

BELL SYSTEM PRACTICES
Teletypewriter and Data Stations

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AT&TCo Standard

28 TYPING REPERFORATOR BASE
(RECEIVING-ONLY BASE AND KEYBOARD
SENDING-RECEIVING BASE)
REQUIREMENTS AND ADJUSTMENTS

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28 TYPING REPERFORATOR KEYBOARD
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1. GENERAL

1.01 This section contains the specific requirements and adjustments for the following 28 typing reperforator bases:

- (a) Typing reperforator receiving-only (RO) base, usually referred to as **Base**.
- (b) Typing reperforator keyboard sending-receiving (KSR) base, commonly known as **Keyboard**.

The material herein, together with the section containing the general requirements on teletypewriter apparatus, provides the complete adjusting information for maintenance.

1.02 This section is reissued to revise various adjustment requirements in accordance with changes authorized for this apparatus by P98 series Bell System Practices listed at the end of this section and to include other authorized revisions and additions to bring the section generally up to date. Since this is a general revision, the marginal arrows ordinarily used to indicate changes have been omitted.

1.03 In this section, left or right, front or rear, and top or bottom, apply to apparatus in its normal operating position as viewed from the front.

1.04 When a requirement calls for a clutch to be **disengaged**, the clutch-shoe lever must be fully latched between its tripler and latchlever so that the clutch shoes release their tension on the clutch drum. When **engaged**, the clutch-shoe lever is unlatched and the clutch shoes are wedged firmly against the clutch drum.

1.05 The figures in this section show the adjusting tolerances, the positions of parts, and spring tensions. The illustrations are arranged so the adjustments are in the sequence that would be followed if a complete readjustment of apparatus were being made. In some cases where an illustration shows interrelated parts, the sequence that should be followed in checking the requirements and making the adjustments is indicated by the letters (A), (B), (C), etc.

2. REQUIREMENTS AND ADJUSTMENTS FOR 28 TYPING REPERFORATOR RECEIVING-ONLY (RO) BASE

A. RO Base

2.01 Tape-out Mechanism

(A) TAPE-OUT LEVER

REQUIREMENT

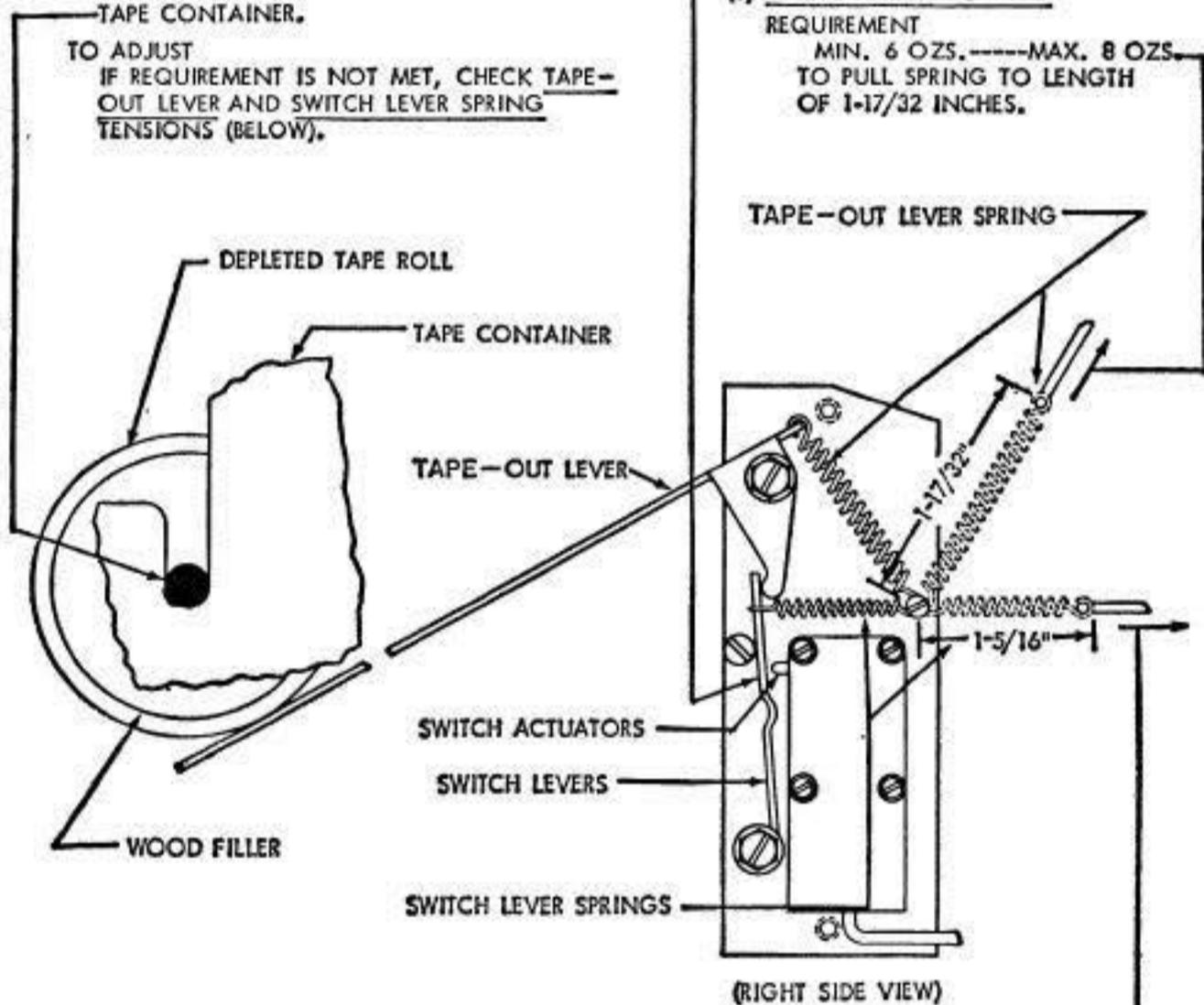
TAPE-OUT LEVER SHALL BE ABLE TO PUSH BOTH SWITCH LEVERS AWAY FROM SWITCH ACTUATORS BUT SHALL NOT BE ABLE TO LIFT WOOD FILLER WITH DEPLETED TAPE ROLL OUT OF SLOTS IN TAPE CONTAINER.

TO ADJUST
IF REQUIREMENT IS NOT MET, CHECK TAPE-OUT LEVER AND SWITCH LEVER SPRING TENSIONS (BELOW).

(B) TAPE-OUT LEVER SPRING

REQUIREMENT

MIN. 6 OZS. --- MAX. 8 OZS.
TO PULL SPRING TO LENGTH OF $1-17/32$ INCHES.



(C) SWITCH LEVER SPRINGS (2)

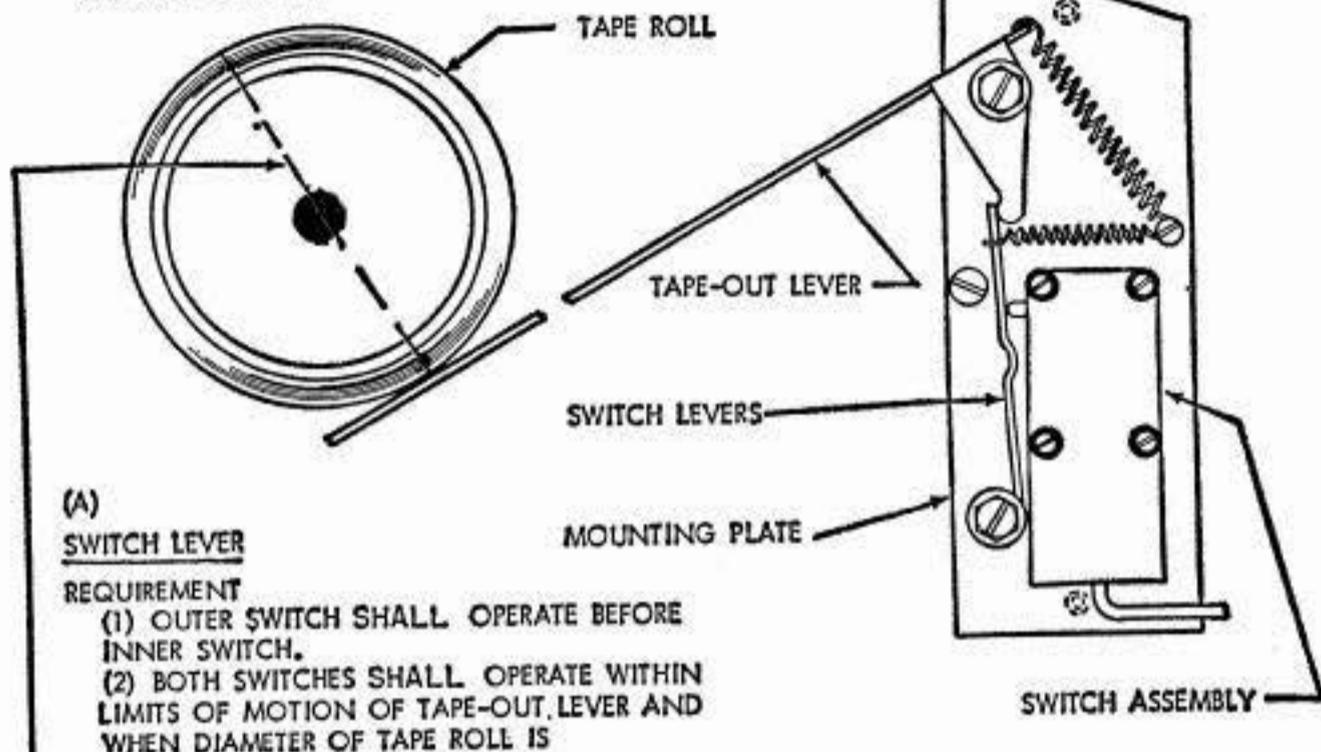
REQUIREMENT

MIN. $1-3/4$ OZS. --- MAX. $2-1/4$ OZS.
TO PULL SPRING TO LENGTH OF $1-5/16$ INCHES.

2.02 Tape-out Mechanism

NOTE:

THE INNER ELEMENTS ARE THOSE NEARER THE MOUNTING PLATE; THE OUTER ELEMENTS, THOSE FARTHER FROM THE MOUNTING PLATE.



(A)
SWITCH LEVER

REQUIREMENT

- (1) OUTER SWITCH SHALL OPERATE BEFORE INNER SWITCH.
- (2) BOTH SWITCHES SHALL OPERATE WITHIN LIMITS OF MOTION OF TAPE-OUT LEVER AND WHEN DIAMETER OF TAPE ROLL IS

MIN. 2-3/16 INCHES --- MAX. 2-5/16 INCHES (WHEN USING A 2 INCH DIAMETER CORE)

TO ADJUST
BEND OUTER SWITCH LEVER TOWARD SWITCH ASSEMBLY.

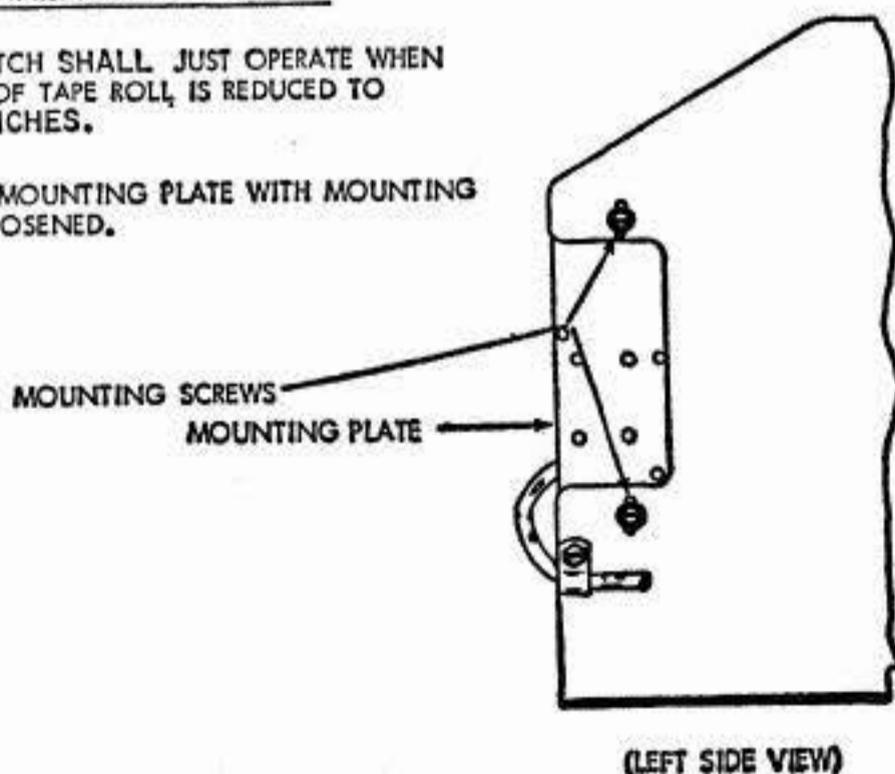
NOTE:
ADJUSTMENT CAN BE FACILITATED BY REMOVING SWITCH MECHANISM FROM TAPE CONTAINER.

(B)
SWITCH MECHANISM MOUNTING PLATE

REQUIREMENT

- OUTER SWITCH SHALL JUST OPERATE WHEN DIAMETER OF TAPE ROLL IS REDUCED TO 2-5/16 INCHES.

TO ADJUST
POSITION MOUNTING PLATE WITH MOUNTING SCREWS LOOSENED.



2.03 Intermediate Drive Mechanism

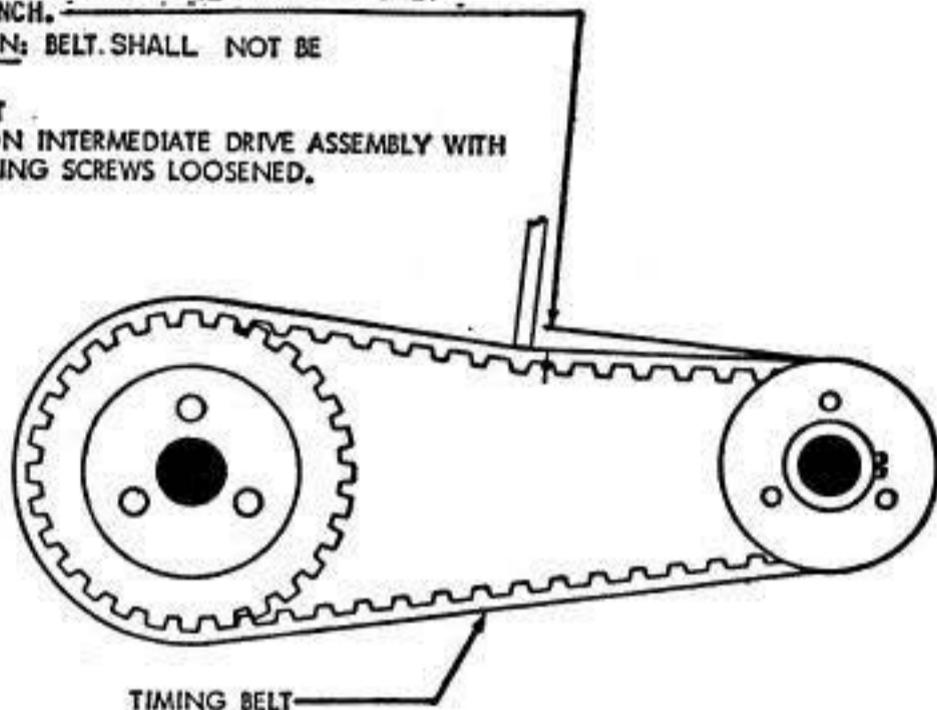
(A) TIMING BELT

REQUIREMENT

A SLIGHT PRESSURE OF (8 ± 1 OZS.) AT CENTER OF SPAN SHALL DEFLECT BELT $1/32$ INCH.

CAUTION: BELT SHALL NOT BE TIGHT.

TO ADJUST POSITION INTERMEDIATE DRIVE ASSEMBLY WITH MOUNTING SCREWS LOOSENED.

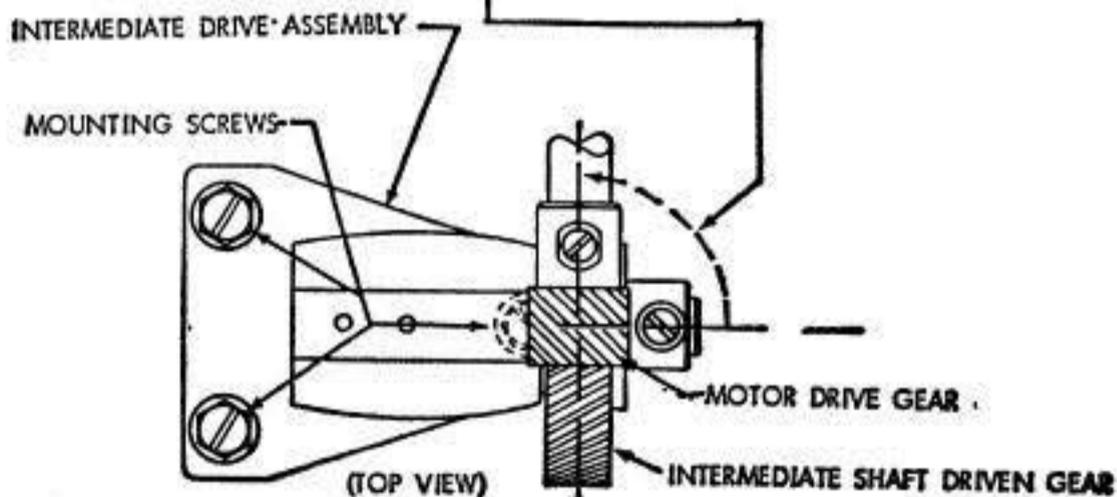


(B) GEAR MESH

REQUIREMENT

MOTOR DRIVE GEAR AND INTERMEDIATE SHAFT DRIVEN GEAR SHALL MESH AT RIGHT ANGLES.

TO ADJUST POSITION DRIVE ASSEMBLY WITH MOUNTING SCREWS LOOSENED. RE-CHECK TIMING BELT ADJUSTMENT (ABOVE).



(C) WIRE TAPE GUIDE

REQUIREMENT

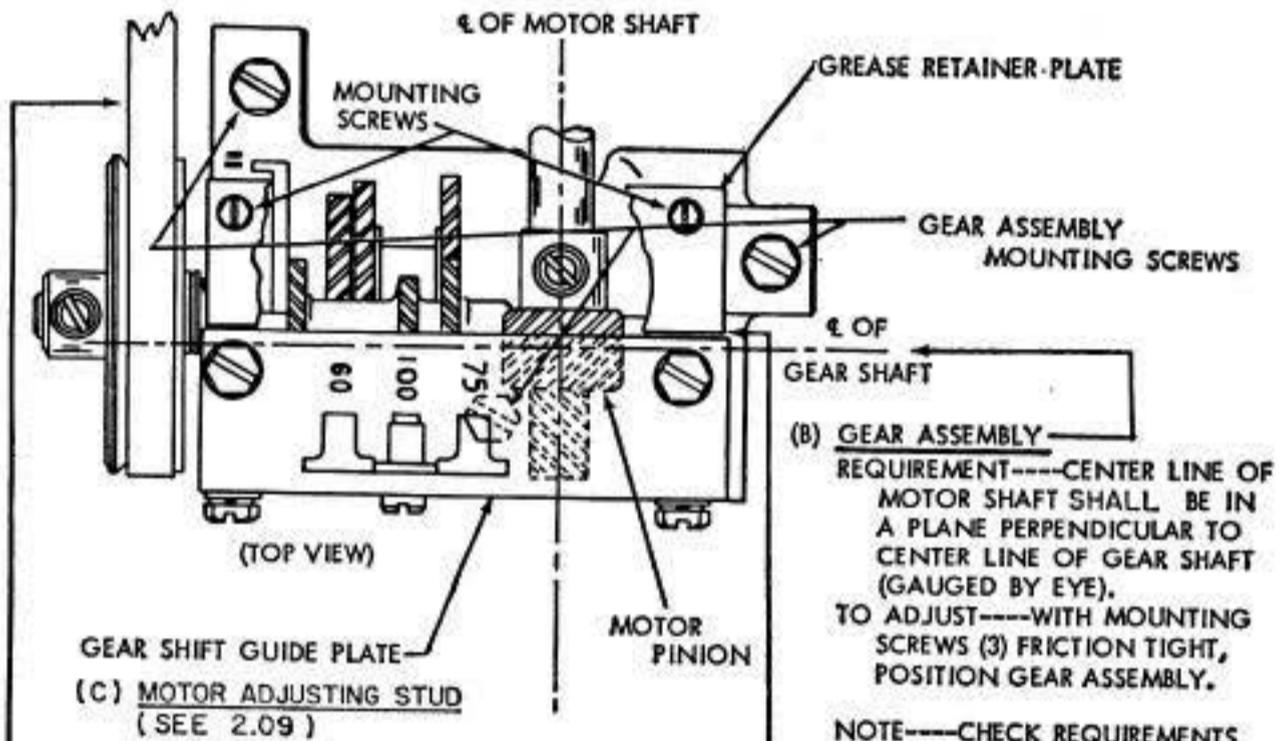
TAPE SHALL PASS FREELY THROUGH WIRE GUIDE AND BE ALIGNED WITH PUNCH GUIDE ASSEMBLY.

TO ADJUST BEND OR POSITION WIRE GUIDE.

2.04 Variable Speed Drive Mechanism

(A) GEAR SHIFT GUIDE PLATE

REQUIREMENT----WITH SPEED SELECTOR LEVER DETENTED IN CENTER POSITION, 100 W.P.M. DRIVING AND DRIVEN GEAR SHALL MESH FULLY AND EDGE OF EACH GEAR SHALL BE APPROXIMATELY IN LINE. (SEE NOTES 1 & 2.)
 TO ADJUST----WITH MOUNTING SCREWS FRICTION TIGHT, POSITION GUIDE PLATE TO LEFT OR RIGHT.



CAUTION: DO NOT ATTEMPT TO SHIFT GEARS WHILE SET IS OPERATING UNDER POWER.

(D) TIMING BELT REQUIREMENT (SEE 2.03) TO ADJUST POSITION GEAR ASSEMBLY WITH MOUNTING SCREWS LOOSENED.

(E) GREASE RETAINER PLATE REQUIREMENT
 GREASE RETAINER PLATE SHALL ALIGN WITH GEAR SHIFT GUIDE PLATE. TO ADJUST----POSITION PLATE WITH ITS MOUNTING SCREWS LOOSENED.

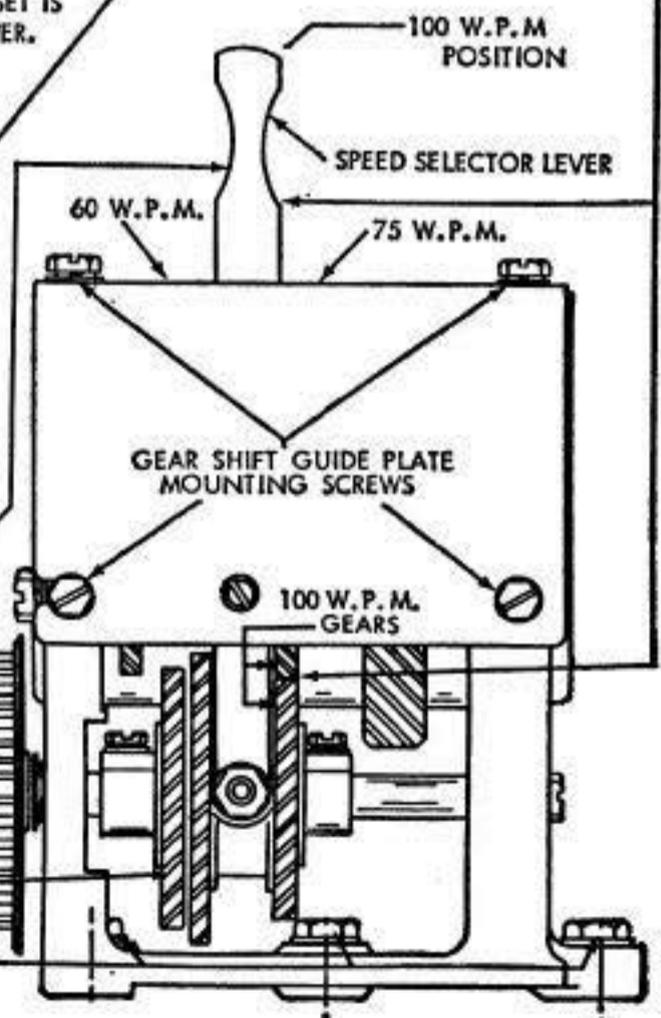
NOTE 1:

SPEED SELECTOR LEVER
 (LIFT UPWARD AND MOVE LATERALLY WHILE ORIENTATING GEARS.)

NOTE 2:

MOVABLE GEAR CLUSTER
 (SLIDING SURFACES AND SHAFT SHALL BE FREE OF BINDS.)

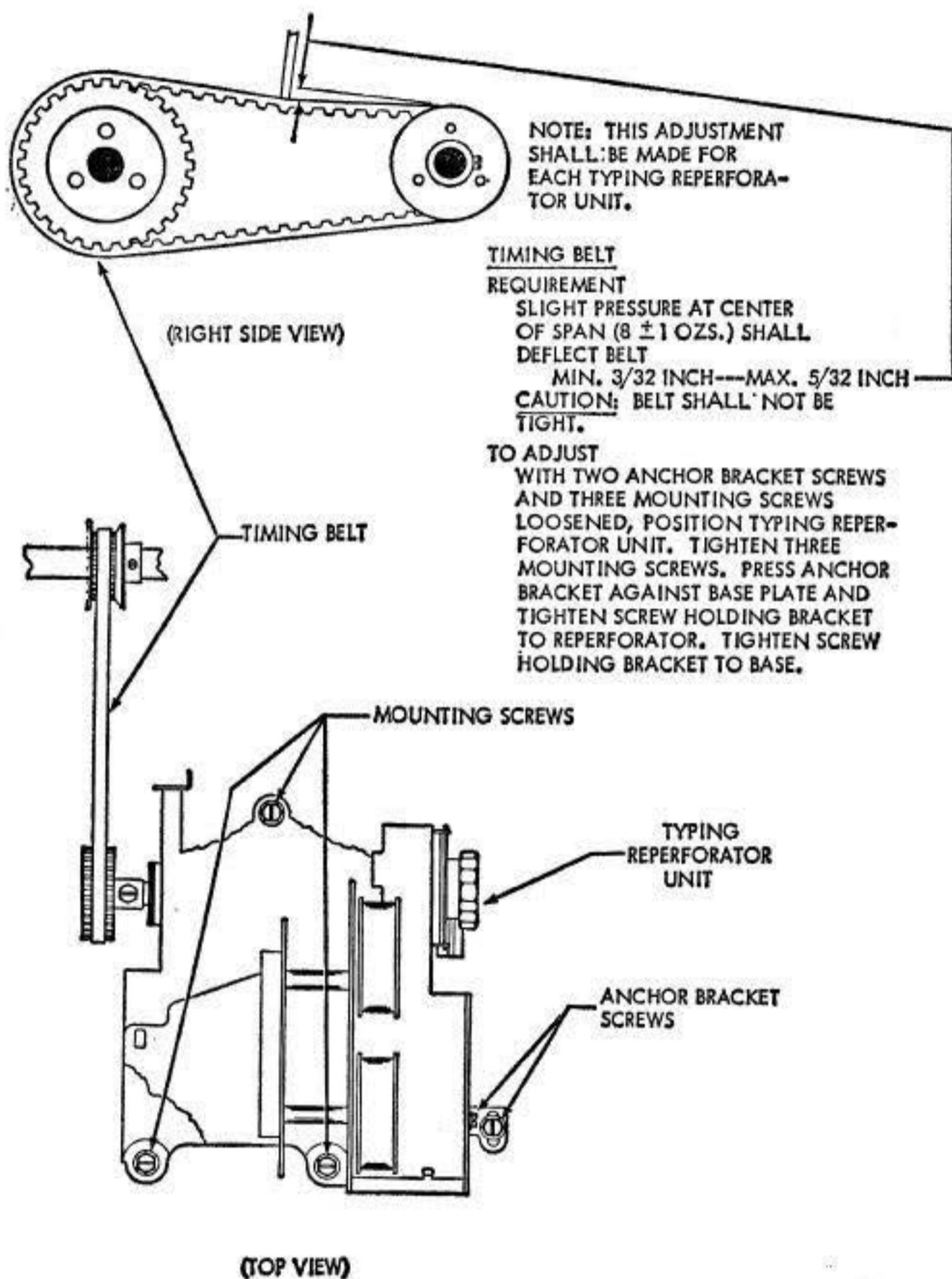
GEAR ASSEMBLY MOUNTING SCREWS



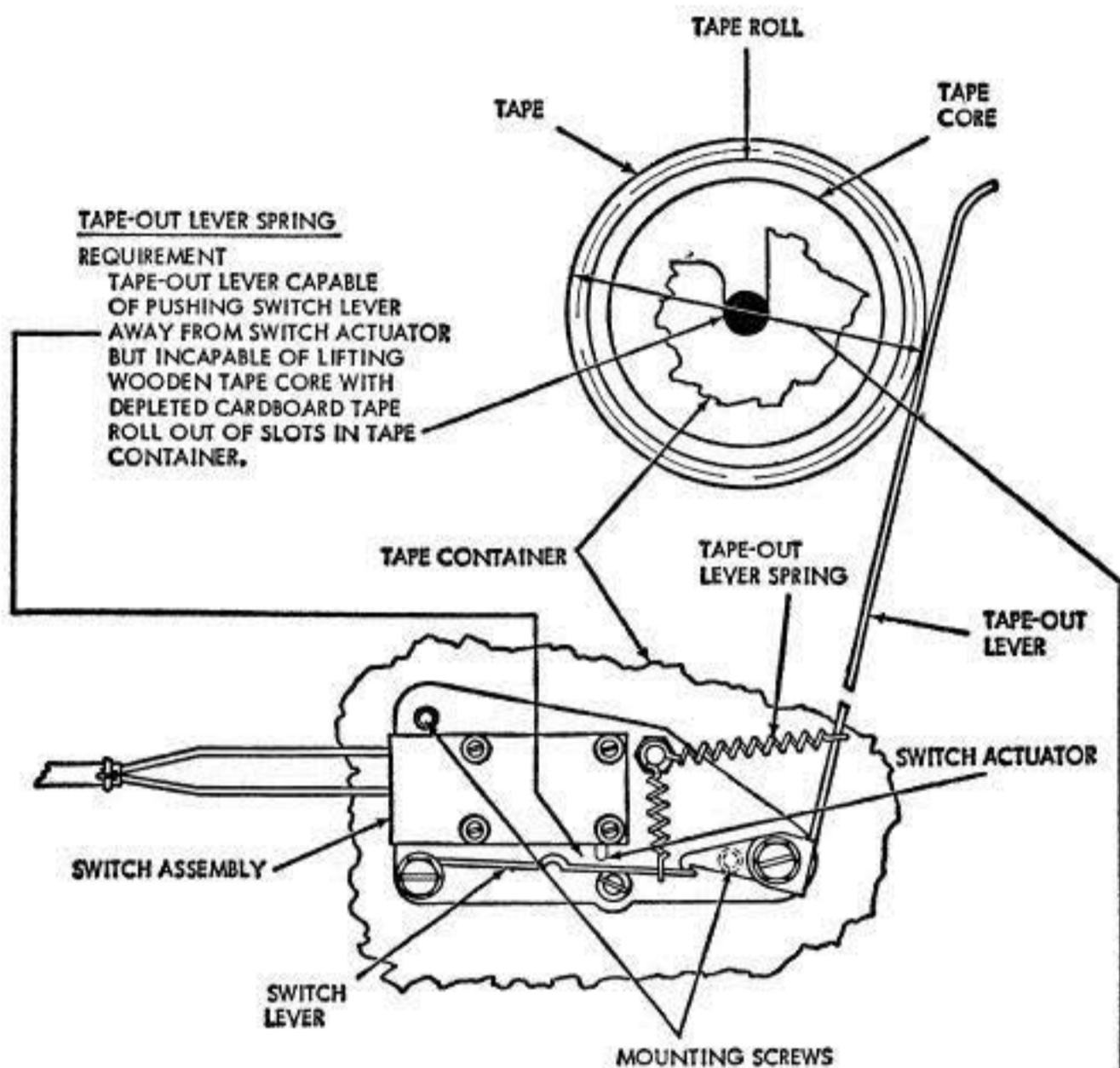
28 TYPING
 REPER-
 FORATOR
 BASE

B. Multiple RO Base

2.05 Drive Mechanism



2.06 Tape-out Mechanism



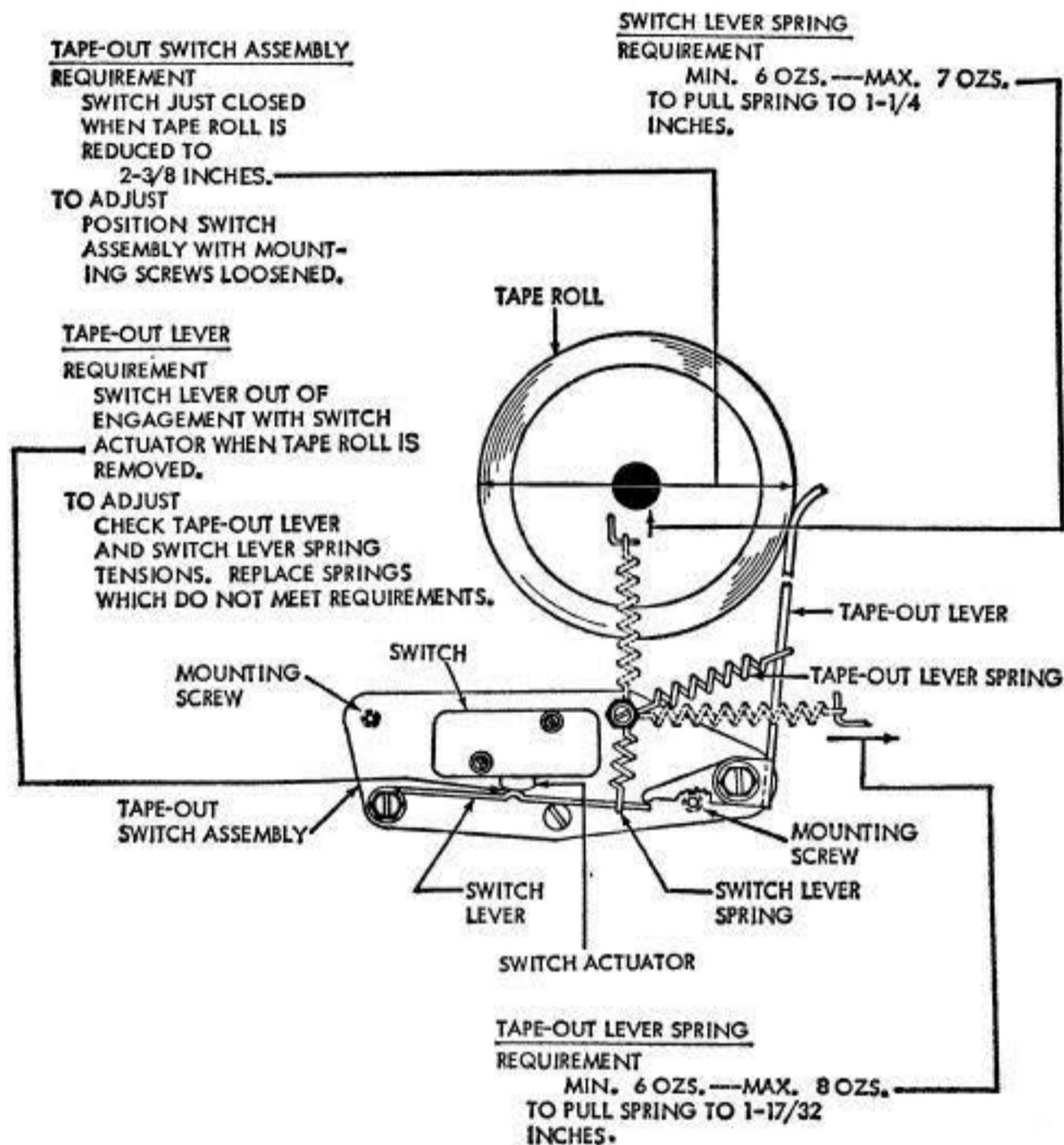
TAPE-OUT SWITCH ASSEMBLY

REQUIREMENT
SWITCH OPERATE WHEN DIAMETER OF
TAPE ROLL
MIN. 2-3/8 INCHES--MAX. 2-5/8 INCHES
CHECK WITH TEST LAMP.

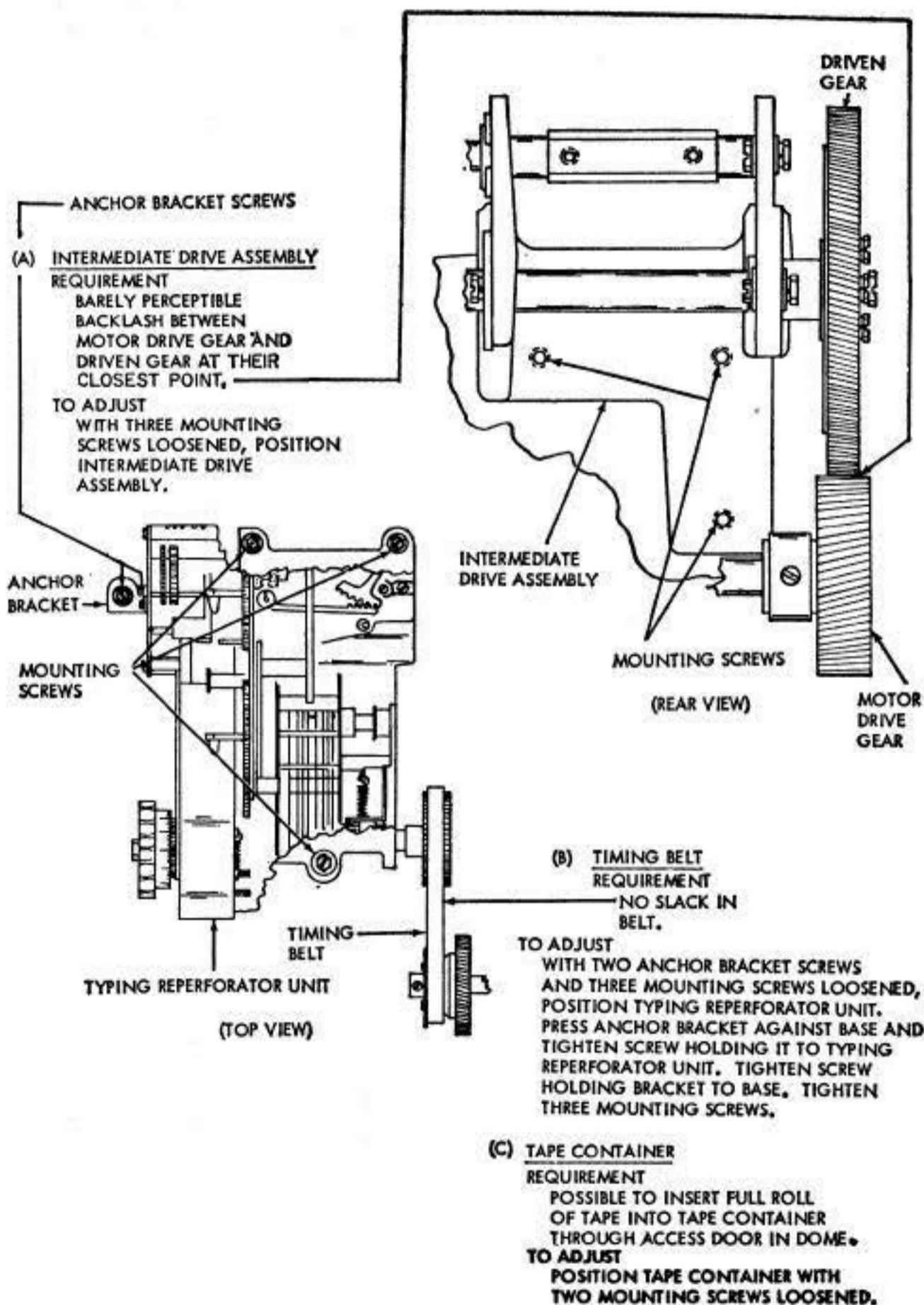
TO ADJUST
WITH TWO MOUNTING SCREWS LOOSENED,
POSITION SWITCH ASSEMBLY ON TAPE
CONTAINER.

C. Auxiliary RO Base

2.07 Tape-out Mechanism



2.08 Drive Mechanism



2.09 Motor Adjusting Stud

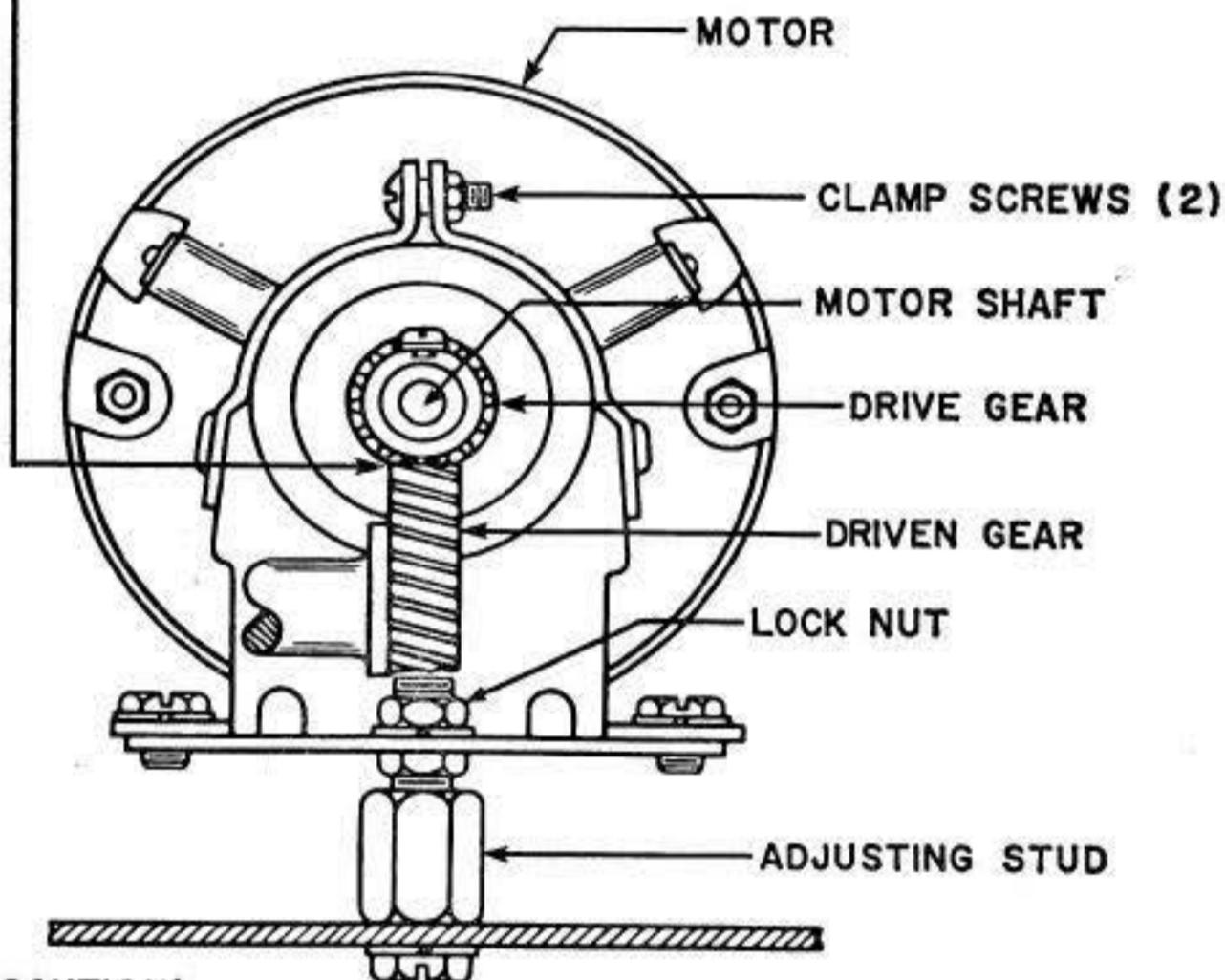
MOTOR ADJUSTING STUD

REQUIREMENT

BARELY PERCEPTIBLE BACKLASH BETWEEN DRIVE GEAR AND DRIVEN GEAR AT THEIR CLOSEST POINT.

TO ADJUST

WITH LOCK NUT LOOSENED, POSITION ADJUSTING STUD. TIGHTEN NUT WHILE HOLDING STUD IN POSITION.

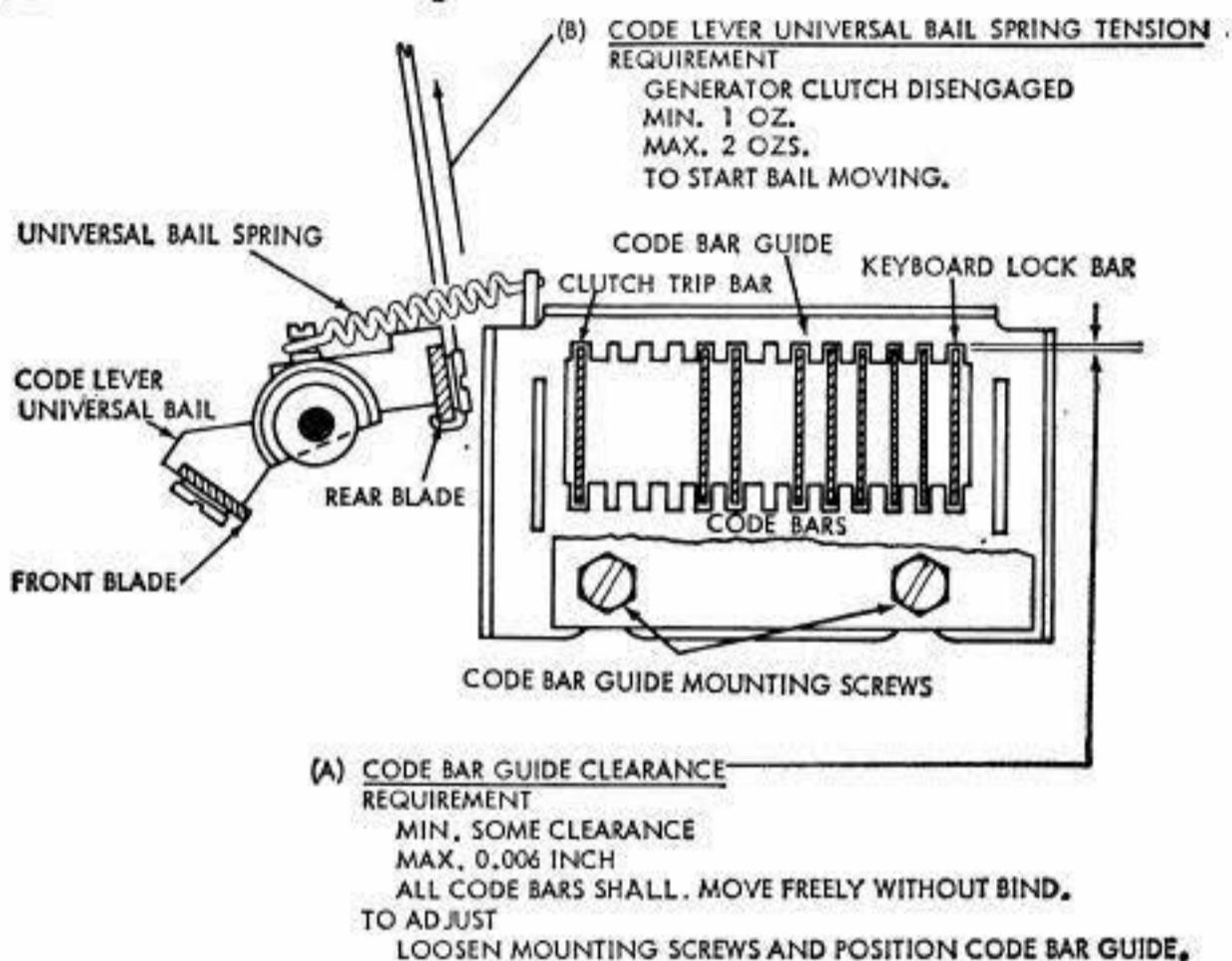
CAUTION:

IF MOTOR BECOMES BLOCKED FOR SEVERAL SECONDS, THERMAL CUT-OUT SWITCH WILL BREAK CIRCUIT. SHOULD THIS HAPPEN, ALLOW MOTOR TO COOL AT LEAST 5 MINUTES BEFORE DEPRESSING RED RESET BUTTON.

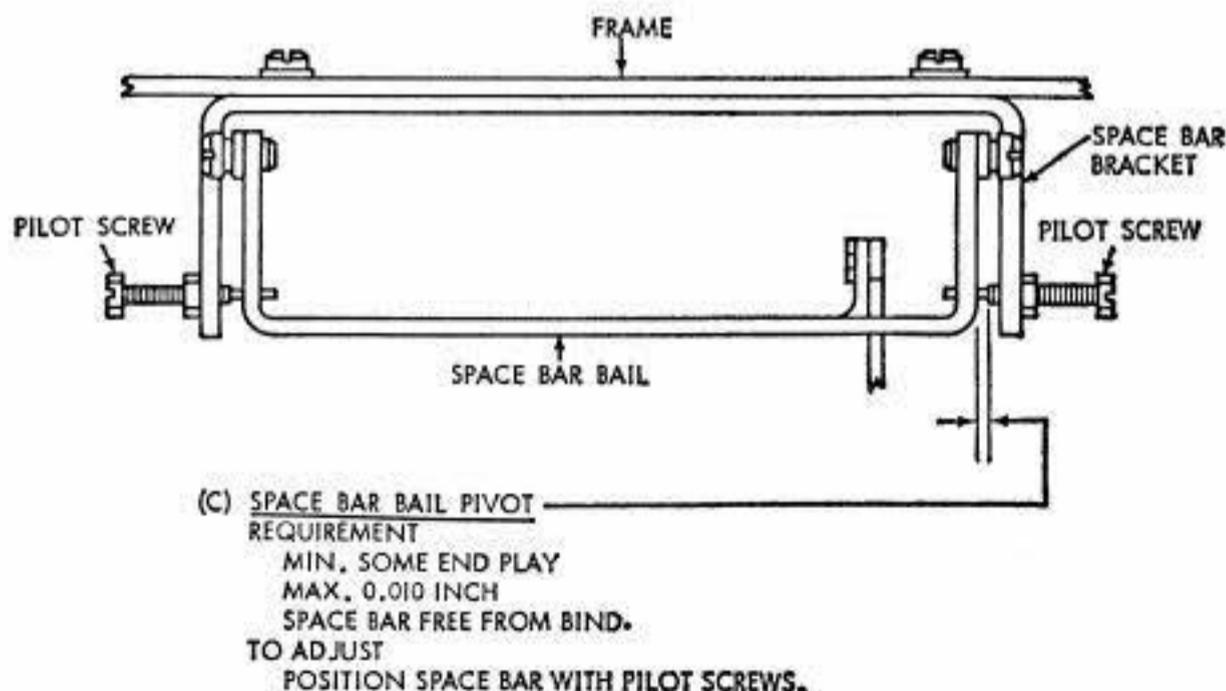
3. REQUIREMENTS AND ADJUSTMENTS FOR 28 TYPING REPERFORATOR KEYBOARD SENDING-RECEIVING (KSR) BASE

A. KSR Base

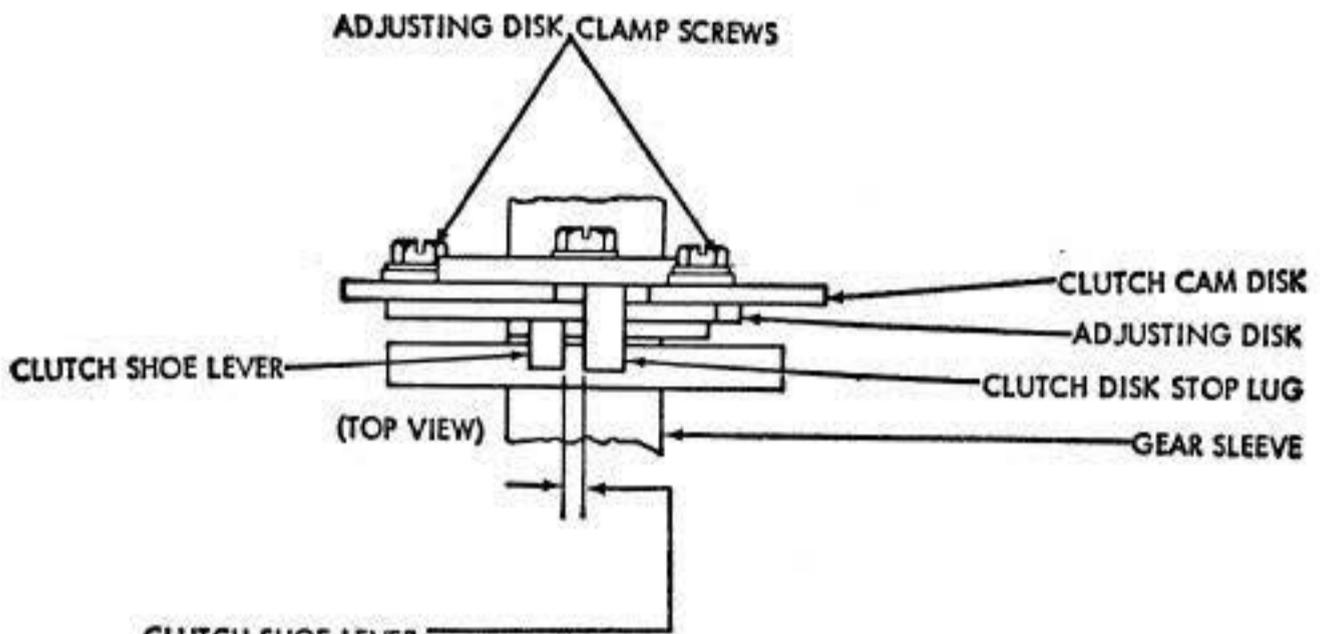
3.01 Codebar and Spacebar Mechanisms



NOTE: KEYLEVER GUIDE PLATE MUST BE REMOVED, SEE DISASSEMBLY AND REASSEMBLY.



3.02 Signal Generator Clutch Mechanism



CLUTCH SHOE LEVER

REQUIREMENT

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

TO CHECK

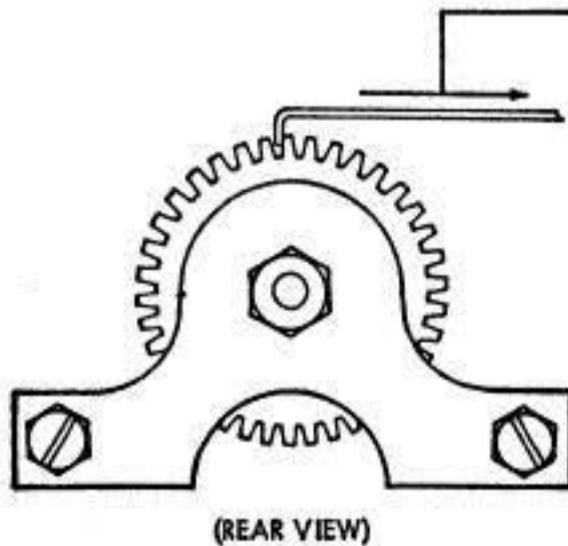
LATCH CLUTCH IN DISENGAGED POSITION AND MEASURE CLEARANCE. ROTATE GEAR UNTIL OIL HOLE IS UPWARD. ENGAGE CLUTCH AND MEASURE CLEARANCE.

TO ADJUST

LOOSEN THE TWO ADJUSTING DISK CLAMP SCREWS TO POSITION DISK.

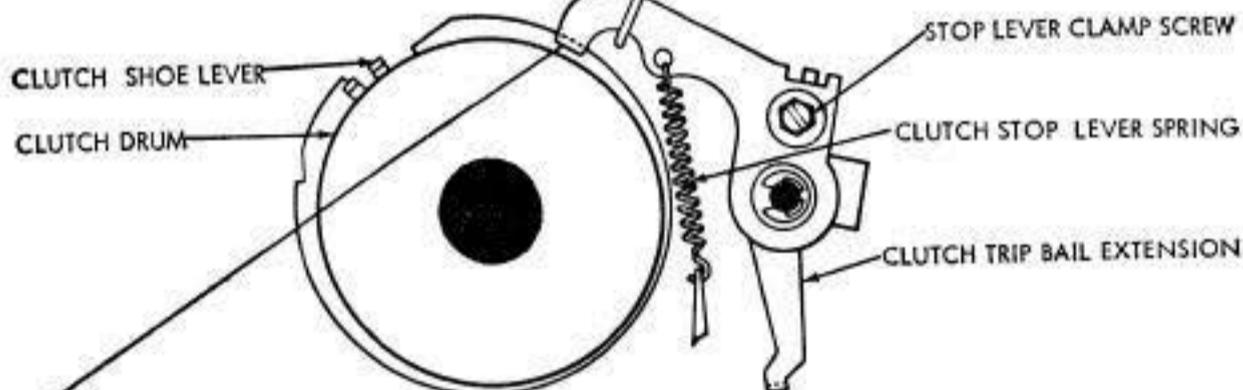
NOTE:

AFTER ABOVE ADJUSTMENT IS MADE, CHECK FOR DRAG ON DRUM AS FOLLOWS: DISENGAGE CLUTCH. HOOK SPRING SCALE ON TOP TOOTH OF GEAR AND PULL AT RIGHT ANGLE TO RADIUS OF GEAR. IF PULL OF 12 OZS. OR MORE IS REQUIRED TO MOVE THE DRUM, REFINE ABOVE ADJUSTMENT.

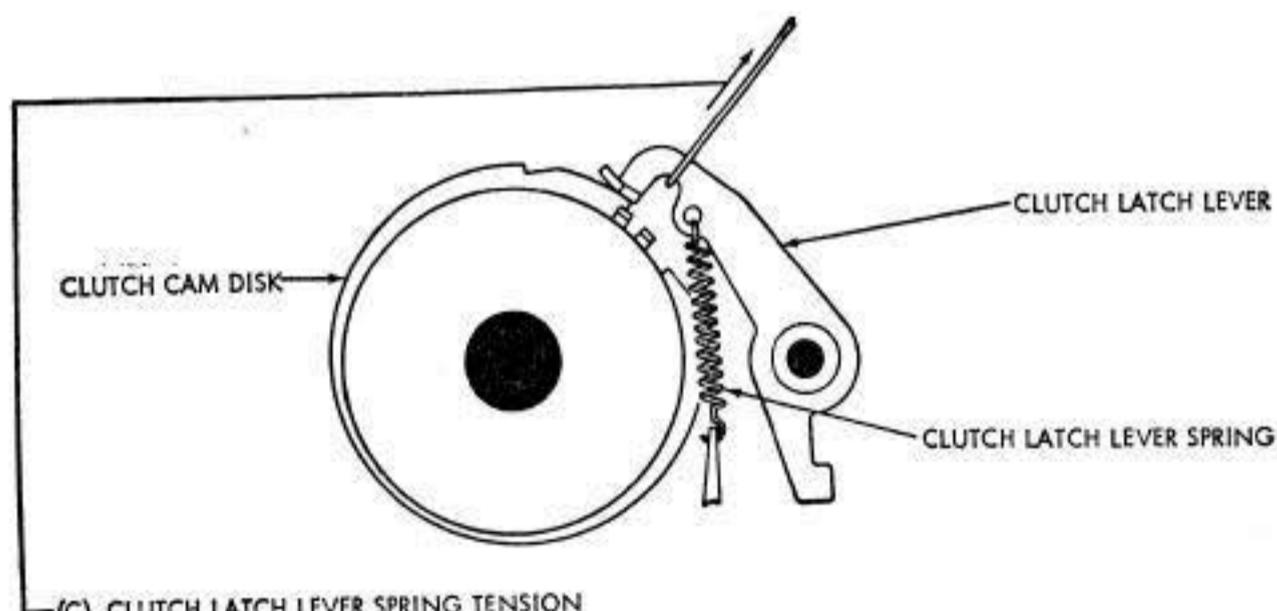


3.03 Signal Generator Clutch Mechanism

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

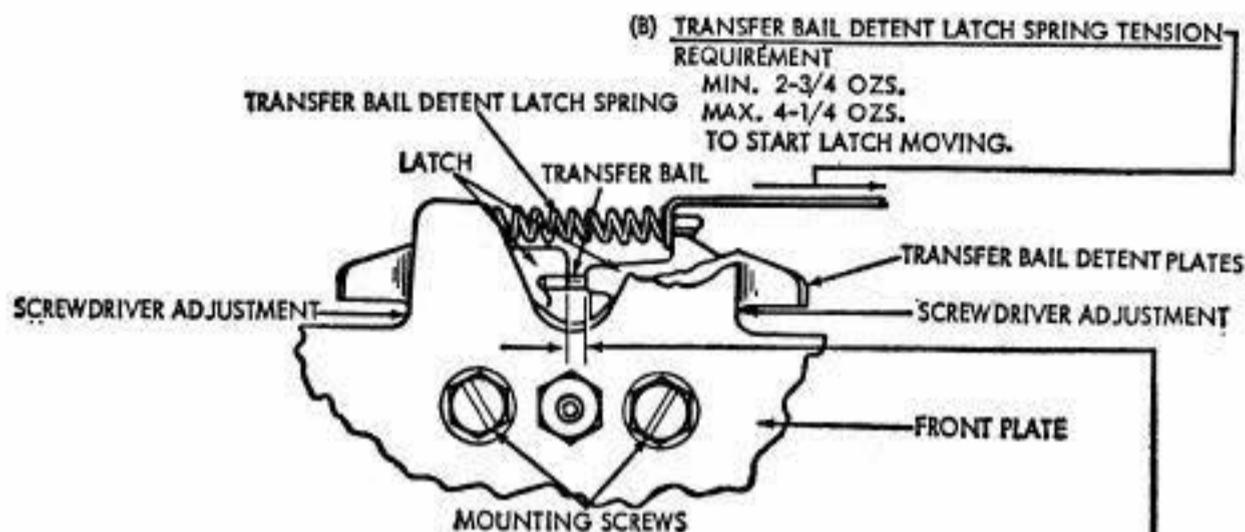


- (A) CLUTCH STOP LEVER
REQUIREMENT
SHALL FULLY ENGAGE CLUTCH SHOE
LEVER.
DURING ROTATION, THE LEVER SHALL
NOT TOUCH THE CLUTCH DRUM AT ANY
POINT.
TO ADJUST
POSITION STOP LEVER WITH ITS CLAMP
SCREW LOOSENED.



- (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.

3.04 Signal Generator Contact Box and Transfer Mechanisms



- (A) TRANSFER BAIL DETENT PLATE
 REQUIREMENT
 EQUAL L. H. AND R. H. CLEARANCE WITHIN 0.002 INCH.
 TO ADJUST
 ROTATE DETENT PLATE RIGHT OR LEFT BY MEANS
 OF SCREWDRIVER WITH MOUNTING SCREWS LOOSENED.

(C) CONTACT BOX CONTACT CLEARANCE-

REQUIREMENT

MARKING AND SPACING GAPS SHALL BE EQUAL WITHIN 0.001 INCH.

TO CHECK

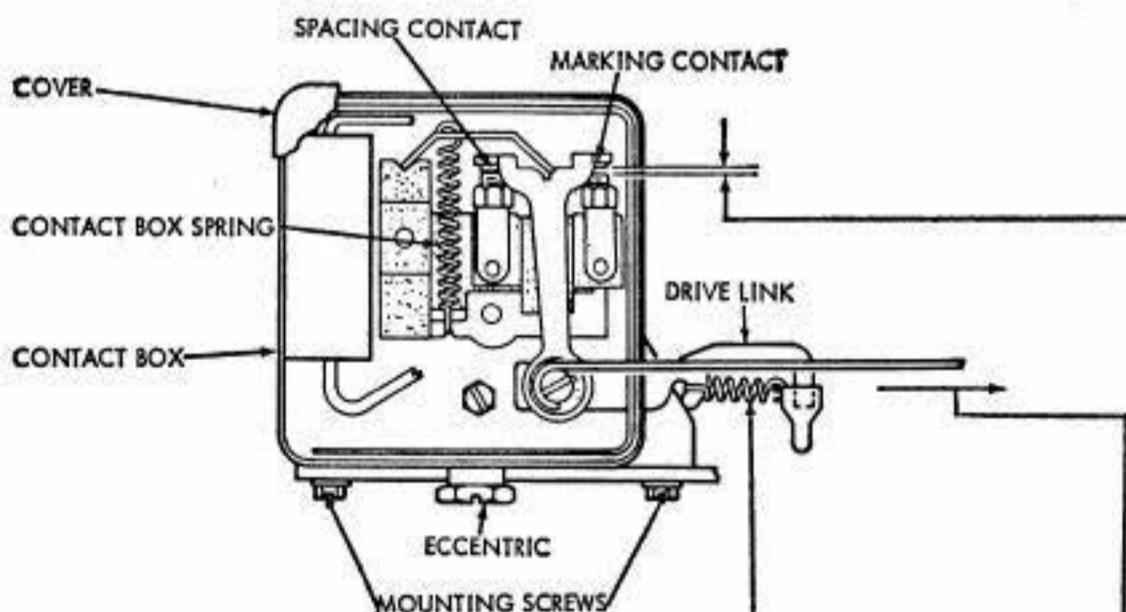
DEPRESS V KEYLEVER AND ROTATE SIGNAL GENERATOR CAM SLEEVE UNTIL EACH CONTACT HAS FULLY OPENED.

TO ADJUST

LOOSEN MOUNTING SCREWS AND MOVE CONTACT BOX BY MEANS OF ECCENTRIC.

NOTE

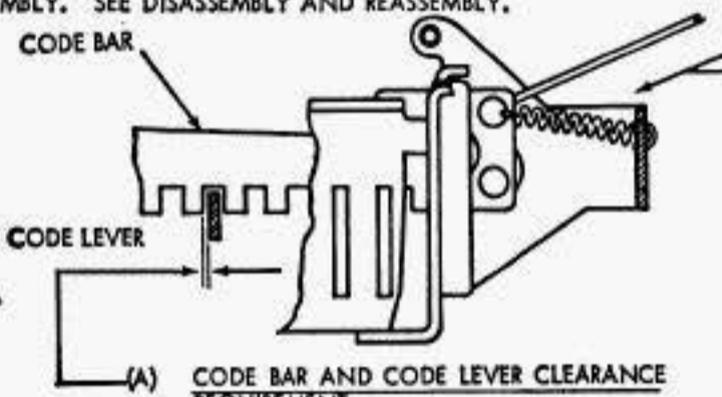
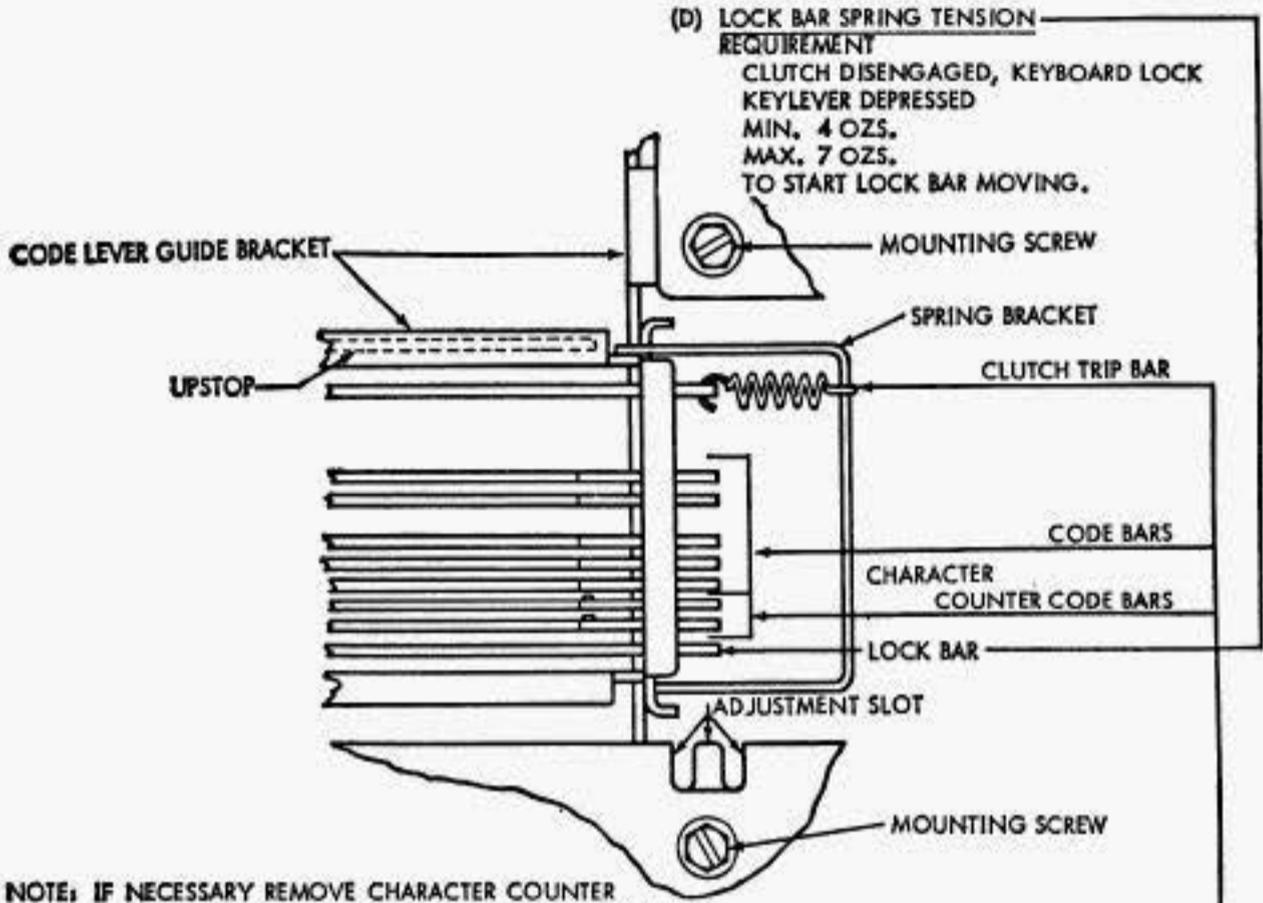
CHECK BY MEANS OF SIGNAL CHECKING DEVICE WHERE POSSIBLE, AND CAREFULLY RE-FINE THE ADJUSTMENT TO ELIMINATE ALL BIAS FROM THE SIGNALS BY EQUALIZING THE CURRENT-ON AND CURRENT-OFF INTERVALS.



- (D) CONTACT BOX DRIVE LINK SPRING TENSION
 REQUIREMENT
 SPRING REMOVED FROM LINK
 MIN. 11 OZS.
 MAX. 13 OZS.
 AT 7/16 INCH.

- (E) CONTACT BOX SPRING TENSION
 REQUIREMENT
 TRANSFER BAIL HELD CLEAR OF DRIVE LINK
 MIN. 2 OZS.
 MAX. 3 OZS.
 TO START LINK MOVING.

3.05 Codebar and Codelever Mechanisms



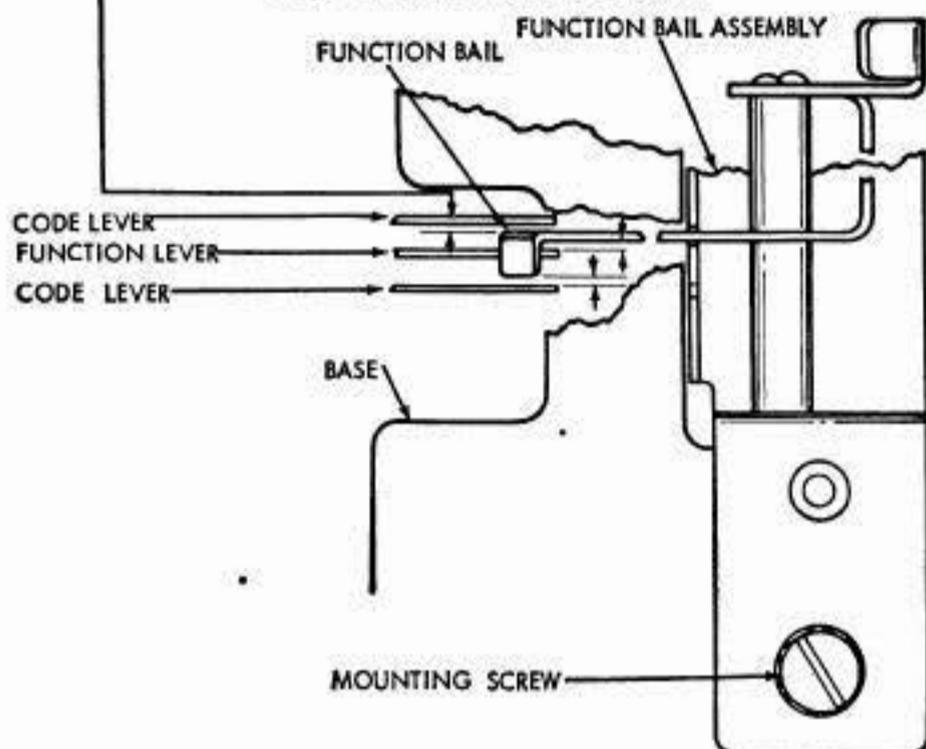
- TO ADJUST POSITION GUIDE BY ADJUSTING SLOT WITH 4 MOUNTING SCREWS LOOSENED.
- (B) **CLUTCH TRIP BAR SPRING TENSION REQUIREMENT**
 BLANK KEYLEVER DEPRESSED TO ALLOW THE CLUTCH TRIP BAR TO FALL TO RIGHT.
 SPRING UNHOOKED FROM BRACKET
 MIN. 9 OZS.
 MAX. 12 OZS.
 TO PULL SPRING TO INSTALLED LENGTH.
- (C) **CODE BAR SPRING TENSION REQUIREMENT (POWER OFF)**
 LTRS KEYLEVER DEPRESSED.
 HOLD TRANSFER LEVERS TO THE RIGHT SO THEY DO NOT AFFECT THE CODE BARS
 MIN. 3 OZS.
 MAX. 5 OZS.
 TO START CODE BAR MOVING.

3.06 Function Bail and Lock-ball Channel Mechanisms

(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 AND CASTING
UNIT LOCATING STUDS LOOSENED.



NOTE

THIS ADJUSTMENT SHALL NOT BE MADE UNLESS THE LOCK-BALL CHANNEL HAS BEEN DISASSEMBLED.

(B) LOCK-BALL CHANNEL

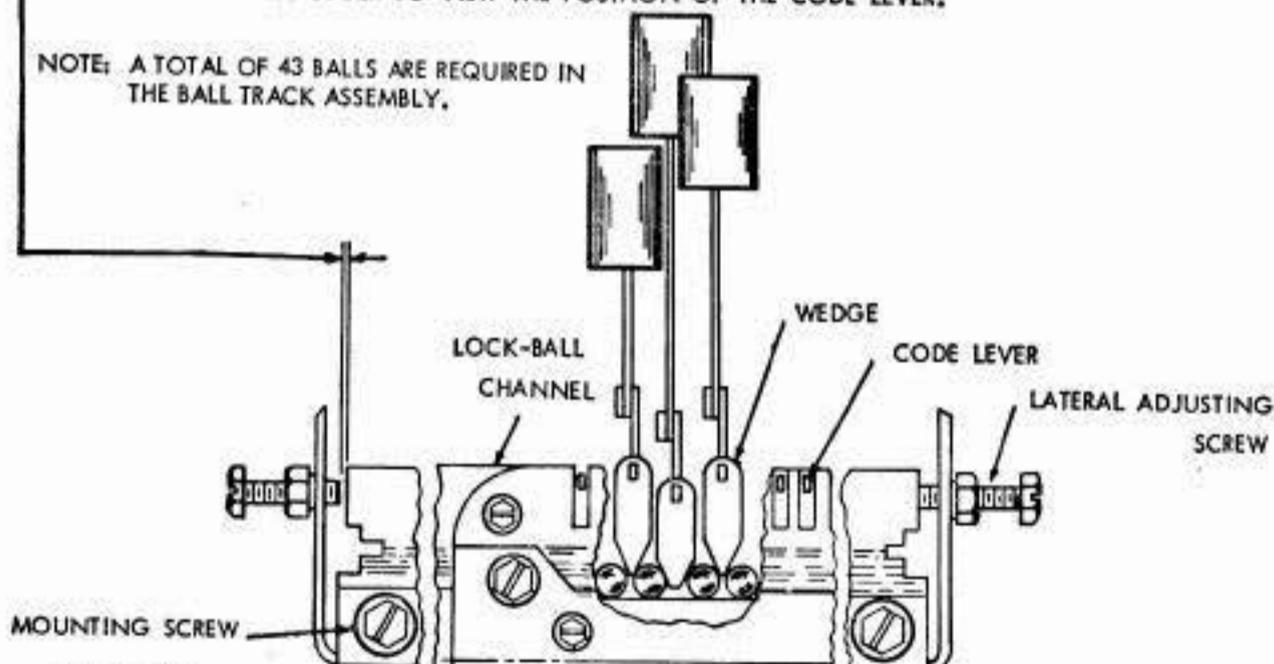
REQUIREMENT

THERE SHALL 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.

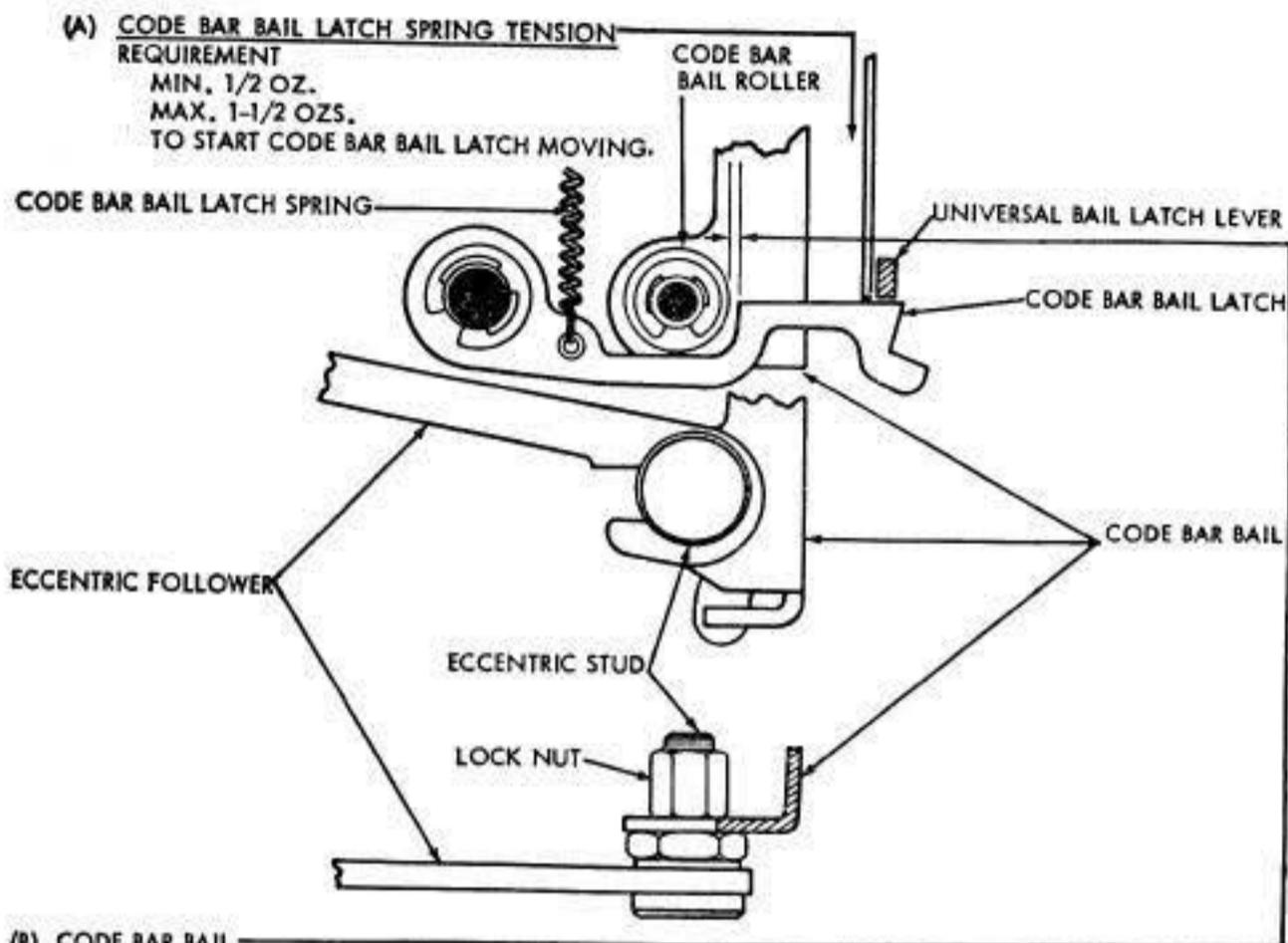
NOTE: A TOTAL OF 43 BALLS ARE REQUIRED IN THE BALL TRACK ASSEMBLY.



TO ADJUST

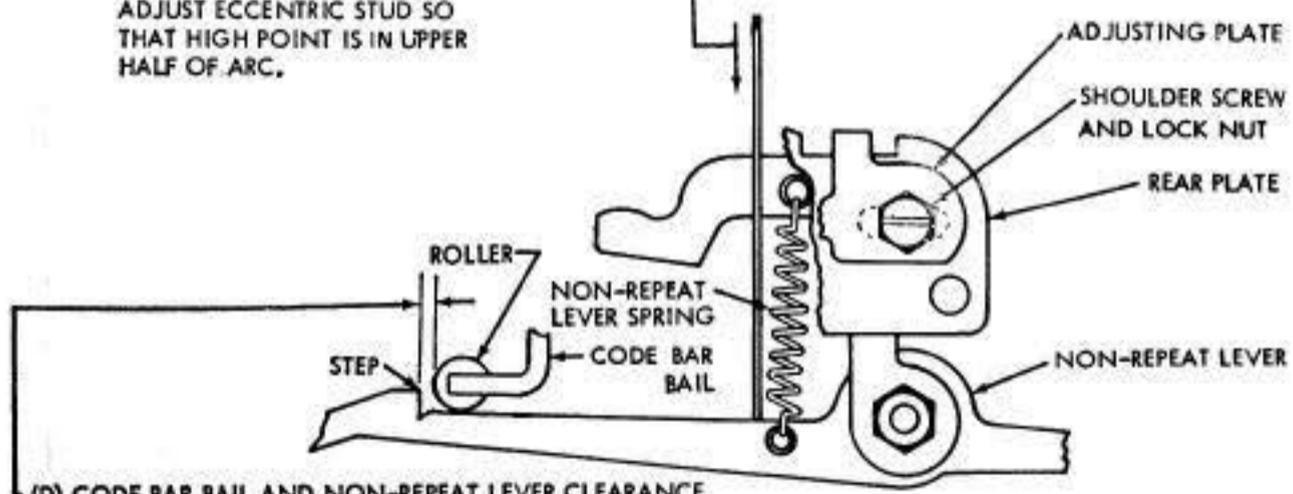
LOOSEN THE LOCK-BALL CHANNEL MOUNTING SCREWS. BACK OFF LATERAL ADJUSTING SCREWS AND POSITION CHANNEL. TURN ONE ADJUSTING SCREW IN AGAINST THE END OF THE CHANNEL AND LOCK IT. TURN THE OTHER ADJUSTING SCREW IN TO THE END OF THE CHANNEL AND BACK IT OFF 1/4 TURN. LOCK THE SCREW. REPLACE THE WEDGES AND CHECK 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.

3.07 Codebar Bail and Nonrepeat Mechanisms



(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
 WITH LOCK NUT LOOSENED,
 ADJUST ECCENTRIC STUD SO THAT HIGH POINT IS IN UPPER HALF OF ARC.

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



(D) CODE BAR BAIL AND NON-REPEAT LEVER CLEARANCE
 REQUIREMENT (POWER OFF)
 MECHANISM IN INITIAL TRIP-OFF POSITION, ANY KEY DEPRESSED
 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.

3.08 Lock-ball Mechanism (Prel)

(B) LOCK-BALL END PLAY (PRELIMINARY)

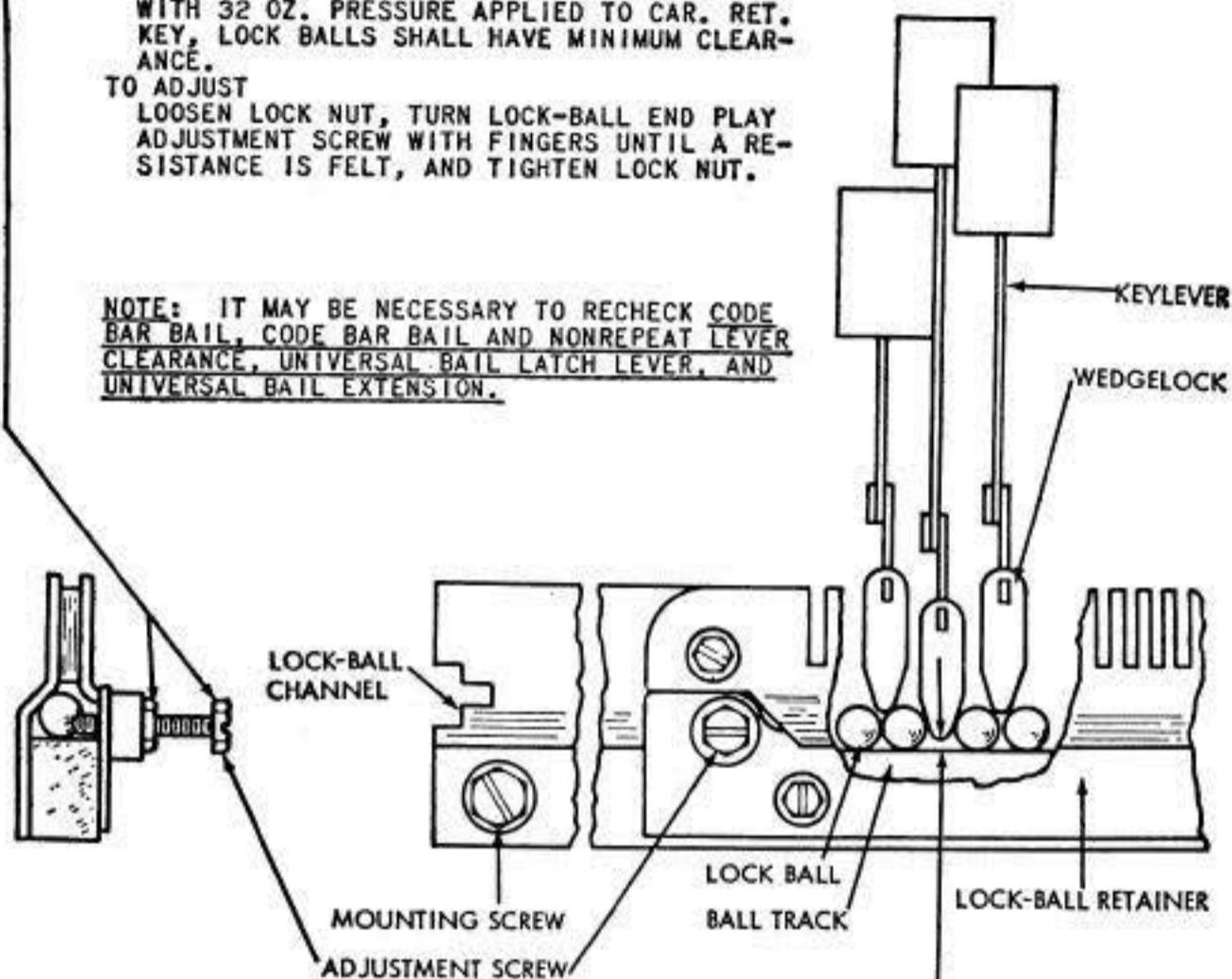
REQUIREMENT

WITH 32 OZ. PRESSURE APPLIED TO CAR. RET. KEY, LOCK BALLS SHALL HAVE MINIMUM CLEARANCE.

TO ADJUST

LOOSEN LOCK NUT, TURN LOCK-BALL END PLAY ADJUSTMENT SCREW WITH FINGERS UNTIL A RESISTANCE IS FELT, AND TIGHTEN LOCK NUT.

NOTE: IT MAY BE NECESSARY TO RECHECK CODE BAR BAIL, CODE BAR BAIL AND NONREPEAT LEVER CLEARANCE, UNIVERSAL BAIL LATCH LEVER, AND UNIVERSAL BAIL EXTENSION.



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

REQUIREMENT

ADJUSTMENT SCREW BACKED OUT TO PERMIT MAXIMUM BALL MOVEMENT WITHOUT BALLS ROLLING OUT OF TRACK. APPLY 32 OZ. PRESSURE TO Q AND P KEYLEVERS

MIN. 0.005 INCH

MAX. 0.015 INCH (EQUAL WITHIN 0.005 INCH)

BETWEEN TIP OF WEDGELOCK AND BALL TRACK.

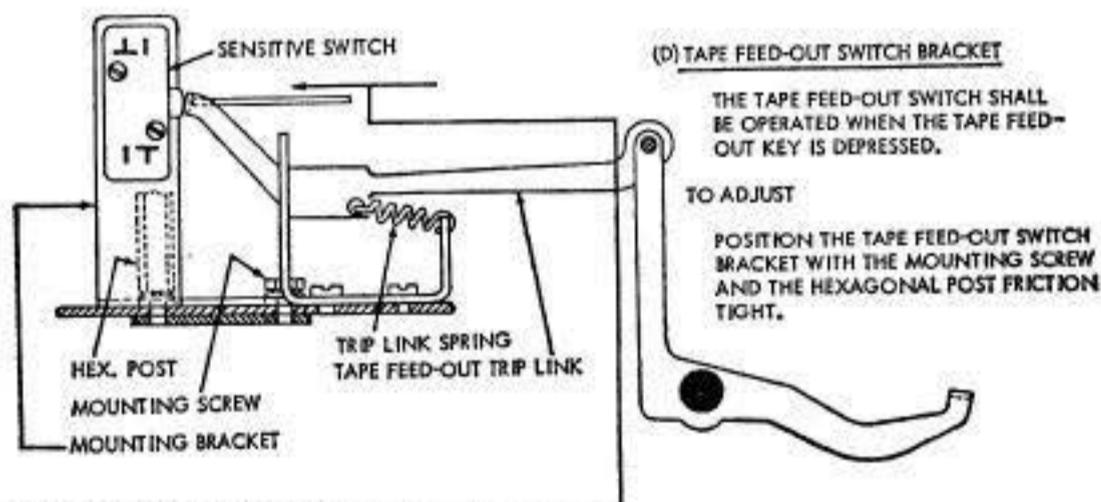
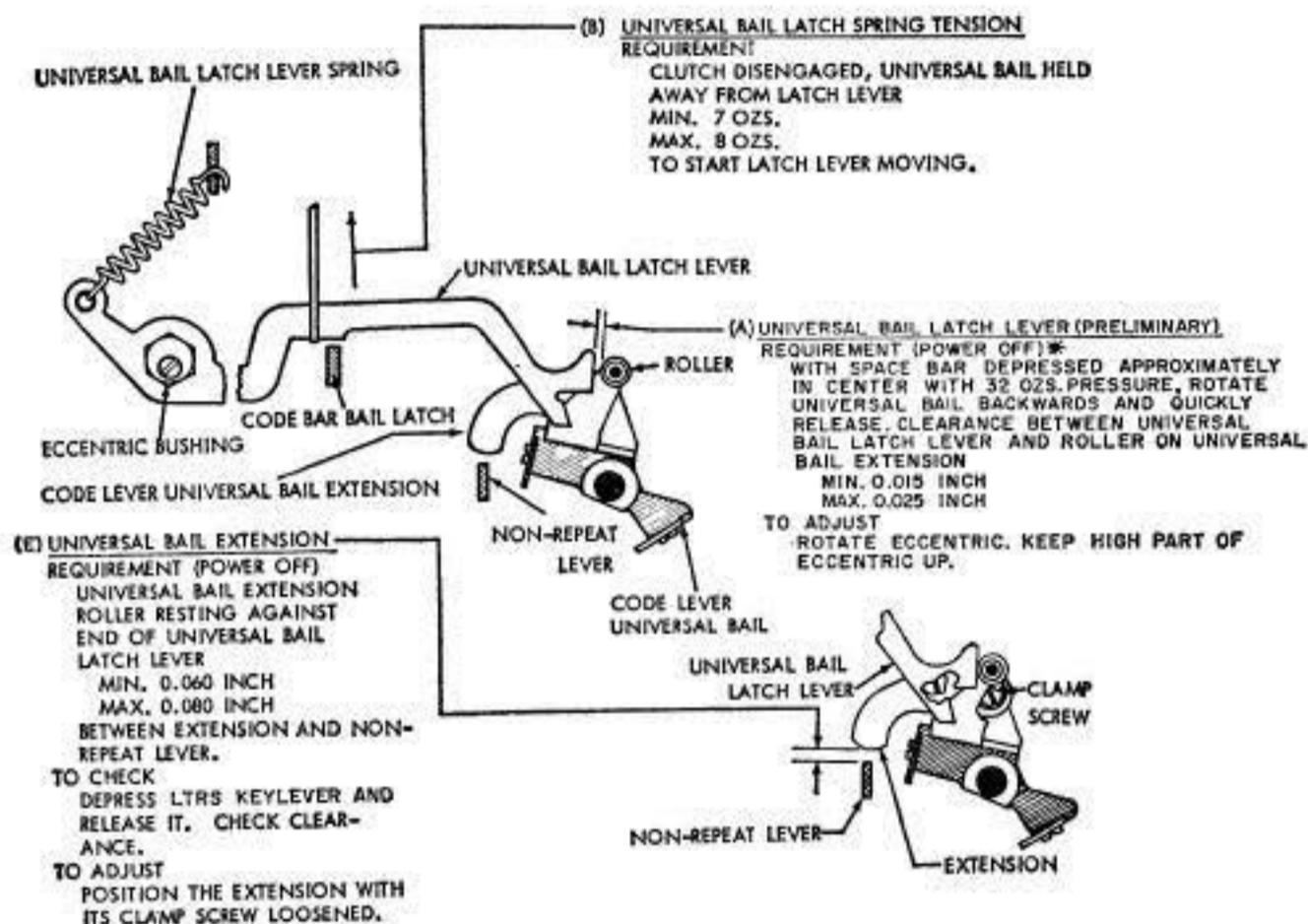
TO ADJUST

LOOSEN MOUNTING SCREWS AT EACH END OF BALL TRACK AND ADJUST TRACK UP OR DOWN.

NOTE: WHEN GAUGING THESE CLEARANCES, MAKE SURE THERE IS NO CLEARANCE BETWEEN LOWER EDGE OF CODE LEVER EXTENSION AND BOTTOM OF SLOTS IN WEDGES.

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

3.09 Universal Bail and Tape Feed-out Mechanisms



NOTE! WHERE UNIT HAS SPACE-REPEAT FEATURE, UNHOOK SPACE-REPEAT SPRING FROM SIGNAL GENERATOR REAR PLATE BEFORE MAKING THE ABOVE ADJUSTMENT, REHOOK SPRING AFTER MAKING ADJUSTMENT.

3.10 **Ball Wedgelock and Ball Track Clearance, Lock-ball Endplay, and Universal Bail Latchlever (Final)**

Requirement (Keyboard under power)

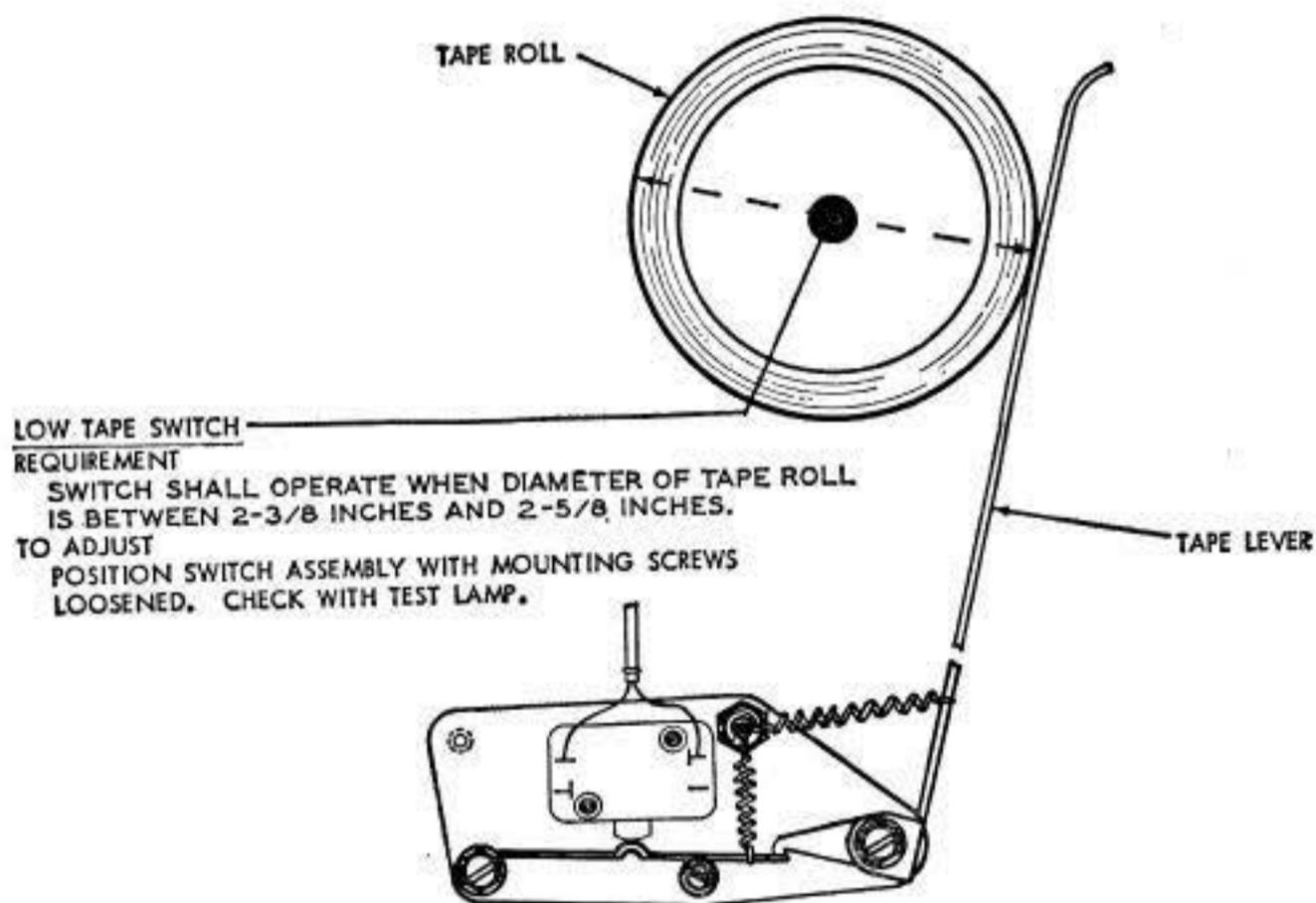
- (1) It shall require
Min. 2 ozs.
Max. 5 ozs.
To trip off any center row key.
- (2) With 5-1/2 oz. pressure applied perpendicularly to "A" key after depressing each key in third row, "A" key shall trip each time one of the keys in the third row is released. Repeat this check with 5-1/2 oz. pressure on CAR. RET. key.
- (3) Clutch shall not trip when any two keys are depressed simultaneously.
- (4) With Min. 4 ozs.—Max. 4-1/2 ozs. applied to space bar after depressing CAR. RET. key, spacebar shall trip each time CAR. RET. key is released by moving finger off key in horizontal direction.

Note: Disregard requirement (4) where unit is equipped with repeat-on-space feature.

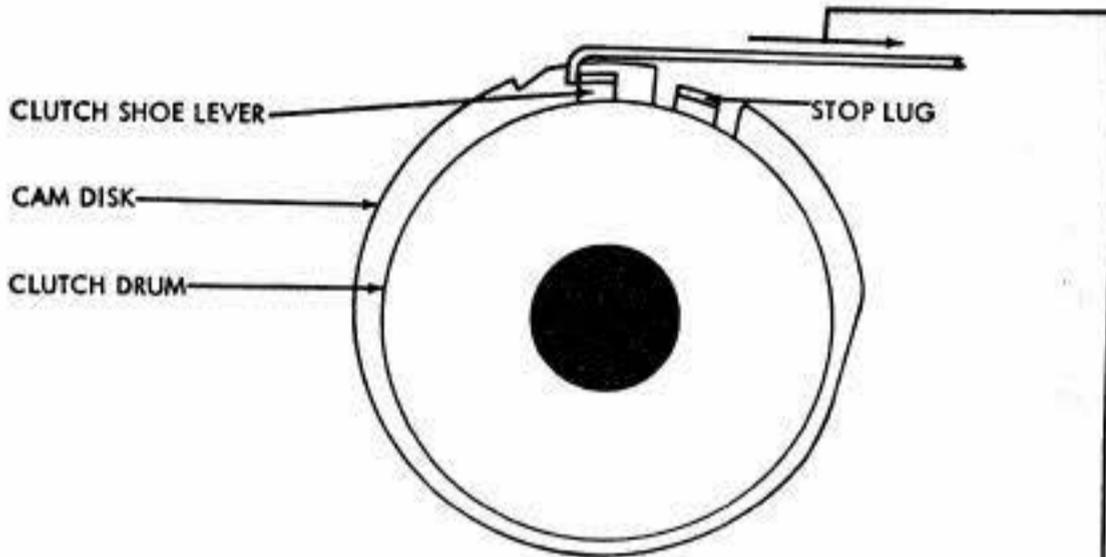
To Adjust

Refine preliminary **Ball Wedgelock and Ball Track Clearance, Lock-ball Endplay, and Universal Bail Latchlever** adjustments and recheck **Universal Bail Extension** adjustment.

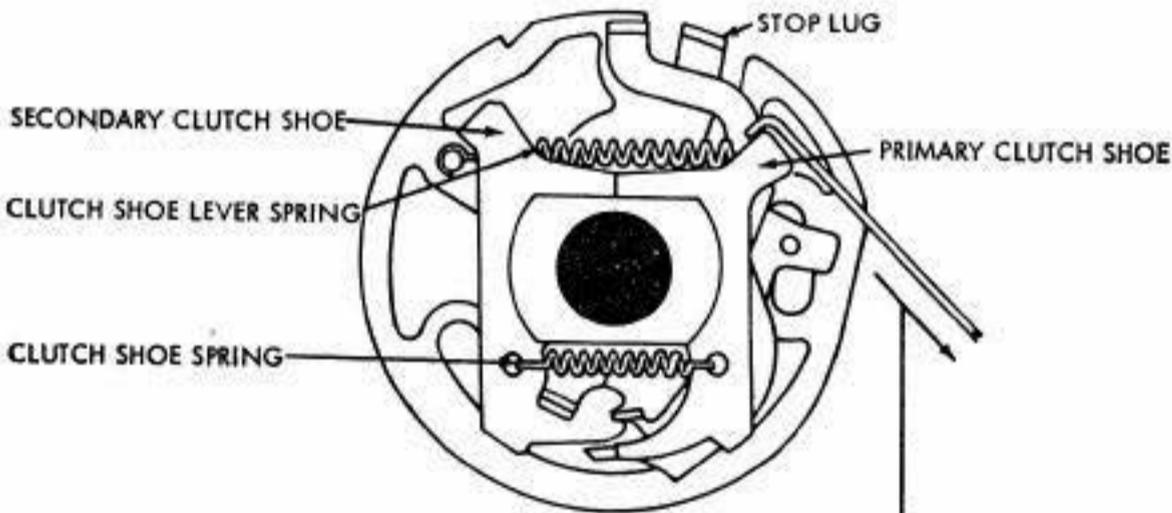
3.11 Low Tape Mechanism



3.12 Signal Generator Clutch Mechanism

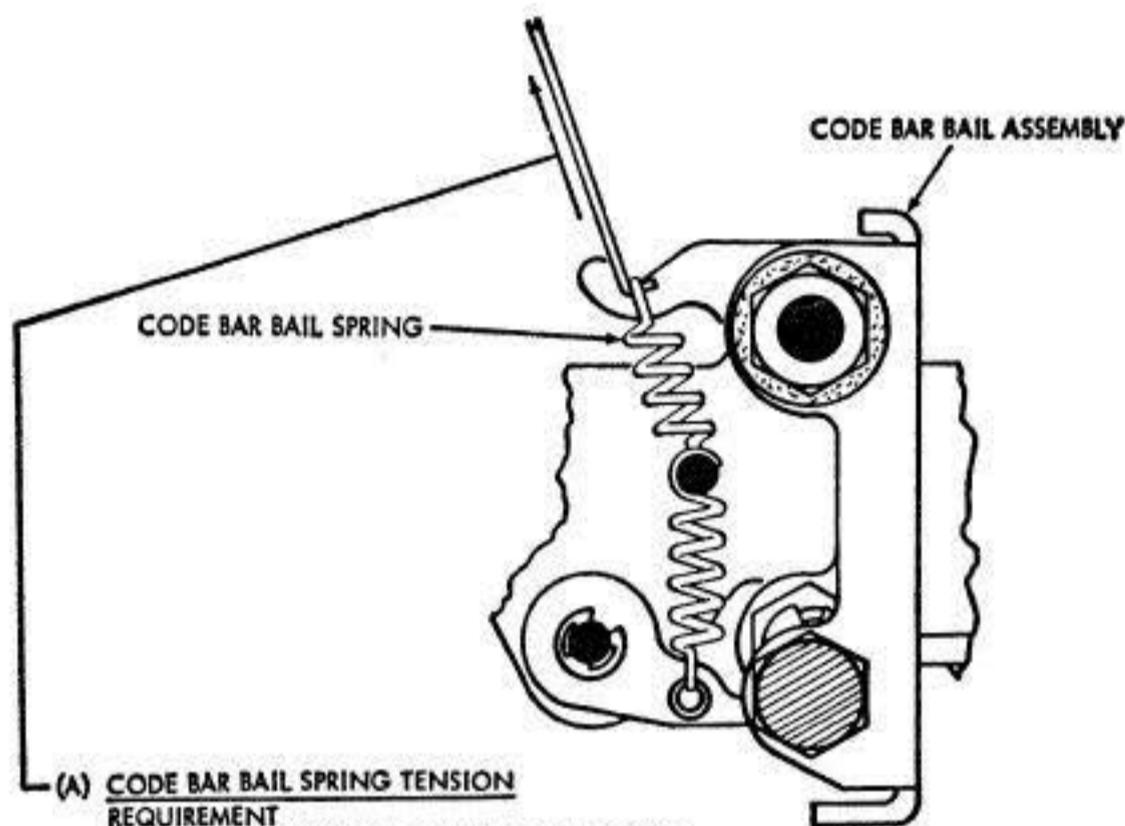


(A) CLUTCH SHOE LEVER SPRING TENSION REQUIREMENT
CLUTCH ENGAGED,
CAM DISK HELD TO PREVENT TURNING
MIN. 15 OZS.
MAX. 20 OZS.
TO MOVE SHOE LEVER IN CONTACT WITH STOP LUG.

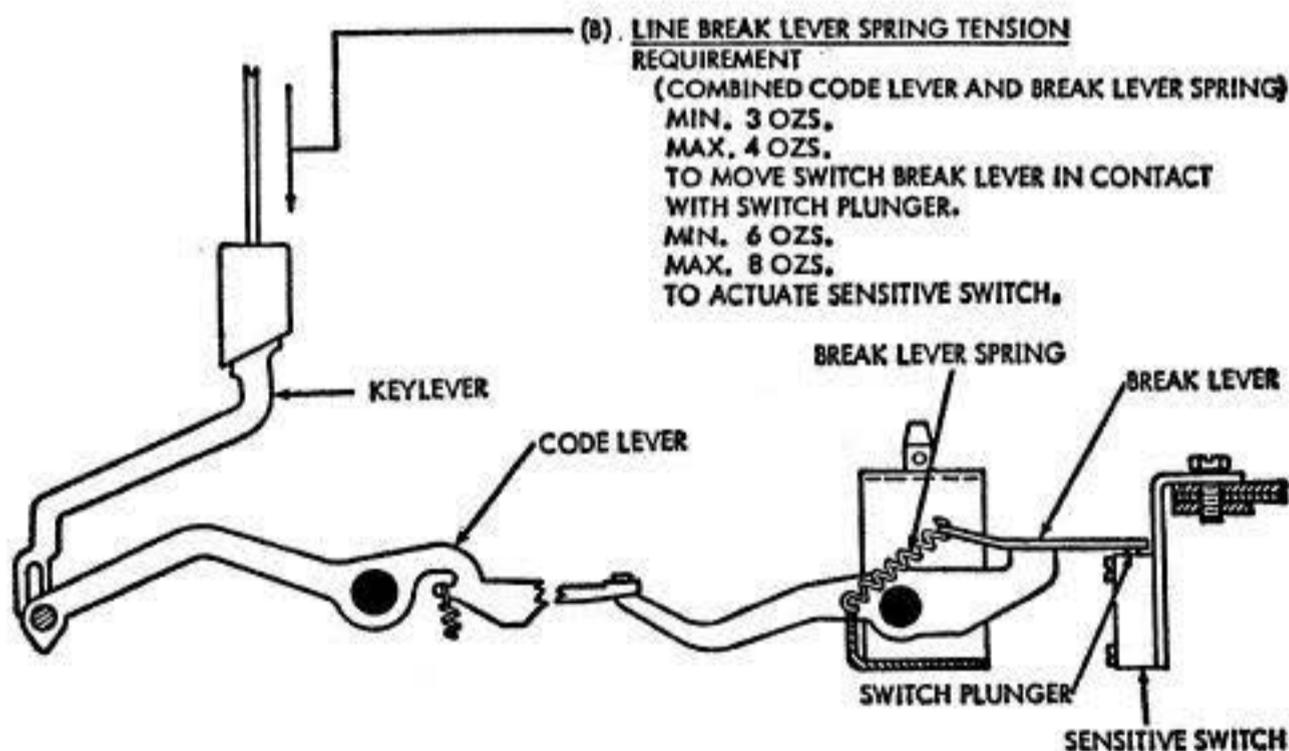


(B) CLUTCH SHOE SPRING TENSION
NOTE
IN ORDER TO CHECK THIS SPRING TENSION, IT IS NECESSARY TO REMOVE THE CLUTCH FROM THE MAIN SIGNAL GENERATOR DRIVE SHAFT. THEREFORE, IT SHALL NOT BE CHECKED UNLESS THERE IS GOOD REASON TO BELIEVE THAT IT DOES NOT MEET ITS REQUIREMENT.
REQUIREMENT
CLUTCH DRUM REMOVED
MIN. 3 OZS.
MAX. 5 OZS.
TO START PRIMARY SHOE MOVING AWAY FROM SECONDARY SHOE AT POINT OF CONTACT.

3.13 Codebar Bail and Line Break Lever Mechanisms

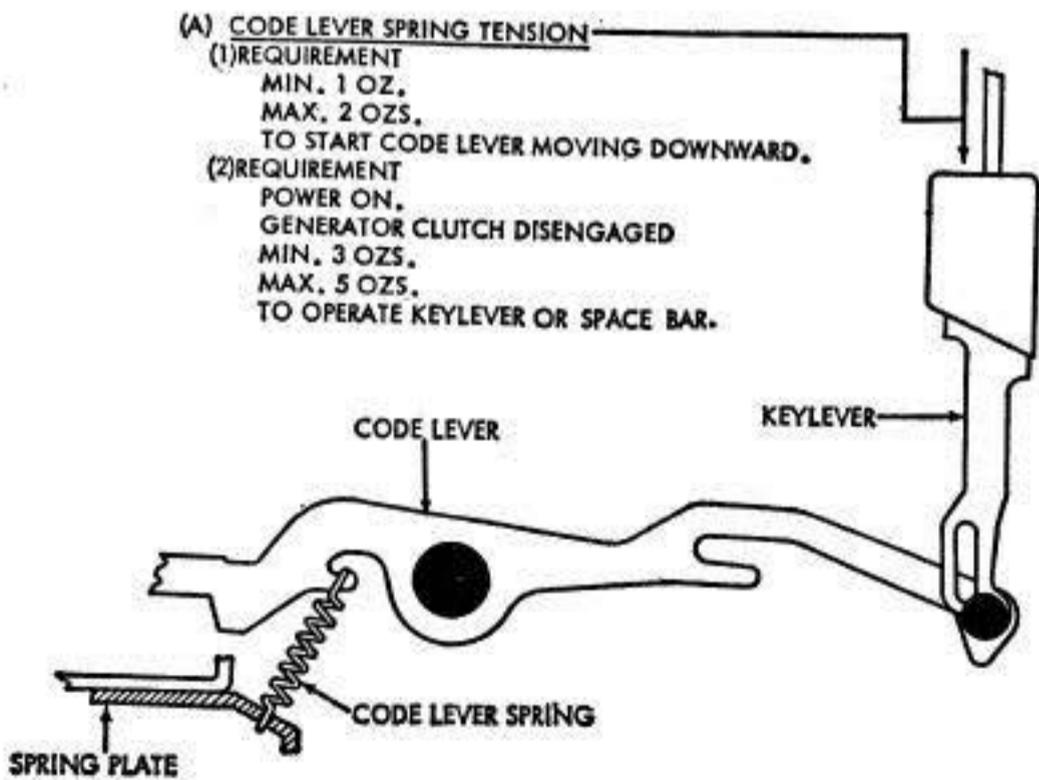
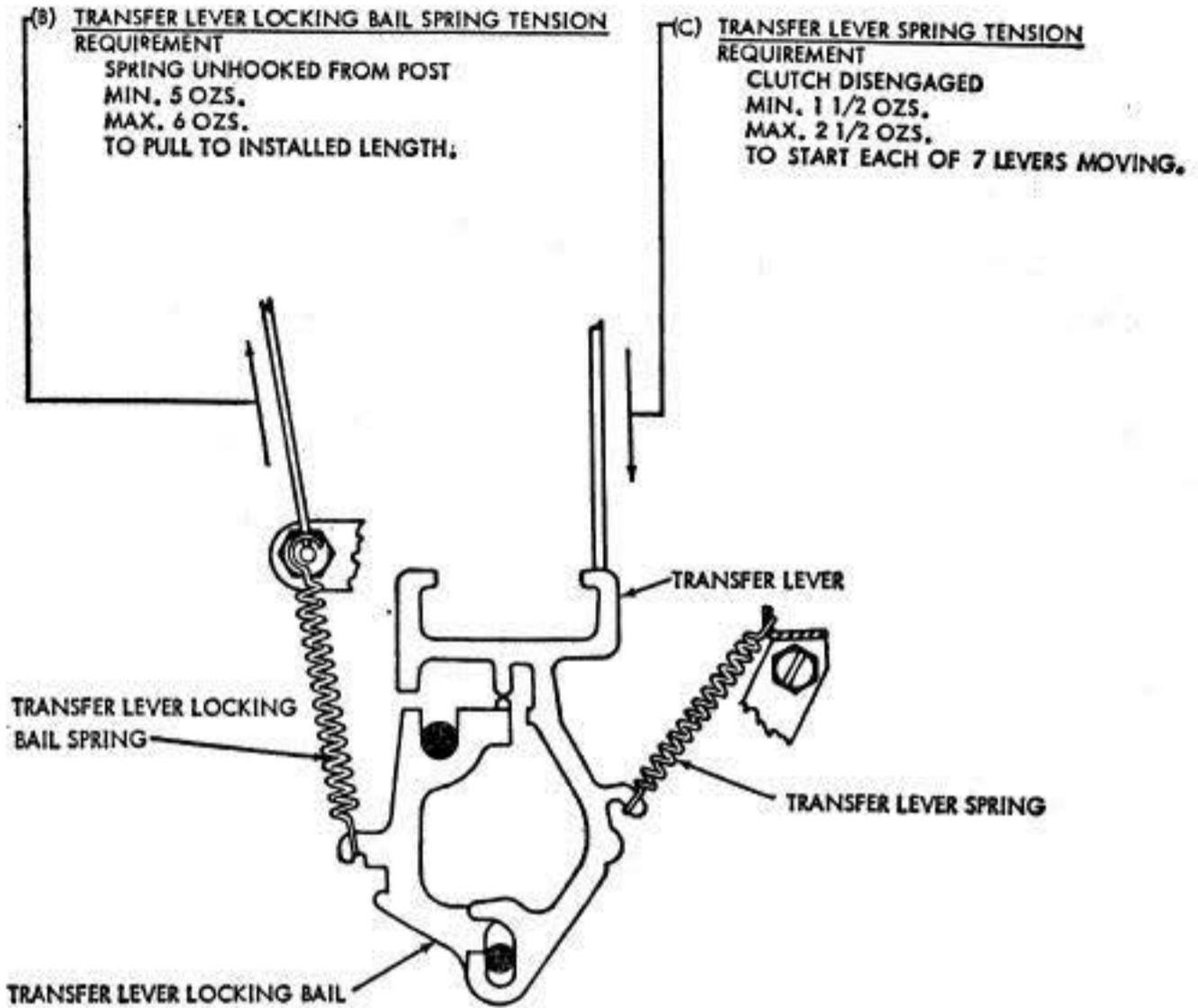


(A) CODE BAR BAIL SPRING TENSION REQUIREMENT
 CLUTCH DISENGAGED, SPRING UNHOOKED FROM ARM
 MIN. 9 OZS.
 MAX. 11 OZS.
 TO PULL TO INSTALLED LENGTH.

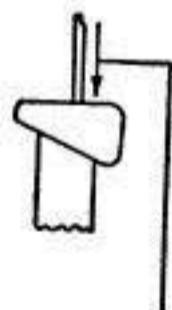
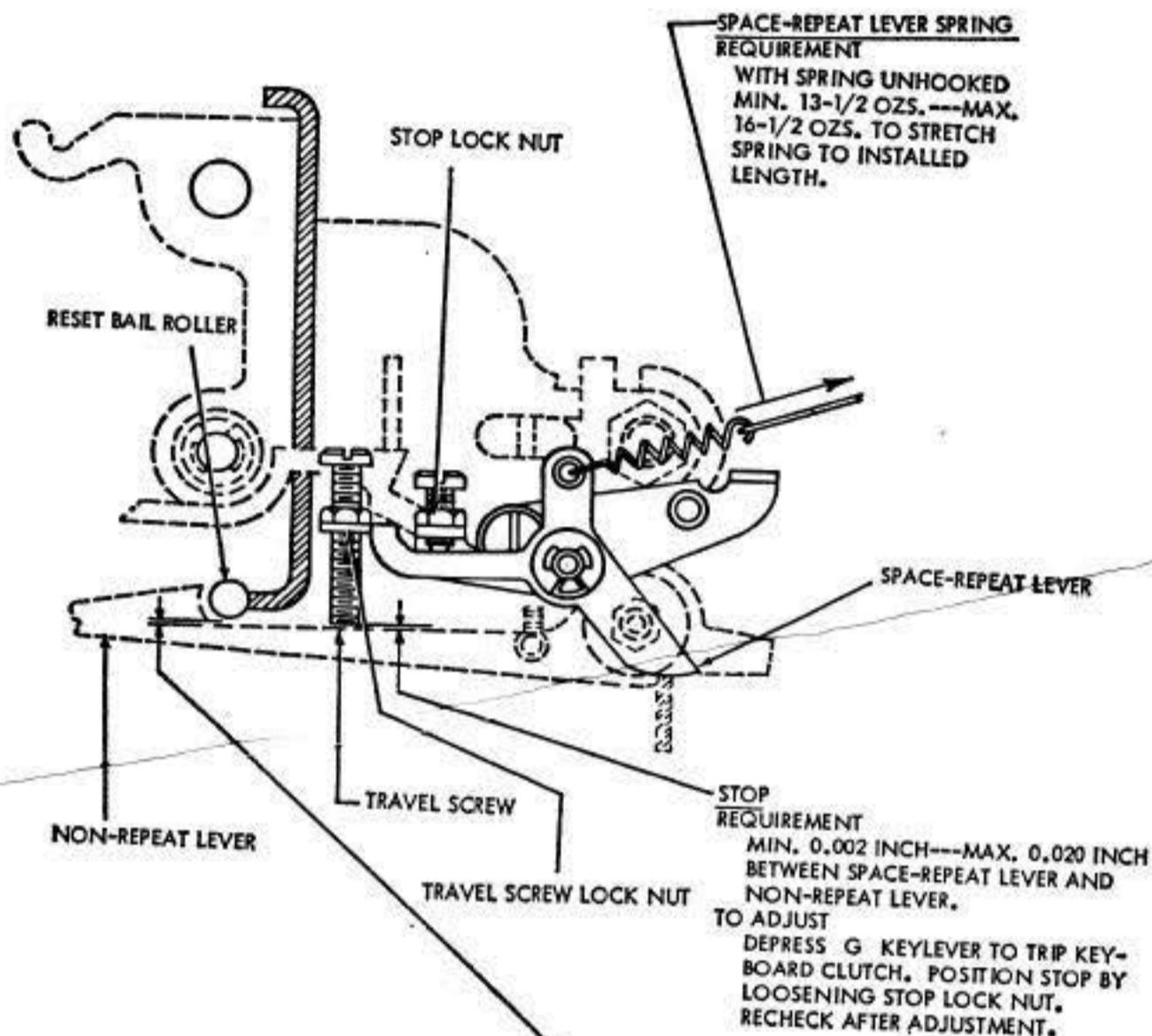


(B) LINE BREAK LEVER SPRING TENSION REQUIREMENT
 (COMBINED CODE LEVER AND BREAK LEVER SPRING)
 MIN. 3 OZS.
 MAX. 4 OZS.
 TO MOVE SWITCH BREAK LEVER IN CONTACT WITH SWITCH PLUNGER.
 MIN. 6 OZS.
 MAX. 8 OZS.
 TO ACTUATE SENSITIVE SWITCH.

3.14 Signal Generator Transfer and Codelever Mechanisms



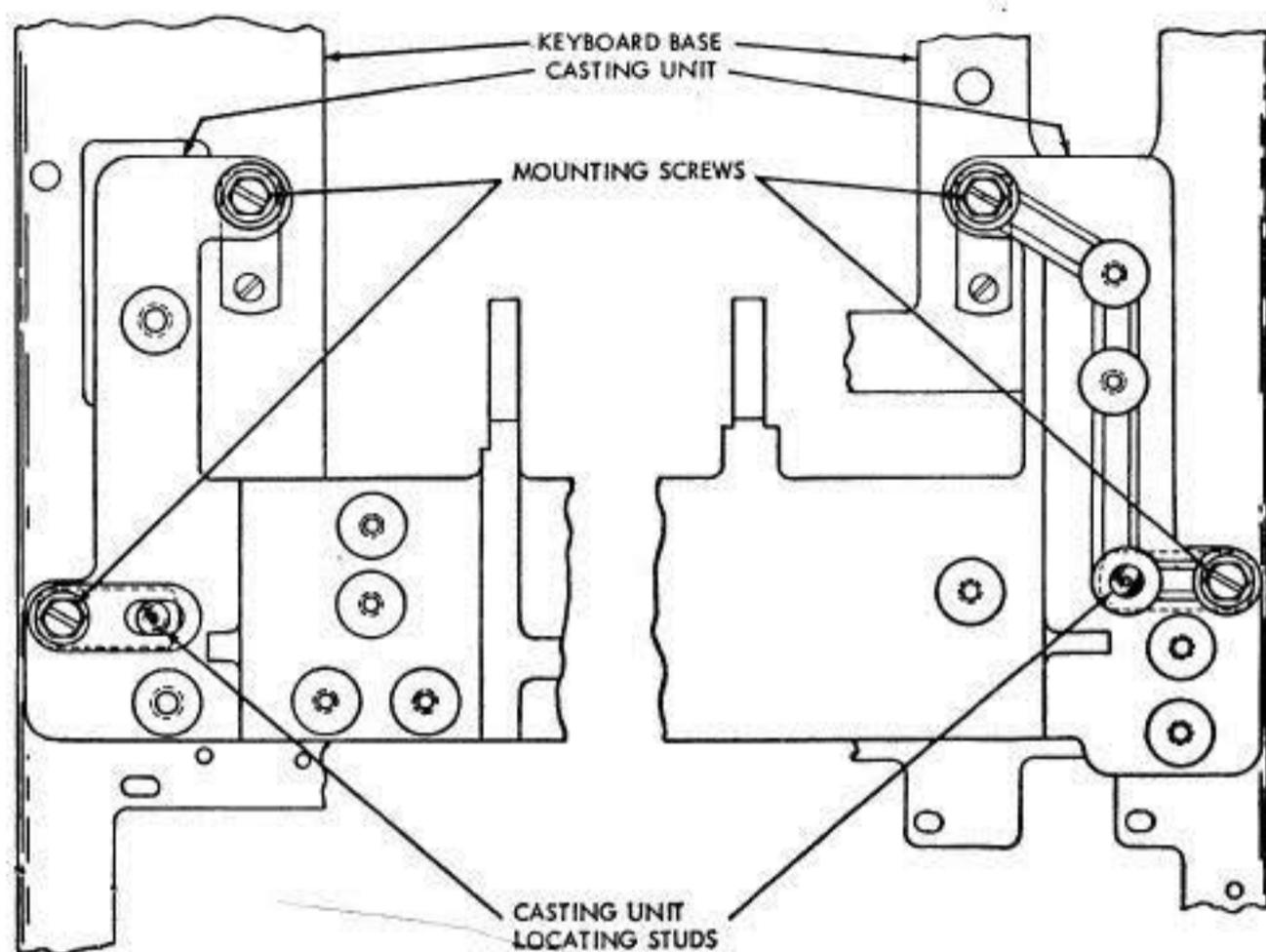
3.15 Repeat-on-Space Mechanism



SPACE BAR
 (1) REQUIREMENT (SINGLE SPACE)
 NORMAL KEY TOP PRESSURE
 TO TRANSMIT SINGLE SPACE.
 (2) REQUIREMENT (REPEAT SPACE)
 SPACE BAR FULLY DEPRESSED AND
 HELD DOWN TO EFFECT CONTINUOUS
 SPACE TRANSMISSION.

TRAVEL SCREW REQUIREMENT
 WITH SPACE KEY FULLY DEPRESSED
 MIN. 0.035 INCH---MAX. 0.080 INCH
 BETWEEN RESET BAIL ROLLER AND
 NON-REPEAT LEVER.
 TO ADJUST
 WITH SPACE KEY FULLY DEPRESSED,
 ADJUST TRAVEL SCREW BY LOOSENING
 TRAVEL SCREW LOCK NUT. RECHECK
 AFTER ADJUSTMENT.
 NOTE
 SPACE BAR TOUCH TO OBTAIN A
 REPEAT IS AFFECTED BY THIS ADJUST-
 MENT. TO GET A LIGHTER TOUCH,
 ADJUST TO UPPER LIMIT. TO OBTAIN
 A HEAVIER TOUCH ADJUST TO THE
 LOWER LIMIT.

3.16 Base and Casting Assembly



CASTING ASSEMBLY TO KEYBOARD BASE

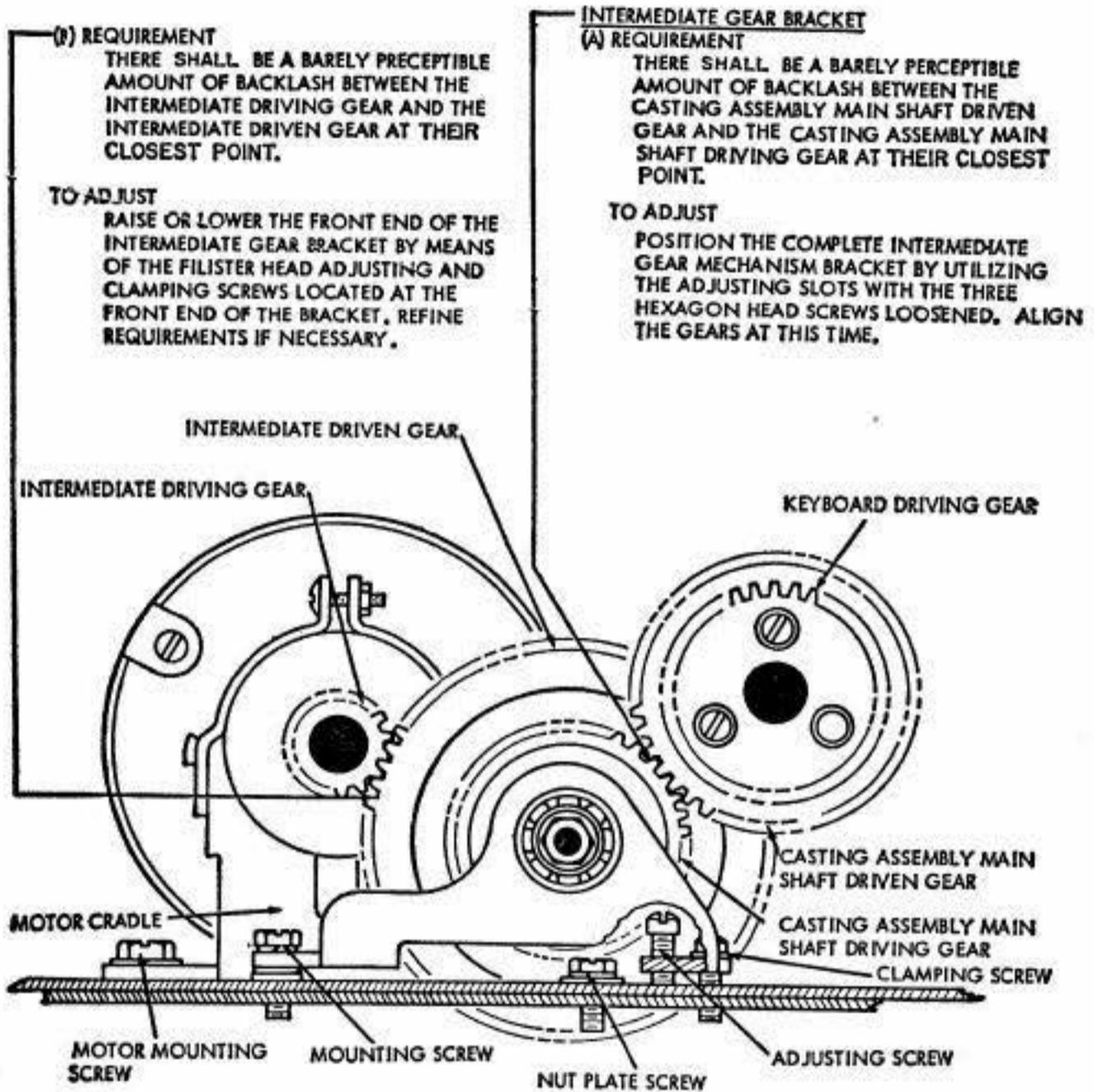
REQUIREMENT

THERE SHALL BE A BARELY PERCEPTIBLE AMOUNT OF BACKLASH BETWEEN THE CASTING ASSEMBLY MAIN SHAFT DRIVEN GEAR AND ITS DRIVING GEAR AT THEIR CLOSEST POINT.

TO ADJUST

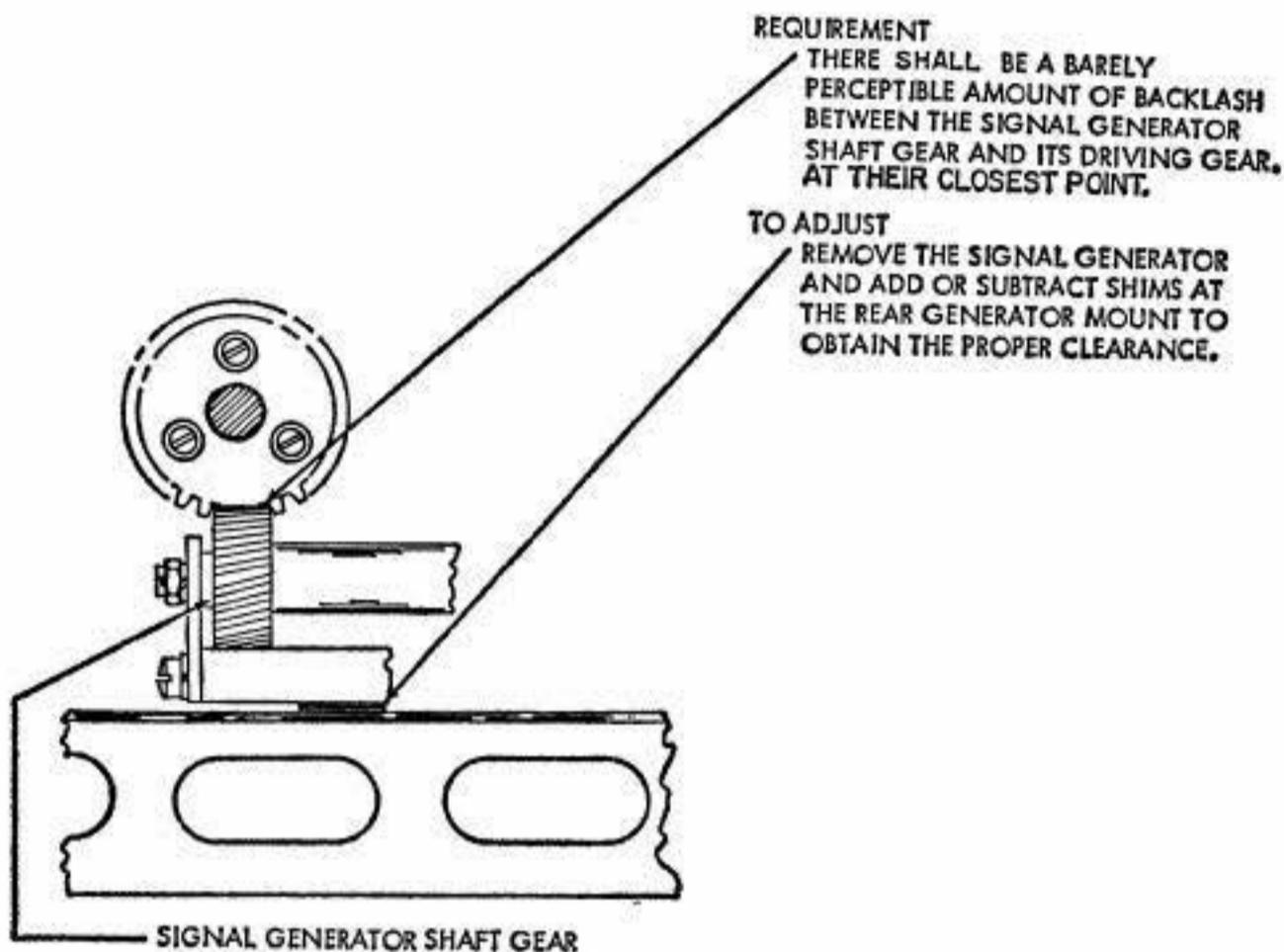
WITH THE FRONT FEET OF THE CASTING ASSEMBLY PLACED OVER THE LOCATING STUDS PROVIDED ON THE KEYBOARD BASE AND ITS MOUNTING SCREWS LOOSENED, POSITION THE CASTING ASSEMBLY UTILIZING ITS OVERSIZE MOUNTING HOLES.

3.17 Intermediate Gear Mechanism



3.18 Signal Generator and Typing Reperforator Gear Mechanisms

(A) SIGNAL GENERATOR SHAFT GEAR MESH

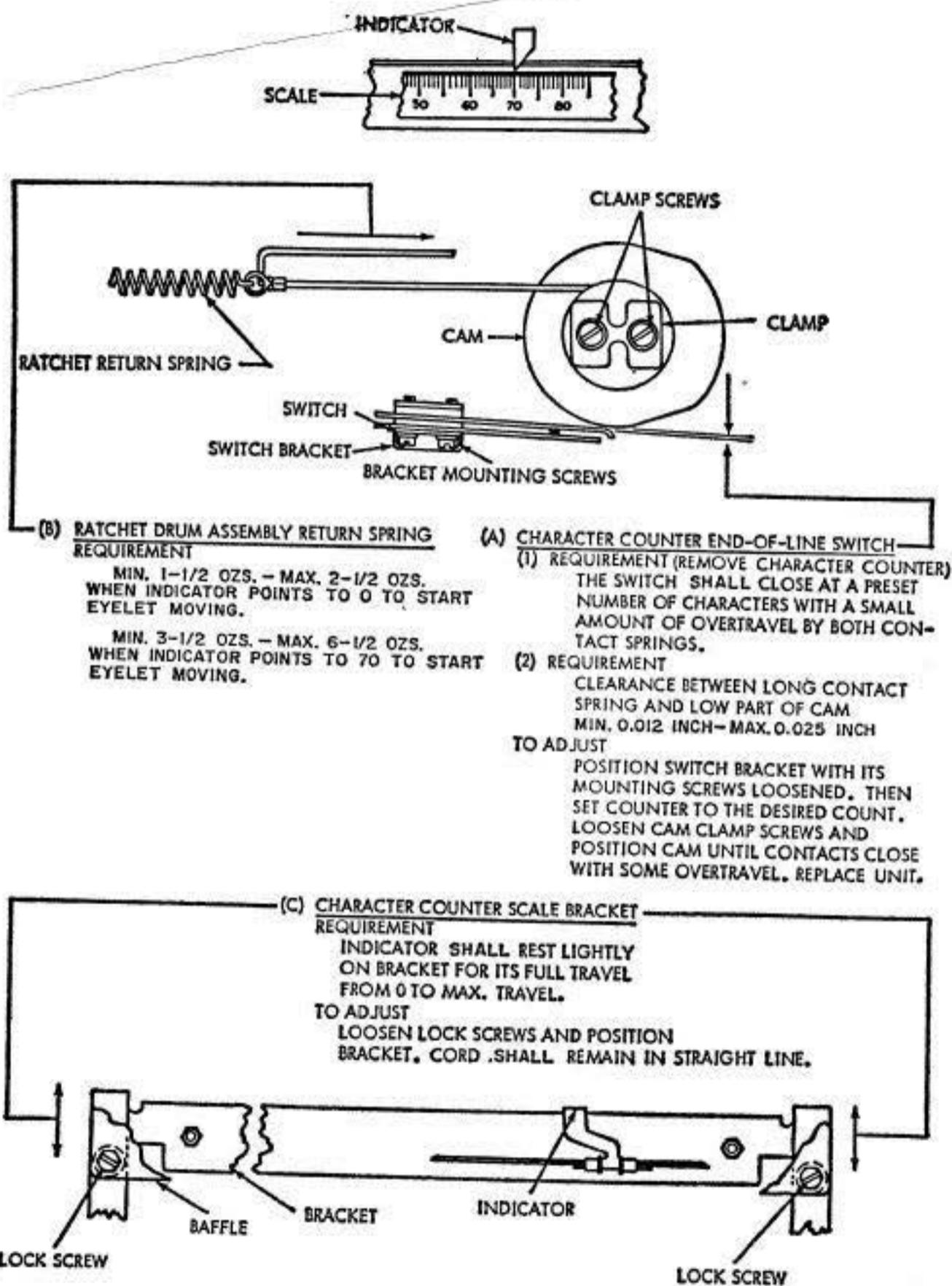


(B) TYPING REPERFORATOR SHAFT GEAR MESH

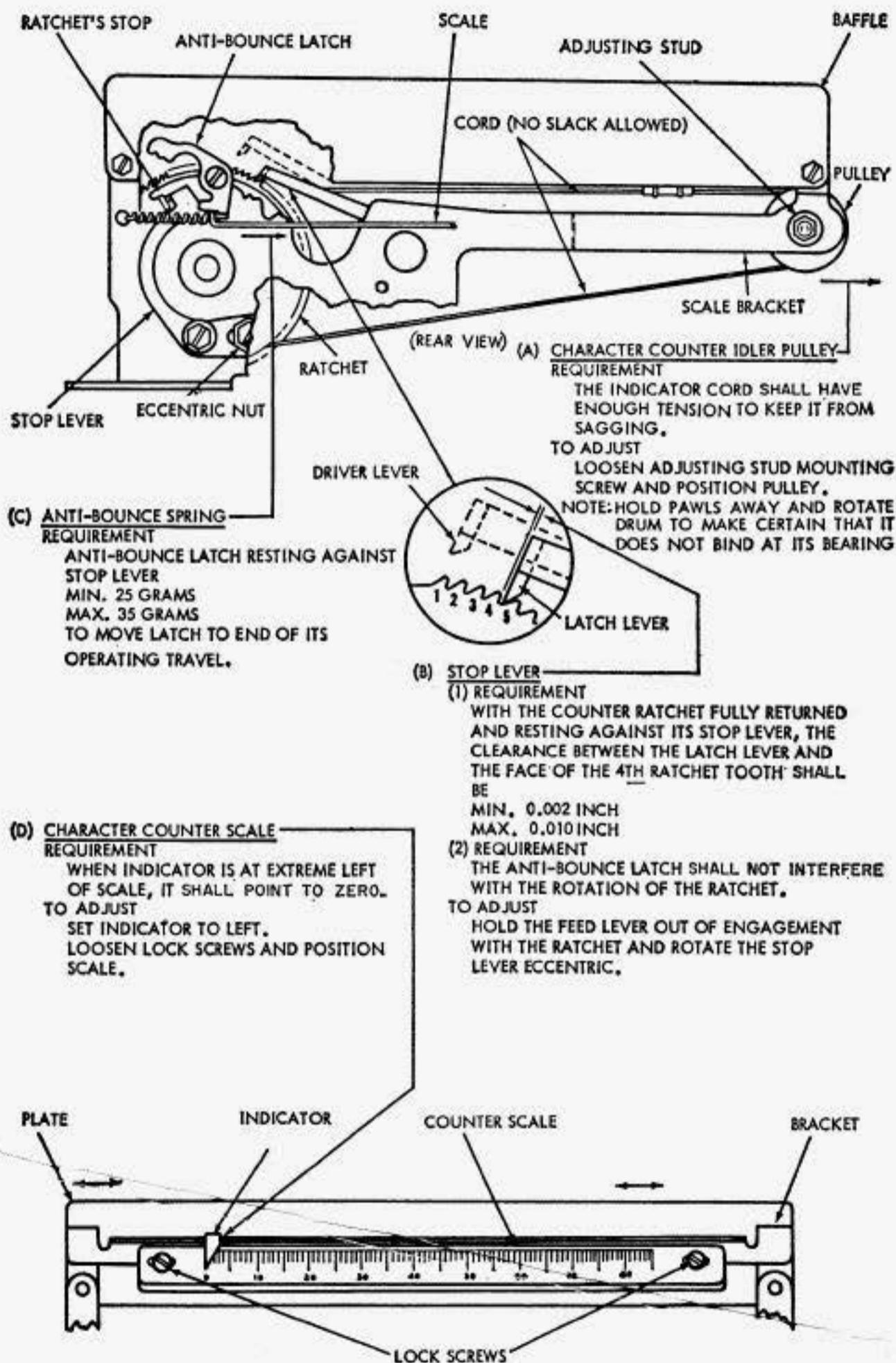
REQUIREMENT
CENTER THE GEAR ON THE TYPING REPERFORATOR MAIN SHAFT WITH THE GEAR ON THE CASTING ASSEMBLY SHAFT.

TO ADJUST
POSITION THE TYPING REPERFORATOR IN ITS OVERSIZE MOUNTING HOLES WITH ITS MOUNTING SCREWS LOOSENED AND ADJUST HUB ON REPERFORATOR.

3.19 Character Counter Mechanism



3.20 Character Counter Mechanism



3.21 Character Counter Mechanism

(A) CHARACTER COUNTER STROKE
REQUIREMENT

WHEN CHARACTER AND REPEAT KEYS ARE DEPRESSED, COUNTER SHALL OPERATE CONSISTENTLY.

WHEN CAR. RET. KEY IS DEPRESSED, THE COUNTER SHALL RESET WITHOUT BINDING.

COUNTER MECHANISM SHALL COUNT FIRST CHARACTER ON RESTART AFTER RESET CONDITION

MIN. 0.012 INCH

MAX. 0.018 INCH

BETWEEN DRIVE LEVER AND RATCHET TOOTH, WHEN COUNTER IS SET NEAR MID-POINT OF ITS RANGE.

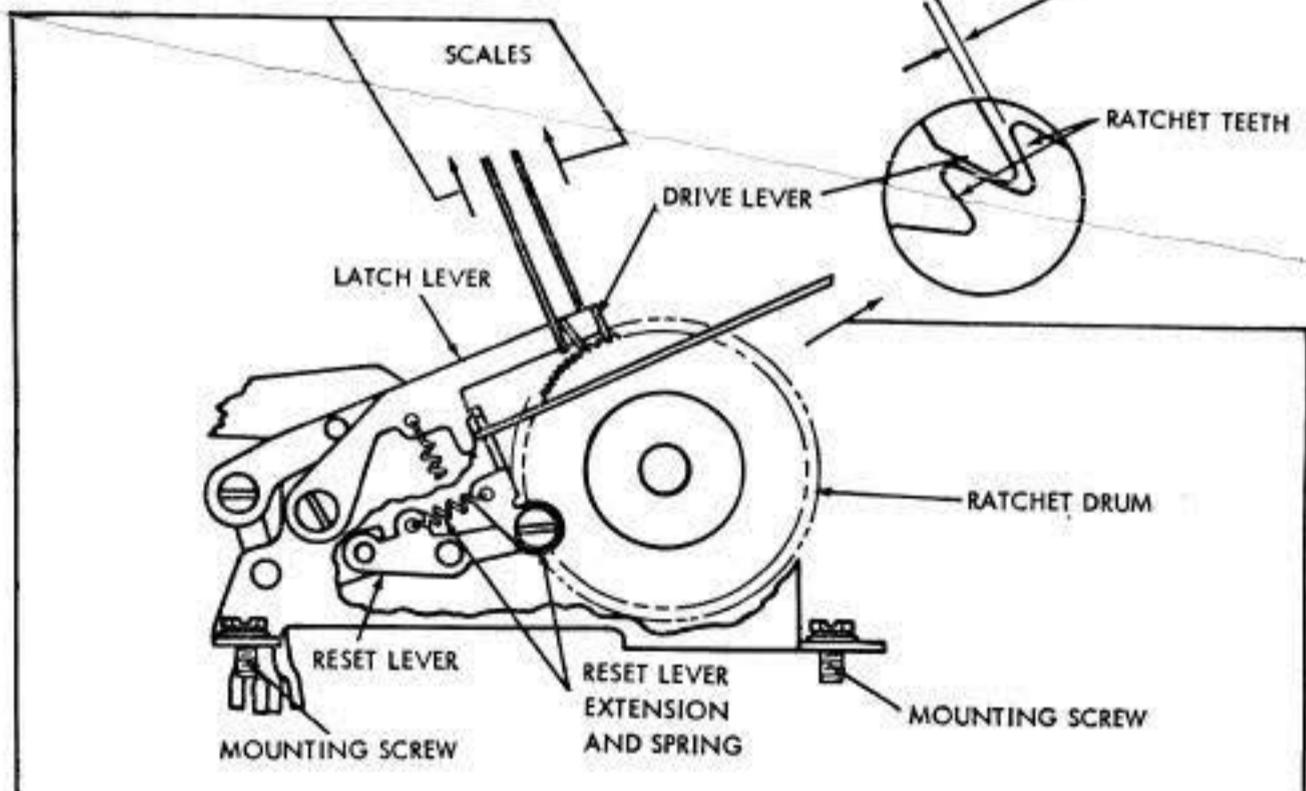
TO ADJUST

LOOSEN MOUNTING SCREWS.

START MOTOR AND STRIKE CAR. RET. KEY, AND THEN E KEY.

TURN OFF MOTOR. DEPRESS E KEY.

POSITION CHARACTER COUNTER FRAME FOR CLEARANCE.



(C) LATCH LEVER AND DRIVE LEVER SPRING
REQUIREMENT

MIN. 1/2 OZ.

MAX. 1 OZ.

TO MOVE EITHER LEVER.

(B) RESET LEVER EXTENSION SPRING
REQUIREMENT

MIN. 3/4 OZ.

MAX. 1-1/4 OZS.

TO START LEVER MOVING.

4. ASSOCIATED BELL SYSTEM PRACTICE

4.01 The following Bell System Practice provides additional information that may be required in connection with this section.

<u>Subject</u>	<u>Section</u>
Alphabetical Index of 28-type Equipment, Bell System Practices, and Associated 28 ASR Station Drawings	P34.001

CHANGES AUTHORIZED BY P98 SERIES BELL SYSTEM PRACTICES

<u>Paragraph</u>	<u>Adjustment Requirements</u>	<u>Includes Changes as Authorized by Section</u>
3.05(A)	Codebar and Codelever Clearance	P98.922
3.08(B)	Ball Wedgeloek and Ball Track Clearance (Prel)	P98.867
3.08(A)	Lock-ball Endplay (Prel)	P98.867
3.09(A)	Universal Bail Latchlever (Prel)	P98.867
3.10	Lock-ball Endplay (Final)	P98.867
3.10	Ball Wedgeloek and Ball Track Clearance (Final)	P98.867
3.10	Universal Bail Latchlever (Final)	P98.867