

14 TELETYPEWRITER AND 14 TYPING REPERFORATOR BASES
REQUIREMENTS AND ADJUSTMENTS

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1. GENERAL

1.01 This section contains the requirements and adjustments for the maintenance of the 14 type teletypewriter and typing reperforator bases.

1.02 This section is reissued to generally bring the section up to date. Because of the changes involved and the general rearrangement of the information, marginal arrows are omitted.

2. REQUIREMENTS AND ADJUSTMENTS

Note: The adjustments herein are for keyboards with nonrepeat-key action. Where it is desired, on certain private-wire services, to send a signal character repeatedly as long as the key is held depressed, the tripoff-pawl eccentric is removed and four washers (TP41663) are clamped under the stop plate, two on each mounting-screw, to prevent the tripoff pawl from disengaging the intermediate pawl. (When not in use, these washers are normally stored under the heads of the screws which mount the brace to the front bracket.) When keyboards are arranged for repeat-key action, the tripoff-pawl adjustment should be disregarded and the tripoff-pawl spring should be twisted one-half turn so as to make the pawl bear against the vertical bracket.

2.01 Sending-contact Gap

REQUIREMENT

IF SIGNAL MEASURING DEVICE IS AVAILABLE, CONTACTS SHOULD BE ADJUSTED TO GIVE BEST SIGNALS WITHIN FOLLOWING LIMITS

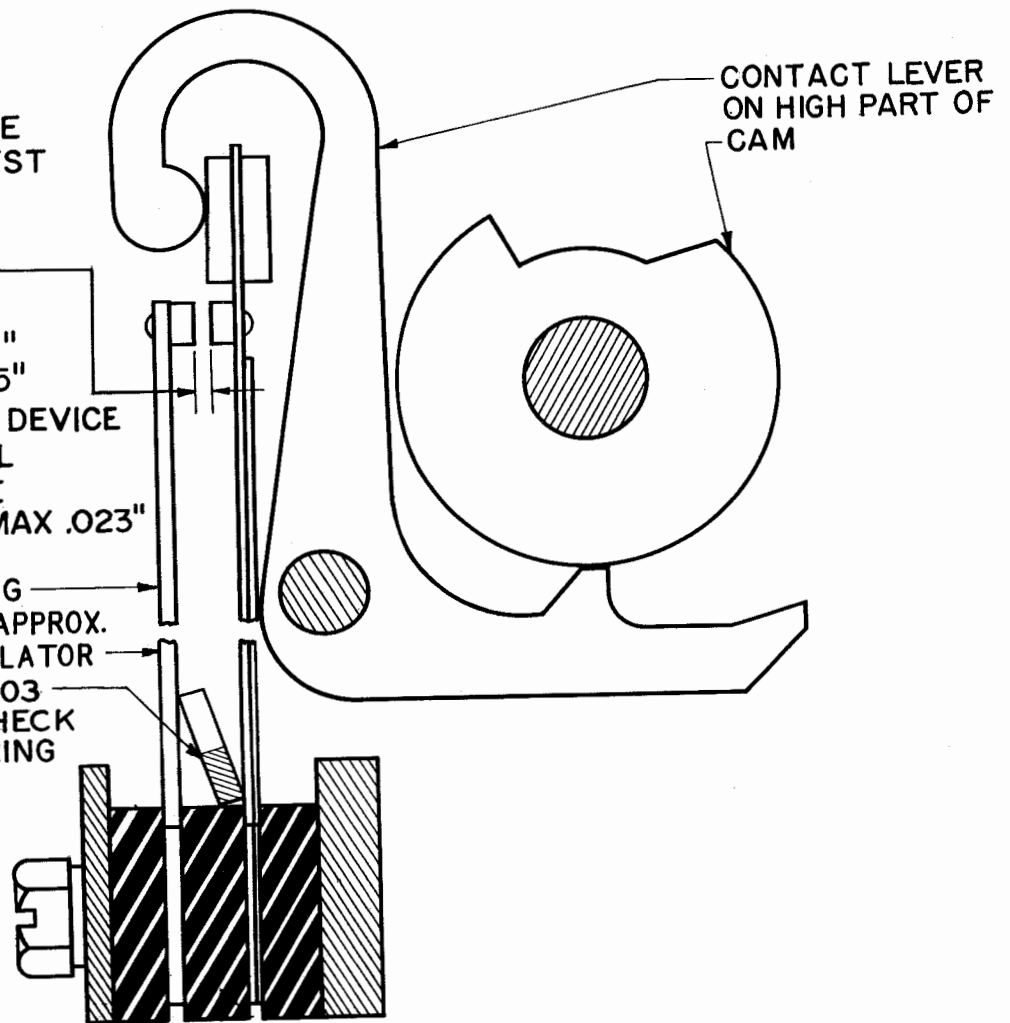
CODE CONTACTS { MIN .017"
MAX .025"

START-STOP CONTACTS { MIN .015"
MAX .025"

IF SIGNAL MEASURING DEVICE IS NOT AVAILABLE ALL CONTACTS SHOULD BE ADJUSTED TO MIN .017", MAX .023"

ADJUST

SHORT SPRING BY BENDING APPROX. 1/4" FROM INSULATOR USING TP72003 TOOL AND CHECK CONTACT SPRING PRESSURE



2.02 Sending-contact Pressure

REQUIREMENT

MIN. $4\frac{1}{2}$ OZ.

MAX. $5\frac{1}{2}$ OZ.

TO OPEN CONTACTS

ADJUST

LONG SPRING

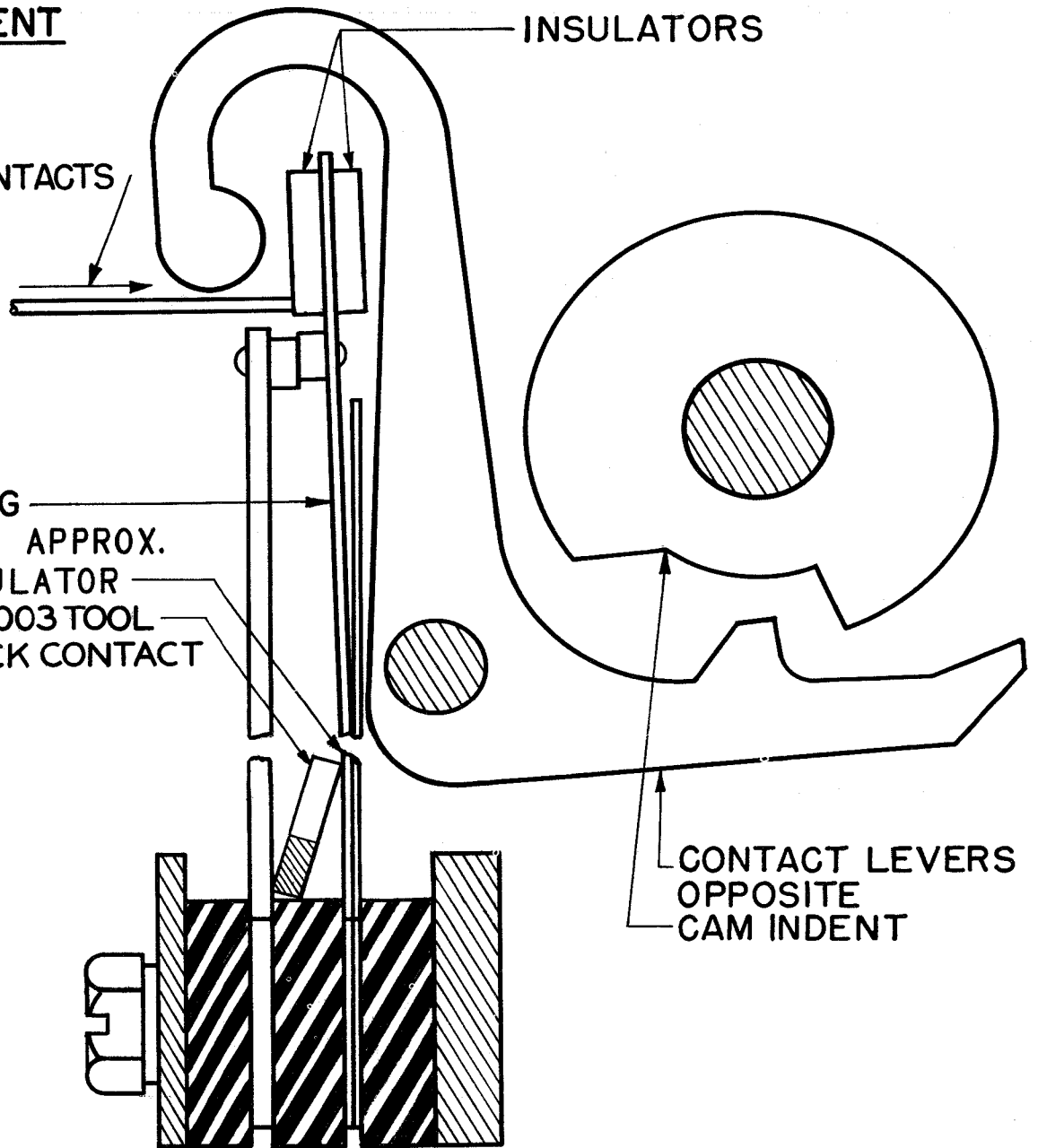
BY BENDING APPROX.

$\frac{1}{4}$ " FROM INSULATOR

USING TP 72003 TOOL

AND RECHECK CONTACT

GAP



2.03 Lock-loop Roller

ADJUST ROLLER STUD

NOTE: IF ADJUSTMENT CANNOT BE MET,
THE CONCENTRIC TP6800 SHOULDER
SCREW USED TO MOUNT THE TP92511
LOCK LOOP ROLLER SHOULD BE
REPLACED BY AN ECCENTRIC
TP107485 SHOULDER SCREW

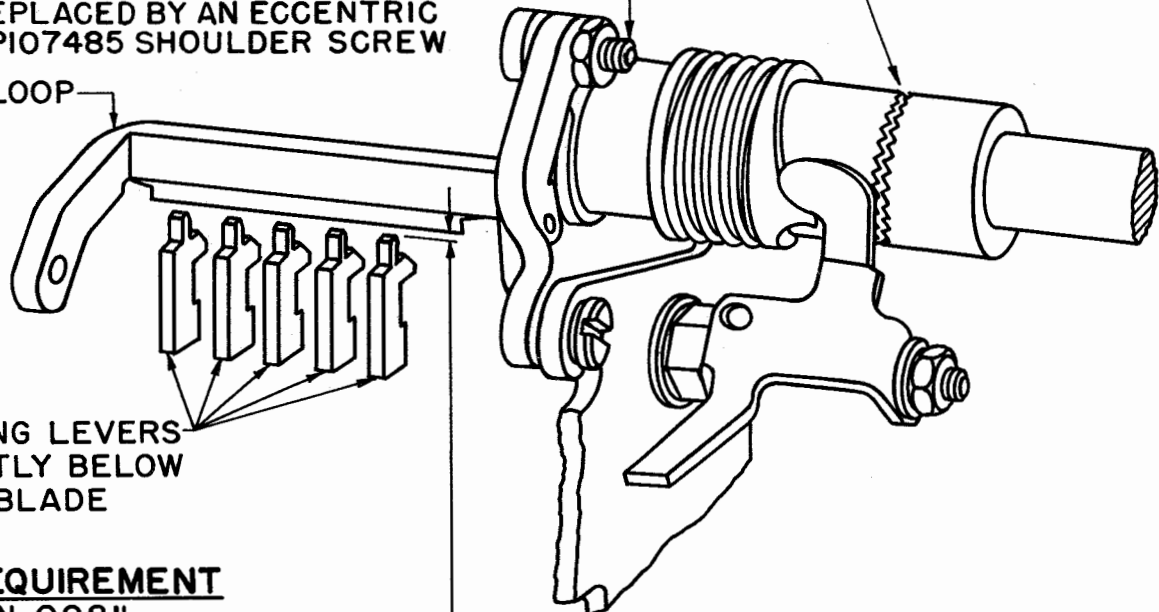
CAM SLEEVE TURNED BY
HAND UNTIL CLUTCH
IS FULLY DISENGAGED

LOCK LOOP

LOCKING LEVERS
DIRECTLY BELOW
LOOP BLADE

REQUIREMENT

MIN. .008" CLEARANCE
MAX. .015"
TO NEAREST LEVER



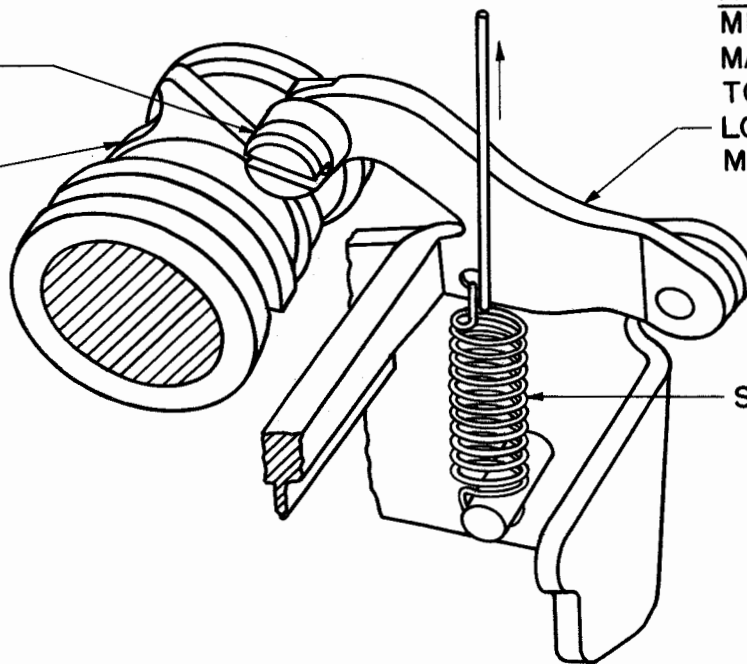
2.04 Lock-loop Spring

REQUIREMENT

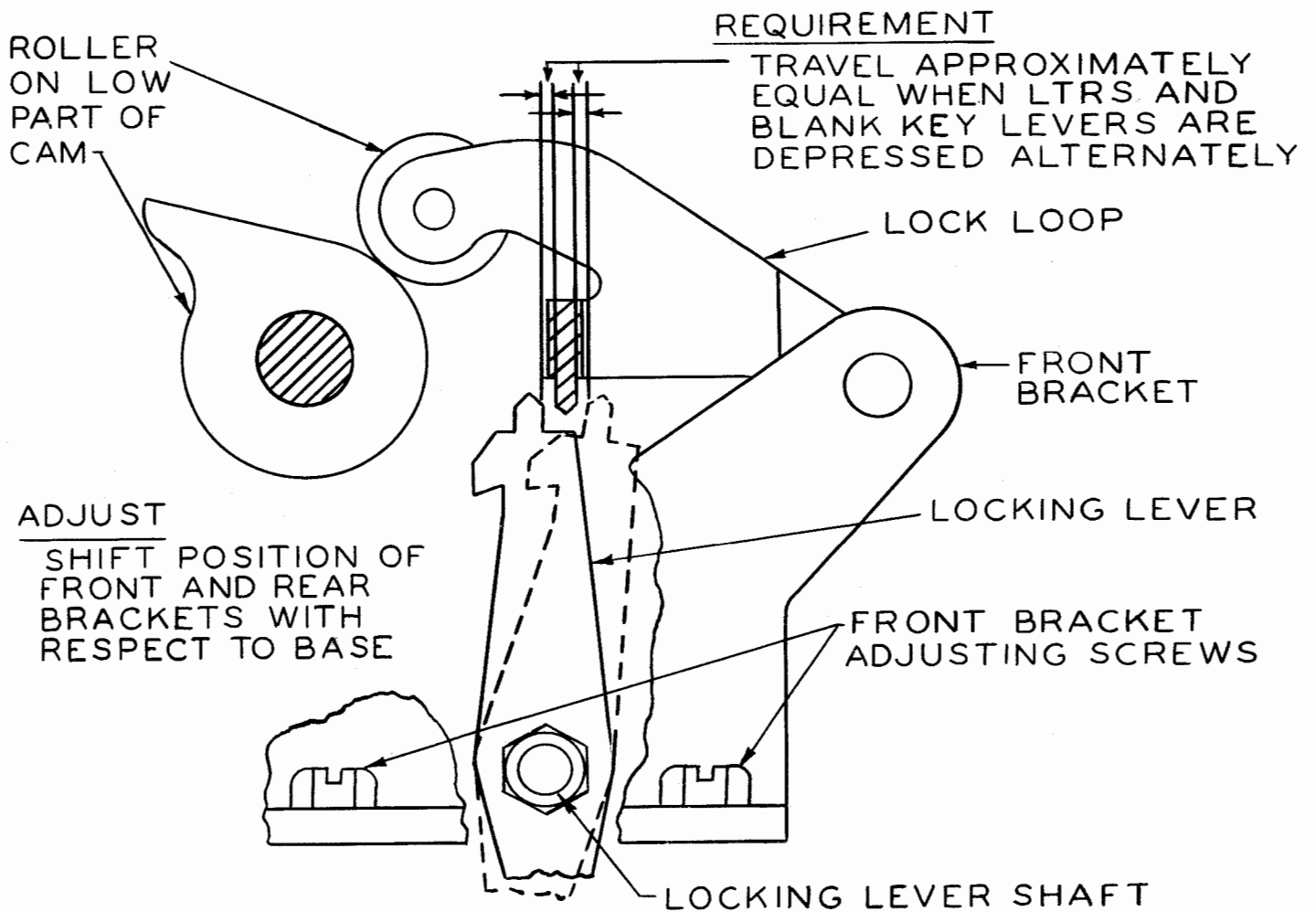
MIN. 4 OZ.
MAX. 5 OZ.
TO START
LOCK LOOP
MOVING

ROLLER
ON LOW
PART OF
CAM

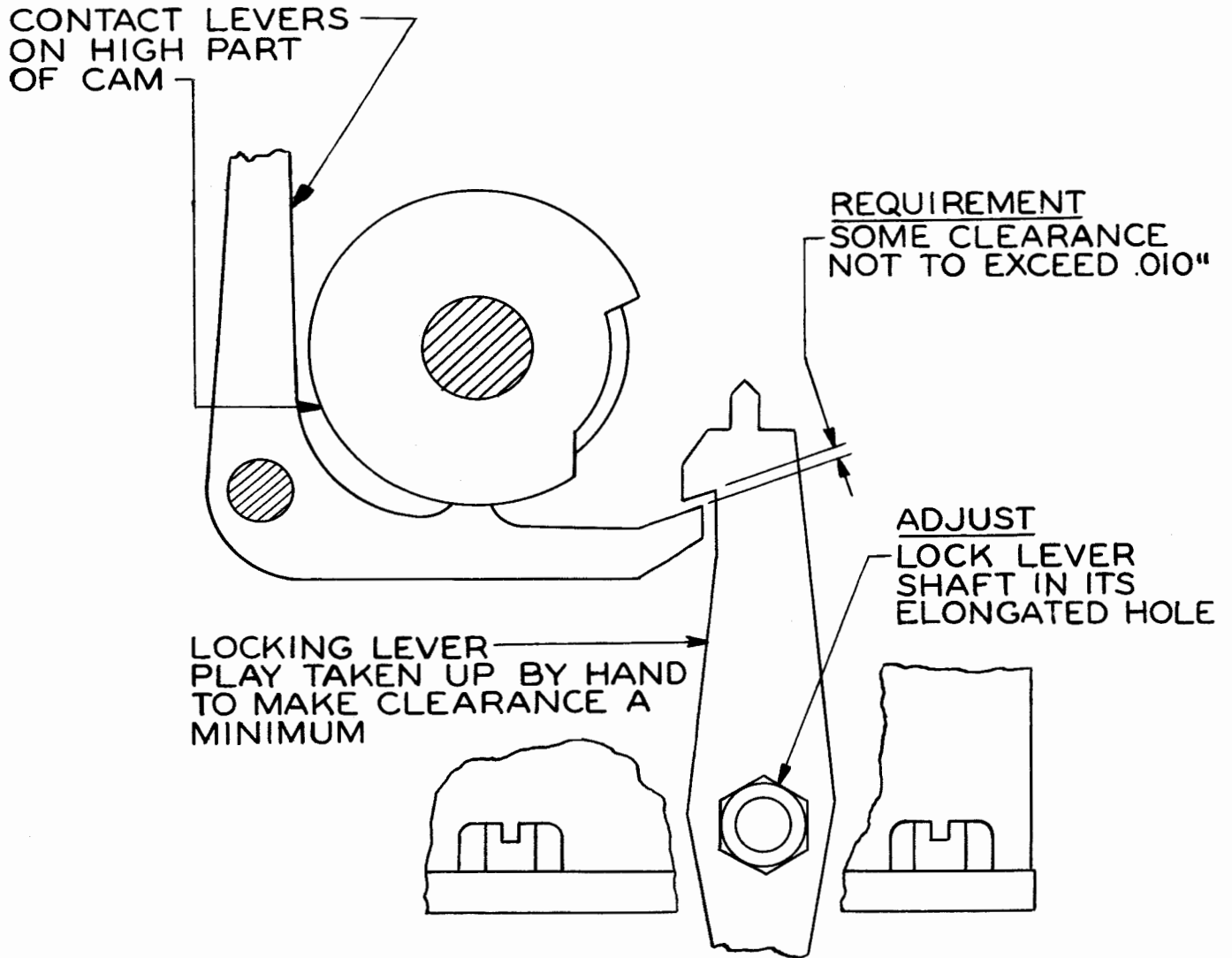
SPRING



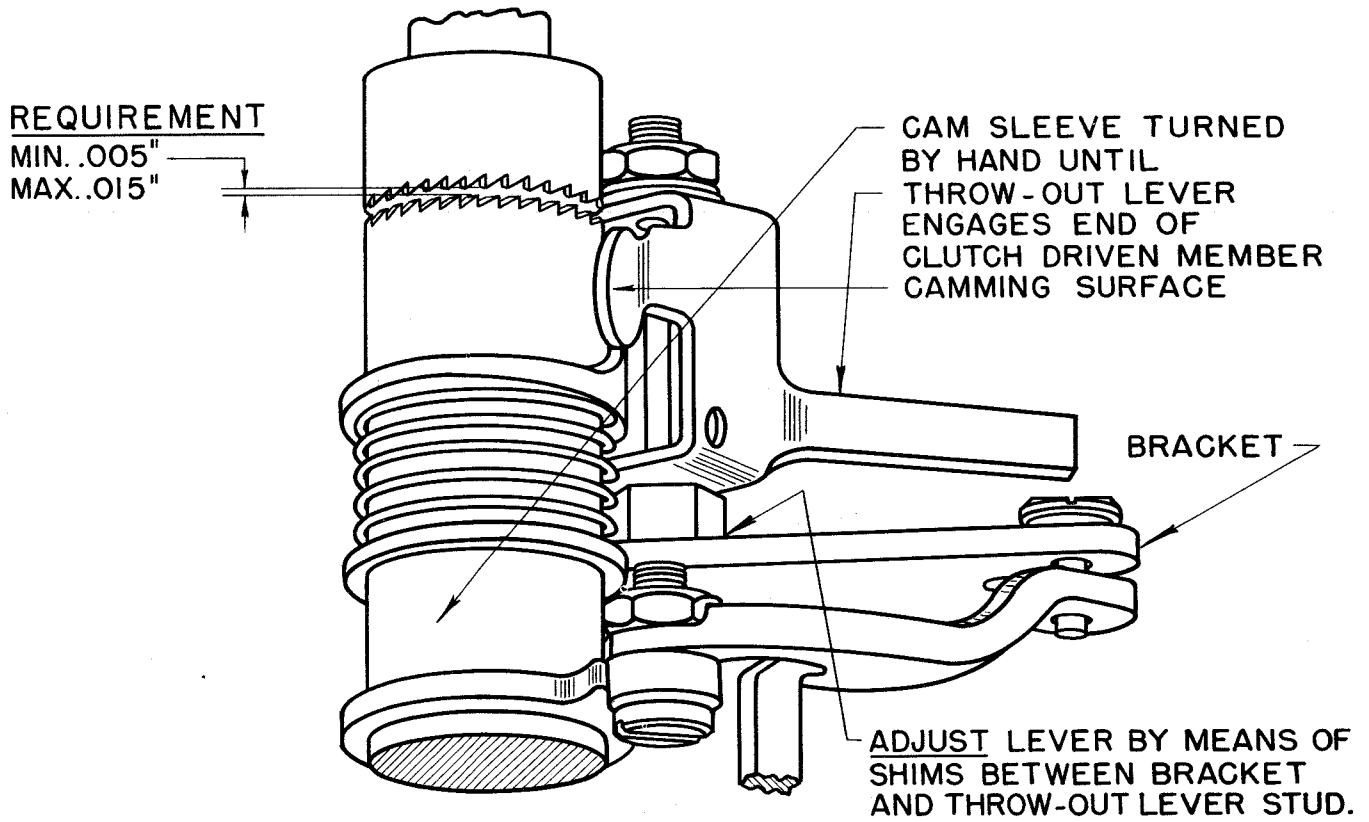
2.05 Locking-lever Travel



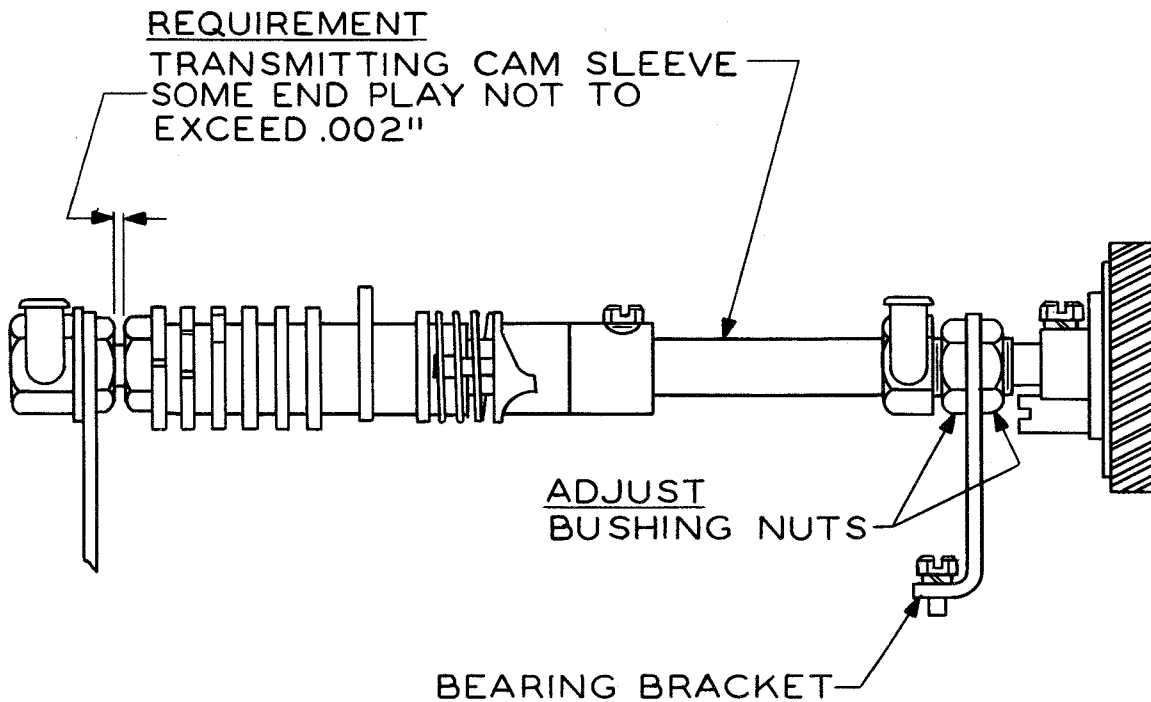
2.06 Locking-lever Clearance



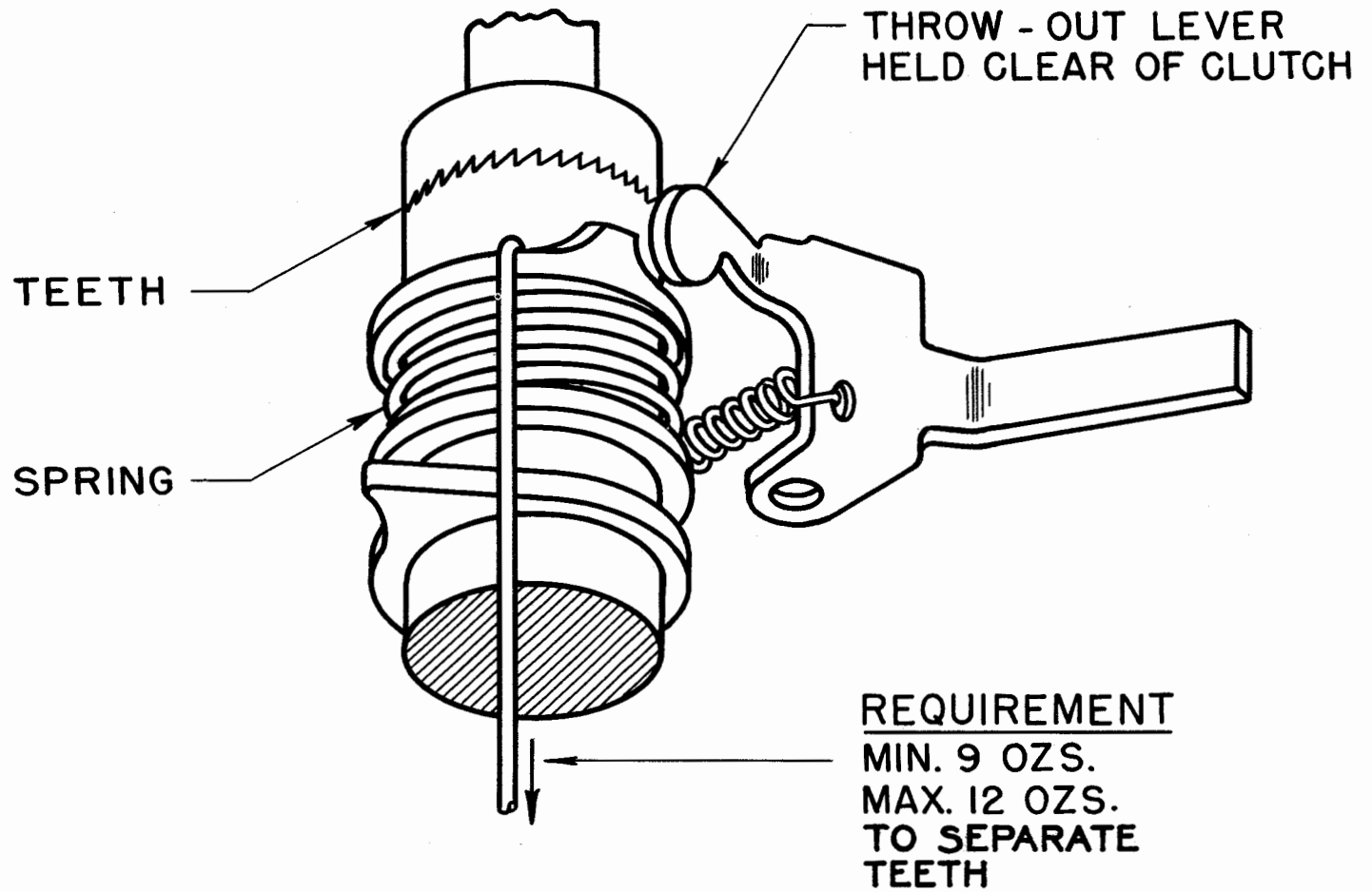
2.07 Clutch Teeth



2.08 Transmitting Cam Sleeve Endplay



2.09 Clutch Spring

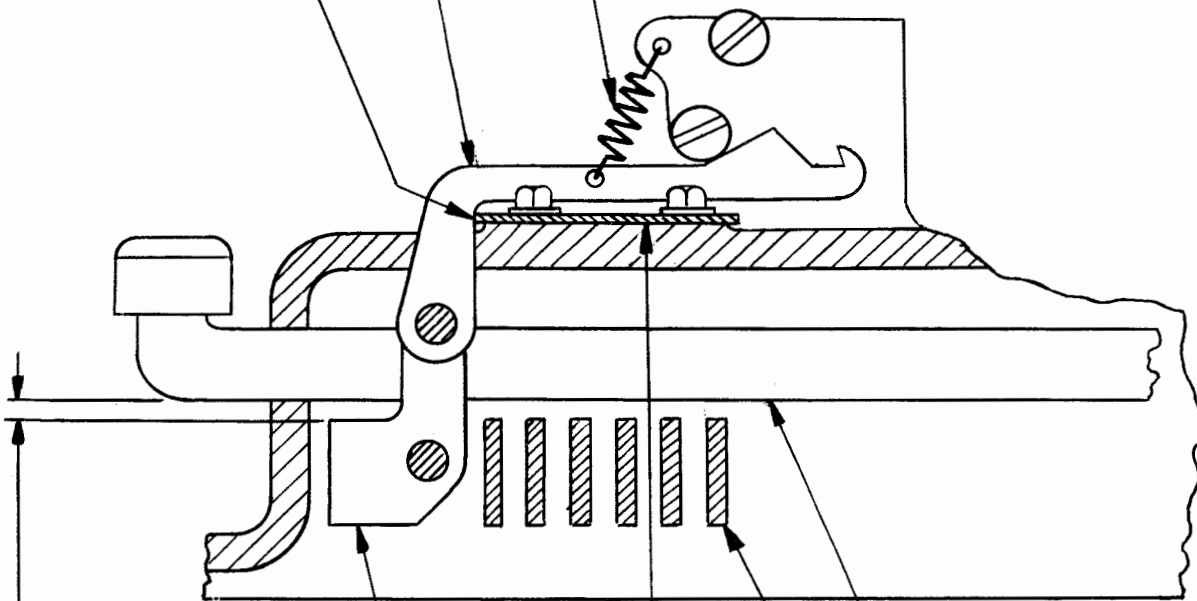


2.10 Universal Bar

NOTE: IF BASE IS EQUIPPED WITH ADJUSTABLE UNIVERSAL BAR PIVOT SCREWS, THE UNIVERSAL BAR SHOULD HAVE SOME END PLAY, NOT MORE THAN .010" AND TRIP OFF PAWL SHOULD BE APPROXIMATELY MID-WAY BETWEEN SIDES OF SLOT IN CASTING

TRIP OFF PAWL RESTING AGAINST FRONT END OF STOP PLATE

TRIP OFF PAWL SPRING



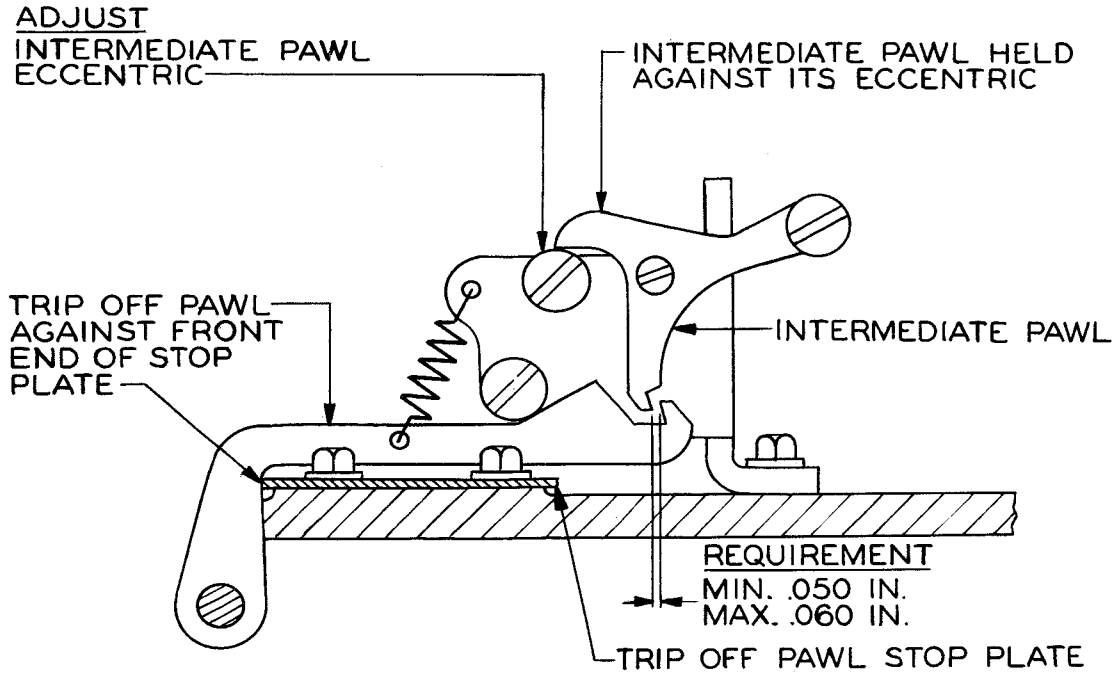
UNIVERSAL BAR

KEY LEVER
SELECTOR BAR

ADJUST TRIP-OFF-PAWL STOP-PLATE

REQUIREMENT
MIN. .040"
MAX. .060"

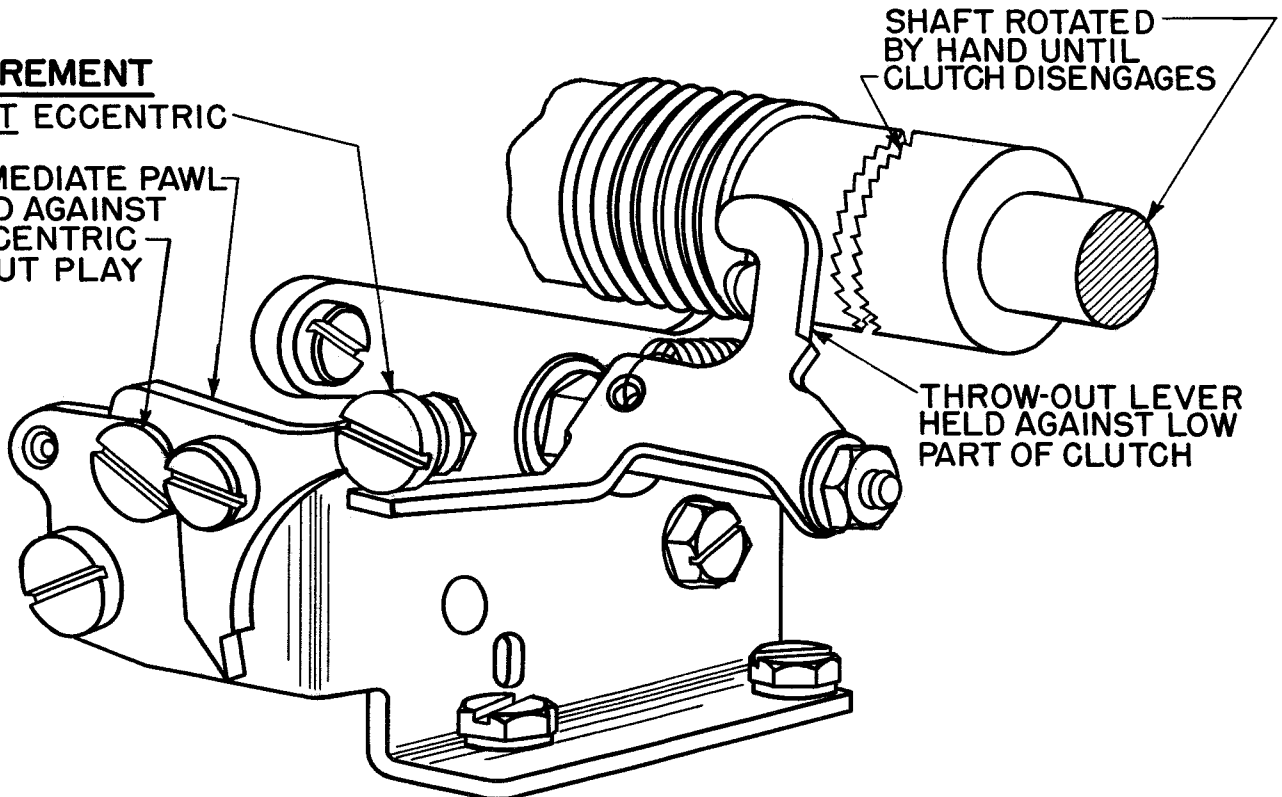
2.11 Intermediate Pawl



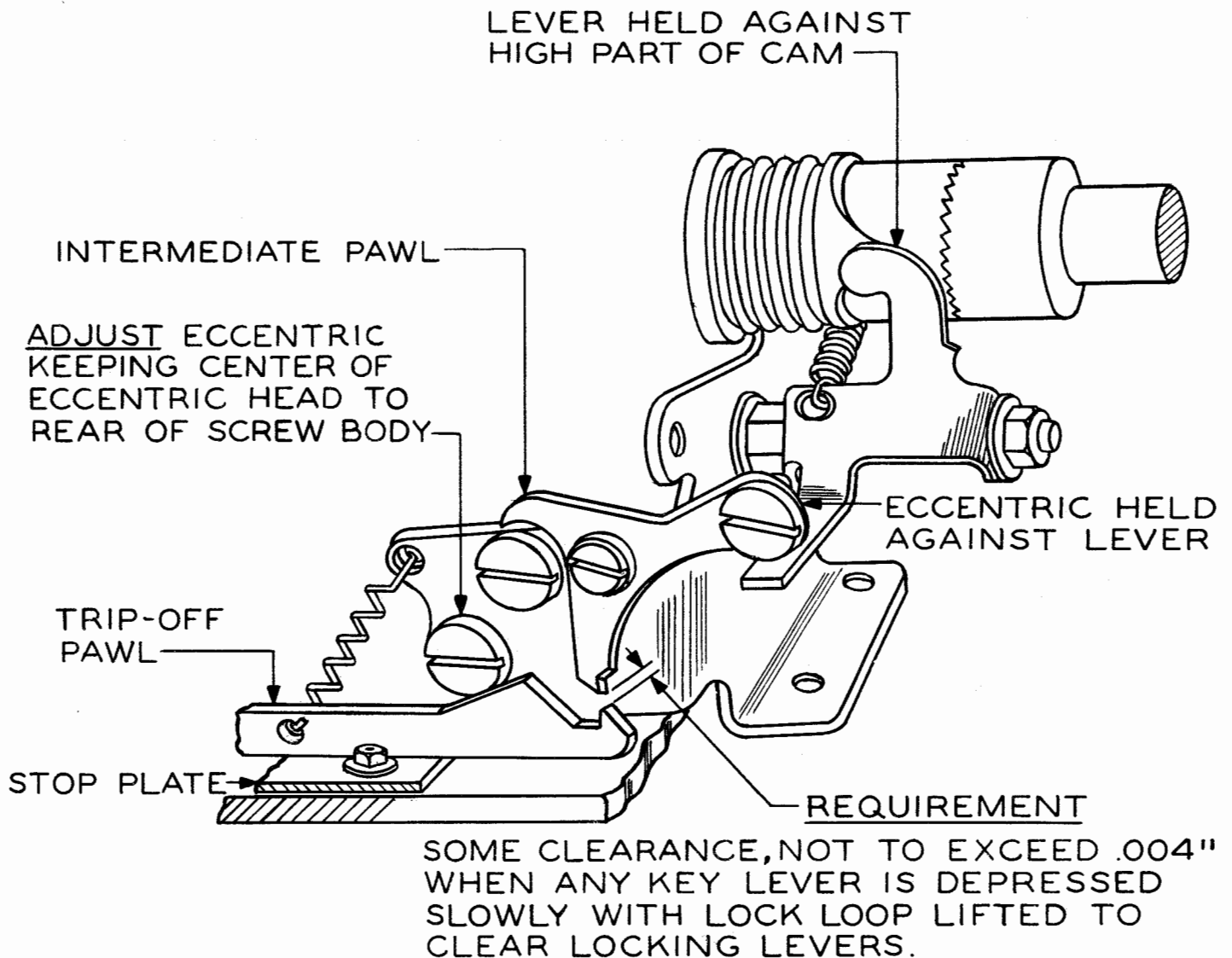
2.12 Throwout-lever Eccentric

REQUIREMENT

ADJUST ECCENTRIC SO INTERMEDIATE PAWL IS HELD AGAINST ITS ECCENTRIC WITHOUT PLAY



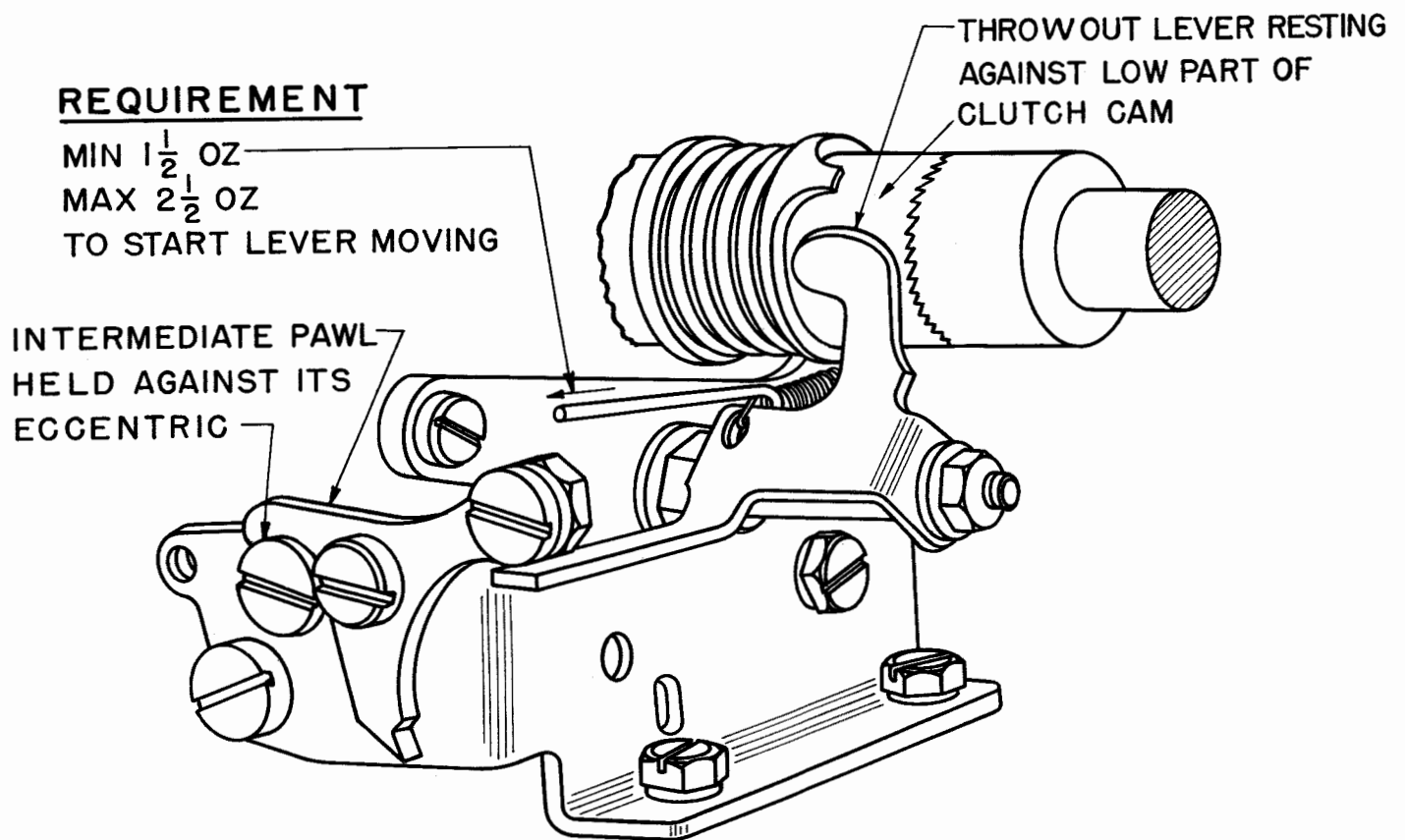
2.13 Tripoff-pawl Eccentric



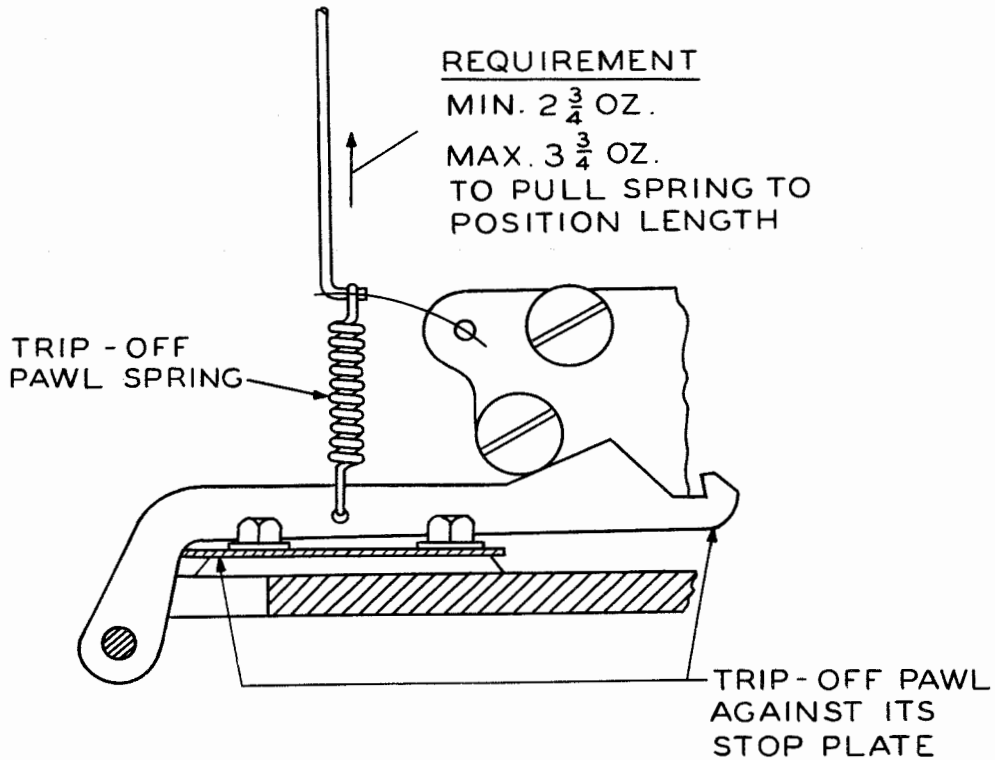
NOTE 1: IF BASE IS ARRANGED FOR REPEAT KEY ACTION, TRIP-OFF PAWL ECCENTRIC IS NOT USED AND NOTCHED PART OF TRIP-OFF PAWL FULLY OVERLAPS INTERMEDIATE PAWL.

NOTE 2: IF NECESSARY, BEND THE REAR EXTENSION OF THE TRIP-OFF PAWL STOP PLATE SO THAT WITH THE TRIP-OFF PAWL IN ITS OPERATED POSITION, THERE IS MIN 0.002", MAX 0.004" CLEARANCE BETWEEN THIS FORMED END OF THE STOP PLATE AND THE LOWER EDGE OF THE TRIP-OFF PAWL.

2.14 Throwout-lever Spring



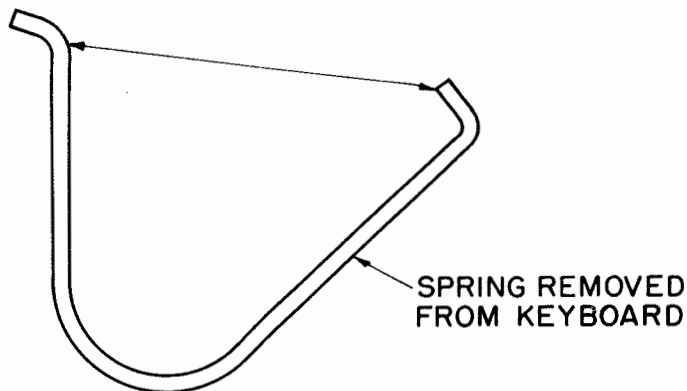
2.15 Tripoff-pawl Spring



2.16 Keylever Springs

REQUIREMENT

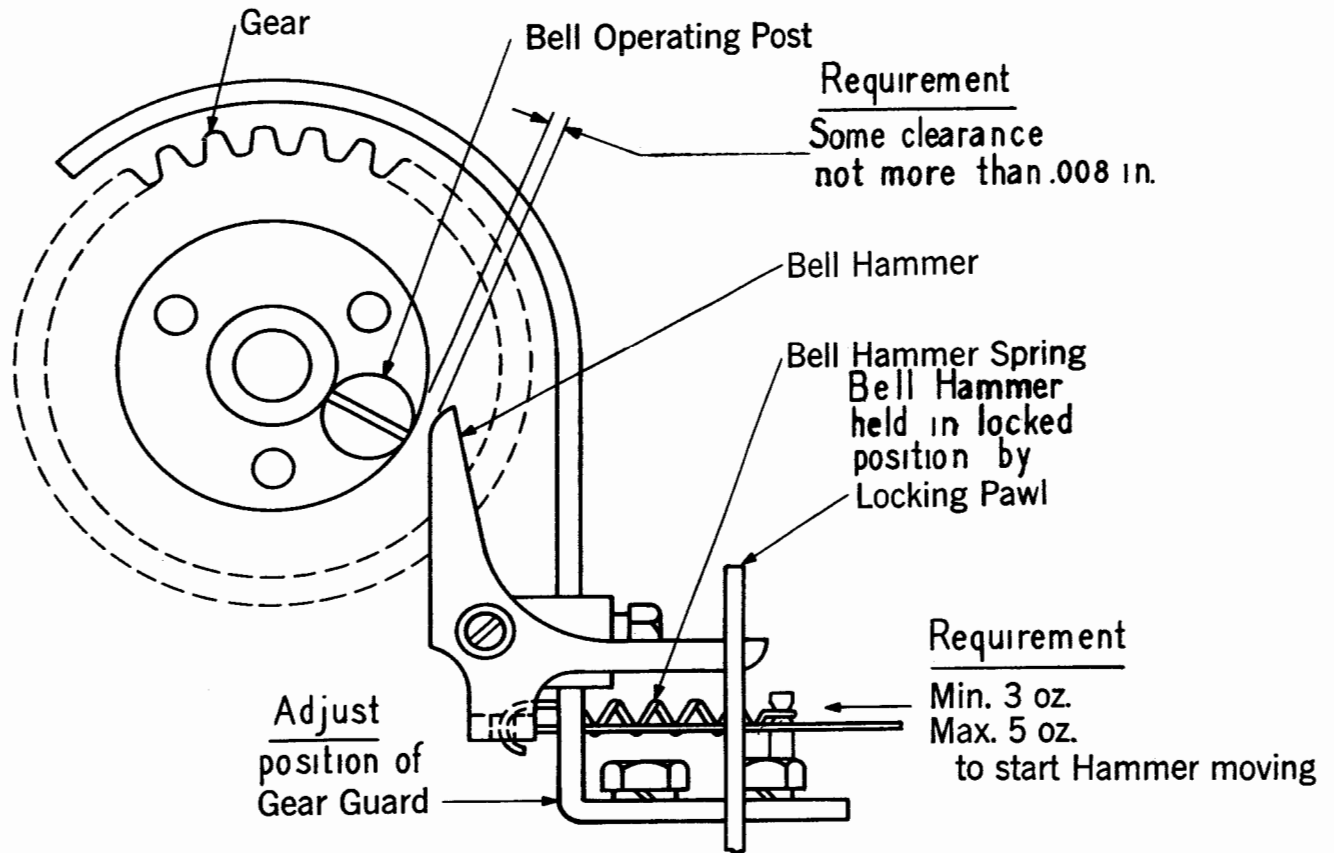
$1 \frac{15}{16}$ " FOR SPACE
 KEY LEVER SPRINGS
 $1 \frac{3}{16}$ " FOR ALL OTHER
 KEY LEVER SPRINGS



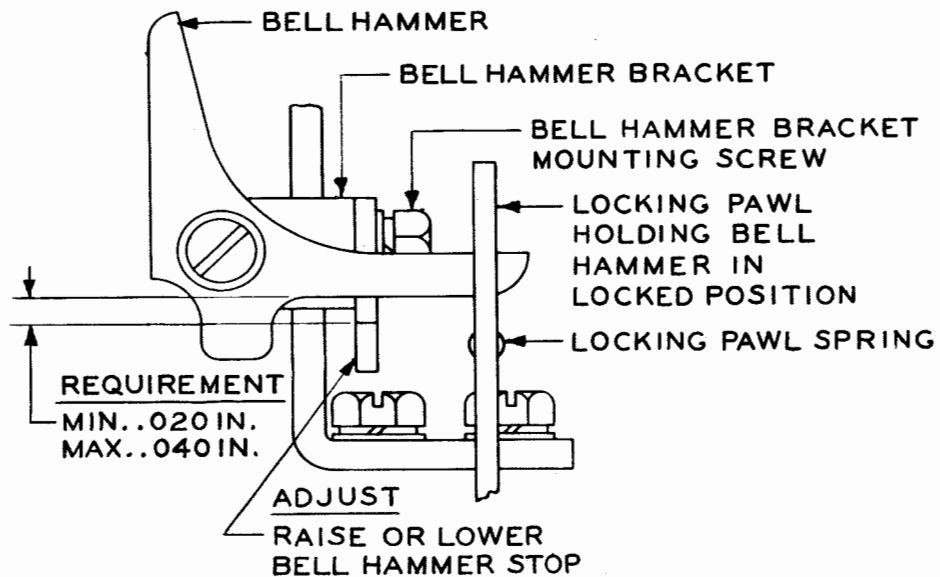
TO ADJUST, BEND SPRING

Note: 2.17 through 2.23 apply to tape-out signal mechanism.
 Note: Remove tape-reel container for 2.17 through 2.19 if necessary.

2.17 Bell-hammer Extension

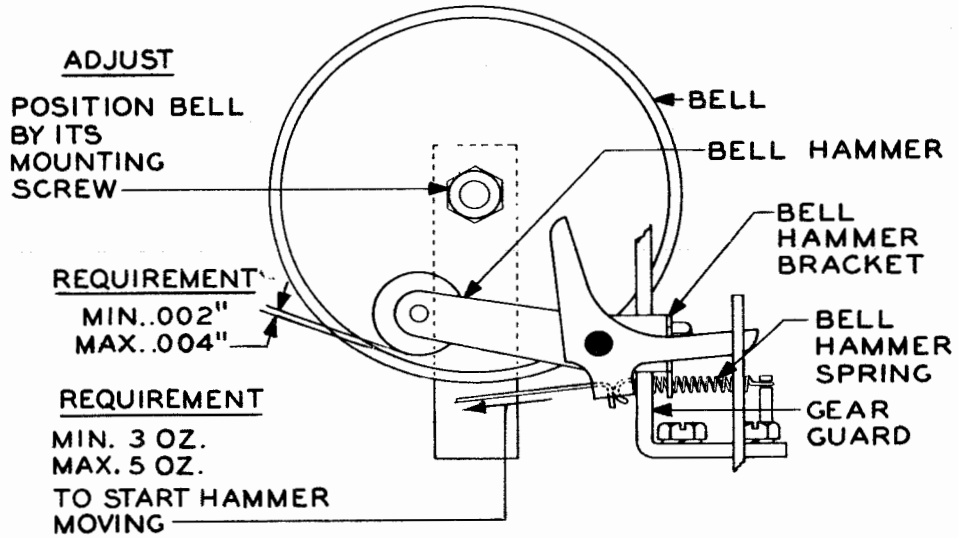


2.18 Bell-hammer Stop

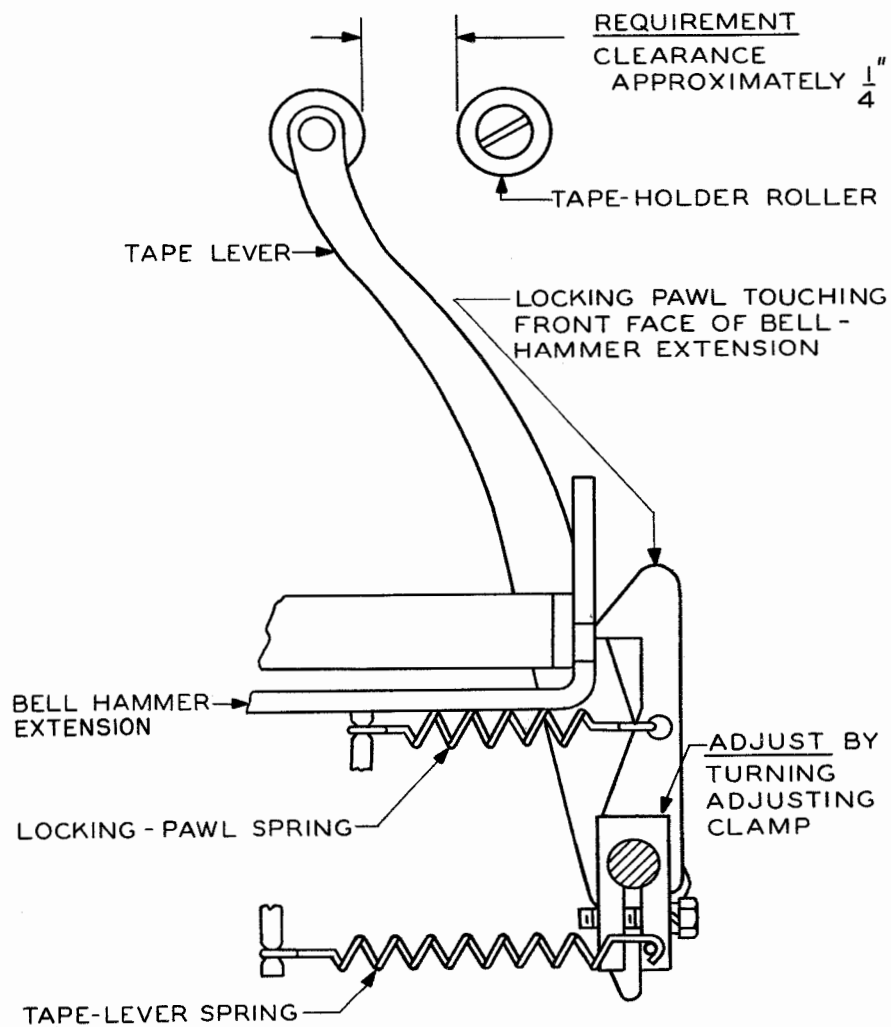


BELL HAMMER STOP

2.19 Bell Hammer and Bell-hammer Spring



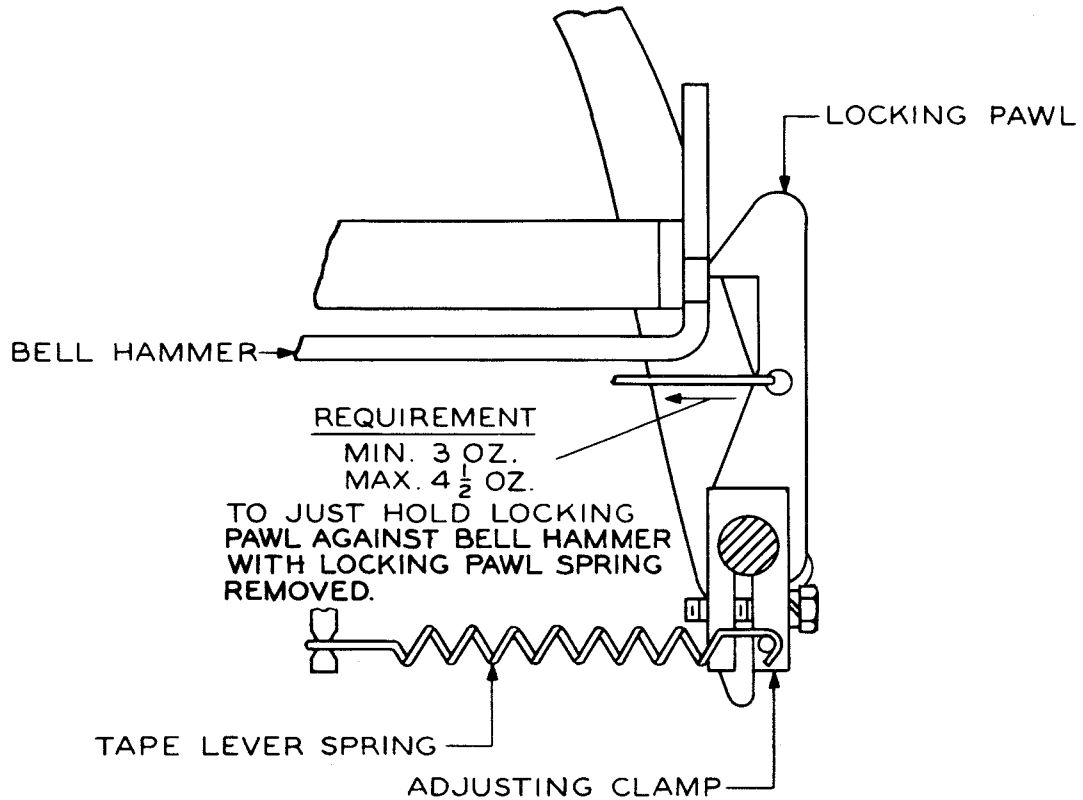
2.20 Tape Lever (Typing Unit)



2.21 Tape Lever (Typing Reperforator): The clearance requirement is the same as in 2.20 but in this case it applies between the tape-out lever (here a flat strip) and the tape-reel wooden filler instead of the tape-holder roller.

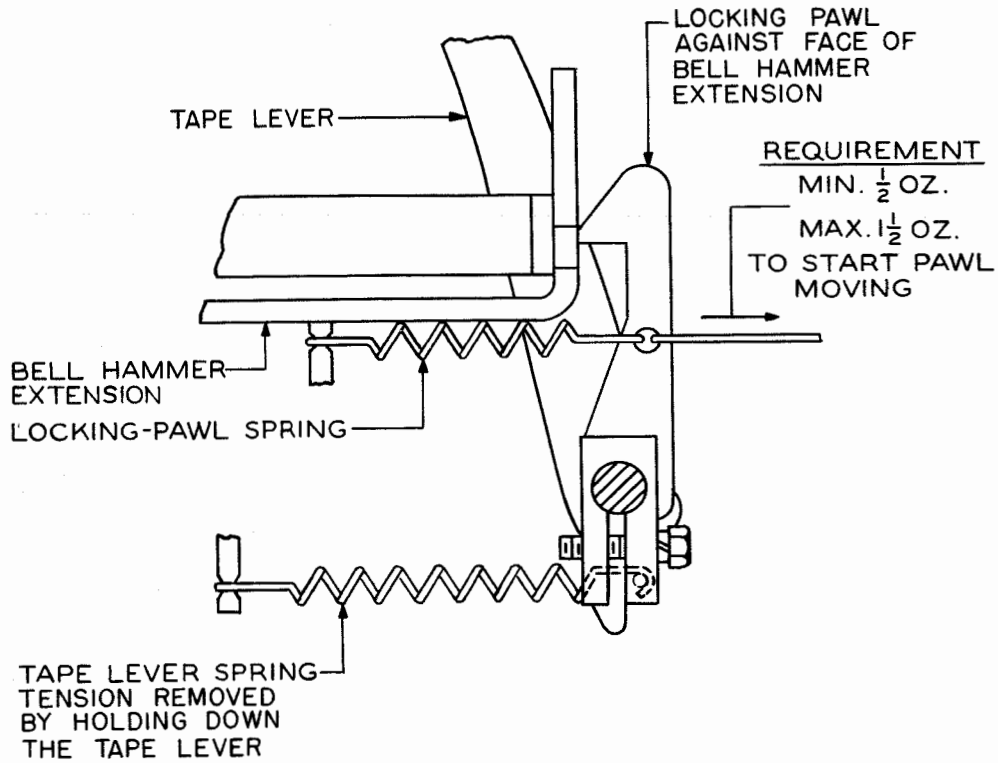
Note: Remove tape-reel container if necessary.

2.22 Tape-lever Spring

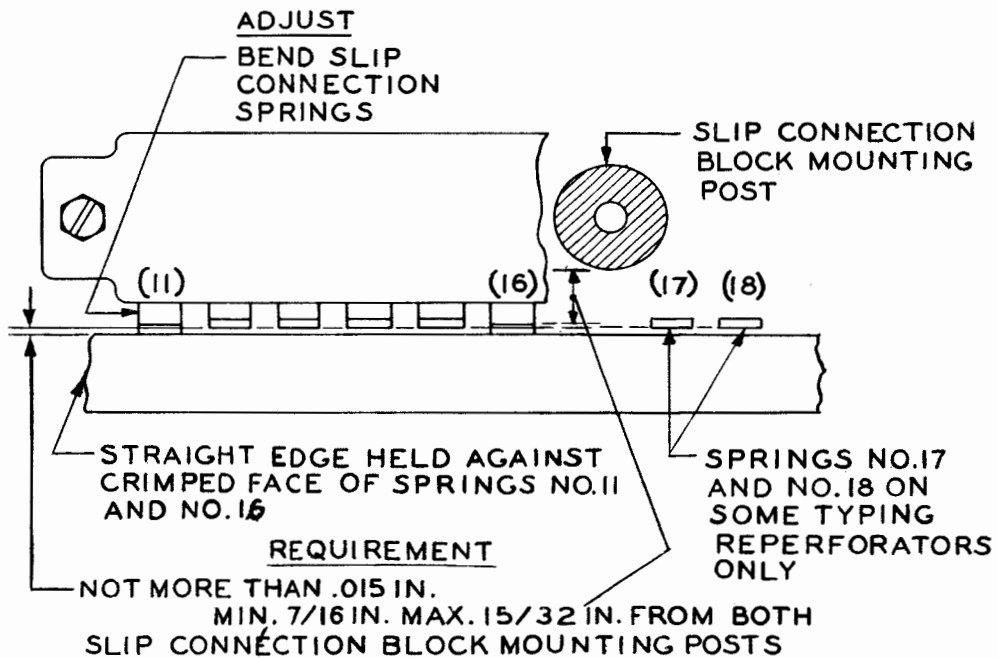


Note: Replace tape-reel container if it has been removed.

2.23 Locking-pawl Spring



2.24 Slip-connection Springs



2.25 Jack Springs: With the typing unit, typing reperator unit, or equivalent removed from the base, it should require a minimum 1-1/2 pounds, maximum 3 pounds downward pressure on the inner end of the crimp of the long spring of the line shorting jack, to separate the two contact springs 0.030 inch. When the typing unit, typing reperator unit, or equivalent is in position on the base, the jack springs should be separated minimum 0.020 inch, maximum 0.060 inch.

To Adjust for Tension: Bend the long spring.

To Adjust for Separation: Bend the short spring and its back stop.

2.26 Tape-contact Assembly: (Provided on certain Typing Reperator Bases used in switching service to operate a lamp to signal end of tape.)

Note: Contact adjustments (a), (b), and (c) can be checked and corrected only by removing the contact assembly. This should not be done unless the contacts are obviously out of adjustment.

(a) The short contact spring and stiffener should be approximately parallel to the mounting bracket. If necessary, bend to meet this requirement.

(b) It should require some tension, not more than 1 ounce, to move each leg of the forked short contact spring away from its stiffener.

(c) There should be minimum 0.010 inch, maximum 0.020 inch clearance between contacts. Bend the longer contact spring to obtain this clearance.

(d) With the assembly mounted in position, the following requirements should be met:

(1) With the bell-hammer locking pawl touching the front face of the bell-hammer extension, the contact points should just close.

(2) With the bell-hammer locking pawl fully engaging the bell-hammer extension and the tape-out lever in the down or "full" position, there should be some clearance between the contact bakelite extension and the tail of the bell-hammer locking pawl.

To Adjust to Meet These Two Requirements:
Position the contact assembly bracket.

Note: Paragraphs 2.27 through 2.29, covering repeat-space mechanism, apply to keyboards equipped with repeat-space or the combined repeat-space and repeat-S mechanism.

2.27 Repeat-space-rod spring tension should be minimum 3/4 ounce, maximum 1-3/4 ounces to start rod moving with repeat-yoke held unoperated.

To Gauge: Hook the scale over the repeat-space rod just below the spring and pull horizontally toward the front of the keyboard.

2.28 Repeat-space-rod Bracket:

(a) The face of the section with the elongated hole on the repeat-space-rod bracket should be parallel to the rear edge of the transmitter bracket.

(b) The repeat-space-rod end should engage the intermediate pawl by at least 1/2 the thickness of the pawl when the space bar is fully depressed.

To Adjust (a) and (b): Position the repeat-space-rod bracket by means of its enlarged mounting hole.

2.29 Repeat-space Rod: There should be minimum 0.010 inch, maximum 0.020 inch clearance between the clutch throwout lever and the high part of the throwout cam when 10-ounce pressure from the push end of an inverted 32-ounce scale is applied at the approximate center of the space bar to depress it lightly against its rubber stop.

To Adjust: Position the repeat-space rod by means of its adjusting nuts.

Note: 2.30 is concerned with the repeat-S mechanism found on keyboards equipped with combined repeat-space and repeat-S mechanism. The adjustment should be made with keyboard base cover-plate removed.

2.30 Repeat-yoke Lug: When the S keylever is depressed by applying 26 ounces of pressure at the center of the S keytop with the push end of an inverted 32-ounce scale, there should be minimum 0.010 inch, maximum 0.020-inch clearance between the clutch throwout lever and the high part of the throwout cam. The S keylever should bottom in the selector-bar slots when this 26-ounce pressure is applied.

To Adjust: Position the repeat-yoke lug by means of its mounting screws.