUIREMENT

THE LOCK BALL TRACK SHOULD BE POSITIONED UP OR DOWN SO THAT WHEN A SINGLE KEY IS DEPRESSED THE LOCKING WEDGE DOES NOT TOUCH THE BOTTOM OF THE BALL RACE. (CHECK FOR ADDITIONAL SPRING AFTER THE KEY IS FULLY DEPRESSED.) ALSO MAKE CERTAIN THAT THE WEDGE RETAINER DOES NOT TOUCH THE PROJECTION THAT HOLDS THE LOCKING WEDGE.

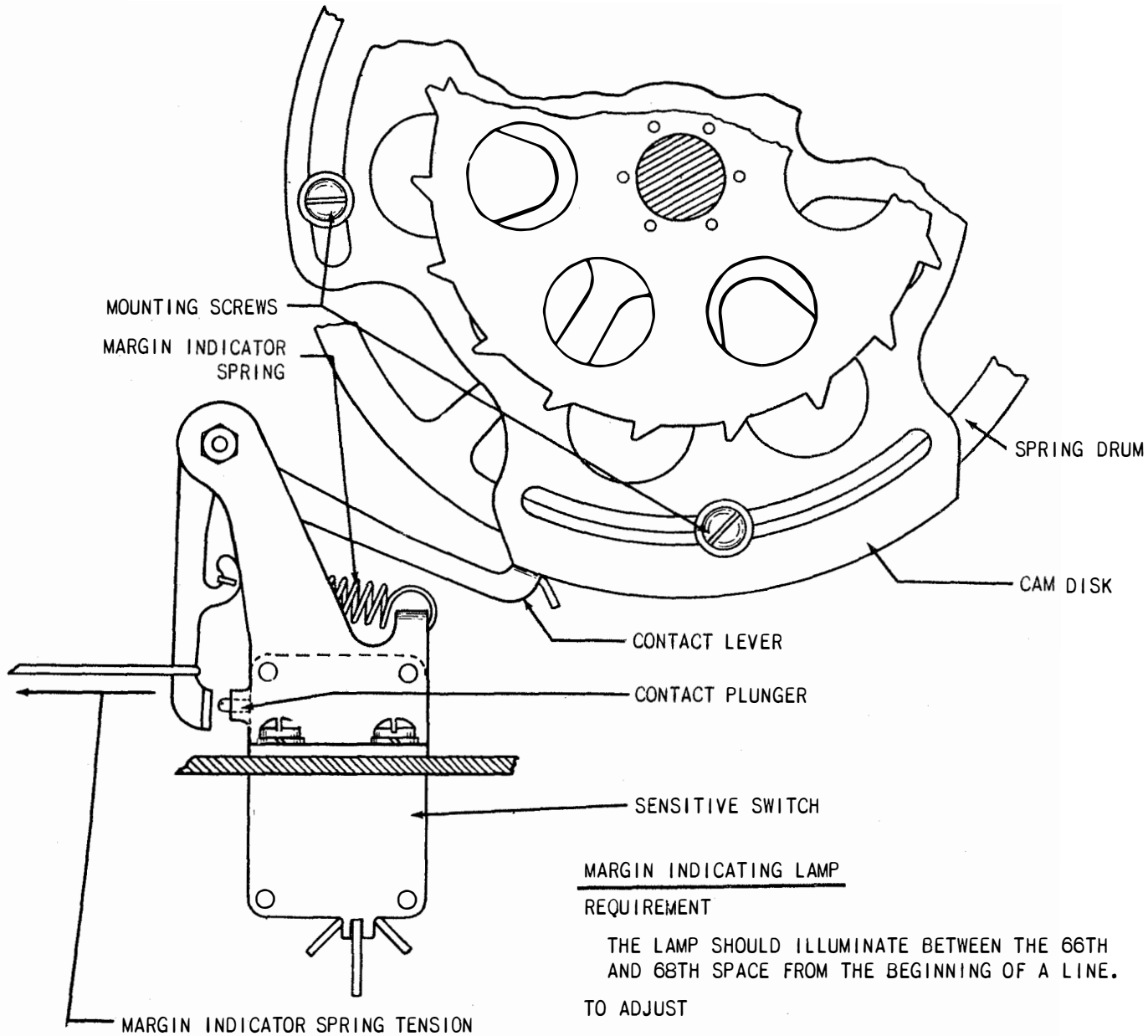
THE ADJUSTABLE STOP LEVER SHOULD BE POSITIONED SO THAT WHEN TWO KEYS ARE DEPRESSED SIMULTANEOUSLY THE LOCKING WEDGES WILL NOT ADVANCE BETWEEN THE BALLS SUFFICIENTLY FOR THE KEYBOARD CLUTCH TO TRIP, WHEN A SINGLE KEY IS DEPRESSED AND RELEASED, IT SHOULD RETURN TO ITS EXTREME UPWARD POSITION (OPERATE UNDER POWER).

IT SHOULD REQUIRE NOT MORE THAN 7 OZS. TO DEPRESS A KEY TO ITS EXTREME DOWNWARD POSITION. MAKE CERTAIN THAT THE KEYTOPS DO NOT BIND IN KEYBOARD HOLES.

TO ADJUST

LOOSEN THE BALL STOP LEVER CLAMP SCREW AND LOCK BALL TRACK MOUNTING SCREW FRICTION TIGHT. POSITION THE LOCK BALL TRACK TO MEET THE FIRST REQUIREMENT. POSITION THE STOP LEVER TO MEET THE OTHER REQUIREMENTS.

FIGURE 8



MARGIN INDICATOR SPRING TENSION

REQUIREMENT

MIN. 7 OZS.
MAX. 11 OZS.
TO MOVE THE CONTACT LEVER FROM THE CONTACT PLUNGER.

MARGIN INDICATING LAMP

REQUIREMENT

THE LAMP SHOULD ILLUMINATE BETWEEN THE 66TH AND 68TH SPACE FROM THE BEGINNING OF A LINE.

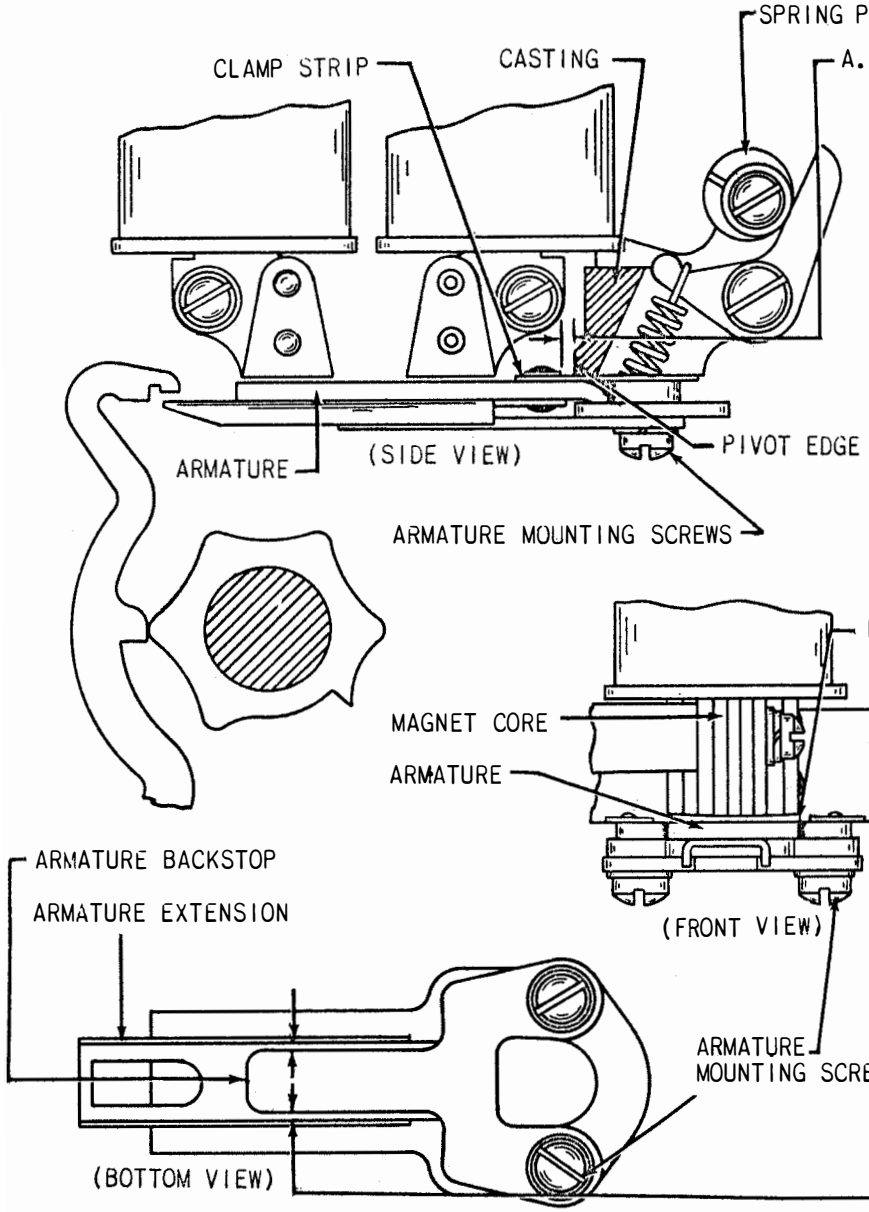
TO ADJUST

POSITION THE CAM DISK ON THE SPRING DRUM WITH ITS THREE MOUNTING SCREWS LOOSENED.

FIGURE 9

d. TYPING UNIT

NOTE
TO FACILITATE MAKING THE FOLLOWING ADJUSTMENTS, REMOVE THE SELECTOR MAGNET ASSEMBLY.



A. ARMATURE CLAMP STRIP

REQUIREMENT

CLEARANCE

MIN. 0.010 INCH
MAX. 0.030 INCH
BETWEEN ARMATURE CLAMP STRIP AND PIVOT END OF CASTING.

TO ADJUST

FIRST, POSITION ARMATURE SPRING PLATE ECCENTRIC TO HOLD ARMATURE FIRMLY AGAINST PIVOT EDGE OF CASTING. THEN, POSITION ARMATURE WITH MOUNTING SCREWS LOOSENED.

B. ARMATURE ALIGNMENT

REQUIREMENT

OUTER EDGE OF ARMATURE SHOULD BE FLUSH (WITHIN 0.010 INCH) WITH OUTER EDGE OF MAGNET CORE.

TO ADJUST

POSITION ARMATURE WITH MOUNTING SCREWS LOOSENED.

C. ARMATURE BACKSTOP ALIGNMENT

REQUIREMENT

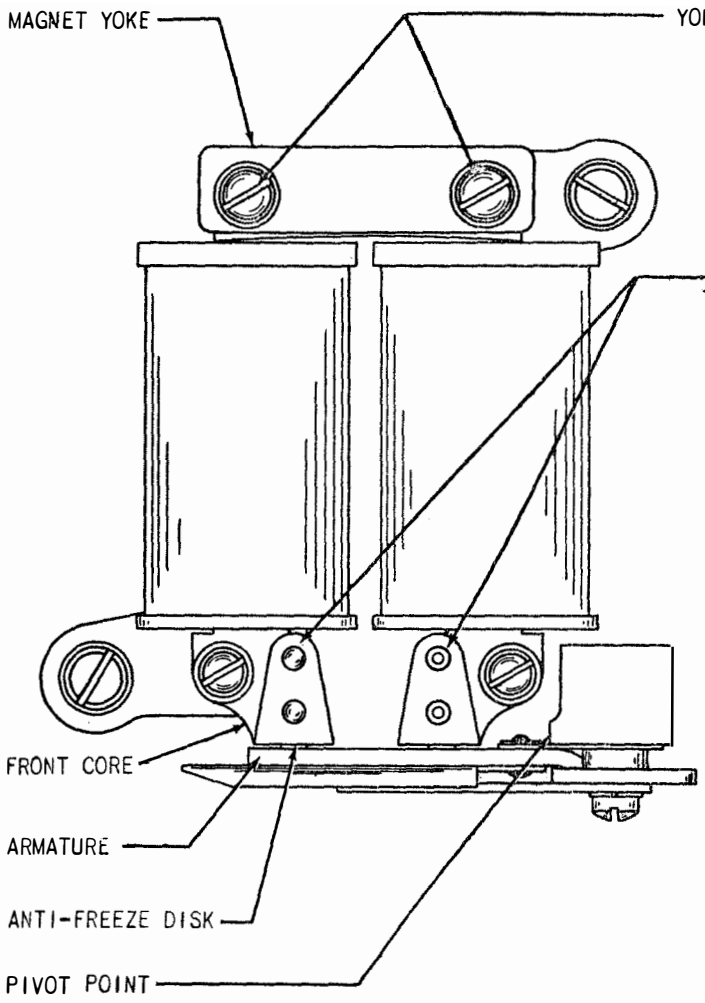
SOME CLEARANCE

MIN. 0.010 INCH
BETWEEN THE SIDES OF THE BACKSTOP AND THE SIDES OF THE ARMATURE.

TO ADJUST

POSITION BACKSTOP WITH ARMATURE MOUNTING SCREWS LOOSENED.

FIGURE 10



MAGNET CORE

REQUIREMENT

WITH ARMATURE HELD FIRMLY AGAINST PIVOT POINT AND FRONT CORE, THE FRONT ANTI-FREEZE DISK SHOULD MAKE FLAT CONTACT WITH FRONT CORE AND REAR ANTI-FREEZE DISK SHOULD MAKE CONTACT WITH REAR CORE.

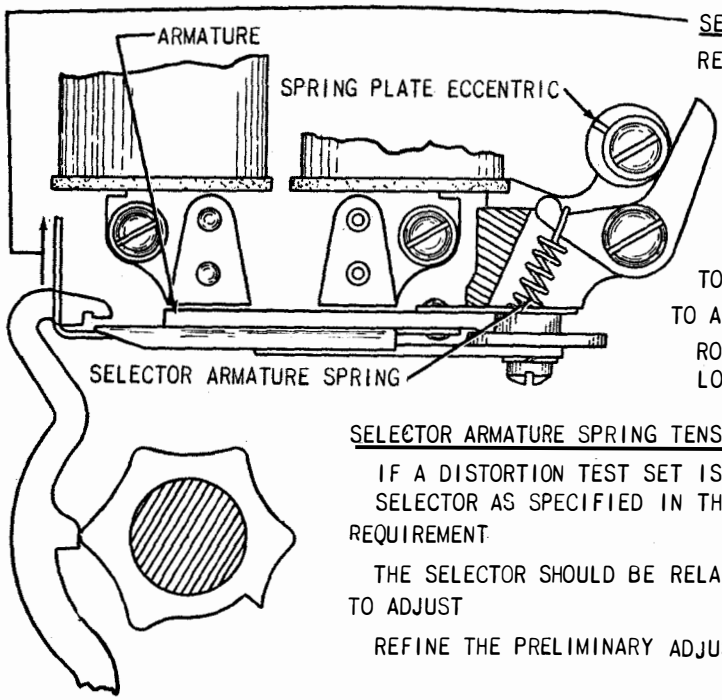
TO ADJUST

REMOVE RIGHT-HAND YOKE MOUNTING SCREW. LOOSEN THE OTHER THREE MOUNTING SCREWS AND POSITION THE LEFT-HAND CORE SO THAT ITS FACE AND THE ARMATURE ARE PARALLEL. TIGHTEN THE LEFT CORE MOUNTING SCREW. HOLD THE ARMATURE AGAINST THE LEFT CORE AND POSITION THE RIGHT CORE SO THAT IT TOUCHES THE ARMATURE AND TIGHTEN THE RIGHT-HAND CORE MOUNTING SCREW. DEPRESS THE MAGNET YOKE AND REPLACE THE RIGHT-HAND YOKE SCREW. TIGHTEN ALL MOUNTING SCREWS.

NOTE

REPLACE THE SELECTOR MAGNET ASSEMBLY.

FIGURE 11



SELECTOR ARMATURE SPRING TENSION - PRELIMINARY

REQUIREMENT

BOTH THE MARKING AND SPACING LOCK LEVERS (FIG. 33) ON HIGH PART OF LOCK LEVER CAM. SCALE APPLIED UPWARD AT END OF ARMATURE.

		0.060 AMP.		0.020 AMP.
TENSION:	MIN.	2-1/2 OZS.	MIN.	1-1/2 OZS.
	MAX.	3 OZS.	MAX.	2 OZS.

TO PULL ARMATURE TO MARKING POSITION.

TO ADJUST

ROTATE SPRING PLATE ECCENTRIC WITH ITS MOUNTING SCREW LOOSENED.

SELECTOR ARMATURE SPRING TENSION - FINAL

IF A DISTORTION TEST SET IS AVAILABLE, DETERMINE THE INTERNAL BIAS OF THE SELECTOR AS SPECIFIED IN THE INSTRUCTIONS FURNISHED WITH THE SET.

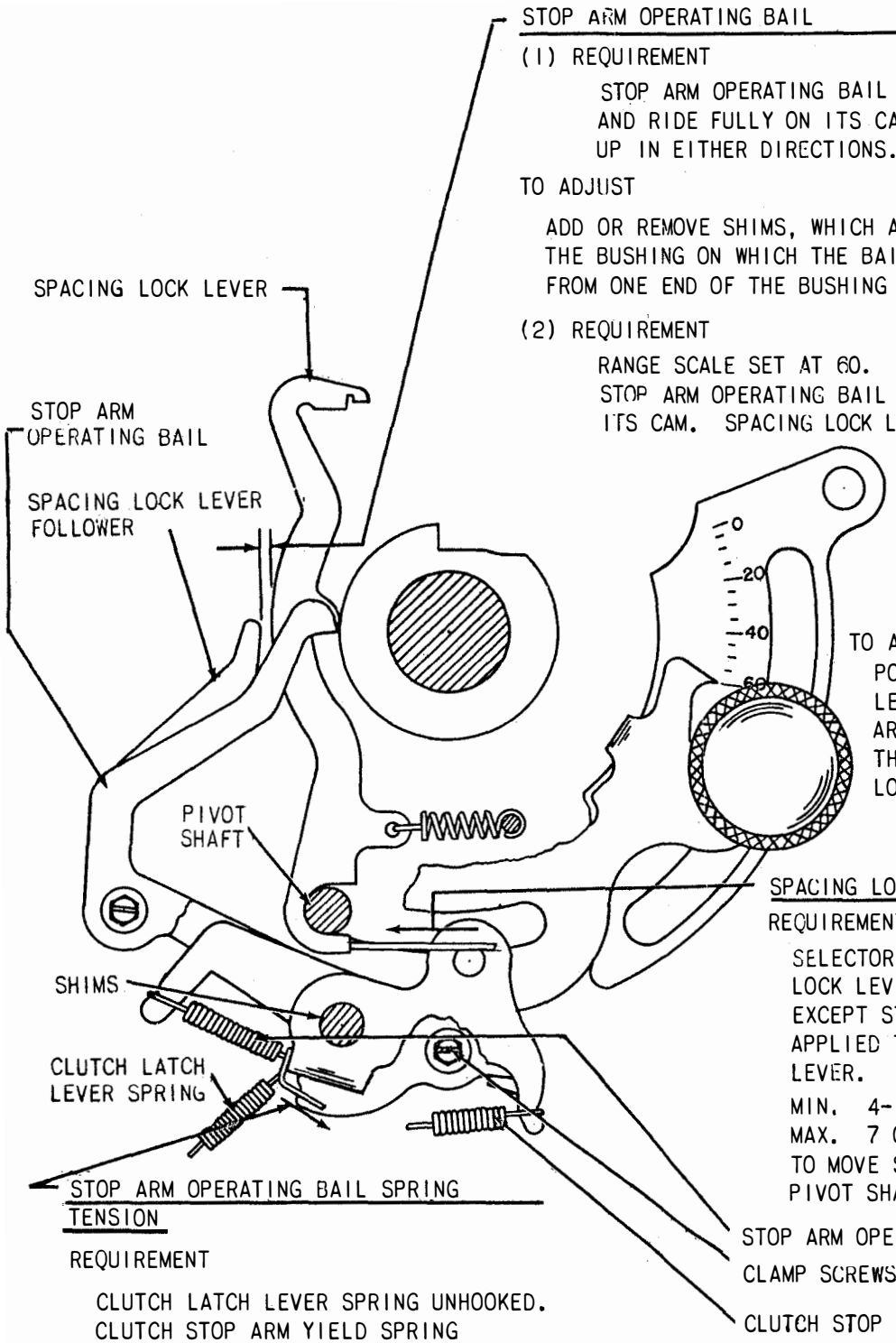
REQUIREMENT

THE SELECTOR SHOULD BE RELATIVELY FREE OF INTERNAL BIAS.

TO ADJUST

REFINE THE PRELIMINARY ADJUSTMENT BY ROTATING THE SPRING PLATE ECCENTRIC.

FIGURE 12



STOP ARM OPERATING BAIL

(1) REQUIREMENT

STOP ARM OPERATING BAIL FREE ON ITS PIVOT AND RIDE FULLY ON ITS CAM WITH ITS END PLAY TAKEN UP IN EITHER DIRECTIONS.

TO ADJUST

ADD OR REMOVE SHIMS, WHICH ARE PLACED AT EACH END OF THE BUSHING ON WHICH THE BAIL PIVOTS; OR SHIFT SHIMS FROM ONE END OF THE BUSHING TO THE OTHER END.

(2) REQUIREMENT

RANGE SCALE SET AT 60.
STOP ARM OPERATING BAIL ON HIGH PART OF ITS CAM. SPACING LOCK LEVER ON HIGHEST PART OF ITS CAM. SOME CLEARANCE BETWEEN FRONT EDGE OF SPACING LOCK LEVER AND SPACING LOCK LEVER FOLLOWER

MAX. 0.004 INCH

TO ADJUST

POSITION THE SPACING LOCK LEVER FOLLOWER ON THE STOP ARM OPERATING BAIL WITH THE TWO CLAMP SCREWS LOOSENED.

SPACING LOCK LEVER SPRING TENSION

REQUIREMENT

SELECTOR ARMATURE RELEASED. SPACING LOCK LEVER ON ANY LOW PART OF CAM EXCEPT START POSITION. SPRING SCALE APPLIED TO LOWER END OF SPACING LOCK LEVER.

MIN. 4-1/2 OZS.
MAX. 7 OZS.
TO MOVE SPACING LOCK LEVER FROM ITS PIVOT SHAFT.

STOP ARM OPERATING BAIL SPRING TENSION

REQUIREMENT

CLUTCH LATCH LEVER SPRING UNHOOKED. CLUTCH STOP ARM YIELD SPRING REMOVED.

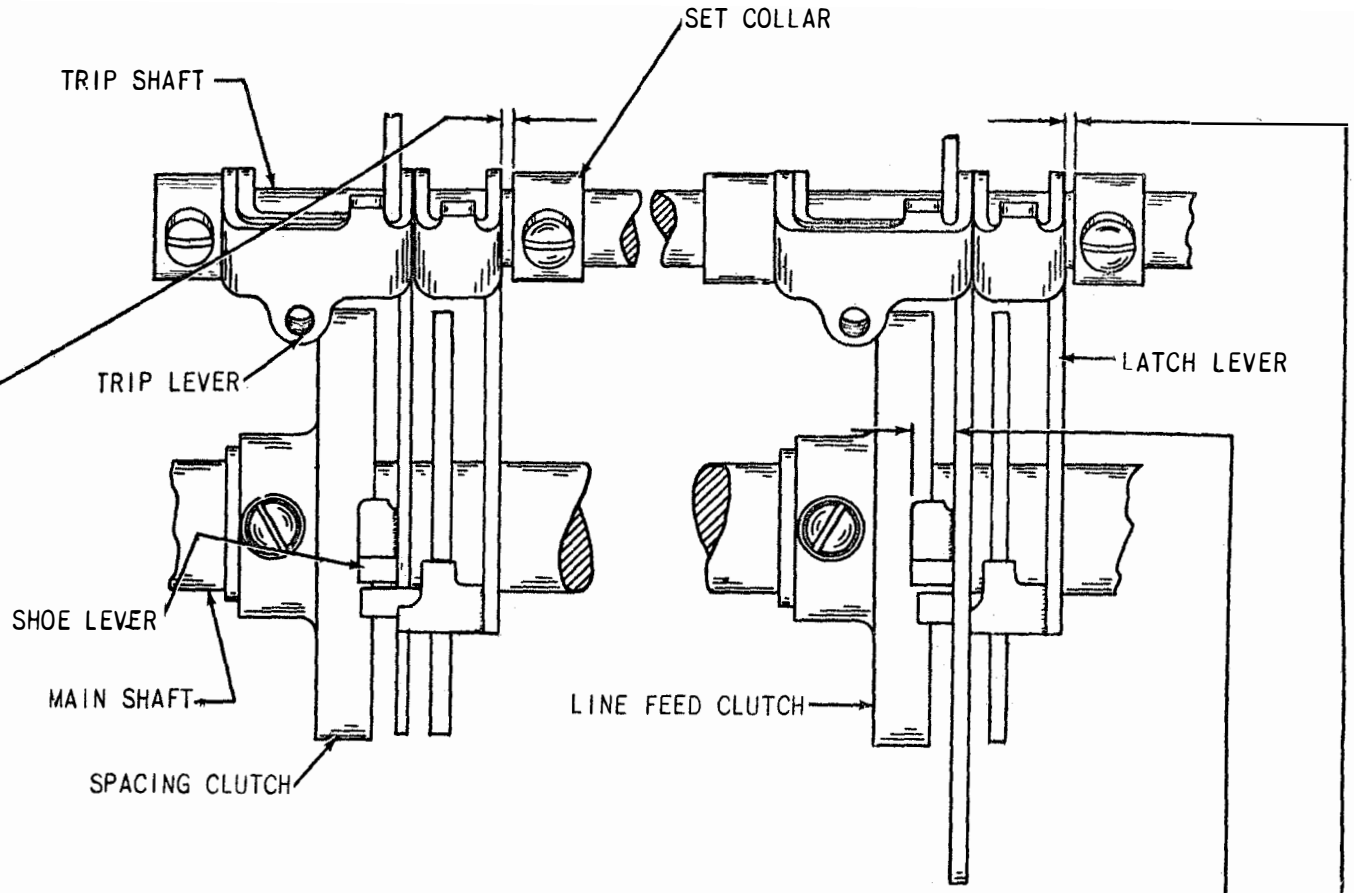
MIN. 9 OZS.
MAX. 11 OZS.
TO MOVE THE BAIL.

STOP ARM OPERATING BAIL SPRING (INNER SPRING)

CLAMP SCREWS

CLUTCH STOP ARM YIELD SPRING

FIGURE 13



CLUTCH TRIP SHAFT SET COLLARS

(1) REQUIREMENT

APPROXIMATE ALIGNMENT OF RIGHT ENDS OF STOP EXTENSIONS ON TRIP LEVER AND SHOE LEVER.

TO ADJUST

POSITION THE TRIP LEVER SET COLLAR.

(2) REQUIREMENT

THE SPACING CLUTCH LATCH LEVER SHOULD HAVE SOME SIDE PLAY.

MAX. 0.008 INCH

TO ADJUST

POSITION THE LATCH LEVER SET COLLAR.

(3) REQUIREMENT

POSITION THE TRIP LEVER SET COLLAR SO THAT THE TRIP LEVER HAS SOME PLAY.

MAX. 0.008 INCH

FIGURE 14

A. TYPE BOX CLUTCH TRIP LEVER ECCENTRIC POST

REQUIREMENT

TYPE BOX CLUTCH DISENGAGED.
TRIP LEVER SHOULD ENGAGE THE CLUTCH SHOE LEVER BY THE FULL THICKNESS OF THE SHOE LEVER

TO ADJUST

POSITION THE TRIP LEVER ECCENTRIC POST.

B. LINE FEED CLUTCH TRIP LEVER ECCENTRIC POST

REQUIREMENT

TRIP LEVER ADJUSTING SCREW BACKED OFF.
LINE FEED CLUTCH IN ITS STOP POSITION.
TRIP LEVER SHOULD ENGAGE THE CLUTCH SHOE LEVER BY THE FULL THICKNESS OF THE SHOE LEVER.

TO ADJUST

POSITION THE TRIP LEVER ECCENTRIC POST.

C. LINE FEED CLUTCH TRIP LEVER ADJUSTING SCREW

REQUIREMENT

LINE FEED FUNCTION SLIDE ARM IN REAR POSITION.
CLUTCH TRIP LEVER AGAINST ITS ECCENTRIC POST.
TRIP ARM HELD AGAINST ITS FUNCTION SLIDE ARM.
SOME CLEARANCE BETWEEN THE END OF THE TRIP LEVER ADJUSTING SCREW AND THE TRIP ARM.

MAX. 0.006 INCH

TO ADJUST

POSITION THE ADJUSTING SCREW.

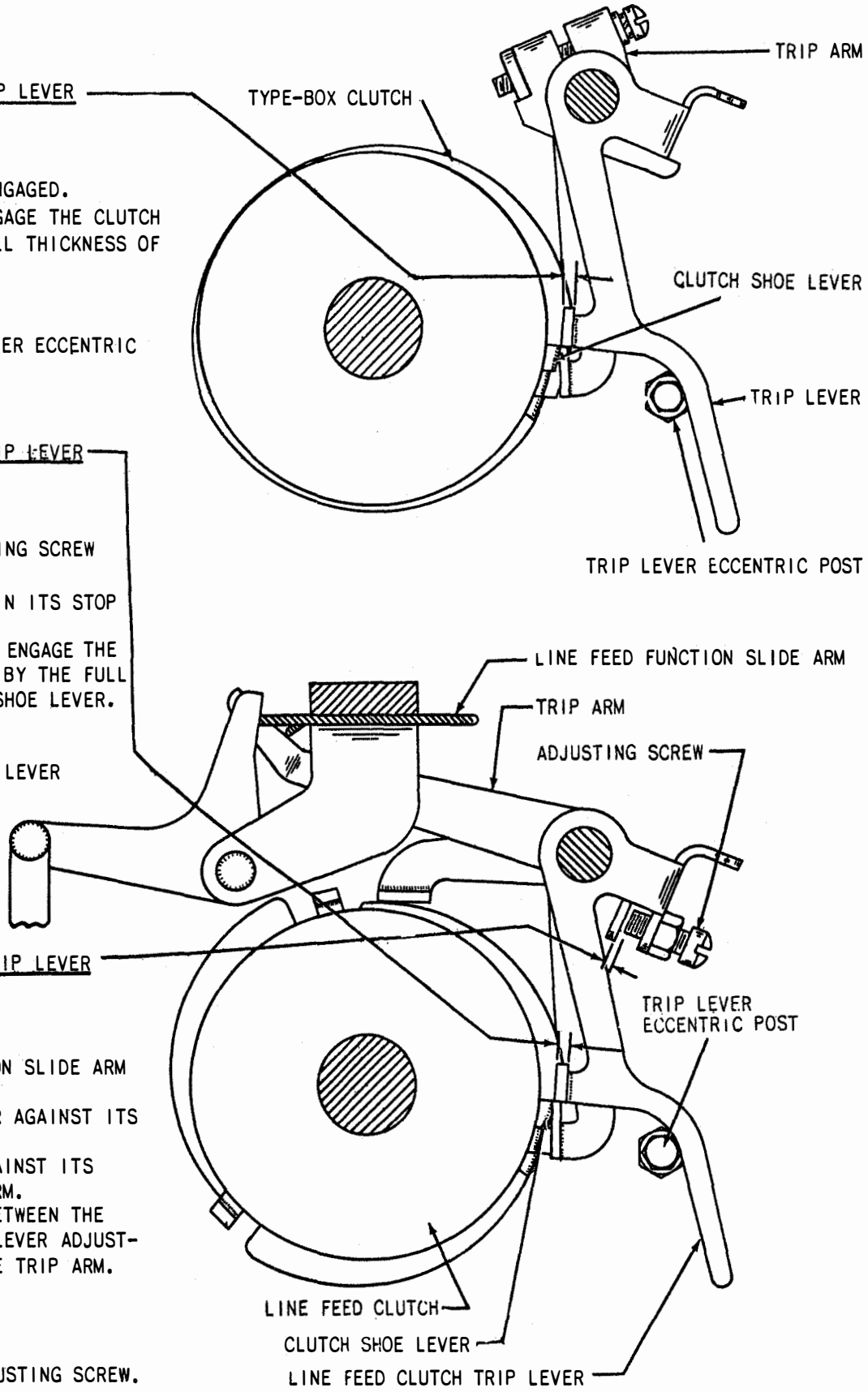
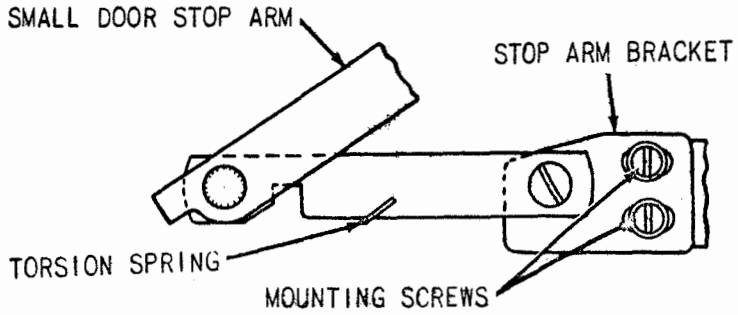


FIGURE 15



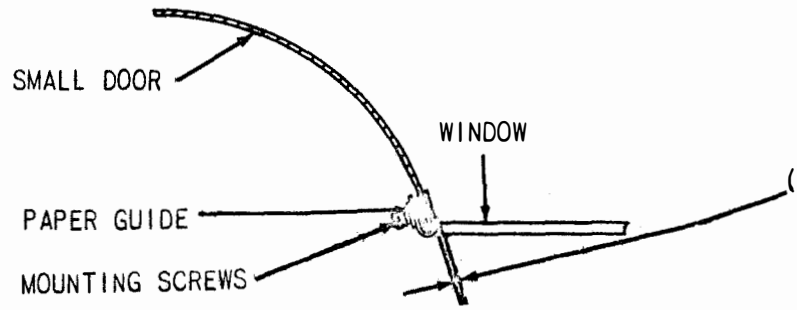
SMALL DOOR STOP ARM

REQUIREMENT

STOP ARM SHOULD BE FREE OF BINDS WHEN DOOR IS OPENED OR CLOSED.

TO ADJUST

LOOSEN THE STOP ARM BRACKET MOUNTING SCREWS. CLOSE THE DOOR. DISCONNECT THE TORSION SPRING. ALIGN STOP ARM FOR FREENESS AND TIGHTEN MOUNTING SCREWS WITH DOOR CLOSED. REPLACE TORSION SPRING.



WINDOW AND PAPER GUIDE

(1) REQUIREMENT

THE BOTTOM EDGE OF THE PAPER GUIDE SHOULD BE FLUSH WITH THE BOTTOM EDGE OF THE WINDOW.

TO ADJUST

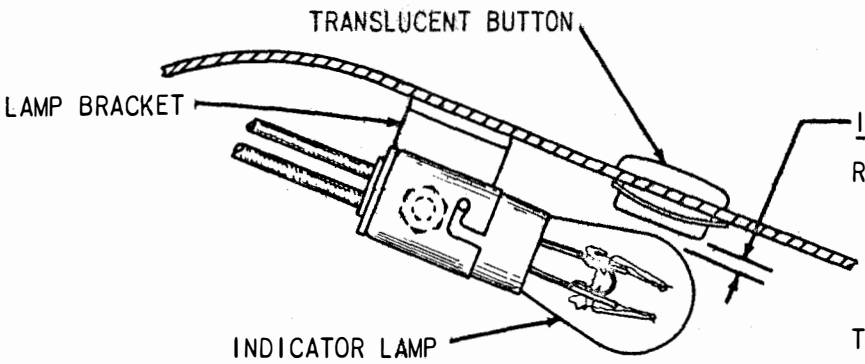
POSITION THE PAPER GUIDE WITH ITS MOUNTING SCREWS LOOSENED.

(2) REQUIREMENT

THE SMALL DOOR SHOULD BARELY CLEAR THE WINDOW WHEN THE DOOR IS OPENED OR CLOSED.

TO ADJUST

POSITION WINDOW WITH ITS RETAINER SCREWS LOOSENED.



INDICATOR LAMP

REQUIREMENT

CLEARANCE BETWEEN INDICATOR LAMP AND TRANSLUCENT BUTTON APPROXIMATELY 1/16 INCH.

TO ADJUST

POSITION LAMP HOLDER ON ITS BRACKET WITH ITS MOUNTING SCREWS LOOSENED.

FIGURE 16

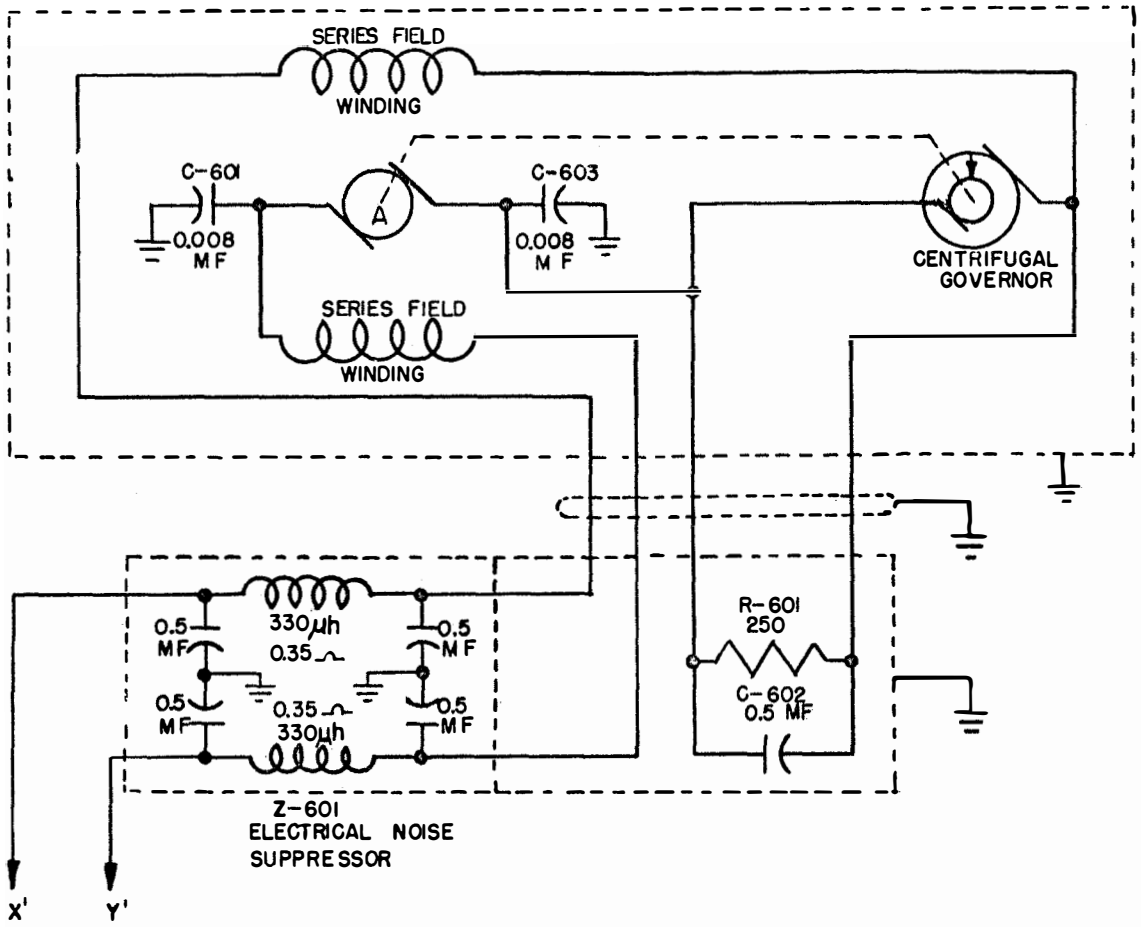


FIGURE 17. AC MOTOR, GOVERNED, PD-18/U

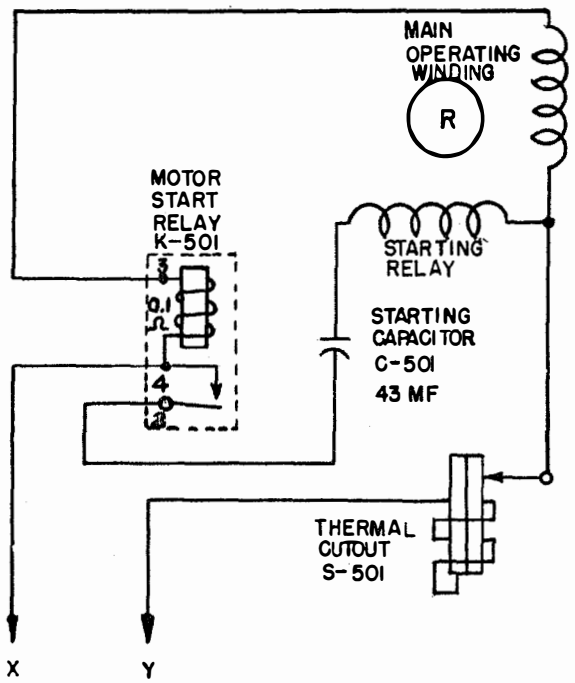


FIGURE 18. AC MOTOR, SYNCHRONOUS, PD-17A/U

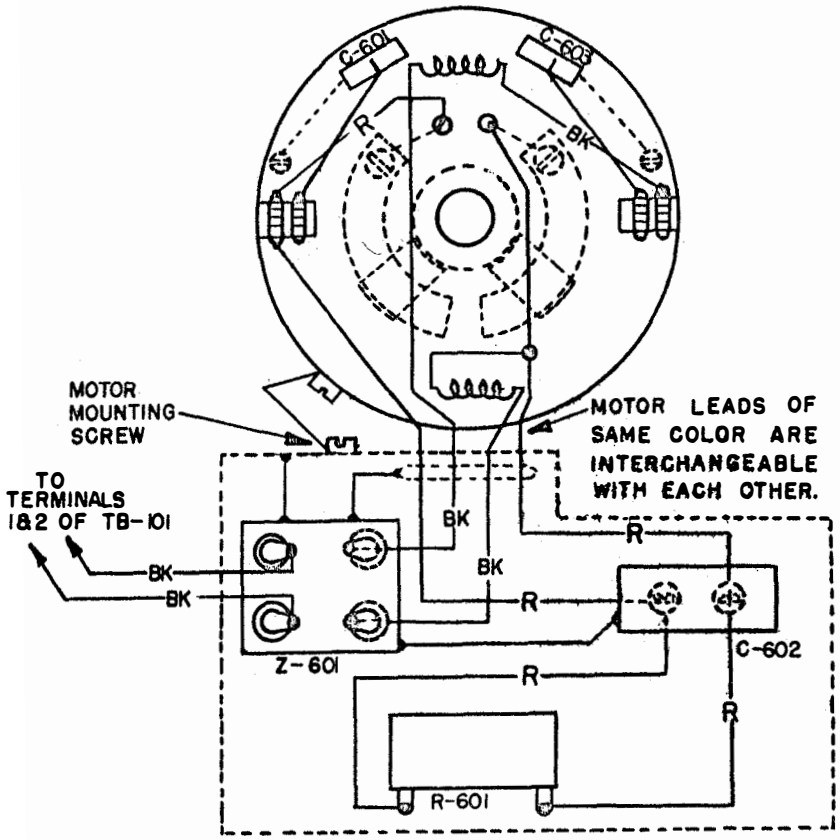


FIGURE 19. AC MOTOR, GOVERNED, PD-18/U

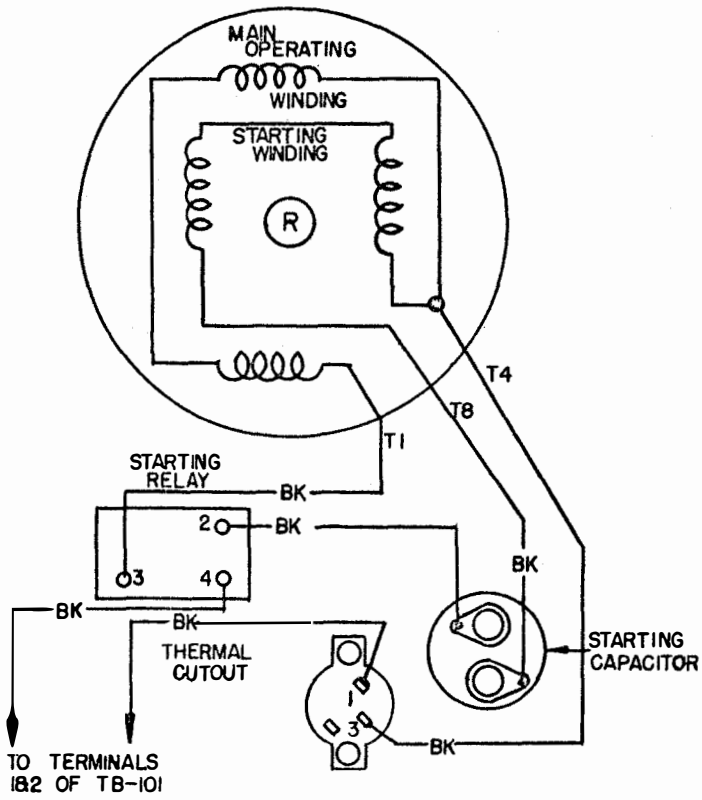


FIGURE 20. AC MOTOR, SYNCHRONOUS, PD-17A/U

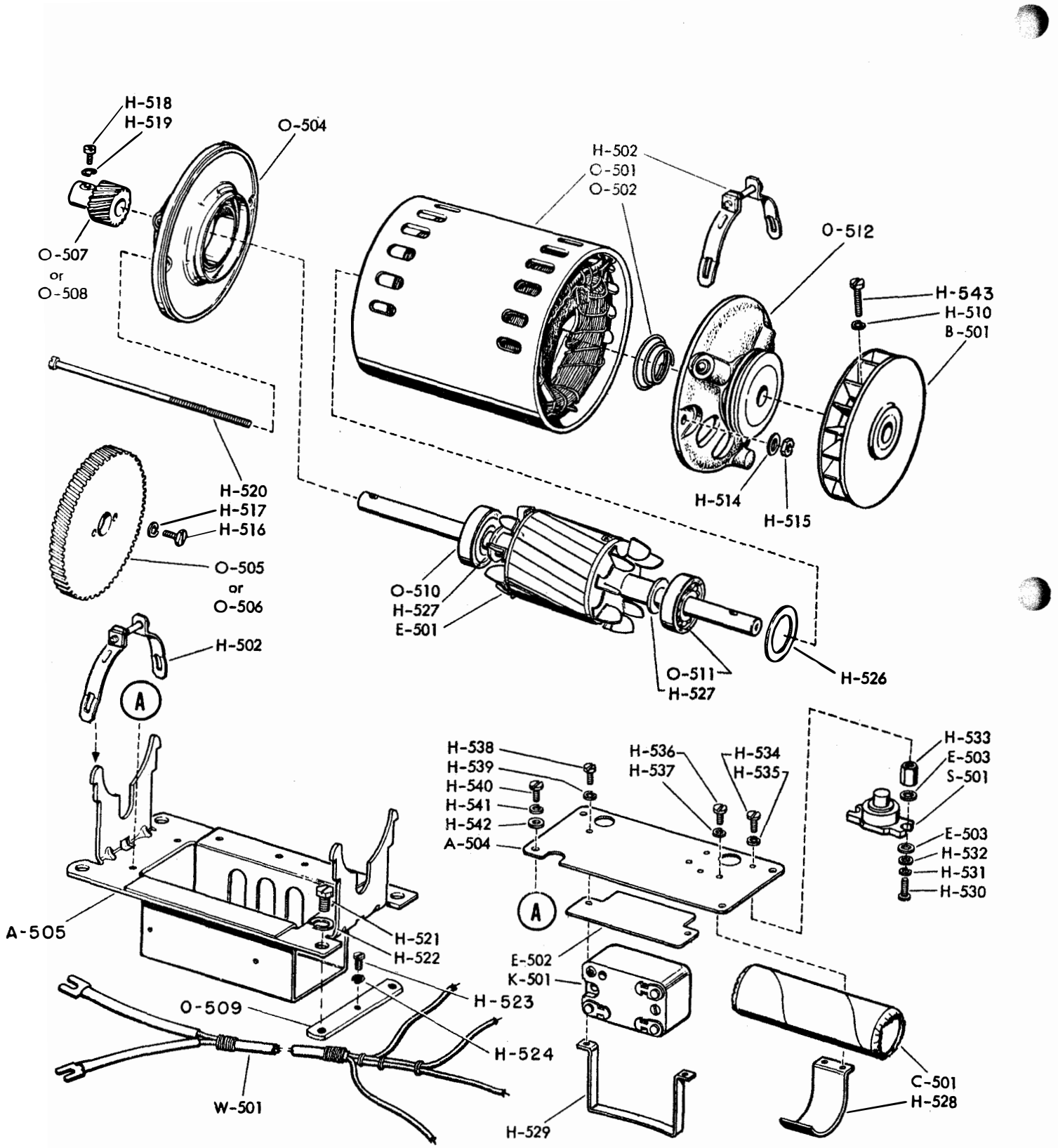

H-518
H-519
O-504
O-507
or
O-508
H-502
O-501
O-502
O-512
H-543
H-510
B-501
H-514
H-515
H-520
H-517
H-516
O-505
or
O-506
O-510
H-527
E-501
O-511
H-527
H-526
H-502
A
H-538
H-539
H-540
H-541
H-542
A-504
H-536
H-537
H-534
H-535
H-533
E-503
S-501
E-503
H-532
H-531
H-530
A-505
H-521
H-522
H-523
E-502
K-501
0-509
H-524
W-501
H-529
C-501
H-528

FIGURE 21

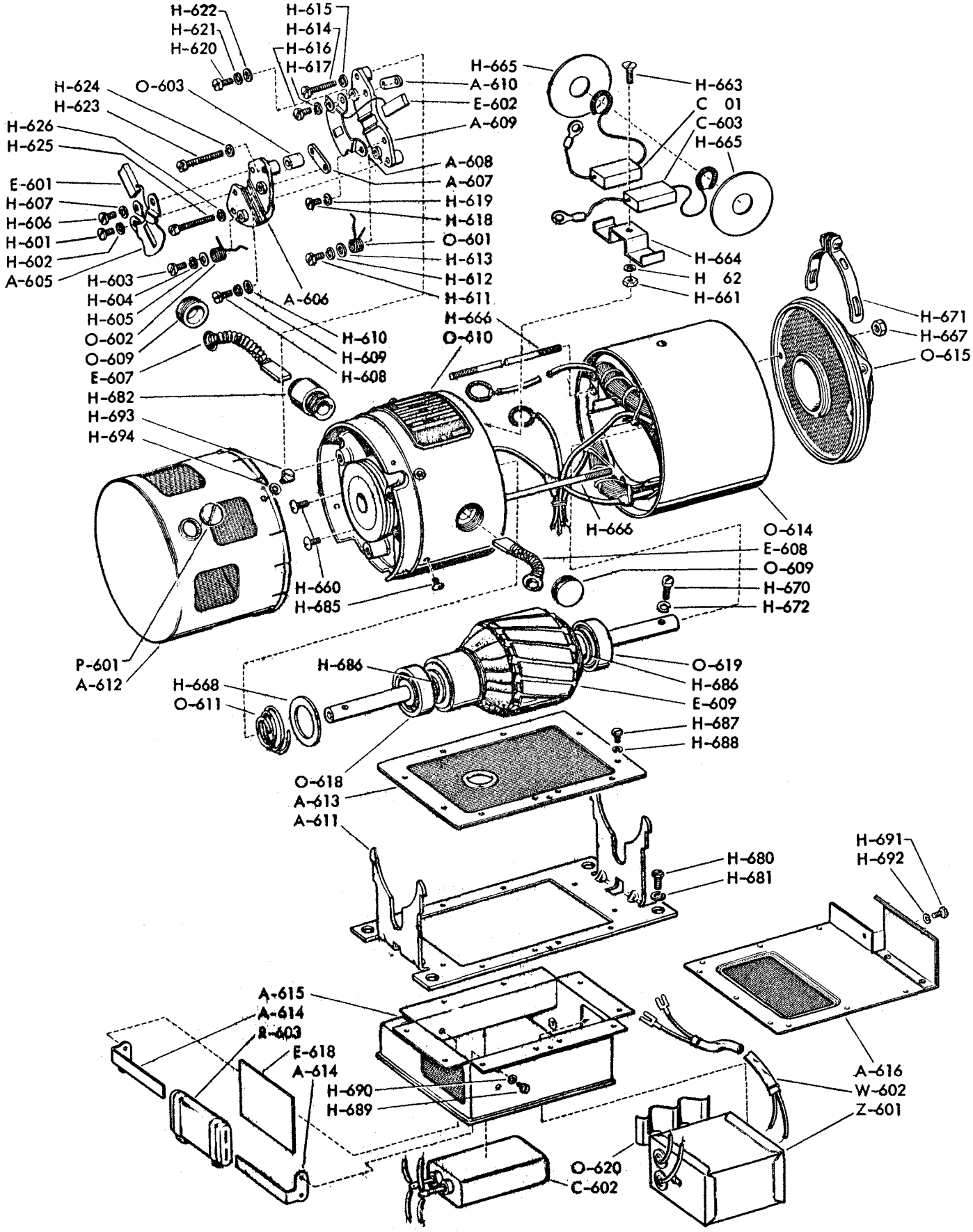

H-622
H-621
H-620
H-615
H-614
H-616
H-617
H-624
H-623
O-603
H-626
H-625
E-601
H-607
H-606
H-601
H-602
A-605
H-603
H-604
H-605
O-602
O-609
E-607
A-606
H-610
H-609
H-608
H-682
H-693
H-694
P-601
A-612
H-660
H-685
A-610
E-602
A-609
A-608
A-607
H-619
H-618
O-601
H-613
H-612
H-611
H-665
H-663
C 01
C-603
H-665
H-664
H 62
H-661
H-666
O-610
H-666
H-671
H-667
O-615
O-614
E-608
O-609
H-670
H-672
H-686
O-619
H-686
E-609
H-668
O-611
H-687
H-688
O-618
A-613
A-611
H-680
H-681
H-691
H-692
A-615
A-614
B-603
E-618
A-614
H-690
H-689
A-616
W-602
Z-601
O-620
C-602

FIGURE 22

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	MANUFACTURERS CODE	MANUFACTURERS DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	EQUIP. BOX	EQUIP. QUAN.	STOCK BOX	STOCK QUAN.

DELETE THE FOLLOWING PARTS FROM TABLE 8-4, COMBINED PARTS AND SPARE PARTS LIST

A-1313, E-613, H-525, H-673, H-674, H-675, H-676, H-677, H-678, H-679, H-683, H-684, H-1182, H-1183, H-1184, H-1420, H-1421, O-188, O-612, O-616, O-617, O-1649, O-1665, O-1964, O-1969, R-601, R-602, W-601

CHANGE THE FOLLOWING PARTS INFORMATION ON TABLE 8-4, COMBINED PARTS AND SPARE PARTS LIST AS FOLLOWS:

A-119	BRACKET: irregular shape; steel, nickel plated; approx 1 11/32" lg x 25/32" h x 15/32" wd o/a, 0.035" thk material; mts by two elongated slots in body; one end formed w/elongated slot and rounded ear w/body hole, curved cutout and rectangular shaped extension w/tapped hole on other end	Guide for O-281		N17-T-350014-576	CTT	151204	151204	A-119	1	-	-	-	-
A-611	BRACKET: motor support; "U" shape; steel, nickel plated; approx 6 3/16" lg x 3 3/8" wd x 2 9/32" h o/a, 0.095" thk material; mts by body hole in ea corner; rectangular shaped hole, 2 cutouts and 11 tapped holes in base, irregularly cutout in both ends	Mounts FD-18/U to Keyboard Base			CTT	152046	152046	A-611	1	-	-	-	-
H-273	STUD: steel, nickel plated; approx 1 17/32" lg x 3/8" across flats o/a, shoulder 1/16" lg x 9/32" diam; one end threaded 7/32" lg w/#6-40 thd; shank w/slot one end, slot around ctr of body	Pivot for and mounts O-249 to A-118		N17-T-350014-713	CTT	151069	151069	H-273	1	1	1	-	-
H-372	NUT, cap: hex cap, round body; steel, nickel plated; #4-40; approx 1/8" h; 3/16" wd across flats	Locks H-368 to O-279		N17-T-350014-908	CTT	151812	151812	H-372	1	-	-	-	-
H-682	HOLDER, contact brush: brass body w/bakelite insulator; 2 grooves around shank end, wd slot at other end; approx 1 1/4" lg x 11/16" OD x 11/32" ID o/a; mts by body; 2 slots, in line, through ID	Holder for E-607 or E-608		N17-H-71773-1911	CTT	122206	122206	H-682	2	-	-	-	-
H-1409	SCREW, machine: wrench drive; Hex H; stainless steel; #6-40, approx 1/4" lg o/a; 3/16" lg threaded portion; head 1/16" thk x 1/4" across flats; character "A" stamped on head	Holds H-1411 to A-1312 and identifies function box arrangement		N17-T-350014-909	CTT	151739A	151739A	H-1409	1	-	-	-	-
H-1484	WASHER, lock: steel, nickel plated; round, approx 9/32" OD x 1/8" ID x 0.018" thk o/a; shakeproof type, straight internal teeth	Holds O-1510 through O-1513 and O-1515 through O-1520 to H-1487		N17-T-350010-258	CTT	92260	92260	H-1484	1	-	-	-	-
H-1589	SCREW, set: slot drive; headless; steel, nickel plated; #10-32; 13/32" lg; cup point	Adjusts air release from O-1609			CTT	1214	1214	H-1589	1	-	-	-	-

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
					MANUFACTURERS				EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
H-1590	NUT, hexagon: steel, nickel plated; #10-32; 3/32" thk; 1/4" across flats	Locks H-1589 in position			CTT	89897	89897	H-1590	1	-	-	-	-
H-1803	WASHER, flat: steel, nickel plated; round w/2 ears, approx 1" h x 13/16" wd x 0.035" thk o/a; 9/16" ID; body hole in ea ear	Holds O-1803 through O-1808 to O-1801			CTT	151794	151794	H-1803, H-1815	2	-	-	-	-
H-1815	Same as H-1803	Holds O-1826 through O-1828 and H-1837 to O-1825											
H-1864	SCREW, machine: wrench drive; Hex H; stainless steel; #4-40; approx 1/4" lg o/a; 3/16" lg threaded portion; head 1/16" thk x 3/16" across flats; character "N" stamped on head	Holds O-1855 to O-1857 and identifies type box arrangement		N17-T-350014-910	CTT	151738N	151738N	H-1864	1	-	-	-	-
O-249	LEVER: steel, nickel plated; irregular shape, formed one end, splits in two arms other end, hub welded to wd p/o body; approx 1 7/8" lg x 21/32" h x 1/2" wd o/a, 0.065" thk material; mts by ID of hub, csk hole in approx ctr of lever	Operates O-257		N17-T-350014-893	CTT	151387	151387	O-249	1	-	-	-	-
O-253	BEARING ASSEMBLY, roller: single row radial; light duty; cylindrical rollers; approx 5/32" shaft diam, 1/4" OD, 9/32" wd bearing; lubricated and packed per CTT spec; standard fit; retained w/felt washer on shaft of 23/32" lg stud w/#6-40 thd by retaining ring	Bearing for O-249		N17-T-350014-912	CTT	151388	151388	O-253	1	-	-	-	-
O-609	CAP: brass w/bakelite insulator; 3/4" - 24 external thd one half length, knurled other half, slot in ctr; approx 5/16" lg x 3/4" OD o/a, 5/8" ID in threaded end only; mts by threaded portion; bakelite disk inserted inside cap	Retains E-607 or E-608 in H-682		N17-T-350013-803	CTT	122204	122204	O-609	2	-	-	-	-
O-610	END-BELL: steel; irregular shape, three irregular shape holes, 3 bosses, vibration mt, 2 cutouts and 2 grommets in front end, 2 internal rises on rear end, 2 ball oilers on side; approx 2 9/16" lg x 3 7/8" OD x 3/8" ID o/a; mts by 2 tapped holes in rear end; 12 tapped holes and 3 body holes irregularly located	End bell for O-614 and mounts A-606, A-609, H-682 and part of series circuit		N17-E-39048-1001	CTT	122200	122200	O-610	1	-	-	-	-
O-615	END-BELL: irregular shape, front has 4 irregular shaped holes and boss on lower half, vibration mt extends in front, electrostatic shield w/#40 brass screen on back; approx 3 3/16" OD x 7/16" ID x 1 3/16" lg o/a; mts by elongated hole in ea of 2 opposite cutouts; body hole near ID	End bell for E-614		N17-E-39047-4501	CTT	122253	122253	O-615	1	-	-	-	-

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS										SPARE PARTS			
					MANUFACTURERS					EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
C-1670	WASHER, felt: hard, white felt, round, approx 11/16" OD x 17/32" ID x 1/8" thk o/a	Lubricates O-1669		N17-T-350013-630	CTT	89096	89096	O-1670, O-1674	2	-	-	-	-
C-1674	Same as O-1670	Lubricates O-1675											
O-2030	Same as O-1314	Pivot for and spaces O-2087 from left side frame											
		ADD THE FOLLOWING PARTS TO TABLE 8-4, COMBINED PARTS AND SPARE PARTS LIST											
A-504	PLATE, mounting: steel, nickel plated; approx 4 5/8" lg x 2 1/4" wd x 0.042" thk o/a; mts by four corner holes; curved cutout one side, 2 large and 6 small body holes irregularly spaced	Mounting plate for C-501, K-501 and S-501			CTT	151920	151920	A-504	1	-	-	-	-
A-505	BRACKET ASSEMBLY: c/o 2 brackets welded together; steel, nickel plated; irregular shape upper bracket has 2 formed ends w/cut-out in ea, 4 body ears, 4 tapped holes, and rectangular cutout in ctr, lower bracket "U" shape w/3 elongated holes in one side and 2 body holes in ea side, 4 tapped holes through both brackets; approx 6 3/16" lg x 3 3/8" wd x 3 11/16" h o/a; mts by body hole in ea corner ear	Mounts PD-17A/U		N17-T-350013-893	CTT	150976	150976	A-505	1	-	-	-	-
A-612	COVER: brass, nickel plated; closed one end, one cutout and 10 slots other end, one rectangular hole, 8 sq holes and one tapped hole in circum, #40 mesh screen soldered to inside of circum; approx 3 11/16" diam x 2 3/4" lg o/a; mts by lip and 4 body holes in circum	Electrostatic shield and cover for governor mechanism			CTT	152044	152044	A-612	1	-	-	-	-
A-613	COVER: steel and brass, nickel plated; #40 screen sandwiched between 2 plates, cutout in ctr, and welded together, grommet and washer fastened to screen; approx 4 3/4" lg x 3 3/8" wd x 3/32" thk o/a; mts by 11 body holes; 11 depressions in top plate	Electrostatic shield for mtd parts of A-615			CTT	152037	152037	A-613	1	-	-	-	-
A-614	BRACKET: resistor support; "L" shape; steel. nickel plated; approx 2 1/16" lg x 1/2" wd x 23/32" h o/a, 0.050" thk material; mts by two #4-40 holes 7/16" c to c in irregular shaped short end	Mounts R-603 to A-615			CTT	152034	150234	A-614	2	-	-	-	-

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
					MANUFACTURERS				EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
A-615	BASE, motor: steel, nickel plated; irregular shape, partially enclosed on top w/4 formed flaps around opening, completely open on bottom w/3 sides formed to receive slide cover, 3 cutouts, 2 covered w/#40 brass screen; approx 4 3/4" lg x 2 5/16" wd x 1 17/32" h o/a, 0.016" thk material; mts by 11 body holes in flaps; one tapped hole in disk welded to side and 3 body holes in sides	Container for C-602, R-603 and Z-601			CTT	152039	152039	A-615	1	-	-	-	-
A-616	COVER: steel, nickel plated; rectangular shape, cutout and 2 formations on one side, gray fibre insulator riveted to larger formation, body hole in smaller formation, 9 extrusions along other 3 sides, #40 brass screen soldered over rectangular cutout in body; approx 3 15/16" lg x 3 3/4" wd x 1 3/8" h o/a, 0.016" thk material; slide mts by 3 sides	Cover for A-615			CTT	152040	152040	A-616	1	-	-	-	-
B-501	FAN: turbine type; electric motor operated; aluminum blades; approx 3 1/8" OD x 3/8" ID x 21/32" wd o/a; direct drive; mts by body hole through hub	Cools PD-17A/U			CTT	123769	123769	B-501	1	-	-	-	-
E-108	TERMINAL: nickel silver; narrow end formed to "U" shape, body hole in other end; approx 5/8" lg x 1/4" wd x 1/8" h o/a, 0.015" thk material; formed end tin dipped	Holds cable from Z-101 to keyboard base			CTT	151365	151365	E-108	1	-	-	-	-
E-502	INSULATOR, plate: rectangular w/both corners cutout on one side; PS grade, natural color bakelite; approx 2 9/16" lg o/a; 1 3/8" wd x 1/32" thk o/a, two 1/8" diam mtg holes 2 9/32" c to c	Insulator for K-501			CTT	151924	151924	E-502	1	-	-	-	-
E-503	WASHER, flat: natural color bakelite, PS grade; round, approx 9/32" OD x 1/8" ID x 0.031" thk o/a	Insulating washer for S-501			CTT	87334	87334	E-503	4	-	-	-	-
E-618	INSULATOR, plate: rectangular shape; mica; 2 1/8" lg o/a; 1 3/8" wd x 1/32" thk	Insulates C-602 from R-603			CTT	152058	152058	E-618	1	-	-	-	-
H-394	Same as H-104	Holds O-312 to O-279											
H-395	Same as H-190	Holds O-208 to keyboard base											
H-396	SCREW, pilot: slot drive; FH; steel, nickel plated; #4-40; approx 3/8" lg o/a; 3/32" lg threaded portion; 1/16" thk x 3/16" diam head; 3/32" diam x 7/32" lg pilot	Stop for O-280			CTT	6801	6801	H-396	1	-	-	-	-

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
					MANUFACTURERS				EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
H-397	Same as H-147	Holds H-396 to A-119											
H-398	WASHER, lock: stainless steel; round, approx 13/32" OD x 3/16" ID x 0.022" thk o/a; shakeproof-type, twisted external teeth	Holds keyboard base to CY-870/UG or CY-871/UG			CTT	151572	151572	H-398	4	-	-	-	-
H-399	NUT, cap: round; steel, nickel plated; #4-40; approx 7/32" lg o/a; 3/16" diam body, 5/16" diam knurled cap	Holds O-142, O-143 and A-107 to A-106		N17-T-350014-884	CTT	151829	151829	H-399	2	-	-	-	-
H-400	WASHER, flat: steel, nickel plated; round, approx 5/16" OD x 5/32" ID x 0.035" thk o/a	Holds O-279 to A-118		N17-T-350005-725	CTT	2247	2247	H-400	2	-	-	-	-
H-401	Same as H-322	Retains O-366 on H-273											
H-528	CLAMP: capacitor; steel; nickel plated; approx 1 3/8" lg x 3/4" wd x 1 1/16" h o/a, 0.065" thk material; accommodates 1 1/32" diam capacitor; two #4-40 tapped holes in one end	Clamps C-501 to A-504			CTT	151922	151922	H-528	1	-	-	-	-
H-529	CLAMP: relay; steel; nickel plated; approx 2 17/32" lg x 1/4" wd x 1 5/16" h o/a, 0.065" thk material; accommodates 1 7/8" lg x 1 11/32" h relay; #4-40 tapped hole in ea formed end	Clamps K-501 to A-504			CTT	151925	151925	H-529	1	-	-	-	-
H-530	Same as H-1591	Holds S-501 to H-533											
H-531	Same as H-1144	Holds S-501 to H-533											
H-532	Same as H-104	Holds S-501 to H-533											
H-533	NUT, hexagon: steel, nickel plated; #4-40; 3/8" thk; 1/4" wd across flats	Spaces S-501 from A-504			CTT	151926	151926	H-533	2	-	-	-	-
H-534	Same as H-1691	Holds H-533 to A-504											
H-535	Same as H-1144	Holds H-533 to A-504											
H-536	Same as H-1691	Holds H-528 to A-504											
H-537	Same as H-1144	Holds H-528 to A-504											
H-538	Same as H-1691	Holds H-529 to A-504											
H-539	Same as H-1144	Holds H-529 to A-504											
H-540	Same as H-132	Holds A-504 to A-505											
H-541	Same as H-118	Holds A-504 to A-505											
H-542	Same as H-125	Holds A-504 to A-505											

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS										SPARE PARTS			
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	MANUFACTURERS CODE	MANUFACTURERS DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	EQUIP. BOX	EQUIP. QUAN.	STOCK BOX	STOCK QUAN.
H-543	Same as H-1112	Holds B-501 to E-501											
H-687	Same as H-257	Holds A-613 and A-615 to A-611											
H-688	Same as H-147	Holds A-613 and A-615 to A-611											
H-689	Same as H-257	Holds A-614 to A-615											
H-690	Same as H-147	Holds A-614 to A-615											
H-691	Same as H-257	Holds A-616 to A-615											
H-692	Same as H-147	Holds A-616 to A-615											
H-693	Same as H-1493	Holds A-612 to O-610											
H-694	Same as H-118	Holds A-612 to O-610											
H-817	WASHER, flat: steel, nickel plated; round, approx 1/2" OD x 1/4" ID x 1/32" thk o/a	Spaces side cradle rail from A-753 and A-754 or A-702		N17-T-350007-582	CTT	71858	71858	H-817	20	-	-	-	-
H-818	GUIDE, cable: steel; 9/16" diam cable; approx 1 3/4" lg x 1" wd x 0.065" thk o/a; one elongated mtg hole	Front guide for W-1101		N17-T-350014-902	CTT	151955	151955	H-818	2	-	-	-	-
H-819	Same as H-311	Holds H-818 and side cradle rail to A-753 and A-754 or A-702											
H-820	Same as H-760	Holds H-818 and side cradle rail to A-753 and A-754 or A-702											
H-821	SCREW, machine: slot drive; RH; iron, nickel plated; #10-32; approx 1/2" lg o/a; 3/8" lg threaded portion; head 1/8" thk x 11/32" diam	Holds A-753 and A-754 to CY-871/UG or A-702 to CY-870/UG		N17-T-350006-703	CTT	8333	8333	H-821	16	-	-	-	-
H-822	Same as H-776	Holds A-753 and A-754 to CY-871/UG or A-702 to CY-870/UG											
H-823	Same as H-780	Holds A-753 and A-754 to CY-871/UG or A-702 to CY-870/UG											
H-824	GUIDE, cable: steel; 9/16" diam cable; approx 4" lg x 1 1/2" h x 0.065" thk o/a; two mtg holes in curved end	Rear guide for W-1101		N17-T-350014-896	CTT	151956	151956	H-824	2	-	-	-	-

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS										SPARE PARTS			
					MANUFACTURERS					EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
H-1185	Same as H-125	Holds O-1101 to A-1101											
H-1186	Same as H-125	Holds O-1104 to A-1101											
H-2171	Same as H-1324	Bearing surface for and holds O-1926 on O-1931											
H-2172	Same as H-1324	Bearing surface for and holds O-1926 on O-1931											
H-2173	Same as H-799	Bearing surface for O-1965											
H-2174	Same as H-799	Bearing surface for O-1970											
H-2175	Same as H-302	Holds O-1839 to O-1840											
K-501	RELAY, motor starting: SPST normally open; single winding, 6.1 amps AC operating current, 5.2 amps AC release current, insulated; solder lug terminals on coil and contacts; approx 1 27/32" lg x 1 1/4" wd x 1 1/16" h o/a; clamp mtd; fast acting; dust proof cover	Starting relay for PD-17A/U			CTT	151923	151923	K-501	1	-	-	-	-
O-365	SHIM: steel; approx 5/16" OD x 3/16" ID x 0.004" thk o/a	Cushion for A-107			CTT	7654	7654	O-365	8	-	-	-	-
O-366	LINK: steel, nickel plated; cutout one side, rounded ends; approx 1 5/32" lg x 5/16" wd x 0.042" thk o/a; mts by body hole in ea end	Braces O-312		N17-T-350014-901	CTT	151831	151831	O-366	1	-	-	-	-
O-367	BAR, upstop: steel, nickel plated; approx 8 13/16" lg x 1/2" wd x 0.035" thk o/a; mts by ends; 3 cutouts one side, one lg cutout w/tooth in other side, body hole near one end	Upstop for O-314 through O-319			CTT	151830	151830	O-367	1	-	-	-	-
O-368	Same as O-147	Applies tension to O-367											
O-369	Same as O-295	Lubricates O-291											
O-512	Same as O-504	End bell for O-501											
O-620	SPRING: flat type; 0.010" thk nickel silver; approx 1 3/4" lg x 5/8" wd x 1/4" h o/a; 5 equally spaced ripples	Applies pressure to and spaces C-602 and Z-601			CTT	152078	152078	O-620	1	-	-	-	-
O-2132	Same as O-1634	Lubricates O-1754											
O-2133	SPRING: helical compression type; 0.014" diam music wire; approx 7/32" lg x 5/32" OD o/a; approx 6 turns; straight ends	Applies pressure to O-2134			CTT	110872	110872	O-2133	1	-	-	-	-

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	STANDARD NAVY STOCK NUMBER	MANUFACTURERS CODE	MANUFACTURERS DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	EQUIP. BOX	EQUIP. QUAN.	STOCK BOX	STOCK QUAN.
C-2134	Same as C-1349	Ball valve for O-1609											
P-601	PLUG, machine thread: steel, nickel plated; approx 5/32" lg x 13/32" diam o/a; mts by 3/32" lg 3/8" x 32 threaded shank; drive slot across head	Plug for A-612			CTT	152035	152035	P-601	1	-	-	-	-
R-603	RESISTOR, fixed: WW; 250 ohms; 40 w at 300° C max continuous oper temp; approx 2" lg x 1 3/16" wd x 1/2" h o/a; vitreous enamel coating; 2 radial tab term; mts by 2 slots through lg of body	Offers resistance to PD-18/U			CTT	152054	152054	R-603	1	-	-	-	-
W-501	CABLE ASSEMBLY, special purpose: lacquered cotton braid covering; 3 conductors, #18 AWG stranded copper wire; bound w/#6 lacing twine; approx 12" lg o/a; 2 conductors w/CTT 151626 terminals soldered to one end, 4 conductors skinned and tinned other end, vinyl plastic flexible tubing in ctr, tied at ends w/#6 lacing twine	Connects PD-17A/U with TB-101			CTT	151927	151927	W-501	1	-	-	-	-
W-602	CABLE ASSEMBLY, special purpose: lacquered cotton braid covering; 2 conductors, #18 AWG stranded copper wire; covered w/12" lg tubing and tied w/#6 lacing twine; approx 14 3/4" lg o/a; color coded; both conductors tinned one end, CTT 151626 terminals soldered to other end	Connects PD-18/U with Z-601			CTT	152059	152059	W-602	1	-	-	-	-
Z-601	SUPPRESSOR, electrical noise: resistor and capacitor; approx 2 3/16" lg x 2 3/16" wd, incl term, x 1 1/4" h o/a; 1 1/4 amp, 150 v AC, rectangular metal case; 5 solder lug term; hermatically sealed	PD-18/U radio interference suppressor			CIE	#1152	152055	Z-601	1	-	-	-	-

24 January 1951

Temporary correction T-1 to Instruction Book for Teletypewriters TT-47/UG, TT-48/UG, TT-69/UG, and TT-70/UG (NAVSHIPS 91393)

Page 2-0. Delete Figure 2-1 and substitute therefor Figure 1 of this temporary correction.

Page 2-32. Figure 2-59. Change the name CODE BAR RESET BAIL to read: FUNCTION BAR RESET BAIL.

Page 2-38. Figure 2-71. Change the name LINE FEED ECCENTRIC SPUR GEAR to read: LINE FEED CLUTCH SPUR GEAR. Change the name LINE FEED CLUTCH SPUR GEAR to read: LINE FEED ECCENTRIC SPUR GEAR.

Page 3-6. Add the following note at the end of Section 3, paragraph 9:

NOTE

Under certain conditions, filter Z-101 may contribute to signal distortion in the signal line circuit. At the time of installation, the signals should be checked for excessive distortion. When present, it should be compensated for in order to retain the desired quality of the signals.

Page 7-15. Figure 7-6. Under FLUTTER LEVER SPRING TENSION change MIN. 3/4 OZ. - MAX. 1-1/2 OZS. to read: MIN. 1 OZ. - MAX. 2-1/4 OZS.

Page 7-23. Figure 7-14. Change the name CODE BAR to read: CLUTCH TRIP BAR.

Page 7-24. Figure 7-15. Under CLUTCH TRIP BAR SPRING TENSION - REQUIREMENT, change the requirement to read: KEYBOARD CLUTCH DISENGAGED.
LETTERS KEY LEVER DEPRESSED.
MIN. 2 OZS.
MAX. 5 OZS.
TO START CLUTCH TRIP BAR (REAR BAR) MOVING.

Page 7-46. Figure 7-37. Change MIN. 0.025 INCH, MAX. 0.035 INCH to read: SOME CLEARANCE, MAX. 0.025 INCH.

Page 7-48. Delete Figure 7-39 and substitute therefor Figure 2 of this temporary correction.

Page 7-55. Figure 7-46. After (2) REQUIREMENT under TYPE BOX CLUTCH TRIP ARM, add the following:

TO ADJUST

POSITION THE CLUTCH TRIP ARM ON ITS SHAFT WITH THE CLAMP SCREW LOOSENED.

Page 7-68. Figure 7-60. Change 3/16 INCH to read: 5/32 INCH.

Page 7-72. Delete Figure 7-64 and substitute therefor Figure 3 of this temporary correction.

Page 7-77. Figure 7-69. Change MIN. 0.006 INCH to read: MIN. 0.010 INCH.

Page 7-78. Delete Figure 7-70 and substitute therefor Figure 4 of this temporary correction.

Page 7-86. Figure 7-79. Under AUTOMATIC CARRIAGE RETURN ARM - REQUIREMENT change the first two lines to read: CARRIAGE POSITIONED TWO SPACES BEFORE THE POSITION AT WHICH CARRIAGE RETURN IS DESIRED. Under HORIZONTAL STOP SLIDE SPRING TENSION change 1-1/4 OZS. to 2 OZS. and 2-1/2 OZS. to 3 OZS.

Page 7-103. Figure 7-95. Delete the part identified by symbol Z-101 and substitute therefor the part identified by symbol Z-101 shown in Figure 5 of this temporary change. Delete the parts identified by symbols H-145, H-170, H-171, H-172.

Page 7-109. Figure 7-104. Delete the part identified by symbol W-102.

Pages 7-114 & 7-115. Figures 7-109 & 7-110. Delete the parts identified by symbols A-755, H-701, H-761, H-762, H-763, H-764, H-765, H-766, H-784, H-785, H-786, L-751, O-753, O-757, O-758, O-764, XE-753, and add the parts shown in Figure 6 of this temporary change.

Page 7-116. Figure 7-111. Delete the part identified by symbols H-1135, H-1178.

Page 7-117. Figure 7-112. Delete the part identified by symbol H-1173.

Page 7-124. Figure 7-119. The parts identified by symbols O-1492, O-1493, H-1470, H-1471, and H-1472 will be supplied as a subassembly only, identified by symbol O-2131.

Page 7-138. Figure 7-133. Delete the part identified by symbol H-2099.

Change items in Table 8-4 in accordance with pages 10, 11, 12, and 13 of this temporary change.

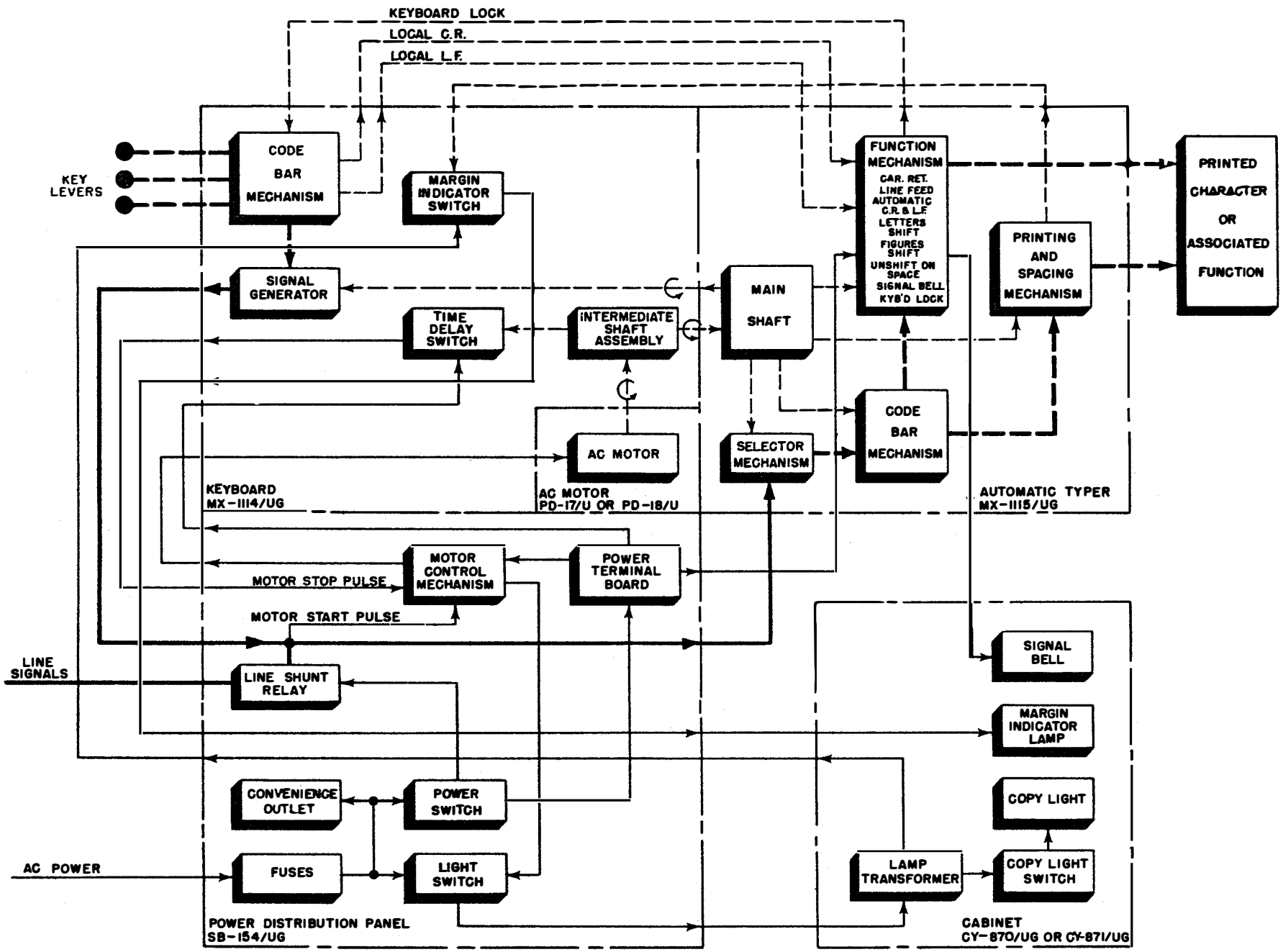
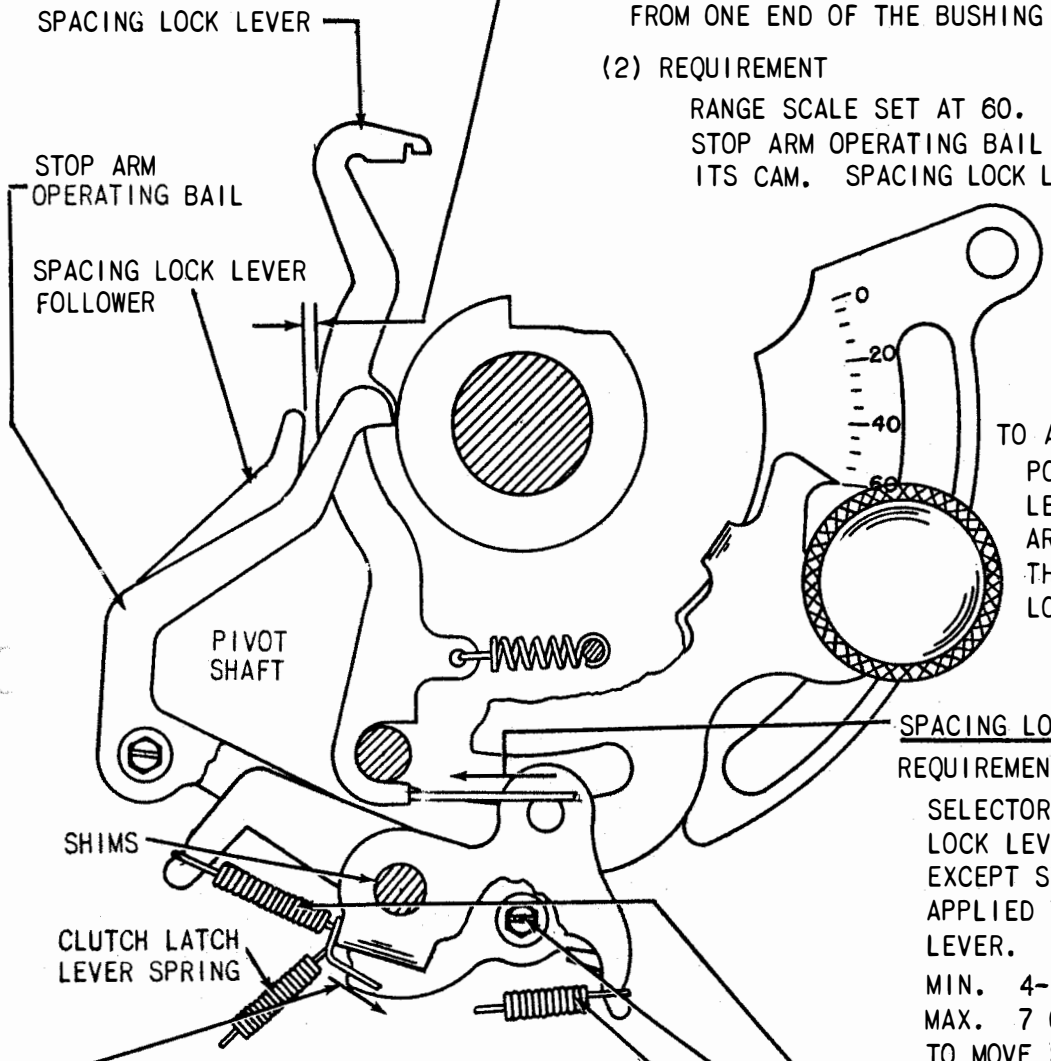

KEYBOARD LOCK
LOCAL C.R.
LOCAL L.F.
KEY LEVERS
CODE BAR MECHANISM
MARGIN INDICATOR SWITCH
FUNCTION MECHANISM
CAR. RET.
LINE FEED
AUTOMATIC C.R. & L.F.
LETTERS SHIFT
FIGURES SHIFT
UNSHIFT ON SPACE
SIGNAL BELL
KYB'D LOCK
PRINTED CHARACTER OR ASSOCIATED FUNCTION
PRINTING AND SPACING MECHANISM
SIGNAL GENERATOR
TIME DELAY SWITCH
INTERMEDIATE SHAFT ASSEMBLY
MAIN SHAFT
AC MOTOR
SELECTOR MECHANISM
CODE BAR MECHANISM
KEYBOARD MX-1114/UG
AC MOTOR PD-17/U OR PD-18/U
AUTOMATIC TYPER MX-1115/UG
MOTOR CONTROL MECHANISM
POWER TERMINAL BOARD
MOTOR STOP PULSE
MOTOR START PULSE
LINE SIGNALS
LINE SHUNT RELAY
SIGNAL BELL
MARGIN INDICATOR LAMP
COPY LIGHT
CONVENIENCE OUTLET
POWER SWITCH
AC POWER
FUSES
LIGHT SWITCH
LAMP TRANSFORMER
COPY LIGHT SWITCH
POWER DISTRIBUTION PANEL SB-154/UG
CABINET CY-870/UG OR CY-871/UG

FIGURE 1



STOP ARM OPERATING BAIL

(1) REQUIREMENT

STOP ARM OPERATING BAIL FREE ON ITS PIVOT AND RIDE FULLY ON ITS CAM WITH ITS END PLAY TAKEN UP IN EITHER DIRECTIONS.

TO ADJUST

ADD OR REMOVE SHIMS, WHICH ARE PLACED AT EACH END OF THE BUSHING ON WHICH THE BAIL PIVOTS; OR SHIFT SHIMS FROM ONE END OF THE BUSHING TO THE OTHER END.

(2) REQUIREMENT

RANGE SCALE SET AT 60.
STOP ARM OPERATING BAIL ON HIGH PART OF ITS CAM. SPACING LOCK LEVER ON HIGHEST PART OF ITS CAM. SOME CLEARANCE BETWEEN FRONT EDGE OF SPACING LOCK LEVER AND SPACING LOCK LEVER FOLLOWER

MAX. 0.004 INCH

TO ADJUST

POSITION THE SPACING LOCK LEVER FOLLOWER ON THE STOP ARM OPERATING BAIL WITH THE TWO CLAMP SCREWS LOOSENED.

SPACING LOCK LEVER SPRING TENSION

REQUIREMENT

SELECTOR ARMATURE RELEASED. SPACING LOCK LEVER ON ANY LOW PART OF CAM EXCEPT START POSITION. SPRING SCALE APPLIED TO LOWER END OF SPACING LOCK LEVER.

MIN. 4-1/2 OZS.
MAX. 7 OZS.
TO MOVE SPACING LOCK LEVER FROM ITS PIVOT SHAFT.

STOP ARM OPERATING BAIL SPRING TENSION

REQUIREMENT

CLUTCH LATCH LEVER SPRING UNHOOKED. CLUTCH STOP ARM YIELD SPRING REMOVED.

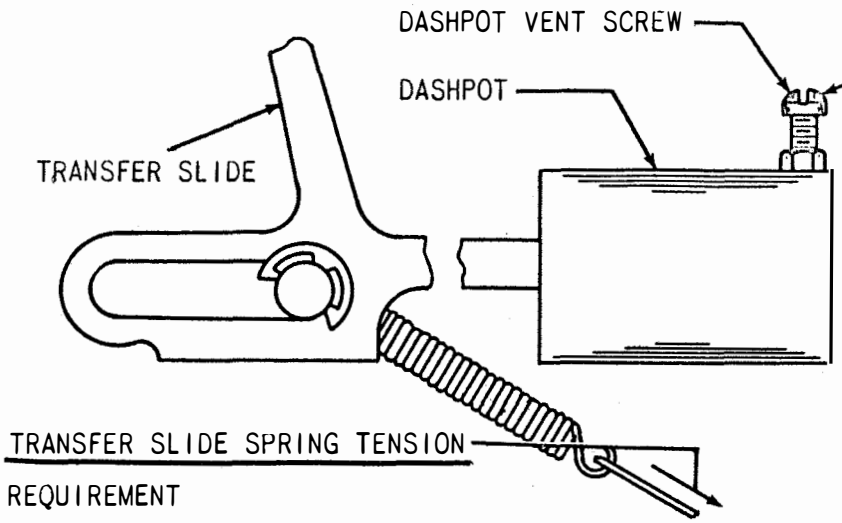
MIN. 9 OZS.
MAX. 11 OZS.
TO MOVE THE BAIL.

STOP ARM OPERATING BAIL SPRING

CLAMP SCREWS

CLUTCH STOP ARM YIELD SPRING

FIGURE 2



DASHPOT VENT SCREW

REQUIREMENT

PRINTING CARRIAGE SHOULD RETURN FROM THE EXTREME RIGHT SIDE OF THE PRINTER WITHOUT BOUNCING.

TO ADJUST

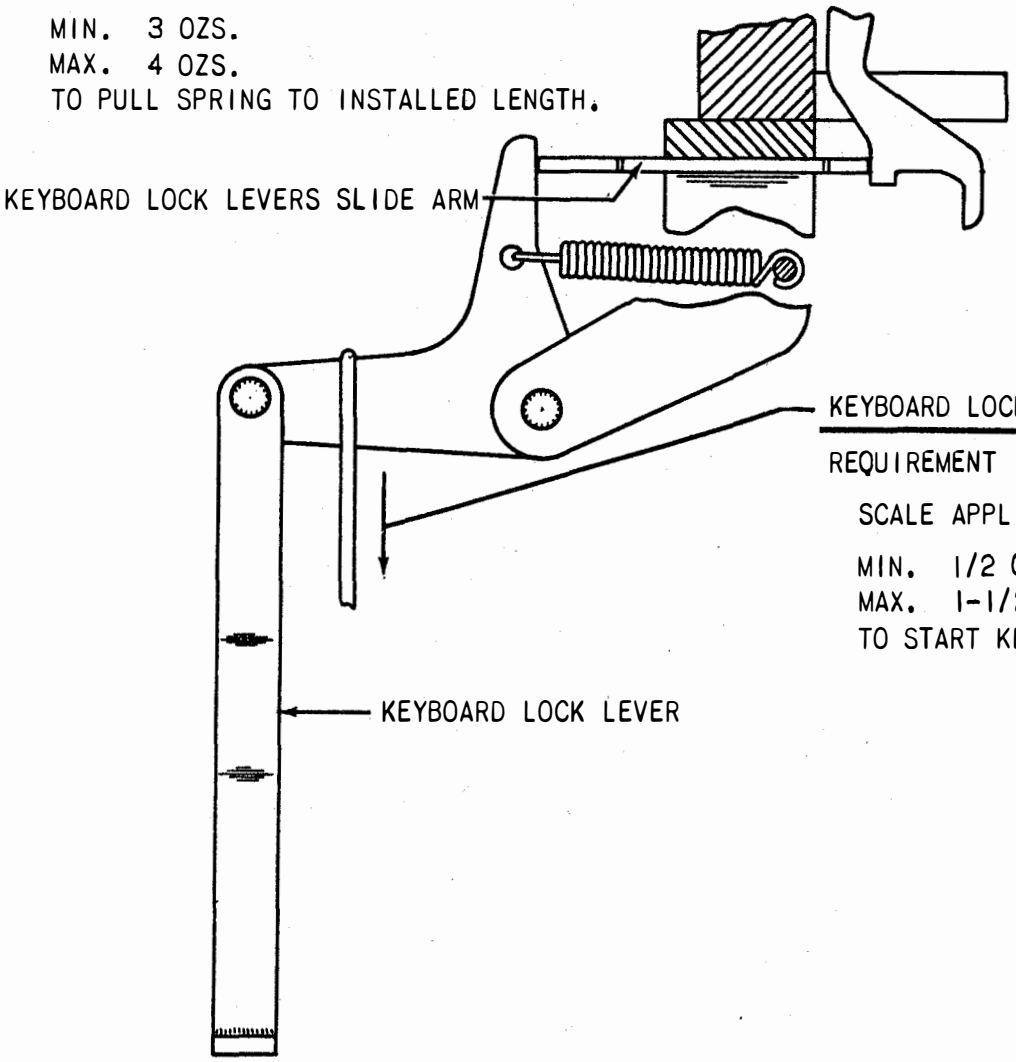
BACK OFF THE VENT SCREW UNTIL A MECHANICAL BOUNCE IS PERCEPTIBLE. THEN ADVANCE THE SCREW UNTIL A SLIGHT PNEUMATIC BOUNCE IS PERCEPTIBLE. LOCK THE SCREW HALF WAY BETWEEN THE TWO POSITIONS.

TRANSFER SLIDE SPRING TENSION

REQUIREMENT

TRANSFER SLIDE IN EXTREME LEFT POSITION.
SPRING UNHOOKED.

MIN. 3 OZS.
MAX. 4 OZS.
TO PULL SPRING TO INSTALLED LENGTH.



KEYBOARD LOCK LEVER SPRING TENSION

REQUIREMENT

SCALE APPLIED TO BELL CRANK.

MIN. 1/2 OZ.
MAX. 1-1/2 OZS.
TO START KEYBOARD LOCK LEVER MOVING.

FIGURE 3

PRINTING HAMMER STOP BRACKET

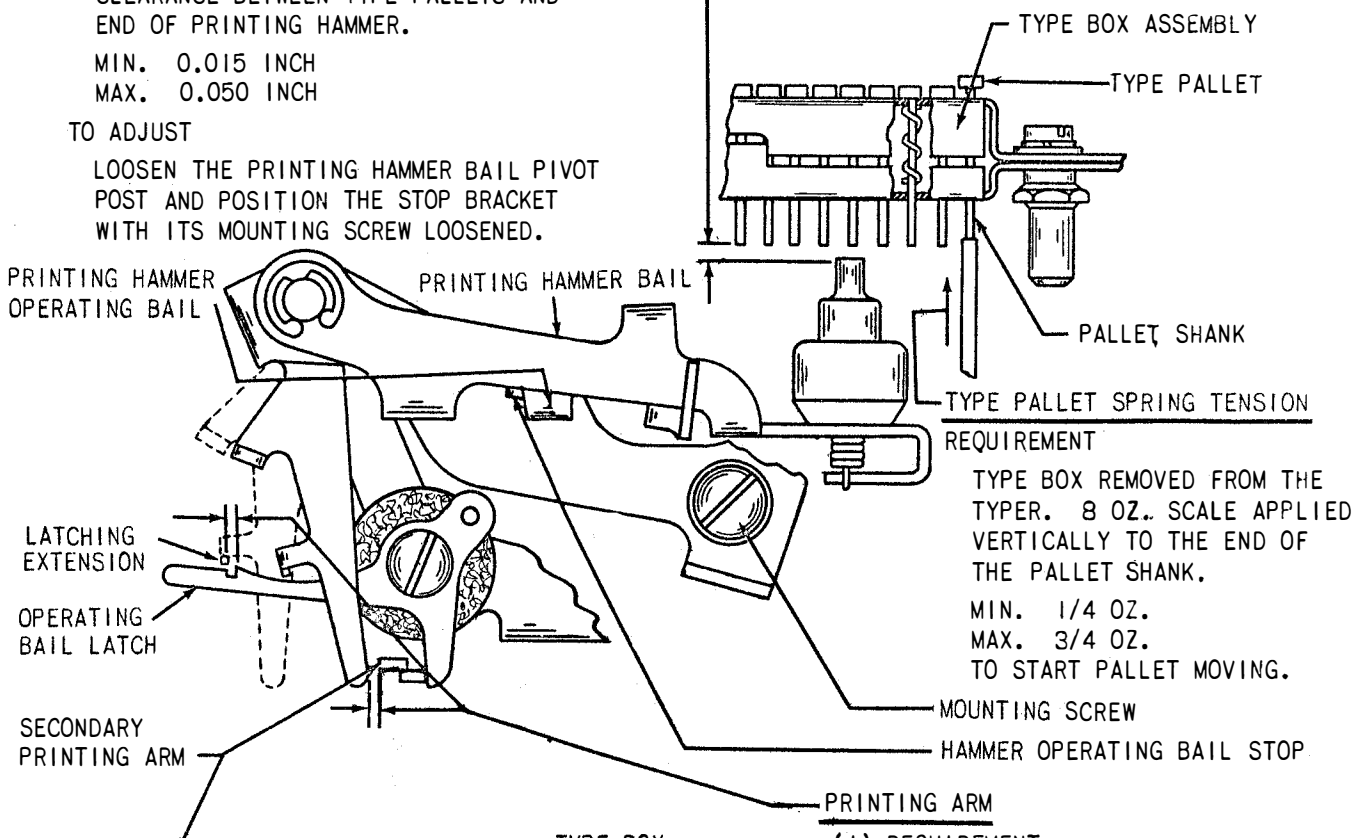
REQUIREMENT

HAMMER OPERATING BAIL AGAINST ITS STOP.
PLAY IN THE PRINTING CARRIAGE AND TYPE BOX TAKEN UP TOWARD THE REAR.
CLEARANCE BETWEEN TYPE PALLETS AND END OF PRINTING HAMMER.

MIN. 0.015 INCH
MAX. 0.050 INCH

TO ADJUST

LOOSEN THE PRINTING HAMMER BAIL PIVOT POST AND POSITION THE STOP BRACKET WITH ITS MOUNTING SCREW LOOSENED.



TYPE PALLET SPRING TENSION

REQUIREMENT

TYPE BOX REMOVED FROM THE TYPER. 8 OZ. SCALE APPLIED VERTICALLY TO THE END OF THE PALLET SHANK.

MIN. 1/4 OZ.
MAX. 3/4 OZ.
TO START PALLET MOVING.

PRINTING ARM

(1) REQUIREMENT

PRINTING TRACK IN MAXIMUM DOWNWARD POSITION.
PRINTING HAMMER OPERATING BAIL AGAINST ITS STOP.
SOME CLEARANCE BETWEEN SECONDARY PRINTING ARM AND FORWARD EXTENSION OF HAMMER OPERATING BAIL.

MAX. 0.010 INCH
WHEN PRINTING ARM IS HELD DOWNWARD FOR MAXIMUM CLEARANCE.

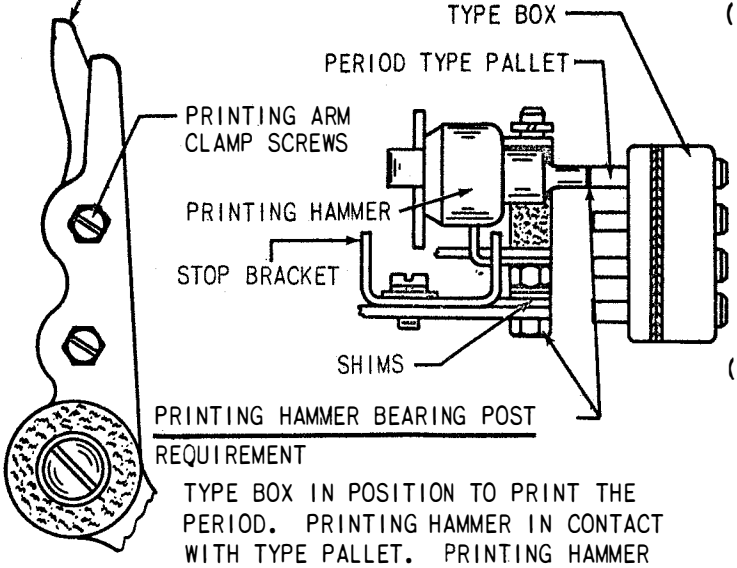
(2) REQUIREMENT

PRINTING TRACK IN UPPERMOST POSITION. LATCHING EXTENSION OF PRINTING HAMMER OPERATING BAIL SHOULD OVERTRAVEL LATCHING SURFACE OF OPERATING BAIL LATCH BY

MIN. 0.006 INCH

TO ADJUST

POSITION SECONDARY PRINTING ARM WITH CLAMP SCREWS LOOSENED.



PRINTING HAMMER BEARING POST

REQUIREMENT

TYPE BOX IN POSITION TO PRINT THE PERIOD. PRINTING HAMMER IN CONTACT WITH TYPE PALLET. PRINTING HAMMER PRESSED DOWNWARD AT ITS BEARING POST. FACE OF THE HAMMER SHOULD BE FULLY ON THE END OF THE TYPE PALLET.

TO ADJUST

ADD OR REMOVE SHIMS BETWEEN THE SHOULDER ON THE BEARING POST AND THE STOP BRACKET.

FIGURE 4

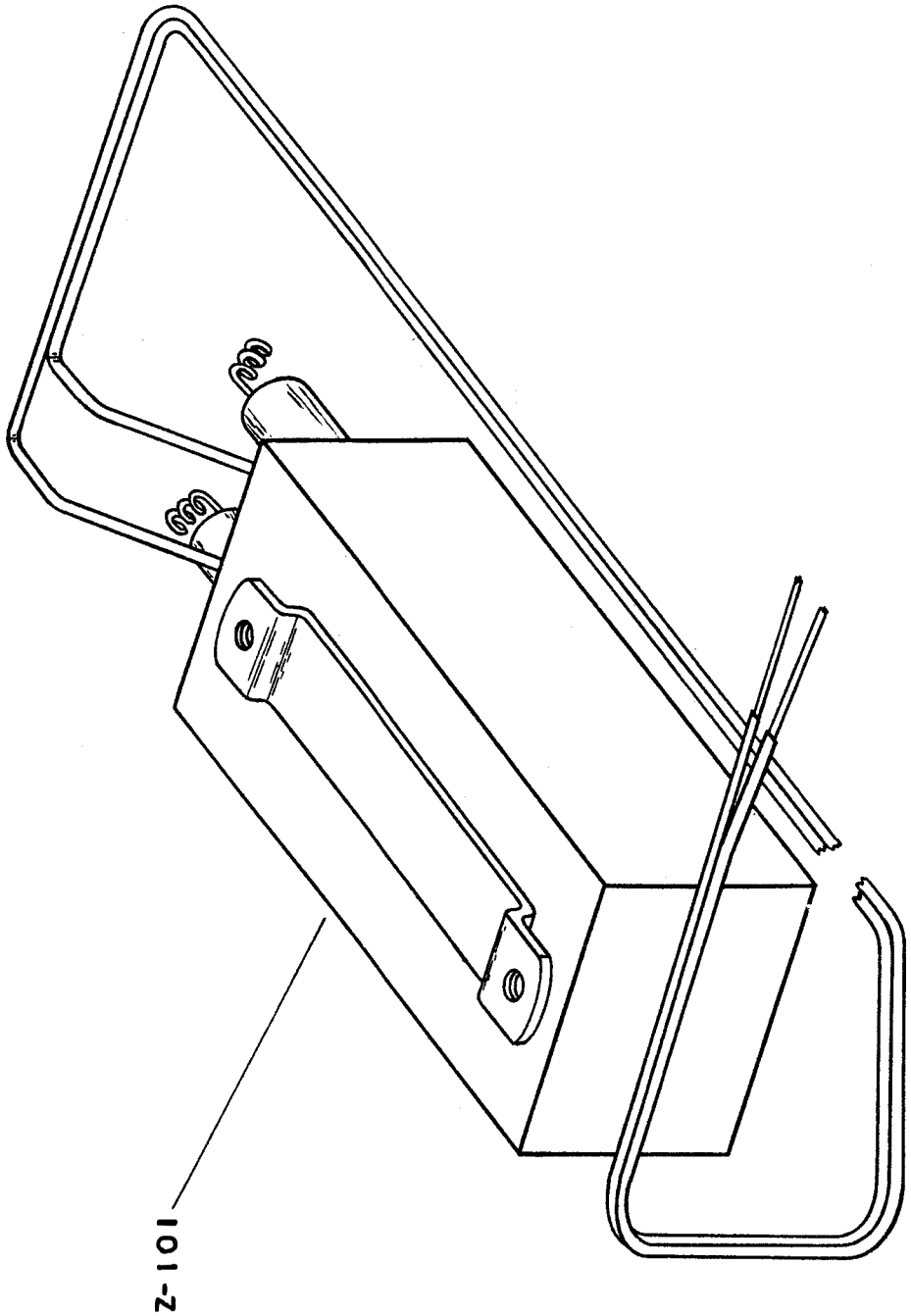


FIGURE 5

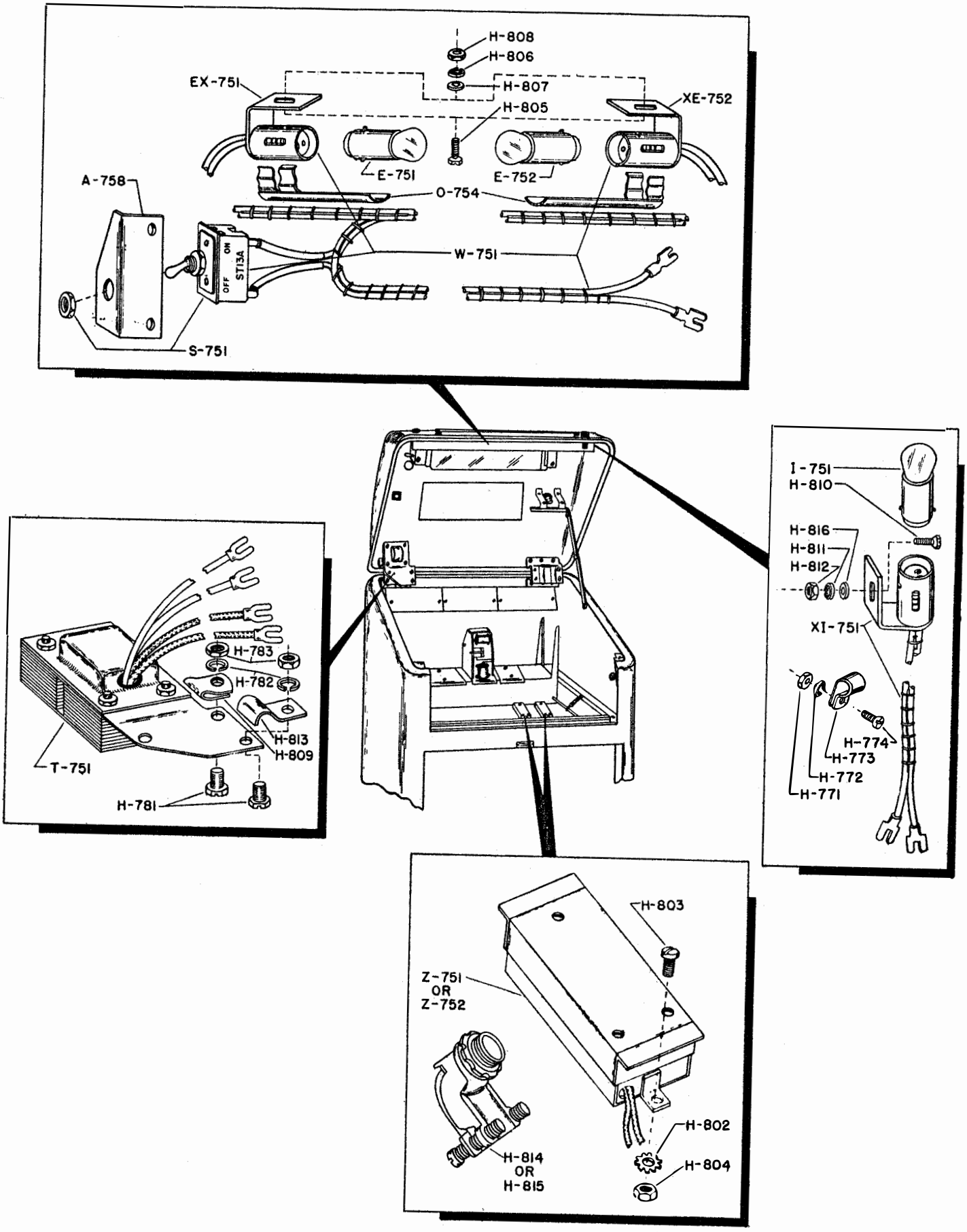

H-808
H-806
H-807
H-805
EX-751
XE-752
E-751
E-752
A-758
O-754
W-751
S-751
ST13A
ON
OFF
H-783
H-782
H-813
H-809
T-751
H-781
I-751
H-810
H-816
H-811
H-812
XI-751
H-774
H-773
H-772
H-771
H-803
Z-751
OR
Z-752
H-802
H-804
H-814
OR
H-815

FIGURE 6

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

DELETE THE FOLLOWING PARTS FROM TABLE 8-4, COMBINED PARTS AND SPARE PARTS LIST

A-755, H-145, H-170, H-171, H-172, H-701, H-761, H-762, H-763, H-764, H-765, H-766, H-784, H-785, H-786, H-1135, H-1173, H-1178, H-2099, L-751, O-753, O-757, O-758, O-764, W-102, XE-753

CHANGE THE FOLLOWING PARTS INFORMATION ON TABLE 8-4, COMBINED PARTS AND SPARE PARTS LIST AS FOLLOWS:

PARTS									SPARE PARTS			
					MANUFACTURERS				EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	FEDERAL STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
E-751	LAMP, incandescent: 6-8v, 1.14 amps, 6 cp; bulb G-6 clear; 1 7/16" lg o/a; miniature bayonet base; C-2R filament; burn any position;	Illuminates copy			CG	82	151982	E-751, E-752, I-751	3	1	6	-	-
E-752	Same as E-751	Illuminates copy											
E-754	INSULATOR, plate: rectangular shape; Grade P, natural color bakelite; approx 16" lg x 2 7/16" h x 0.016" thk o/a; mts by 6 holes irregularly spaced in row; white figures "1" through "30" stamped or stenciled across length	Insulates TB-751, TB-752 and TB-753 from cabinet shell			CTT	151435	151435	E-754	1	-	-	-	-
H-300	SCREW, machine: slot or wrench drive; Hex H; steel, nickel plated; #4-40; approx 1/4" lg o/a; 3/16" lg threaded portion; head 1/16" thk x 3/16" across flats	Holds O-263 to O-262			CTT	151737	151737	H-300, H-315, H-1764, H-1765, H-1779, H-1785, H-1796, H-1810, H-1822	18	1	6	-	-
H-352	WASHER, flat: steel, nickel plated; round, approx 1/4" OD x 1/8" ID x 0.042" thk o/a	Holds O-301 to O-279			CTT	2597	2597	H-352	2	-	-	-	-
H-771	Same as H-780	Holds H-773 to cabinet dome											
H-772	Same as H-776	Holds H-773 to cabinet dome											
H-774	Same as H-1922	Holds H-773 to cabinet dome											
H-781	SCREW, machine: slot or wrench drive; Hex H; steel, nickel plated; #10-32; approx 3/4" lg o/a; 5/8" lg threaded portion; head 1/8" thk x 5/16" across flats	Holds T-751 and H-809 or H-813 to cabinet dome			CTT	78301	78301	H-781	2	-	-	-	-
H-782	Same as H-776	Holds T-751 and H-809 or H-813 to cabinet dome											
H-783	Same as H-780	Holds T-751 and H-809 or H-813 to cabinet dome											
I-751	Same as E-751	Pilot light for end of line indication											

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
					MANUFACTURERS				EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	FEDERAL STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
O-268	SPRING: helical extension type; 0.018" diam music wire; approx 9/16" lg x 1/8" OD x 3/32" ID o/a; approx 17 turns; parallel hook term ea end	Applies tension to O-267 and O-269			CTT	150241	150241	O-268, O-1750, O-1759, O-1776, O-1796, O-1816, O-1834	7	1	4	-	-
O-754	SHIELD, light: nickel silver; approx 8 1/4" lg x 11/16" wd x 7/8" h; clamps on light sockets	Shield for E-751 and E-752			CTT	151983	151983	O-754	1	-	-	-	-
O-769	PAD, silencing: fiber glass; approx 8" lg x 6" wd x 1" thk o/a	Silencing pad			OWEN	CORNING PF-316-1 lb density	151533	O-769	3	-	-	-	-
O-2019	SPRING: helical extension type; 0.014" diam music wire; approx 1 1/8" lg x 3/16" OD o/a; approx 58 turns; hook terms indexed 90°; mts by term at ea end	Applies tension to O-2021 through H-2018			CTT	7634	7634	O-2019, O-2023	2	1	1	-	-
O-2045	SPRING: helical extension type; 0.014" diam music wire; approx 5/8" lg x 3/16" OD x 5/32" ID o/a; approx 26 turns; hook term ea end indexed 90°; mts by terms	Applies tension to O-2033		N17-T-350006-401	CTT	7965	7965	O-2045	1	1	2	-	-
XE-751	LAMPHOLDER: candelabra bayonet type; steel shell body; 110 v; approx 15/16" h x 5/8" wd x 1" lg o/a, 5/8 diam socket; mts by elongated slot in bracket; mtg bracket located parallel to and beside socket; two wire leads 3 3/4" lg	Socket for E-751			CAYZ	12-71	151540	XE-751, XE-752	2	-	-	-	-
XE-752	Same as XE-751	Socket for E-752											
Z-101	SUPPRESSOR, electrical noise: choke coil and capacitor; approx 3 7/8" lg x 1 1/2" wd x 1/8" h o/a dim of case incl capacitors; 1 1/4 amp, 600 v DC; rectangular metal case; mts by 2 #6-40 tapped holes 2 3/8" c to c in bracket soldered to case; 3 solder lug terms inside case; 2 conductor cable, enclosed in copper tubing, irregularly formed, soldered together five places and soldered to one end of case near figures "1" and "2" stamped in case, cable 7 5/8" lg o/a, 2 Erie #362 feed through capacitors, covered w/bakelite caps, on same end of case as cable	Signal line radio interference suppressor			CTT	151369	151369	Z-101	1	-	-	-	-

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS										SPARE PARTS			
					MANUFACTURERS					EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	FEDERAL STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO.	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
	ADD THE FOLLOWING PARTS TO TABLE 8-4, COMBINED PARTS AND SPARE PARTS LIST												
A-758	BRACKET: switch support; "L" shape; steel, nickel plated; approx 2 11/16" lg x 1 5/16" wd x 1 5/16 h o/a, 0.048"thk material; mts by two body holes in one side; cutout on corner and large body hole one side	Mounts S-751 to cabinet dome			CTT	151990	151990	A-758	1	-	-	-	-
H-802	Same as H-512	Holds Z-751 or Z-752 to cabinet											
H-803	Same as H-797	Holds Z-751 or Z-752 to cabinet											
H-804	Same as H-513	Holds Z-751 or Z-752 to cabinet											
H-805	Same as H-1150	Holds XE-751 or XE-752 to cabinet dome											
H-806	Same as H-118	Holds XE-751 or XE-752 to cabinet dome											
H-807	Same as H-125	Holds XE-751 or XE-752 to cabinet dome											
H-808	Same as H-119	Holds XE-751 or XE-752 to cabinet dome											
H-809	Same as H-773	Clamps W-751 to cabinet											
H-810	Same as H-1150	Holds XI-751 to cabinet dome											
H-811	Same as H-118	Holds XI-751 to cabinet dome											
H-812	Same as H-119	Holds XI-751 to cabinet dome											
H-813	CLAMP: cable clamp; steel; nickel plated; approx 1" lg x 1/2" wd x 11/32" h o/a; 0.032" thk material; accommodates 5/16" diam cable	Clamps cable from T-751 to cabinet			CTT	8254	8254	H-813	1	-	-	-	-
H-814	CLAMP: cable clamp; steel; cadmium plated; 2 bolts employed; approx 1 15/16" lg x 1 1/4" h x 1 3/8" wd o/a; accommodates 9/16" diam cable; mts by 1/2" pipe thd and bondnut one end, curved 90°	Clamps power cable to Z-751			APPL ELEC	ETON CO. 7380V	94660	H-814, H-815	2	-	-	-	-
H-815	Same as H-814	Clamps line cable to Z-751											
H-816	Same as H-125	Holds XI-751 to cabinet dome											

TABLE 8-4. COMBINED PARTS AND SPARE PARTS LIST

PARTS									SPARE PARTS			
					MANUFACTURERS				EQUIP.		STOCK	
SYMBOL DESIG.	NAME OF PART AND DESCRIPTION	FUNCTION	JAN OR NAVY TYPE DESIGNATION	FEDERAL STOCK NUMBER	CODE	DESIG.	TELETYPE PART NO	ALL SYMBOL DESIGNATIONS INVOLVED	TOTAL NO. PER EQUIP.	BOX	QUAN.	BOX	QUAN.
O-2131	FOLLOWER BAIL: steel, nickel plated; irregularly curved follower, w/ear on rounded end, held to irregular "U" shaped bail, w/round ear on one side, by 2 screws, lock washers and washers; approx 2 1/16" lg x 1 3/4" h x 15/16" wd o/a; mts by 2 holes in line in sides of "U"; hub welded to ear, 2 body holes and 2 csk holes in bail, two hubs welded to follower	Operates O-1490			CTT	151793	151793	O-2131	1	1	1	-	-
S-751	SWITCH, toggle: SPST	Switch for E-751 and E-752	ST13A	N17-T-70777-8601	CHH	82301BS	118734	S-751	1	-	-	-	-
T-751	TRANSFORMER, power: filament type; 117V, 50-60 cycle, single ph; one output winding, secd 6.3V, 6 amp, ctr tapped; 1600 V insulation; varnish impregnated; metal cover one side; approx 5 1/16" lg x 2 29/32" wd x 2 5/8" h o/a, incl bracket and cover; four CTT #151626 terms at end of 12 1/2" lg four conductor cable; mts by three 7/32" diam holes in bracket	Supplies power to E-751 and E-752			CTT	151984	151984	T-751	1	-	-	-	-
W-751	CABLE ASSEMBLY, special purpose: lacquered cotton braid covering; 2 conductors, #18 AWG copper stranded wire; laced w/#6 lacing twine; approx 34 1/4" lg o/a; color coded; two CTT #151626 terms one end, one breakout w/CHH #82301 BS switch, two CAYZ #12-71 sockets spliced to cable	Connects S-751, XE-751 and XE-752 with TB-752			CTT	151981	151981	W-751	1	-	-	-	-
Z-751	SUPPRESSOR, electrical noise: capacitor and coil; approx 5 3/4" lg x 2 1/4" wd x 1 5/8" h o/a incl mtg brackets; 2.5 amp, 150V AC; rectangular metal case; two 3/16 diam mtg holes in mtg brackets 5 1/4" c to c; two screw terms; 7/8" diam hole in bottom of case, two conductor cable 36" lg w/CTT #151626 terms on one end, "ELECTRICAL NOISE SUPPRESSOR, 2.5 amp 150 V ac 1473 INDUSTRIAL COND. CORP. CHICAGO, U.S.A." printed on top of case	Power, radio interference suppressor			CTT	151989	151989	Z-751, Z-752	2	-	-	-	-
Z-752	Same as Z-751	Line, radio interference suppressor											