28 TAPE PRINTER UNIT (STOCK TICKER)

ADJUSTMENTS

CONTENTS

1. GENERAL 2

MANUAL OPERATION OF THE UNIT 2

CONDITIONING OPERATIONS 3

2. TAPE PRINTER 4

Codebar Mechanism

Clutch drum position 19
Clutch shoe lever 19
Clutch shoe lever spring 20
Clutch shoe spring 20
Codebar cam follower spring 18
Codebar clutch and function clutch trip levers 17
Codebar clutch latchlever spring . . . 17
Codebar detent spring 16
Codebar mechanism 16
Codebar shift lever drive arm 12
Codebar shift lever link bracket . . . 15
Intermediate arm downstop bracket . . 14
Transfer lever eccentric 13
Transfer lever spring 13
Trip shaft lever spring 17

Function Mechanism

Accelerator drive spring 25
Clutch drum position 19
Clutch shoe lever 19
Clutch shoe lever spring 20
Clutch shoe spring 20
Detent spring (print hammer). 23
Detent spring (ribbon) 32
Feed pawl spring 32
Function cam follower spring 24
Function clutch trip lever follower spring 18
Function clutch trip levers 17
Function clutch latchlever spring . . . 17

CONTENTS

Pressure roller spring 31
Print hammer accelerator trip lever overtravel 24
Print hammer head spring 33
Print hammer lever spring. 26
Print hammer mechanism selector slide 23
Print hammer trip lever 25
Print hammer trip lever spring . . . 26
Ribbon feed mechanism drive slide . . 32
Ribbon ratchet wheel torsion 32
Tape margin 29
Tape feed pawl spring 30
Tape feed ratchet detent 30
Tape feed - ribbon feed cam follower spring 29
Tape feed wheel centering 31
Tape feed wheel detent 30
Trip shaft lever spring 17

Positioning Mechanism

Aggregate motion spring 22
Character alignment. 35
Clutch latchlevers. 21
Clutch latchlever springs 22
Clutch shoe lever spring 23
Typebox alignment 36
Typebox alignment (front to rear) . . . 33
Typebox alignment (transverse). . . . 34
Typebox carriage roller arm spring 36
Typebox clutch shoe lever 20
Typebox rack and pinion 28
Typebox rail positioning trip slide . . 27

Selector Mechanism

Clutch shoe lever 19
Clutch shoe lever spring 20
Clutch shoe spring. 20
Marking locklever spring 7
Push lever reset bail spring 10

CONTENTS PAGE

Push lever spring 10
Range finder knob phasing 4
Selector armature 5
Selector armature spring 7
Selector armature stop 6
Selector cam lubricator 9
Selector clutch drum 9
Selector clutch latchlever spring . . . 11
Selector clutch stop arm 4
Selector lever spring 10
Selector magnet bracket 8
Selector receiving margin 9
Spacing locklever spring 11
Start lever spring 11

1. GENERAL

1.01 This section is issued to provide adjustment and maintenance information for the tape printer unit (stock ticker) and to present that information as a separate section.

1.02 In the adjustments covered in this section, location of clearances, position of parts, and point and angle of scale applications are illustrated by line drawings. Requirements and procedures are set forth in the several texts that accompany the line drawings. Required tools, not furnished with the tape printer unit, are listed in the appropriate maintenance tools publication.

1.03 The sequence in which the adjustments appear is that which should be followed when a complete readjustment of the tape printer is undertaken. No single adjustment should be undertaken without first completely understanding the procedure and requirements. Therefore, read a procedure all the way through before making an adjustment or checking a spring tension.

1.04 The spring tensions specified in this section are indications, not exact values. Therefore, to obtain reliable readings, it is important that spring tensions be measured by spring scales placed in the positions shown on pertinent line drawings. Springs that do not meet their requirements shall be replaced by new ones.

1.05 When disengaged, a clutch is latched so that a shoe lever is held in its stop position between a trip lever, which bears against the shoe lever, and a latchlever, which seats in a notch in a clutch cam disc. The shafts and clutch drums will then turn freely without the clutch shoes dragging. When the clutch is engaged or tripped, the shoe lever and cam disc stop-lug are moved apart, and the clutch shoes are wedged against the drum so that the clutch turns in unison with the shaft.

Note: When rotating the main shaft by hand, the clutches will not fully disengage upon reaching the stop position. In order to relieve the drag on the clutch and permit the main shaft to rotate freely, apply pressure on the lug of the clutch disc to permit the latchlever to fully latch. This procedure should be followed prior to applying power to the unit.

1.06 Where applicable, all adjustments should be made with the related cam follower on that half of the two-cycle cam which causes the clearance to be least, unless otherwise specified.

MANUAL OPERATION OF THE UNIT

1.07 To manually operate the unit, apply current to the selector coils while the adjustments are being made to hold the armature in the marking position. To manually select the "rubout" code combination, push the armature to the rear into the spacing position momentarily to permit the selector clutch to engage. Rotate the main shaft slowly, using a handwheel (see the appropriate tools section) until no. 6 push lever has been selected by no. 6 selector lever and no. 6 lever is on the high part of its cam. Levers are numbered 1 to 6 from left to right.

1.08 Strip levers from under selector levers corresponding to the spacing elements of the code combination to be set up. For example, the letter R code combination (-2-4--), has code elements 1, 3, 5, and 6 spacing. By stripping no. 1, 3, 5, and 6 push levers, R is selected.

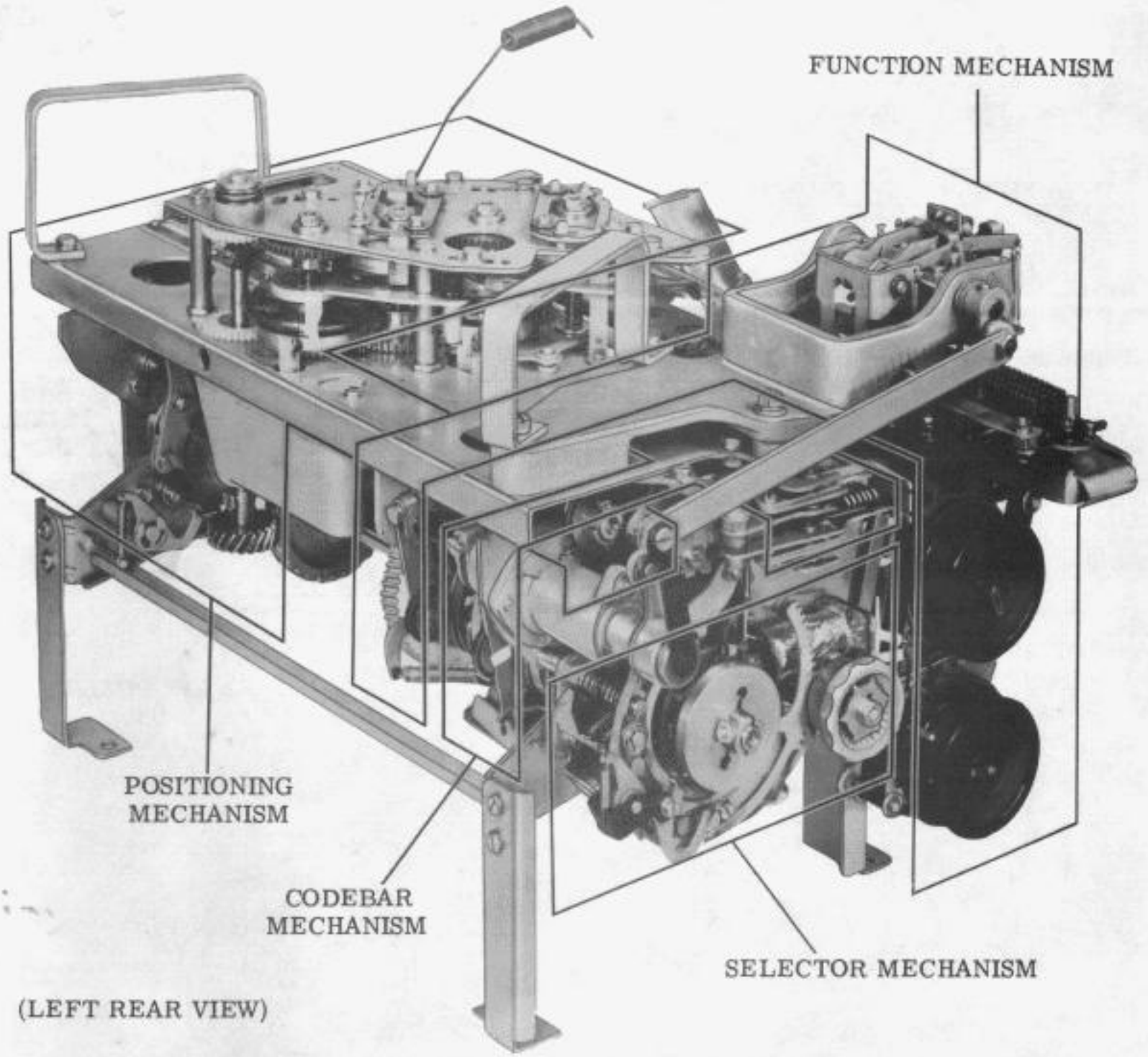


Figure 1 — Tape Printer Unit (Stock Ticker)

Then rotate the main shaft until the required condition is set up or the character has been cleared through the tape printer unit.

CONDITIONING OPERATIONS

1.09 To prevent damage when making a complete adjustment to the tape printer unit, observe the following conditions before proceeding with any adjustments:

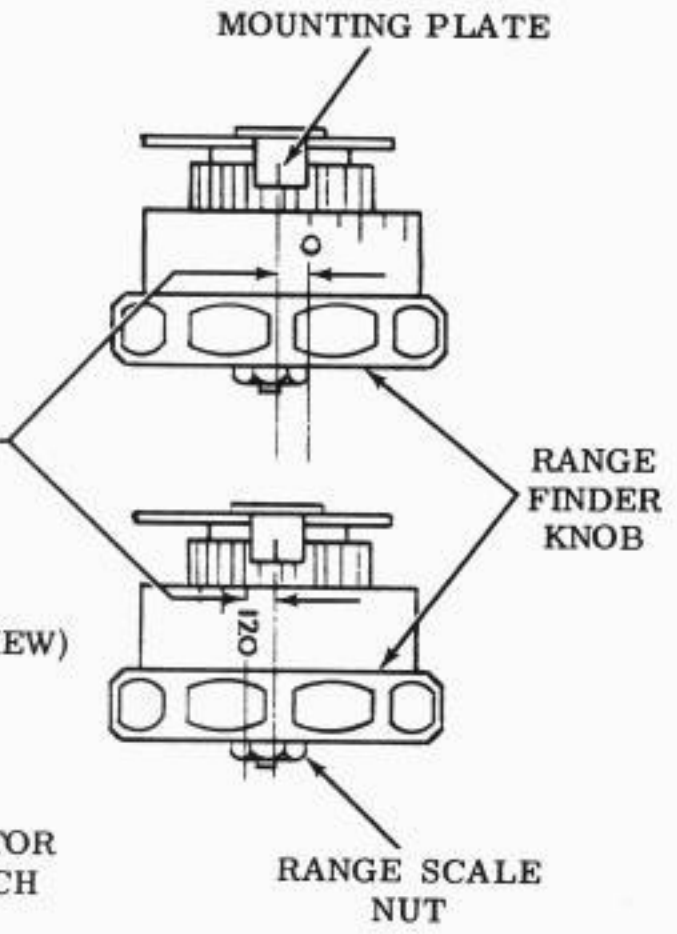
(a) Loosen the scissors operating lever clamp.

(b) Loosen the print hammer shift link clamp screw.

1.10 Before mounting the tape printer on its base, loosen the four mounting screws on the two rear legs. Fasten unit to base before tightening the leg screws.

2. TAPE PRINTER

2.01 Selector Mechanism



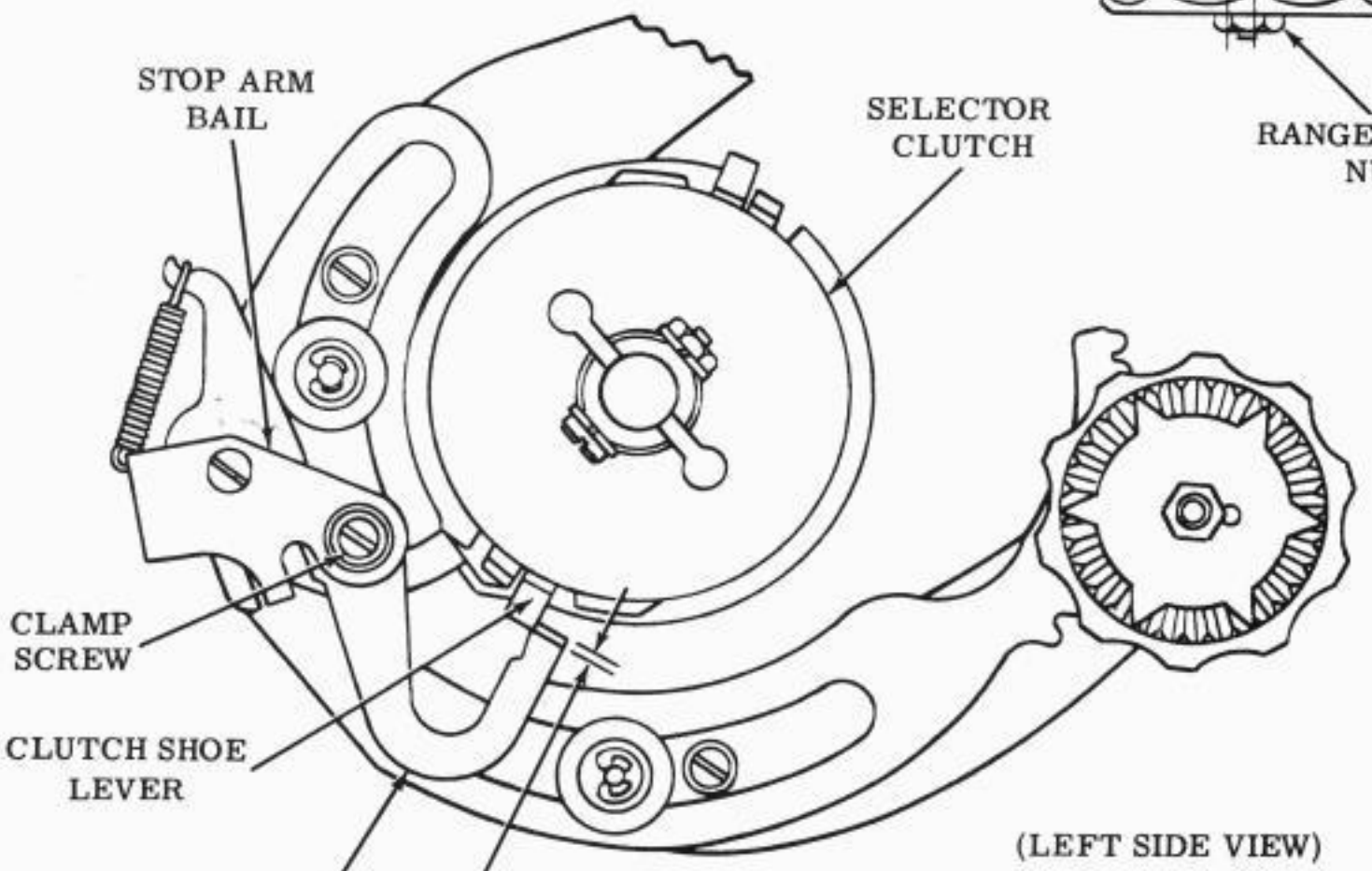
(TOP VIEW)

RANGE FINDER KNOB PHASING

To Check
Turn the range finder knob to its extreme right and left positions.

Requirement
0 mark---120 mark should overtravel the scribed line on the knob mounting plate by an equal amount.

To Adjust
Position range scale knob with its mounting nut loosened.



(LEFT SIDE VIEW)

SELECTOR CLUTCH STOP ARM

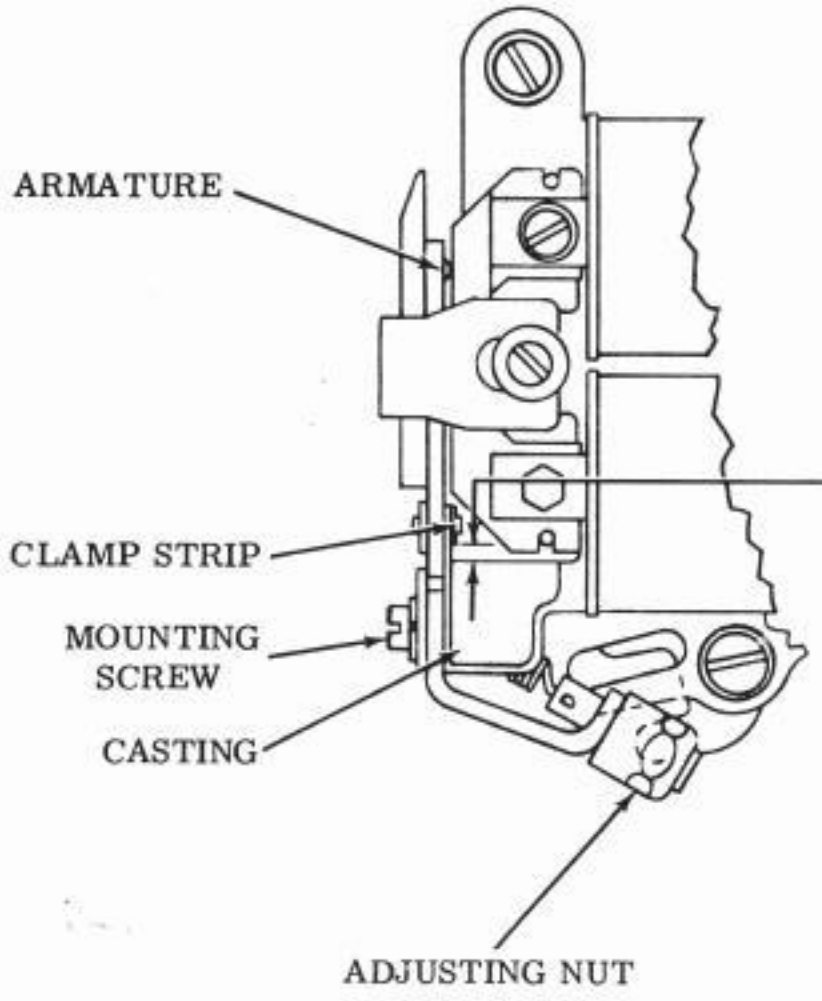
To Check
Set range scale at 60. Place armature in marking position. Disengage (latch) clutch.

Requirement
As gauged by eye, the clutch stop arm should engage the clutch shoe lever by the full thickness of the stop arm.

To Adjust
Position the stop arm with its clamp screw loosened.

2.02 Selector Mechanism (continued)

Note 1: To facilitate making the following adjustments, remove the range finder assembly and selector magnet assembly. (For instructions, see the appropriate tape printer disassembly and reassembly section.)



(LEFT SIDE VIEW)

SELECTOR ARMATURE

Note 2: This requirement need not be made or checked if the SELECTOR MAGNET BRACKET and SELECTOR RECEIVING MARGIN requirements are met.

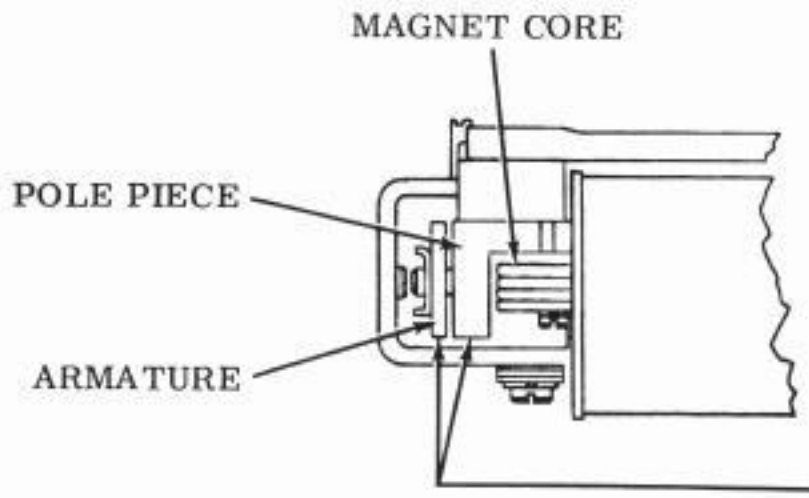
Requirement

(1) Armature Clamp Strip
Min 0.015 inch---Max 0.045 inch clearance between armature clamp strip and casting.

(2) Armature Alignment
Outer edge of the armature should be flush, within 0.015 inch with outer edge of pole pieces.

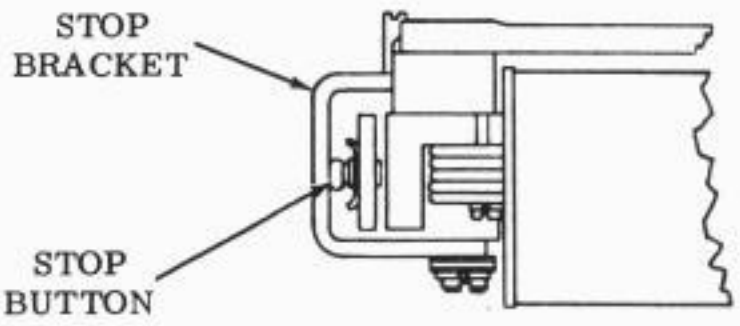
To Adjust

Position the armature spring adjusting nut to hold the lower button of the armature firmly against casting. Position armature with mounting screws loosened.



(TOP VIEW)

2.03 Selector Mechanism (continued)



(TOP VIEW)

SELECTOR ARMATURE STOP

To Check

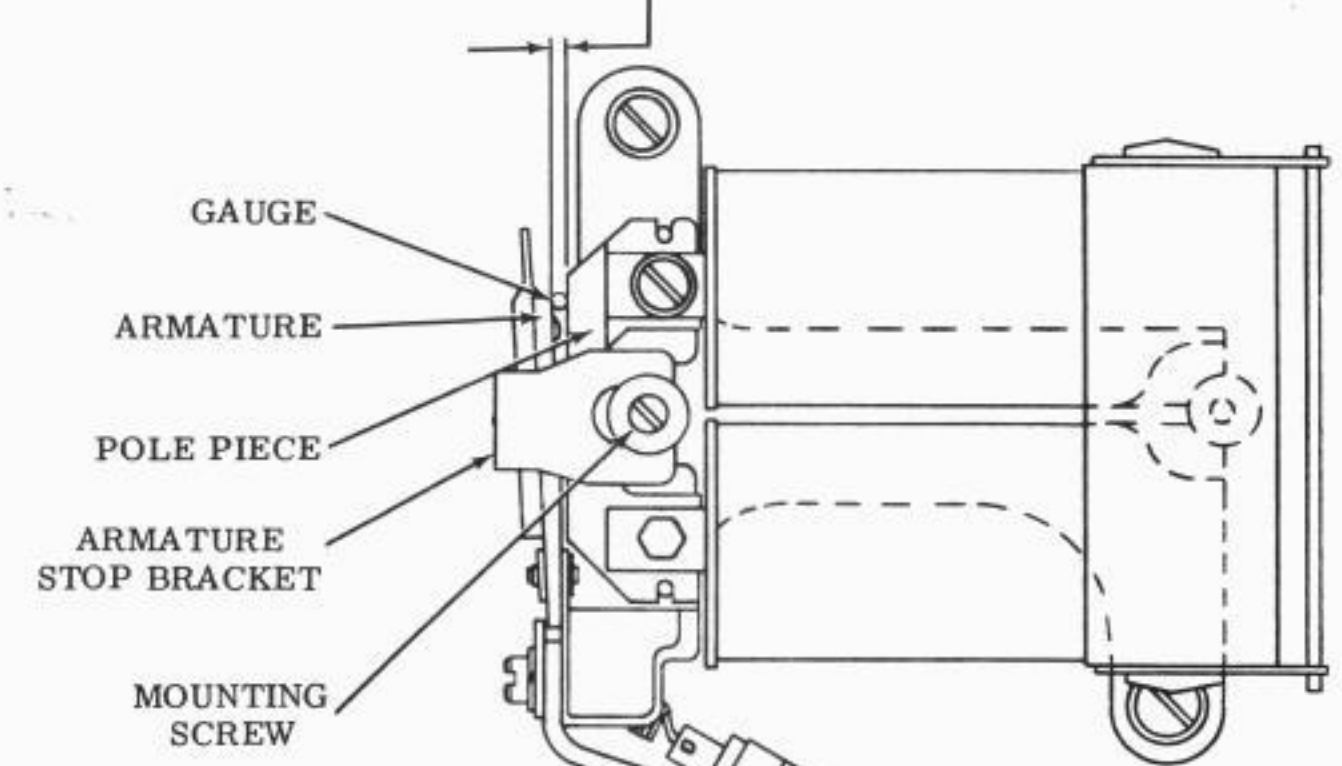
Place gauge between armature and upper pole piece. Check requirement when magnets are de-energized and armature is resting against its stop button.

Requirement

Min 0.020 inch---Max 0.025 inch between the end of the armature and the rear edge of the upper pole piece.

To Adjust

Position the stop bracket with its mounting screw loosened.



(LEFT SIDE VIEW)

2.04 Selector Mechanism (continued)

SELECTOR ARMATURE SPRING

To Check
With no distortion test set available, place marking locklever, spacing locklever, and start lever on high part of their cams.

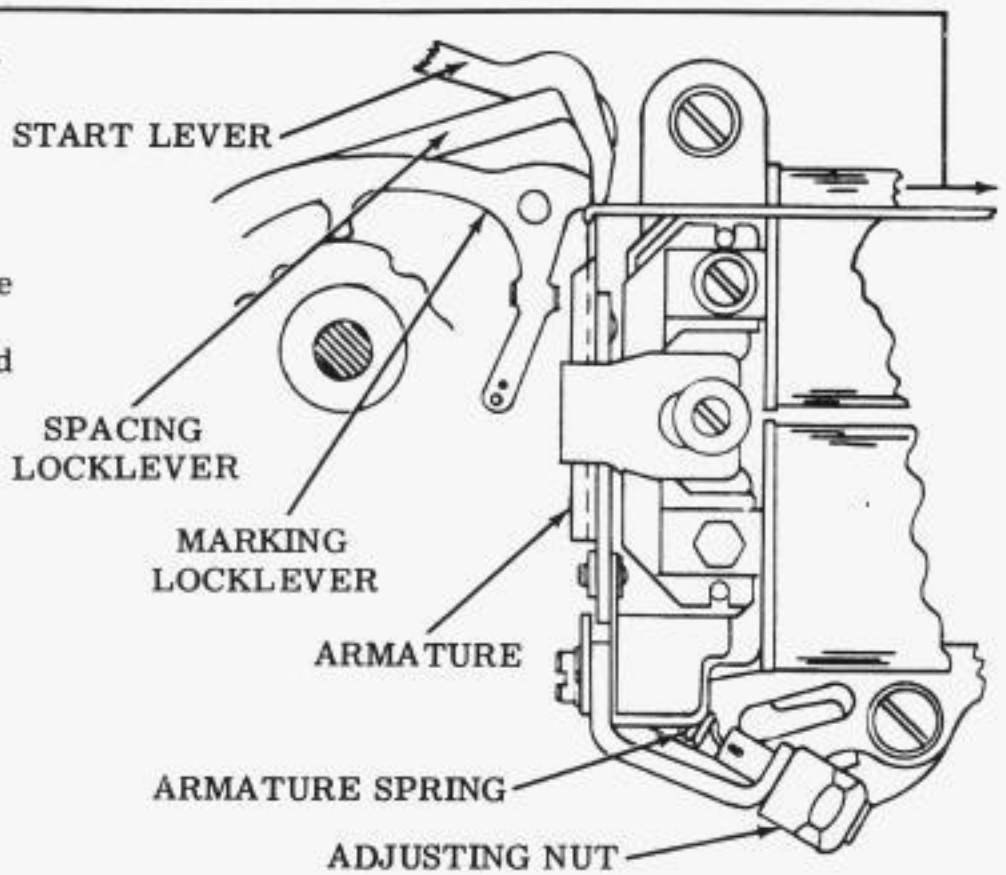
(1) Requirement
Min 4-1/2 oz---Max 5-1/2 oz
to pull armature to marking position.

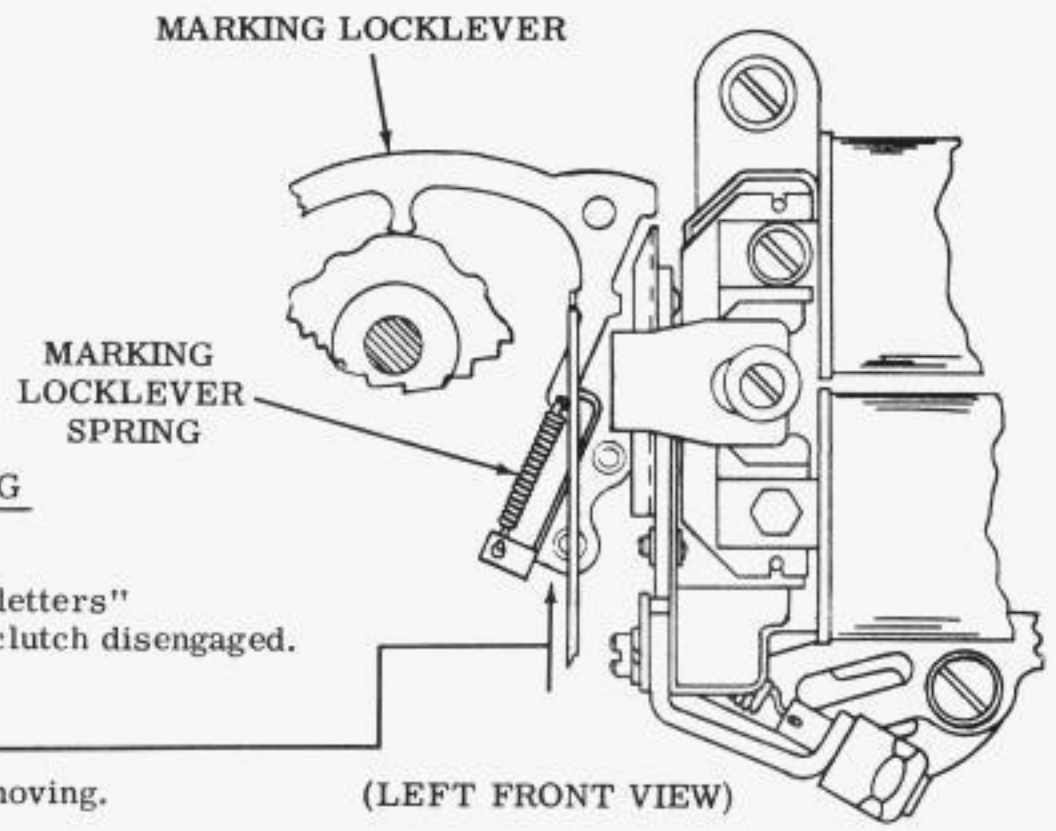
To Check
Use distortion test set.

(2) Requirement
The selector should be relatively free from internal bias when checked as specified in the instructions furnished with the set.

To Adjust
Rotate the adjusting nut.

(LEFT FRONT VIEW)





MARKING LOCKLEVER SPRING

To Check
Energize magnets. Select "letters" code combination, selector clutch disengaged.

Requirement
Min 9 oz---Max 12 oz
to start marking locklever moving.

(LEFT FRONT VIEW)

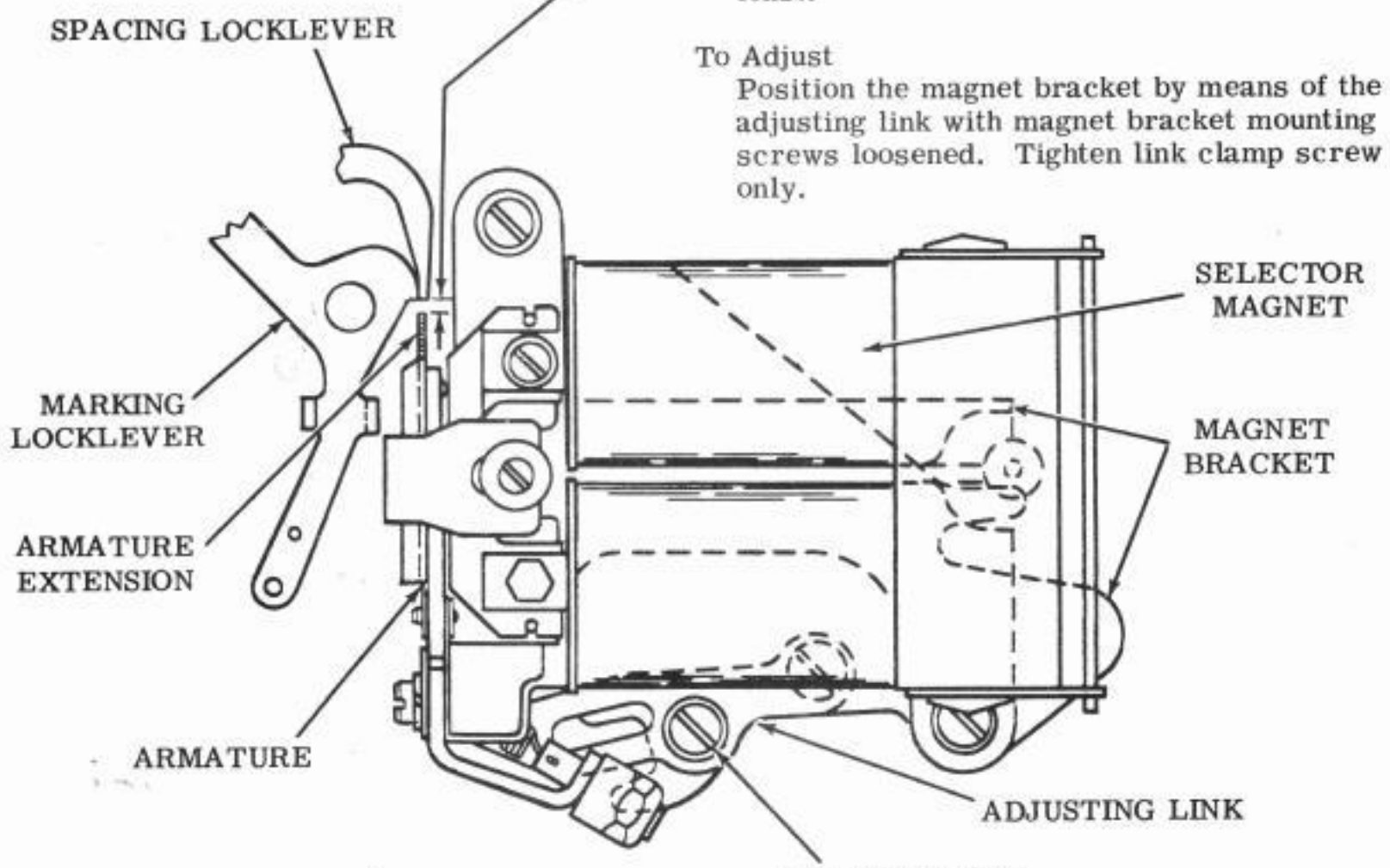
2.05 Selector Mechanism (continued)

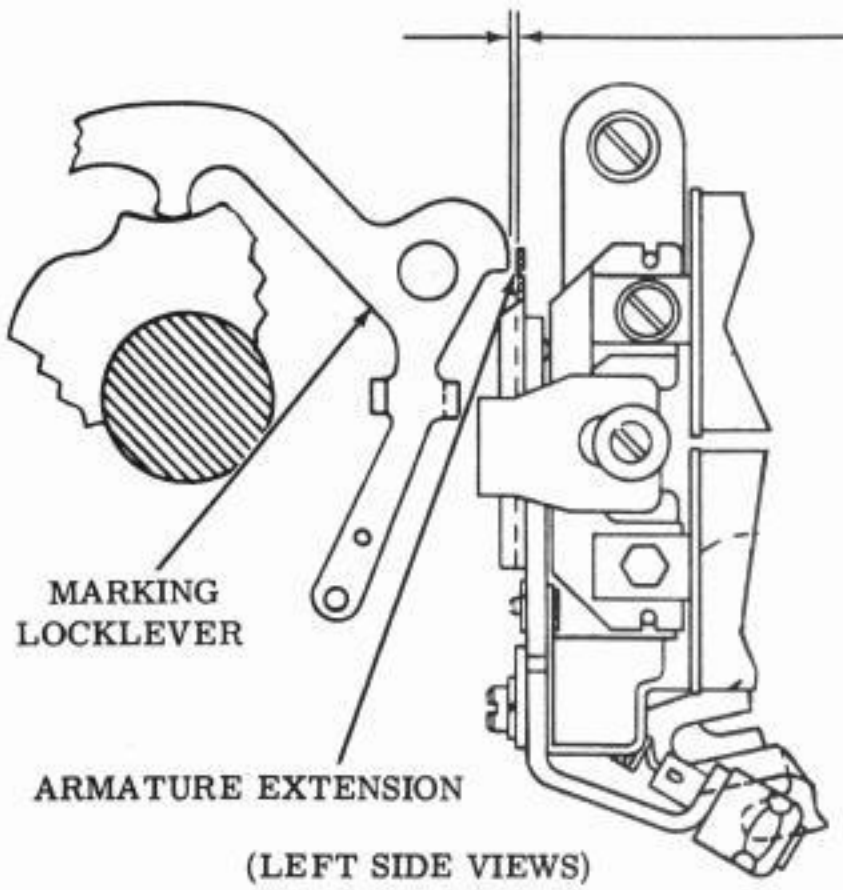
SELECTOR MAGNET BRACKET

To Check
Marking and spacing locklever on high part of their cams. Magnets de-energized.

(1) Requirement
Min 0.010 inch---Max 0.015 inch between end of armature extension and the shoulder on the marking locklever or the tip of the spacing locklever, whichever is least.

To Adjust
Position the magnet bracket by means of the adjusting link with magnet bracket mounting screws loosened. Tighten link clamp screw only.





(LEFT SIDE VIEWS)

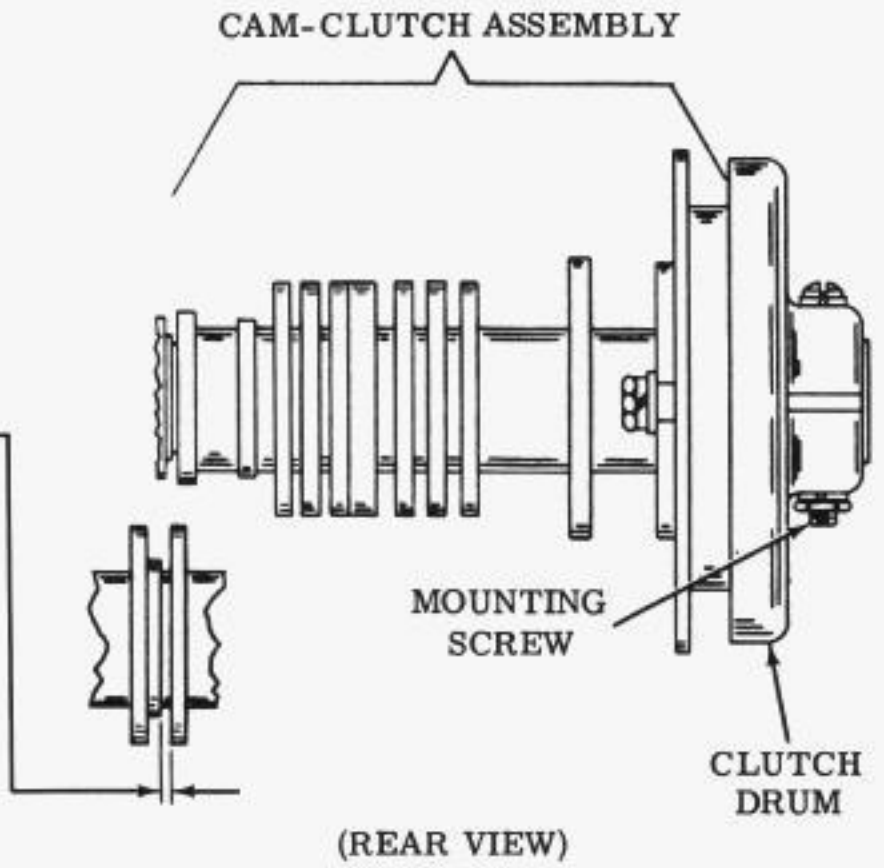
To Check
Marking locklever on low part of cam. Magnets energized. Armature in contact with both pole pieces.

(2) Requirement
Some---to---0.003 inch clearance between rear surface of armature extension and forward surface of marking locklever. With magnet de-energized, should have barely perceptible motion of armature.

To Adjust
Position forward end of magnet bracket with mounting screws loosened.

To Recheck
Rotate selector cam and check for smooth operation of start lever over armature extension. Refine requirements if necessary.

2.06 Selector Mechanism (continued)



(REAR VIEW)

SELECTOR CLUTCH DRUM

To Check
Latch clutch in stop position with clutch drum against shoulder on main shaft.

Requirement
Some---Max 0.010 inch endplay between cam-clutch assembly and shoulder on main shaft.

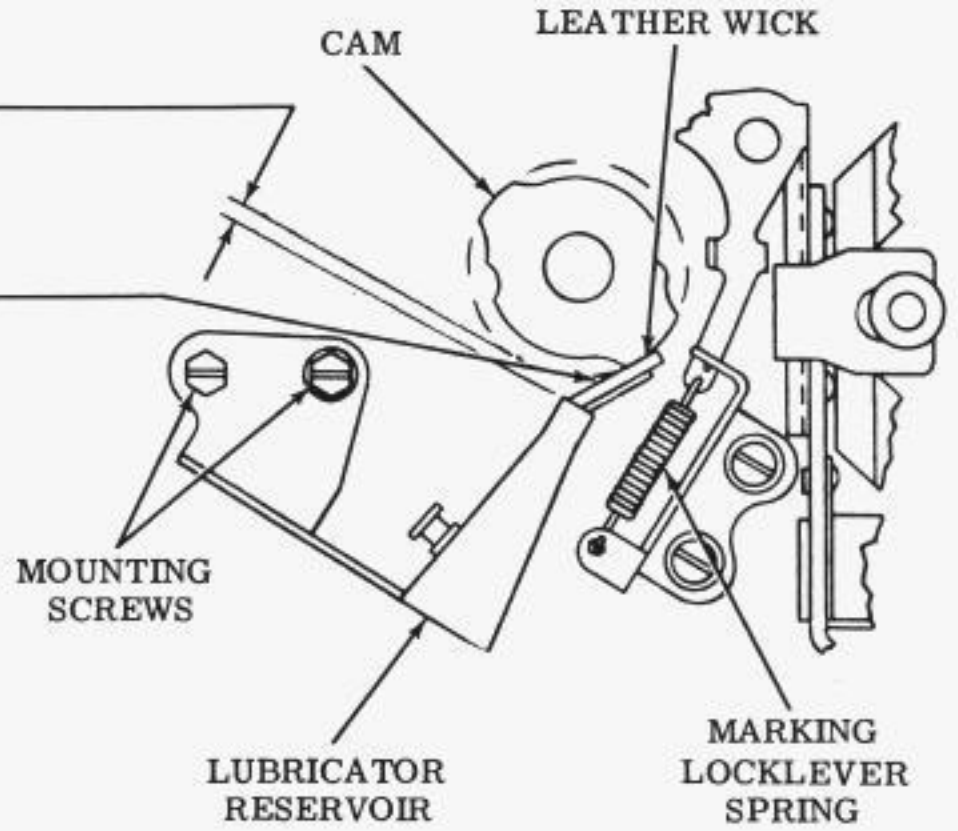
To Adjust
Position clutch drum with mounting screw loosened.

SELECTOR CAM LUBRICATOR

To Check
Rotate cam sleeve until high part of selector cam is opposite lubricator tube.

(1) Requirement
The lubricator tube should clear the high part of the cam by at least 0.020 inch.

(2) Requirement
The high part of the selector lever cams should contact the wick but not deflect it more than 1/32 inch.



(LEFT SIDE VIEW)

SELECTOR RECEIVING MARGIN

To Check
Use signal distortion test set as specified in the instructions furnished with the set.

Requirement

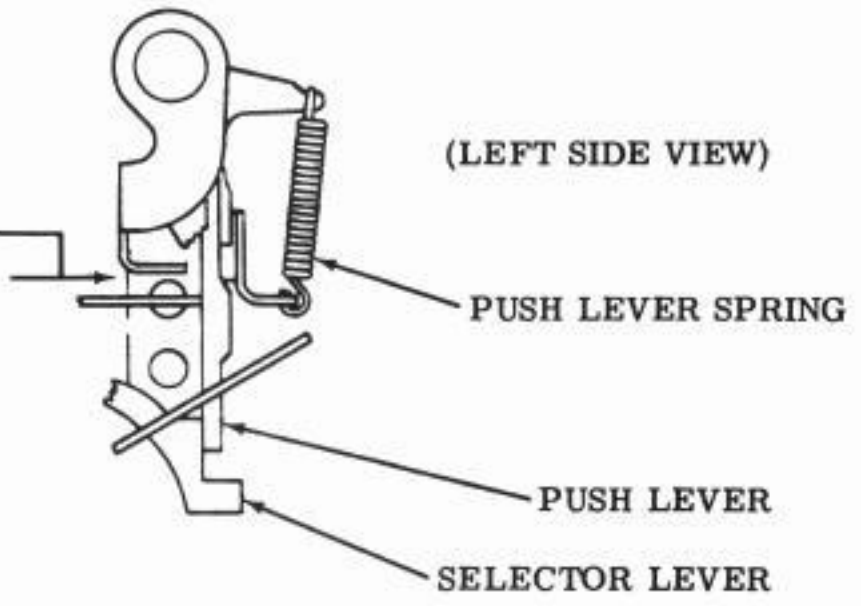
Overall bias	33 percent
End distortion	32 percent (at same range scale setting).

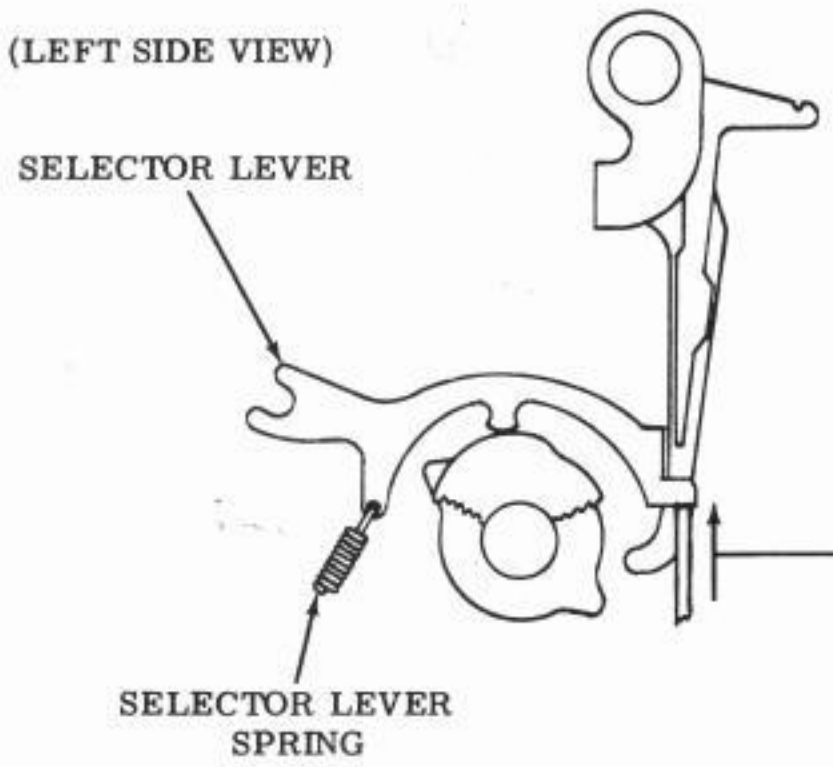
2.07 Selector Mechanism (continued)

PUSH LEVER SPRING

To Check
Place push levers in spacing position.

Requirement
Min 1 oz---Max 2 oz to move push levers from the selector lever. Check all push levers.





SELECTOR LEVER SPRING

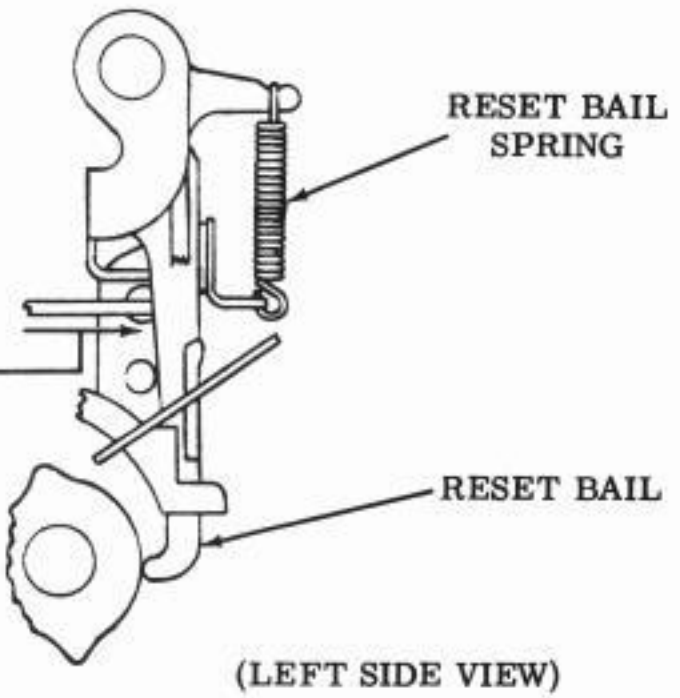
To Check
Rotate shaft until push lever reset bail is latched up on lever guide, and selector levers are on high part of their cams.

Requirement
Min 1-1/2 oz---Max 2-1/2 oz to start each lever moving.

PUSH LEVER RESET BAIL SPRING

To Check
Place push lever in spacing position and push lever bail on low part of cam.

Requirement
Min 1 oz---Max 2 oz to move the bail from the cam.

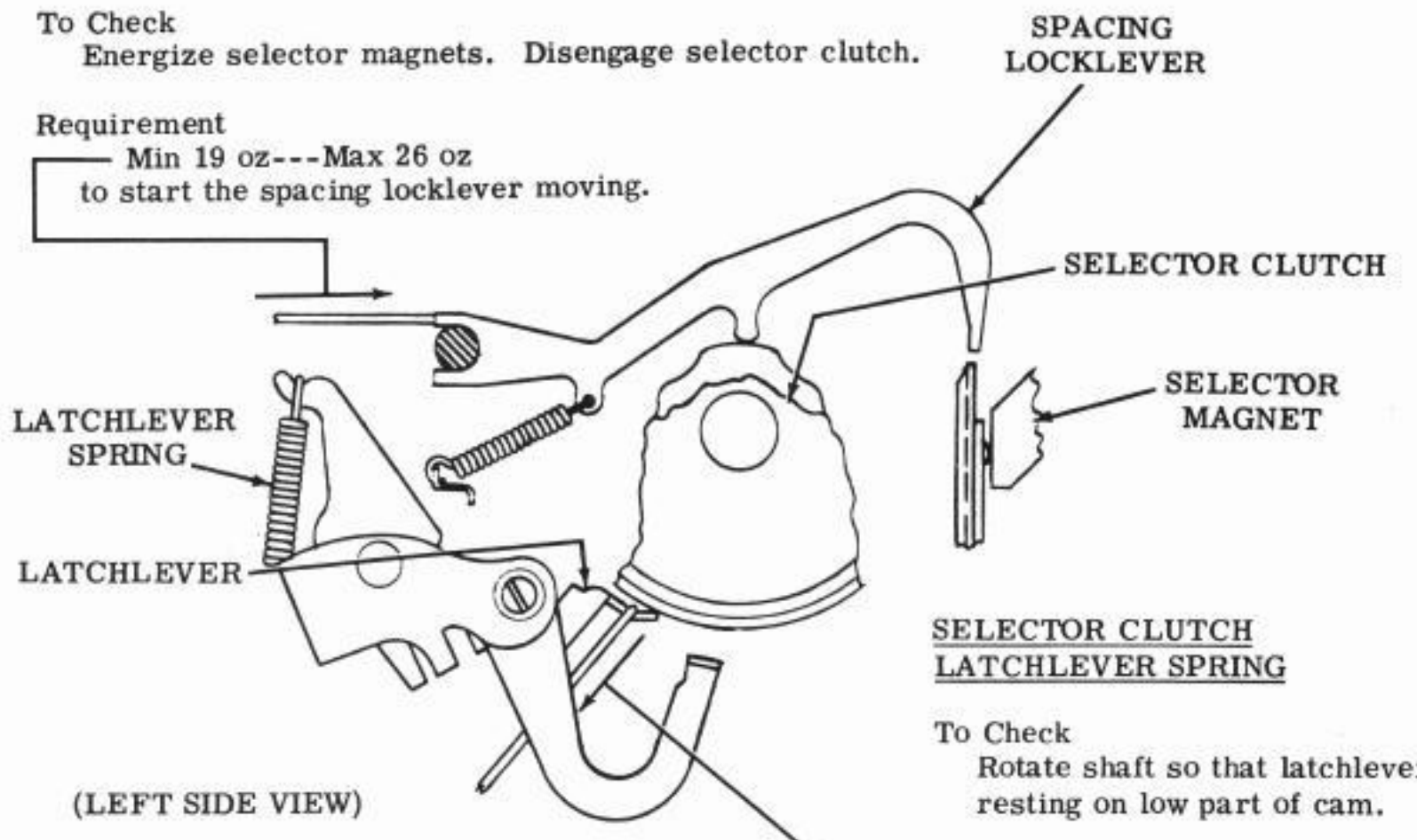


2.08 Selector Mechanism (continued)

SPACING LOCKLEVER SPRING

To Check
Energize selector magnets. Disengage selector clutch.

Requirement
Min 19 oz---Max 26 oz
to start the spacing locklever moving.

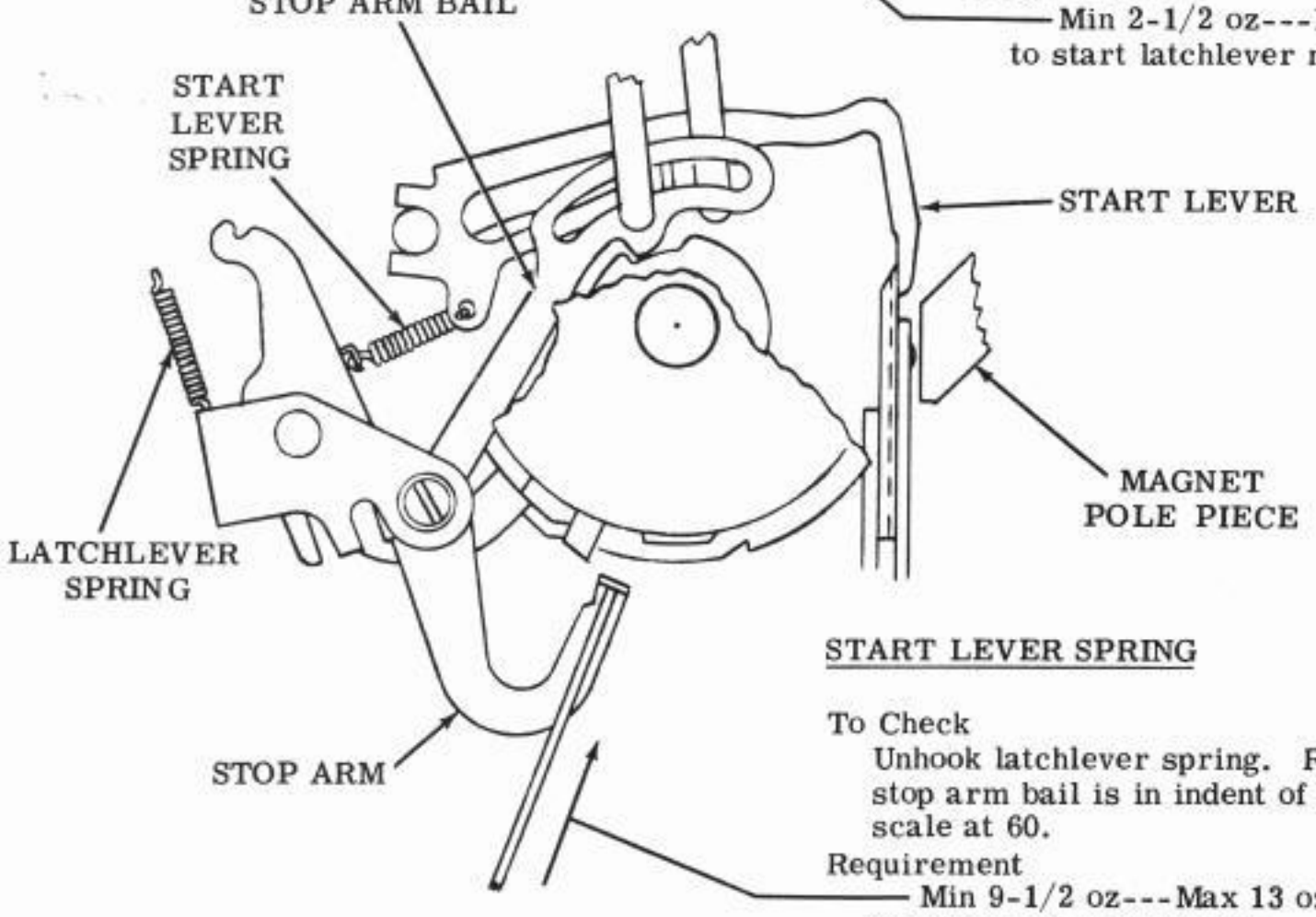


(LEFT SIDE VIEW)

SELECTOR CLUTCH LATCHLEVER SPRING

To Check
Rotate shaft so that latchlever is resting on low part of cam.

Requirement
Min 2-1/2 oz---Max 4 oz
to start latchlever moving.



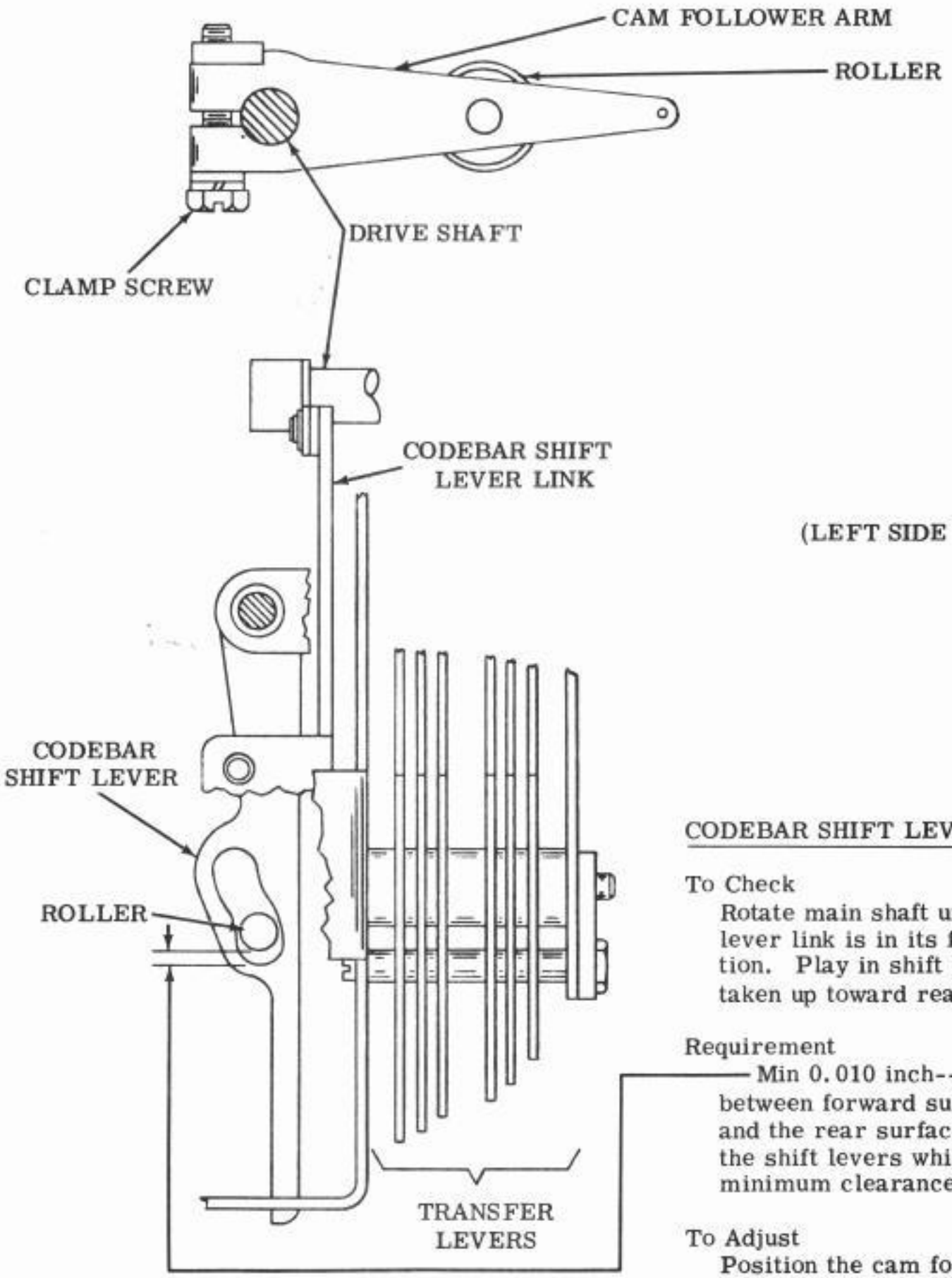
START LEVER SPRING

To Check
Unhook latchlever spring. Rotate shaft until stop arm bail is in indent of cam. Set range scale at 60.

Requirement
Min 9-1/2 oz---Max 13 oz
to start stop arm moving.

(LEFT SIDE VIEW)

2.09 Codebar Mechanism



(LEFT SIDE VIEW)

CODEBAR SHIFT LEVER DRIVE ARM

To Check

Rotate main shaft until codebar shift lever link is in its forwardmost position. Play in shift lever and link taken up toward rear.

Requirement

Min 0.010 inch---Max 0.020 inch between forward surface of the rollers and the rear surface of the cam slot in the shift levers which provides the minimum clearance.

To Adjust

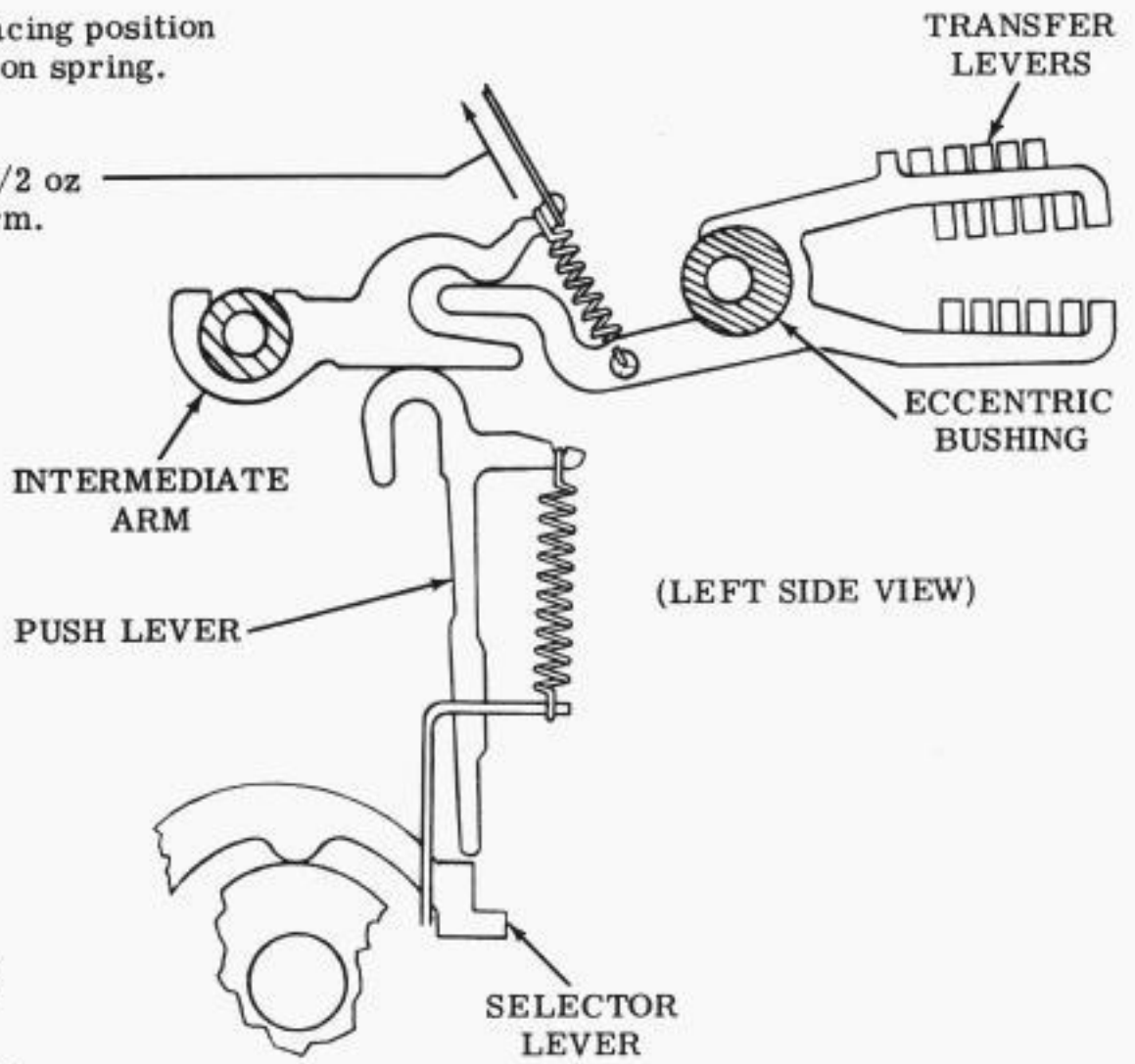
Position the cam follower arm on its drive shaft with its clamp screw loosened. Provide up to 0.006 inch endplay.

2.10 Codebar Mechanism (continued)

TRANSFER LEVER SPRING

To Check
Place transfer levers in spacing position and hold them while pulling on spring.

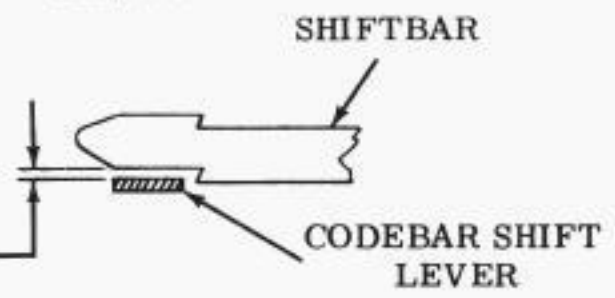
Requirement
Min 1-1/2 oz---Max 2-1/2 oz to move the intermediate arm.



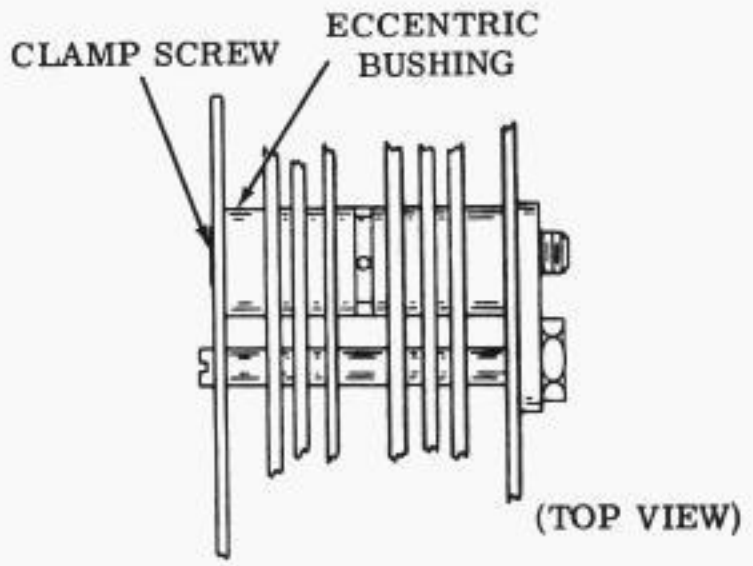
TRANSFER LEVER ECCENTRIC

To Check
Set up "rubout" code combination on the pushbars. Disengage (latch) selector clutch. Rotate codebar shift lever link to its forwardmost position.

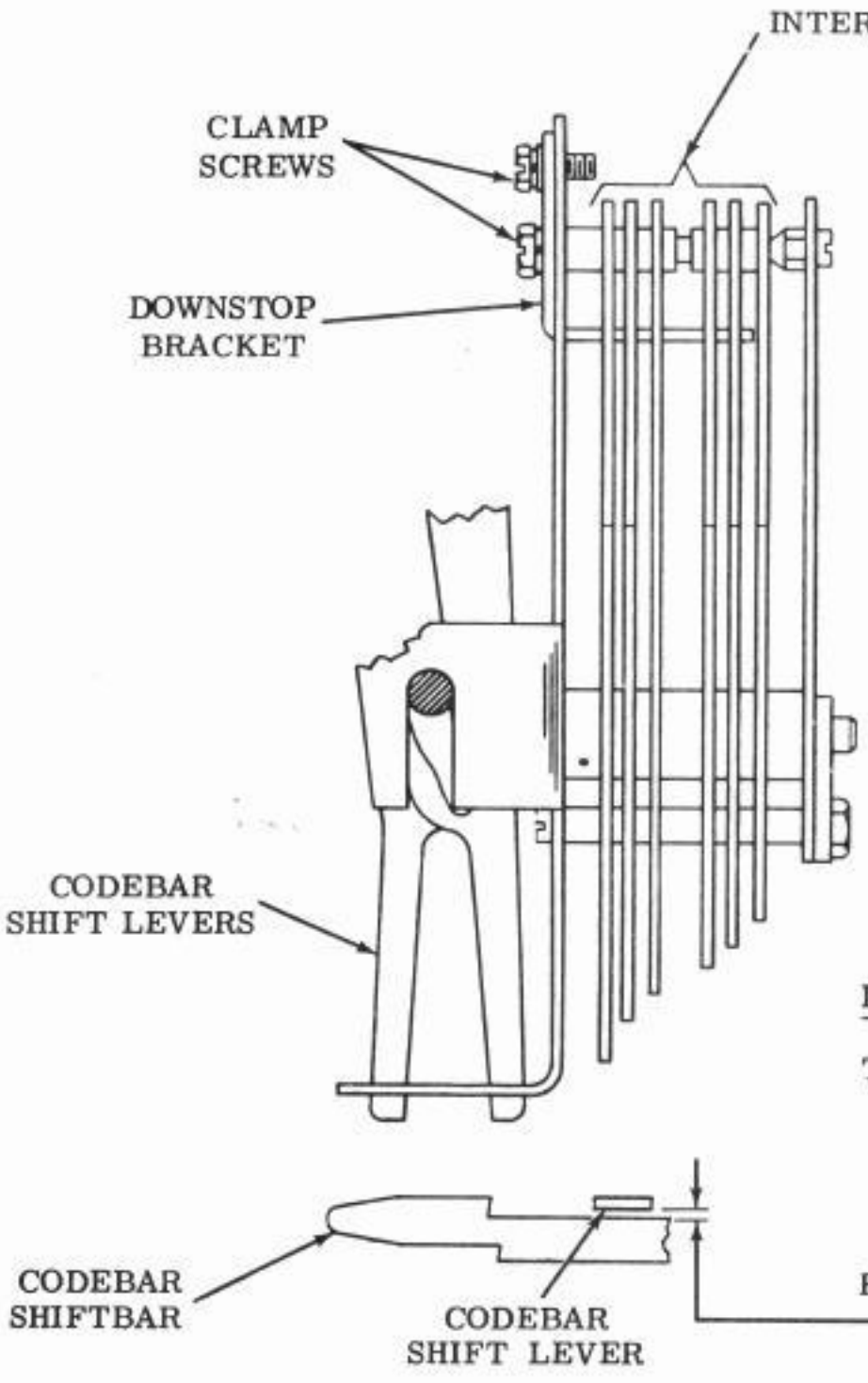
Requirement
Min 0.010 inch---Max 0.025 inch clearance between the lower shift lever and the lower edge of codebar shiftbar which is farthest from the lower shift lever when play is taken up to make clearance maximum.



To Adjust
Loosen the transfer lever clamp screw. Rotate the eccentric bushing to the desired position by using the adjusting holes. Keep the high part of the eccentric to the front of the vertical centerline.



2.11 Codebar Mechanism (continued)



(TOP VIEW)

(FRONT VIEW)

INTERMEDIATE ARM DOWNSTOP BRACKET

To Check

Rotate selector clutch to stop position. Strip the pushbars. Rotate shaft until codebar shift lever link is in rearward position.

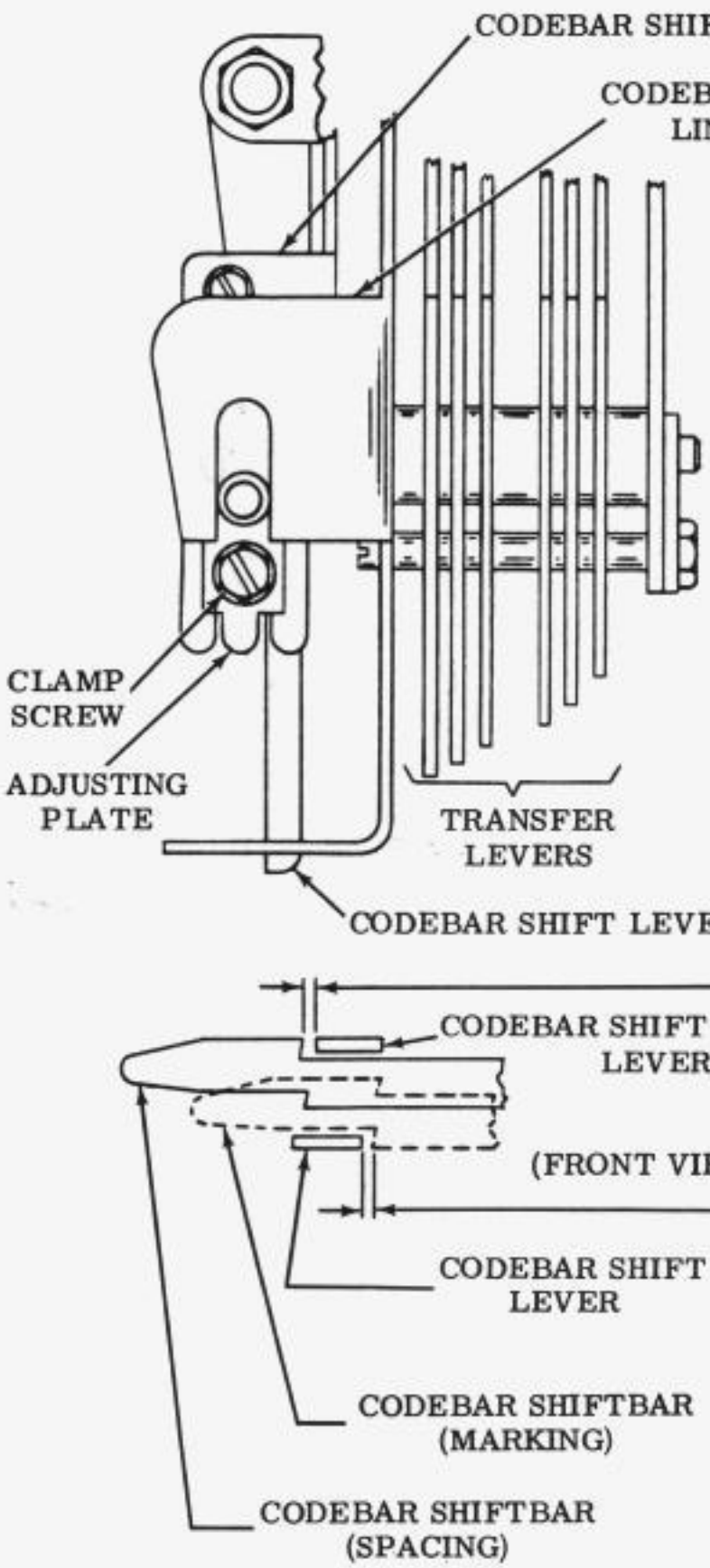
Requirement

Min 0.010 inch---Max 0.025 inch between the upper codebar shift lever and the upper edge of inner step on the codebar shiftbar which is farthest from the upper shift lever when play is taken up for maximum clearance.

To Adjust

Position downstop bracket with its clamp screws loosened.

2.12 Codebar Mechanism (continued)



(TOP VIEW)

CODEBAR SHIFT LEVER LINK BRACKET

To Check (Upper)
Select "blank" code combination. Rotate main shaft until codebar shift lever link reaches its forwardmost position.

Requirement
The motion of front and rear codebar shift levers should be equalized with respect to codebar travel. Clearance between upper codebar shift lever and shoulder on nearest codebar shiftbar
— Min 0.002 inch---Max 0.012 inch
when play is taken up to make clearance maximum.

To Check (Lower)
Select "rubout" code combination. Check clearance between lower codebar shift lever and shoulder on nearest codebar shiftbar in the same manner.

Requirement
— Min 0.002 inch---Max 0.012 inch
when play is taken up to make clearance maximum.

To Adjust
Position adjusting plate (upper and lower) with clamp screws loosened.

2.13 Codebar Mechanism (continued)

CODEBAR DETENT

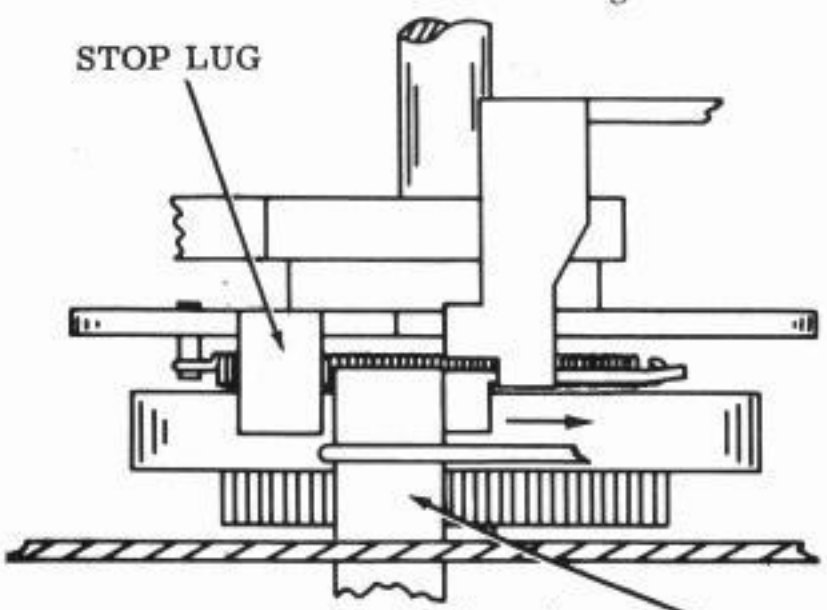
To Check (No. 1 Codebar)
Select blank combination and put unit in stop position. Shift No. 1 codebar to marking. Rotate main shaft until stop lug just clears stop slide extension. Apply 32 oz scale to No. 1 trip slide extension and pull to spacing. Note force required to return to marking position when codebar is manually shifted to spacing. Apply scale to keep trip slide in spacing position and manually detent codebar to marking position. Note force required.

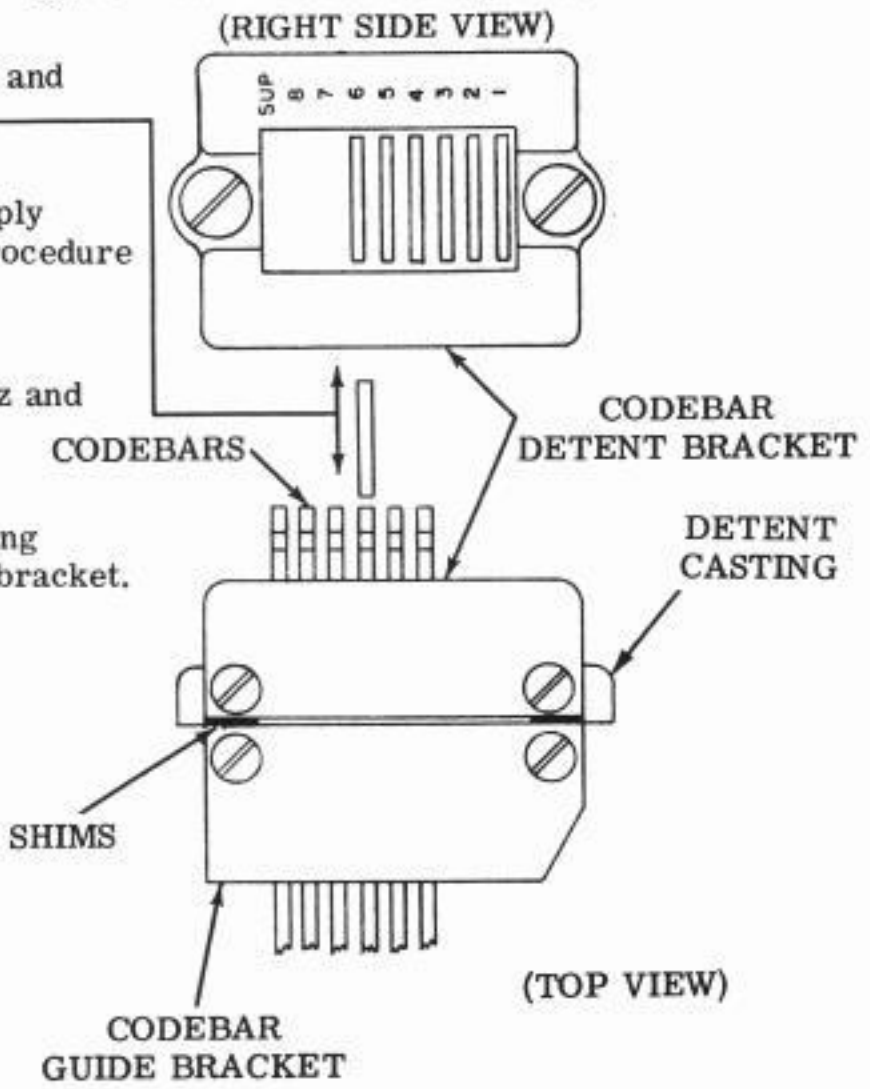
Requirement
The force should be Min 9 oz---Max 16 oz and equal within 3 oz

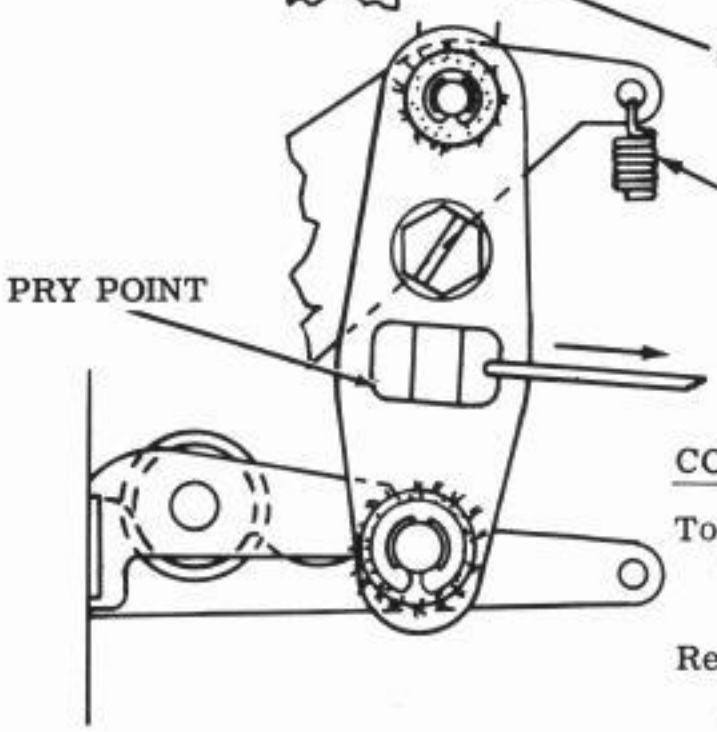
To Check (No. 5 Codebar)
Unhook print hammer detent spring and apply scale to pry point opening. Apply same procedure as that used for No. 1 codebar.

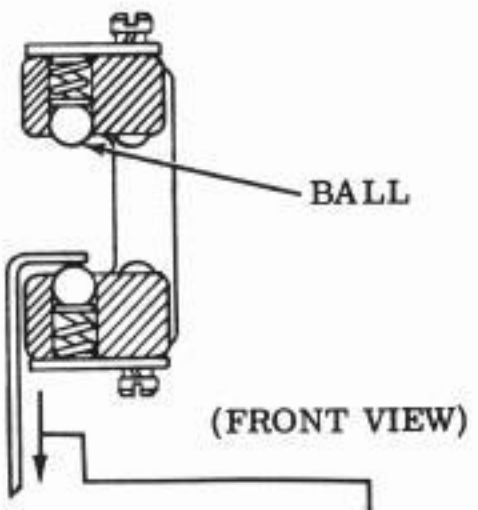
Requirement
The force should be Min 12 oz---Max 20 oz and equal within 3 oz

To Adjust
Equalize the detenting by adding or removing shims between detent casting and codebar bracket.









CODEBAR DETENT SPRING

To Check
Remove the codebar detent assembly and apply scale to the detent balls.

Requirement
Min 4 oz---Max 6 oz to start depressing a ball. Check each ball.

2.14 Codebar Mechanism (continued)
and Function Mechanism

CODEBAR CLUTCH AND FUNCTION CLUTCH TRIP LEVERS

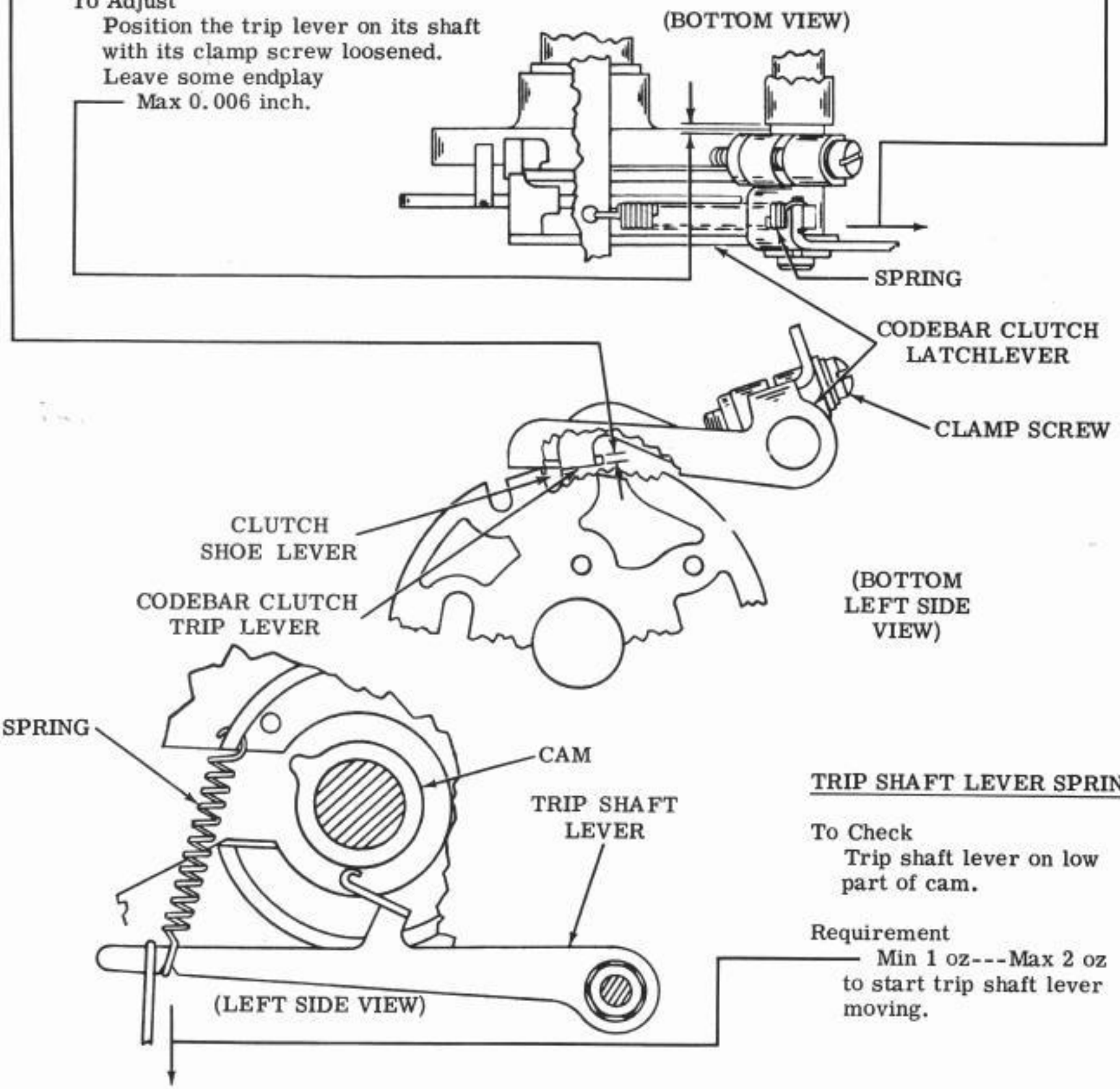
To Check
Latch each clutch in stop position.

Requirement
The clutch trip levers should engage their respective clutch shoe lever by the full thickness of the shoe lever, when checked at the stop position with the least bite.

To Adjust
Position the trip lever on its shaft with its clamp screw loosened. Leave some endplay
Max 0.006 inch.

CODEBAR CLUTCH LATCHLEVER SPRING
FUNCTION CLUTCH LATCHLEVER SPRING

Requirement
Min 5 oz---Max 7-1/4 oz
to move latchlever away from disc.

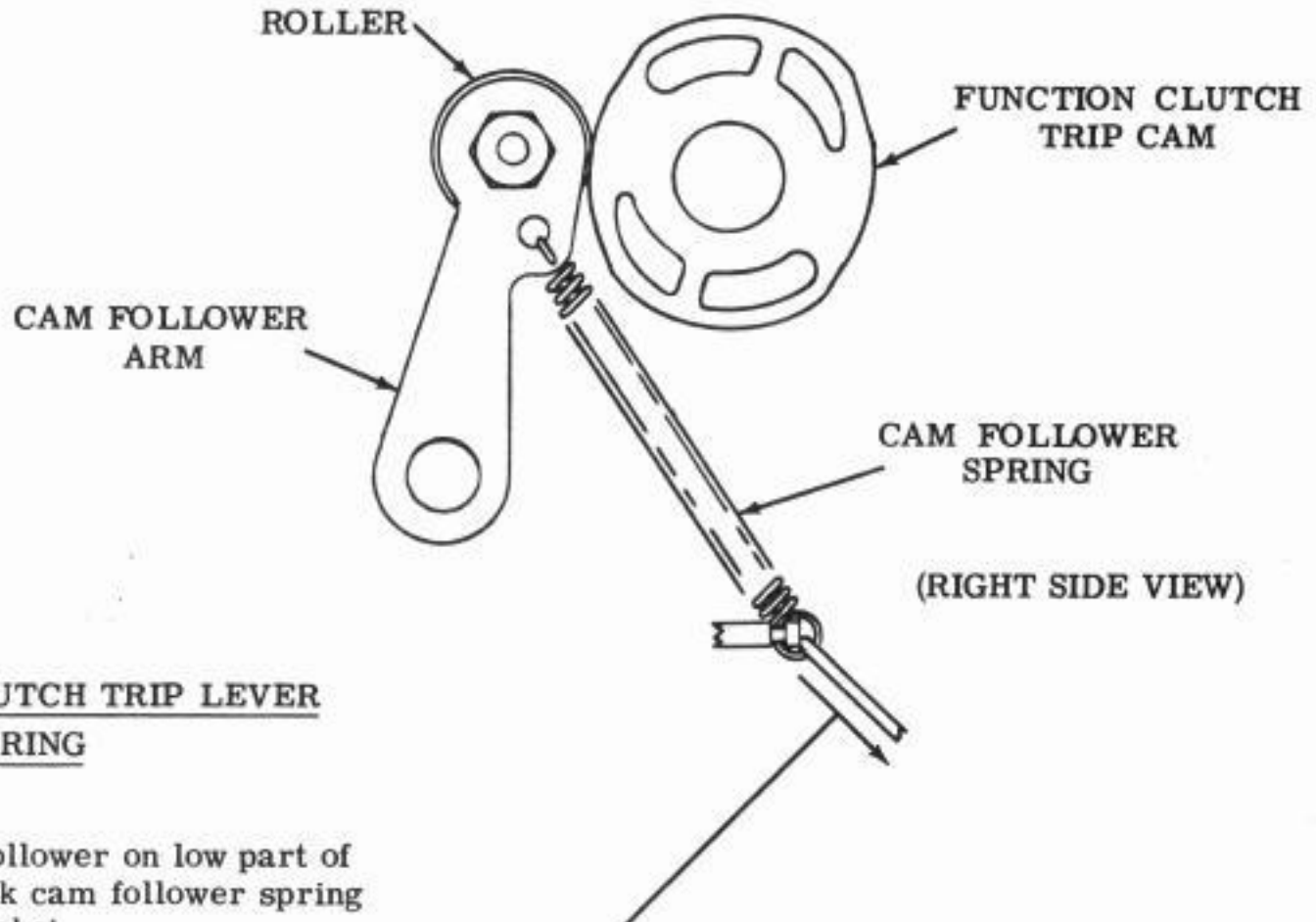


TRIP SHAFT LEVER SPRING

To Check
Trip shaft lever on low part of cam.

Requirement
Min 1 oz---Max 2 oz
to start trip shaft lever moving.

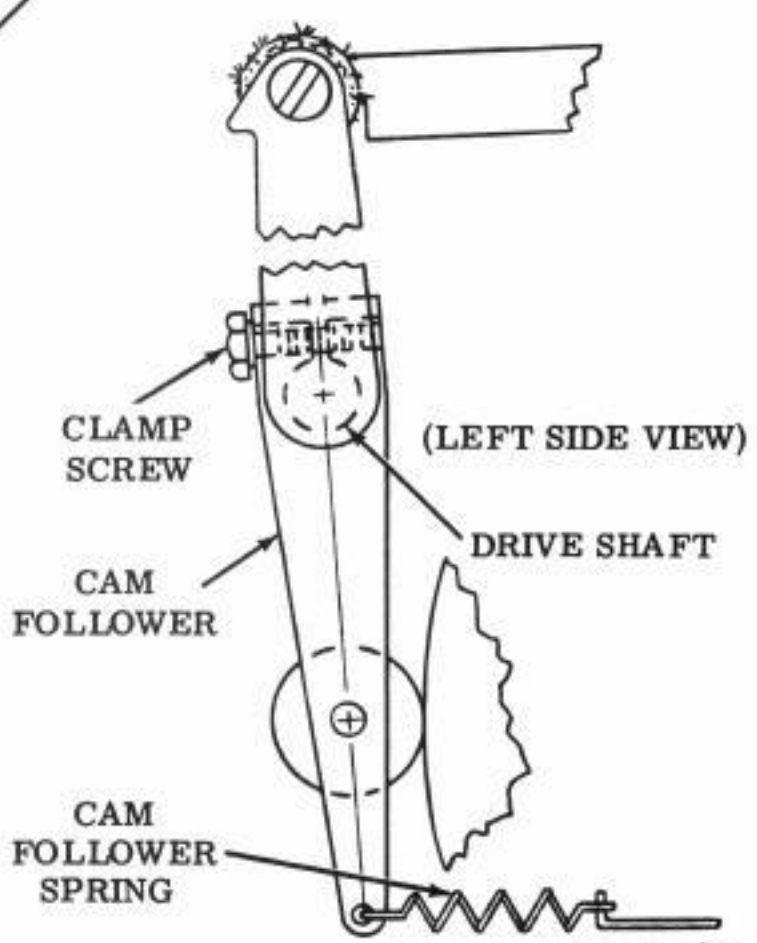
2.15 Codebar Mechanism and Function Mechanism (continued)



FUNCTION CLUTCH TRIP LEVER FOLLOWER SPRING

To Check
Place cam follower on low part of cam. Unhook cam follower spring from its bracket.

Requirement
Min 20 oz---Max 24 oz
to pull spring to its installed length.

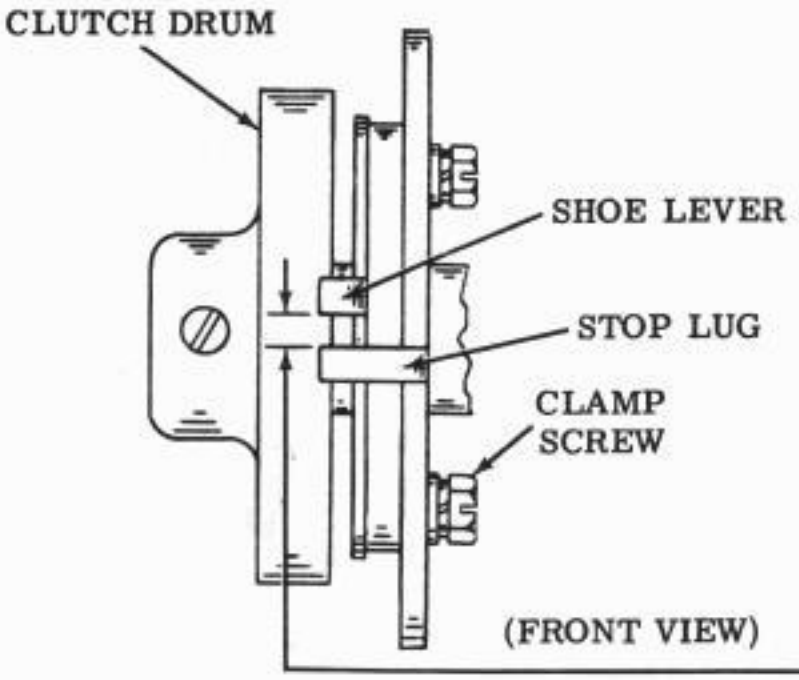


CODEBAR CAM FOLLOWER SPRING

To Check
Place codebar clutch in stop position. Unhook codebar cam follower spring from follower.

Requirement
Min 11 oz---Max 14 oz
to pull spring to installed length

2.16 Selector Mechanism, Codebar Mechanism, and Function Mechanism (continued)



CLUTCH SHOE LEVER
(Selector, Codebar, Function)

To Check

With clutch disengaged and latched in stop position, measure the gap between the clutch shoe lever and stop-lug. Trip the clutch and rotate the clutch until the shoe lever is toward the rear of the unit. Apply 32 oz pressure against stop lug to make gap maximum. Again measure the gap between the shoe lever and lug.

Note 1: When measuring, use the stop-lug adjacent to the notch in the clutch adjustment plate.

Requirement

The gap between the clutch shoe lever and stop-lug should be

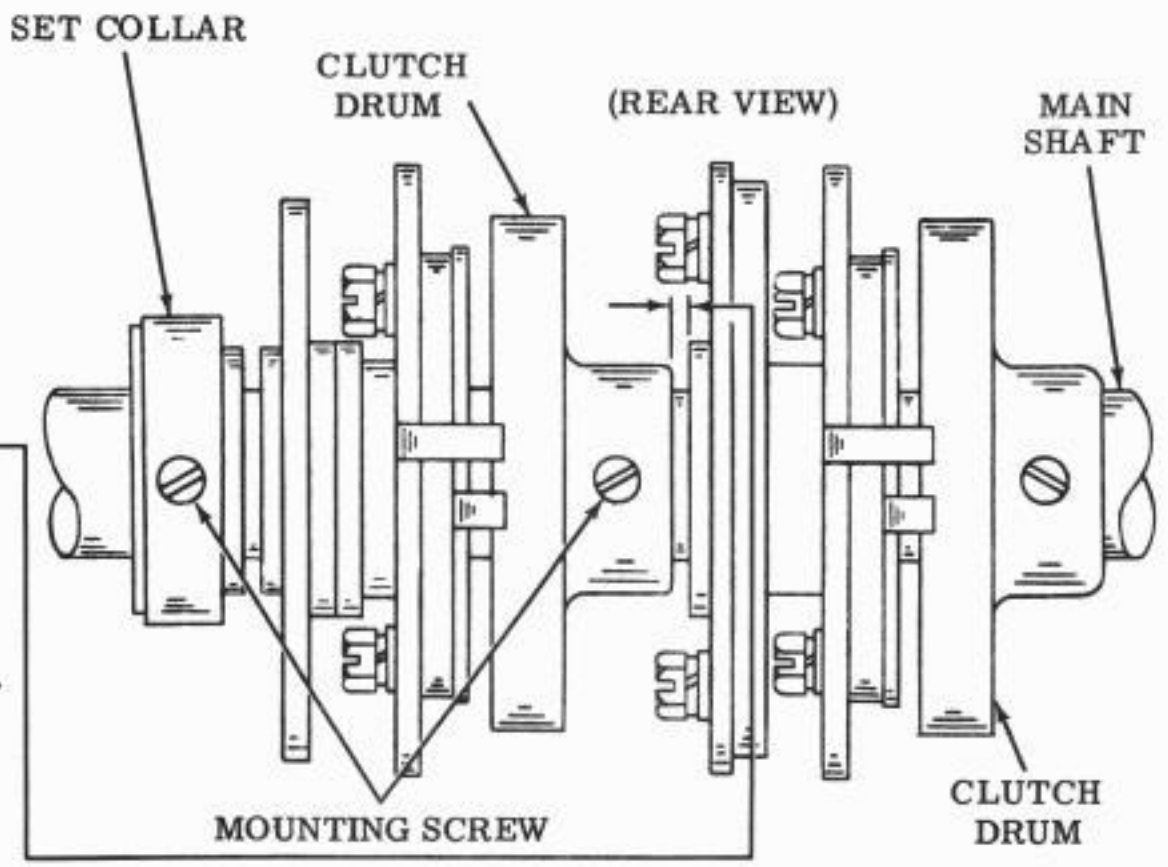
Min 0.055 inch---Max 0.070 inch

greater when clutch is engaged (unlatched) than when it is disengaged (latched). Measure clearance at the stop-lug which has the least.

To Adjust

Rotate the adjusting plate by means of a screwdriver or wrench with the plate clamp screws loosened.

Note 2: After making this adjustment, disengage the clutch, remove the drum screw, and rotate the drum in the normal direction. There should be no drag on the drum. If necessary, refine the adjustment toward the maximum clearance.



CLUTCH DRUM POSITION
(Except Selector)

Requirement

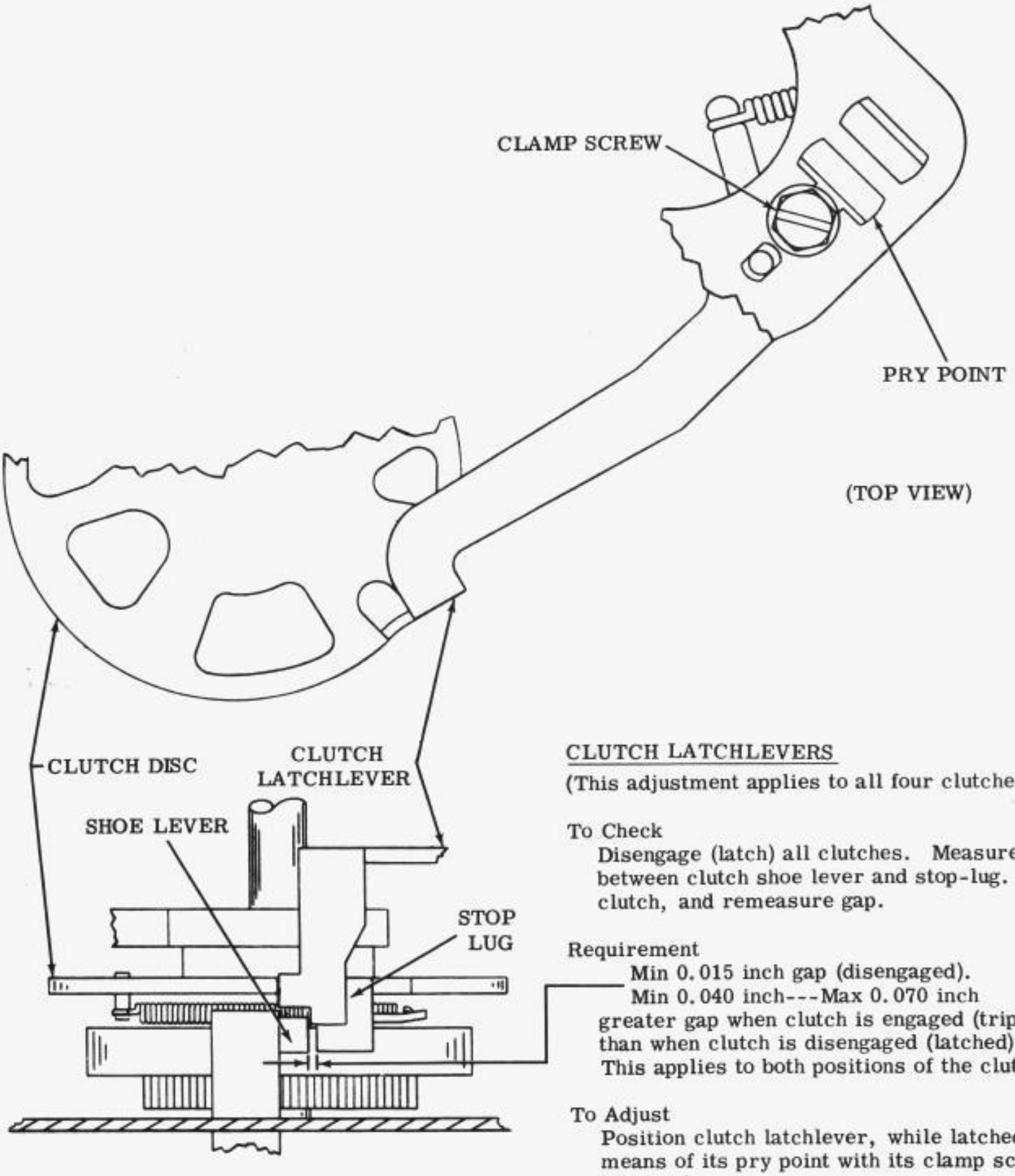
Each clutch should have some endplay

Max 0.015 inch.

To Adjust

Position the clutch drum on the main shaft with its mounting screw and spacing clutch set collar mounting screw loosened.

2.18 Positioning Mechanism



CLUTCH LATCHLEVERS

(This adjustment applies to all four clutches.)

To Check

Disengage (latch) all clutches. Measure gap between clutch shoe lever and stop-lug. Trip clutch, and remeasure gap.

Requirement

Min 0.015 inch gap (disengaged).
Min 0.040 inch---Max 0.070 inch greater gap when clutch is engaged (tripped) than when clutch is disengaged (latched). This applies to both positions of the clutch.

To Adjust

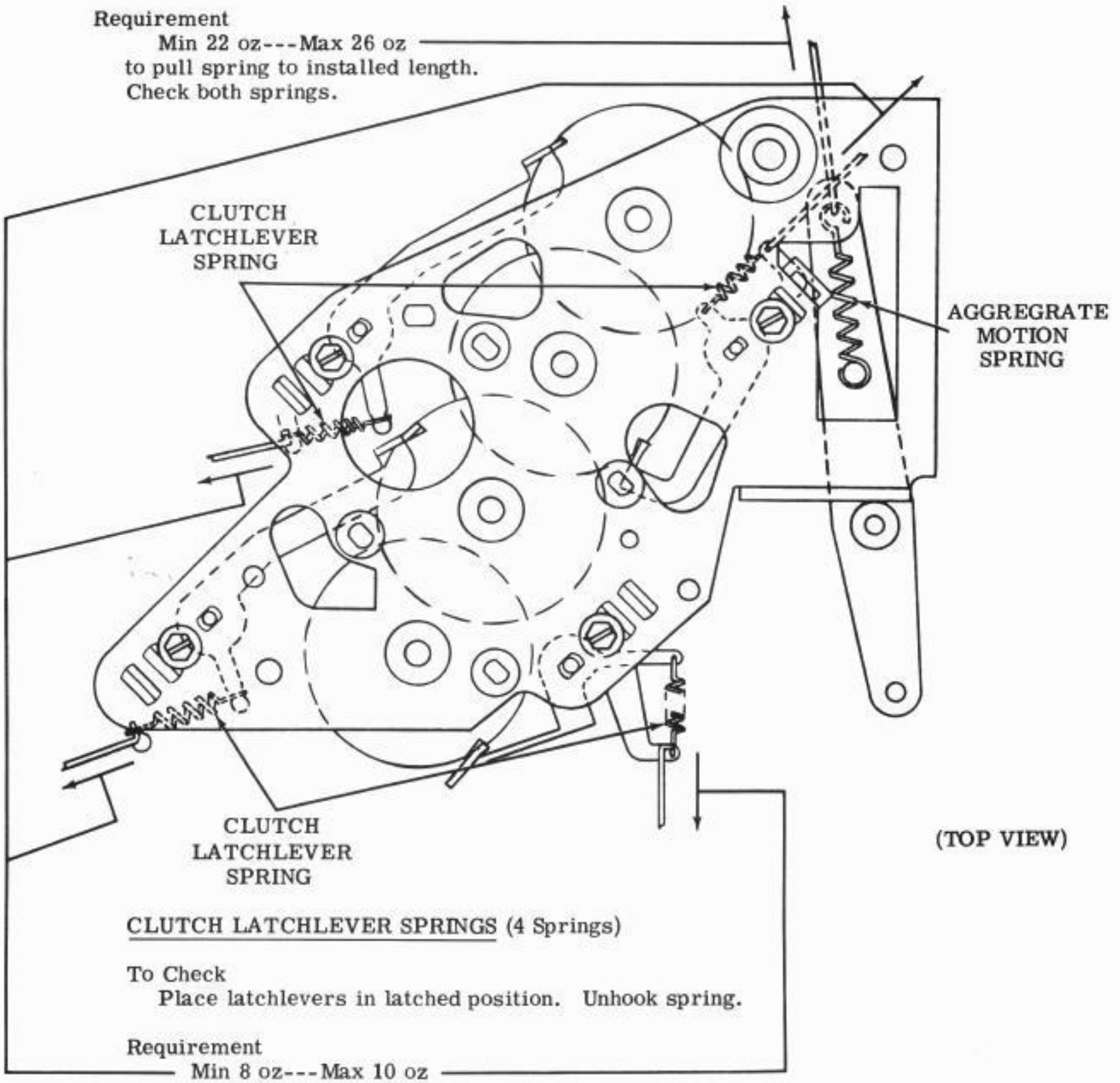
Position clutch latchlever, while latched, by means of its pry point with its clamp screw loosened.

2.19 Positioning Mechanism

AGGREGATE MOTION SPRING

To Check
Select "E" code combination, and rotate unit to stop position. Unhook the spring.

Requirement
Min 22 oz---Max 26 oz
to pull spring to installed length.
Check both springs.



(TOP VIEW)

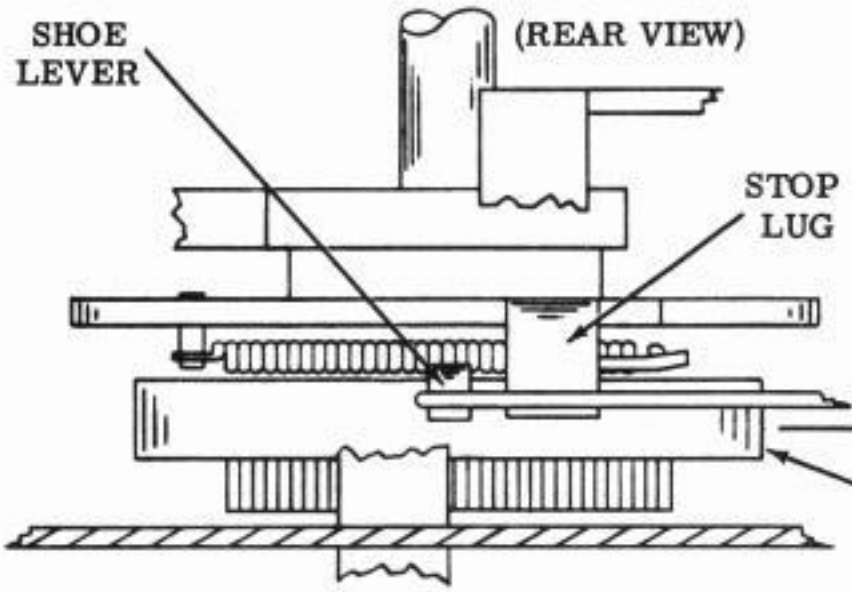
CLUTCH LATCHLEVER SPRINGS (4 Springs)

To Check
Place latchlevers in latched position. Unhook spring.

Requirement
Min 8 oz---Max 10 oz
to pull spring to installed length.

Note: This adjustment applies to all four positioning clutches.

2.20 Positioning Mechanism (continued) and Function Mechanism (continued)



CLUTCH SHOE LEVER SPRING

To Check
Trip (engage) clutch. Hold clutch.

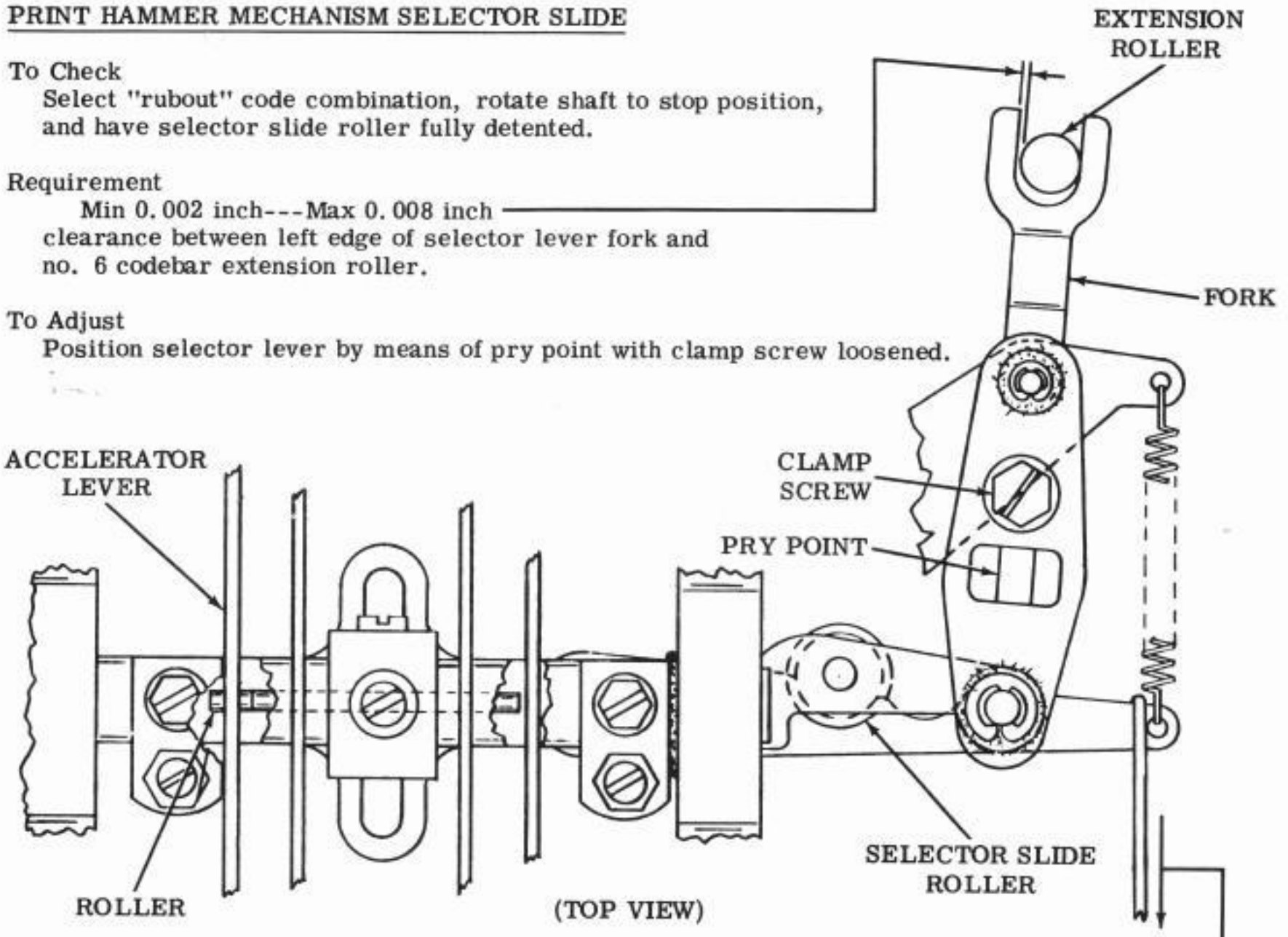
Requirement
Min 9 oz---Max 11 oz
to move shoe lever into contact with stop-lug.

PRINT HAMMER MECHANISM SELECTOR SLIDE

To Check
Select "rubout" code combination, rotate shaft to stop position, and have selector slide roller fully detented.

Requirement
Min 0.002 inch---Max 0.008 inch
clearance between left edge of selector lever fork and no. 6 codebar extension roller.

To Adjust
Position selector lever by means of pry point with clamp screw loosened.



DETENT SPRING

To Check
Operate unit to stop position with detent lever fully detented.

Requirement
Min 2-1/2 oz---Max 3-1/4 oz
to start lever moving.

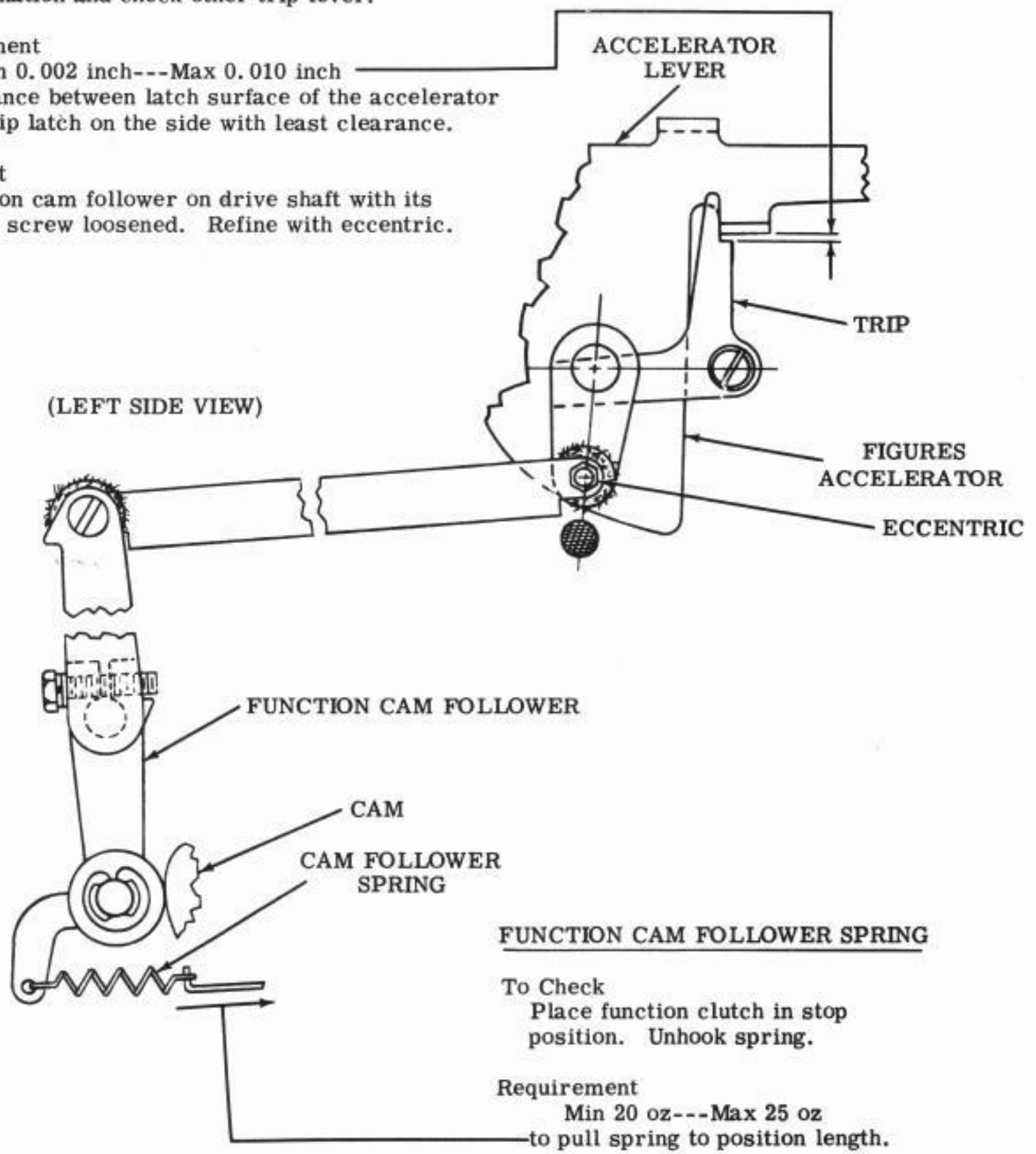
2.21 Function Mechanism (continued)

PRINT HAMMER ACCELERATOR TRIP LEVER OVERTRAVEL

To Check
Select "rubout" code combination, and rotate main shaft until the print mechanism cam follower is on high part of function cam. Select "blank" code combination and check other trip lever.

Requirement
Min 0.002 inch---Max 0.010 inch clearance between latch surface of the accelerator and trip latch on the side with least clearance.

To Adjust
Position cam follower on drive shaft with its clamp screw loosened. Refine with eccentric.

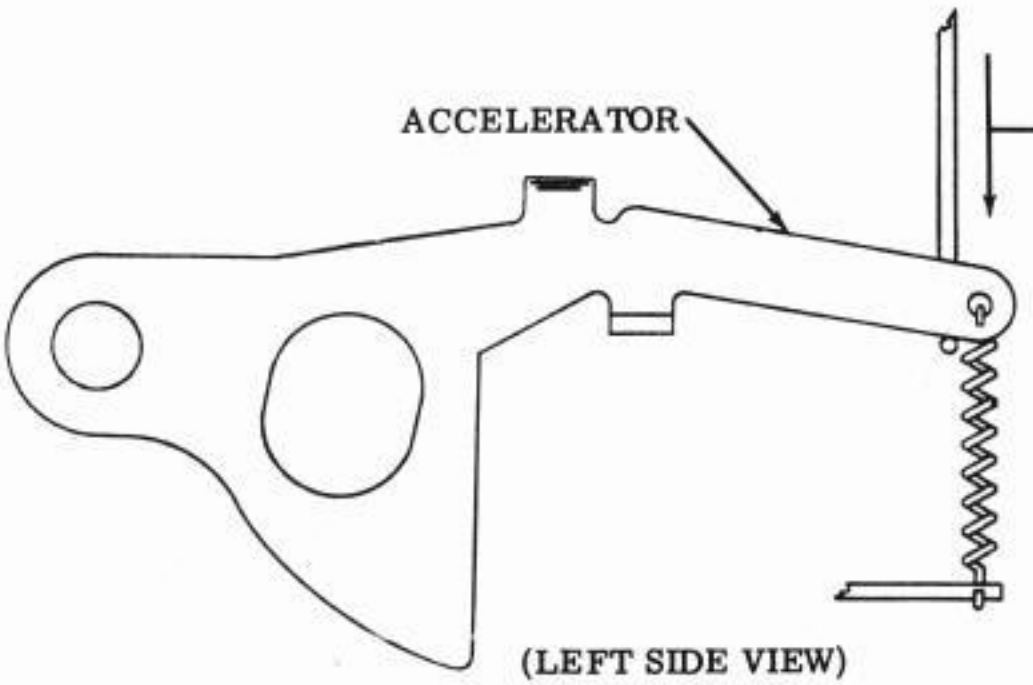


FUNCTION CAM FOLLOWER SPRING

To Check
Place function clutch in stop position. Unhook spring.

Requirement
Min 20 oz---Max 25 oz to pull spring to position length.

2.22 Function Mechanism (continued)



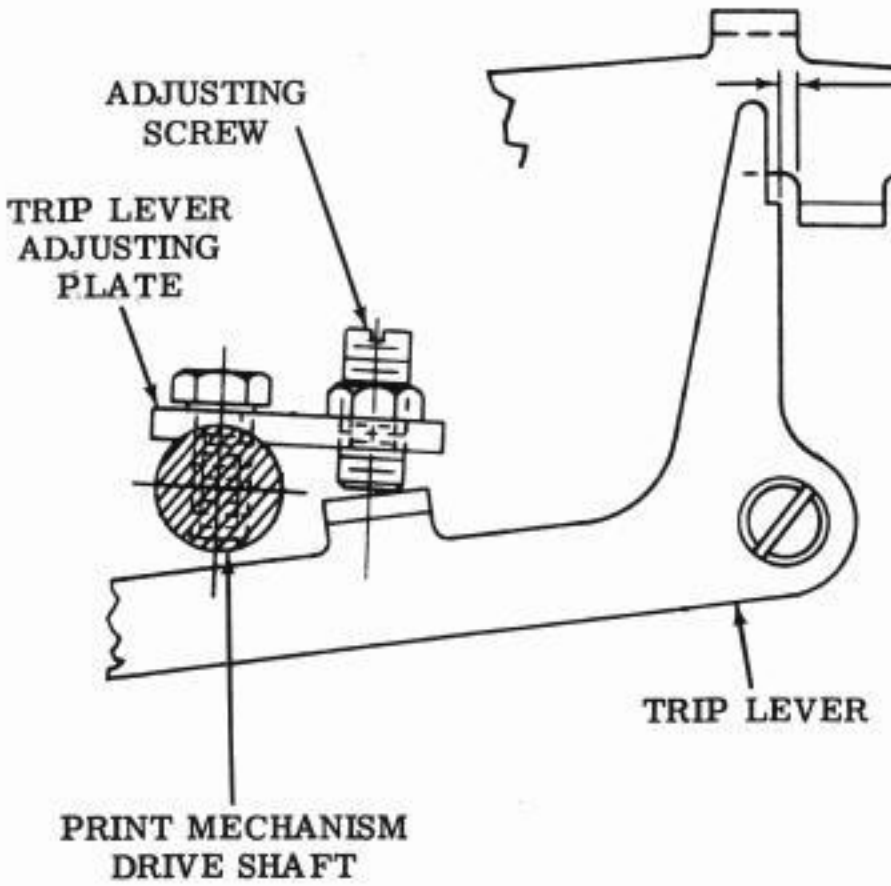
ACCELERATOR DRIVE SPRING

To Check
Place unit in stop position.

Requirement
Min 10 oz---Max 13 oz to start the lever moving.

DRIVE SPRING

(LEFT SIDE VIEW)



(LEFT SIDE VIEW)

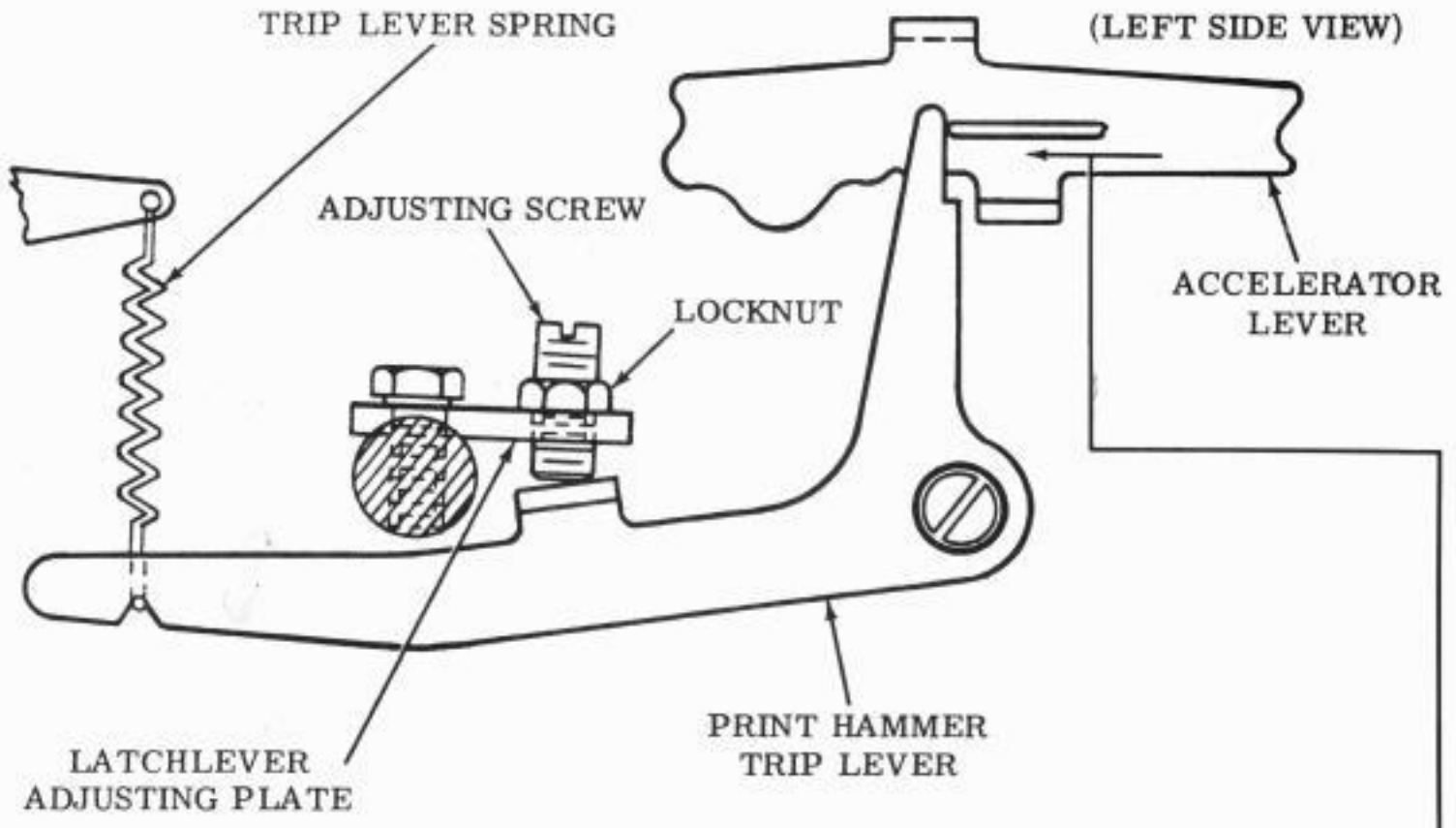
PRINT HAMMER TRIP LEVER

To Check
Place unit in stop position and manually raise the accelerator lever so that its latch extension lines up with the latching surface of the latchlever.

Requirement
Min 0.002 inch---Max 0.015 inch clearance between latchlever and accelerator extension. This applies to both latches.

To Adjust
Rotate the adjusting screw in the adjusting plate with its locknut loosened.

2.23 Function Mechanism (continued)



PRINT HAMMER TRIP LEVER SPRING

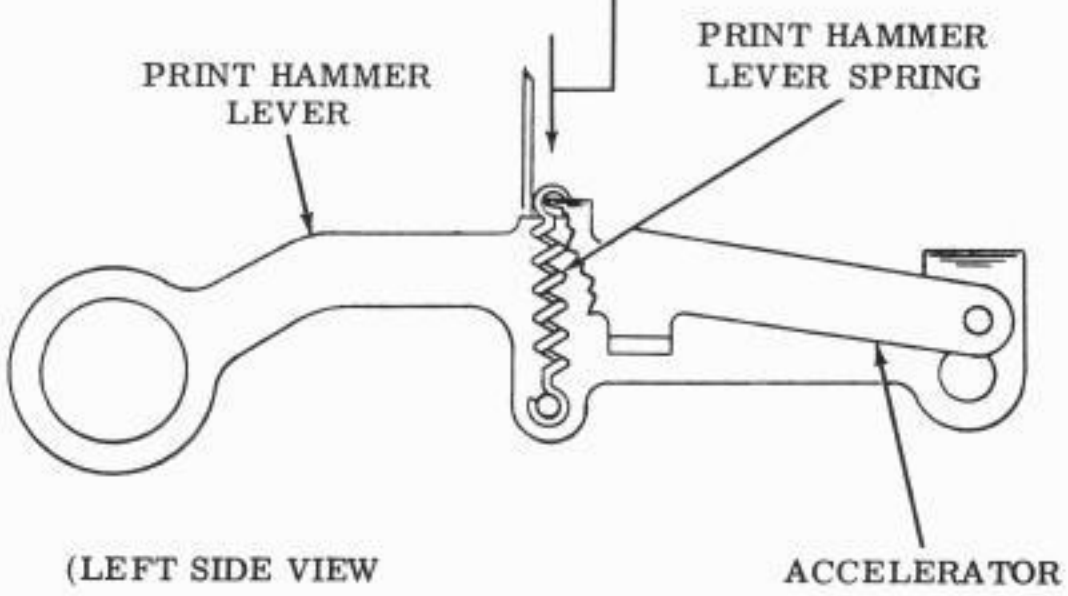
To Check
Place unit in stop position.

Requirement
Min 3 oz---Max 5 oz
to start lever moving away from the accelerator.

PRINT HAMMER LEVER SPRING

To Check
Place unit in stop position.

Requirement
Min 1 oz---Max 2 oz
to move lever away from accelerator.



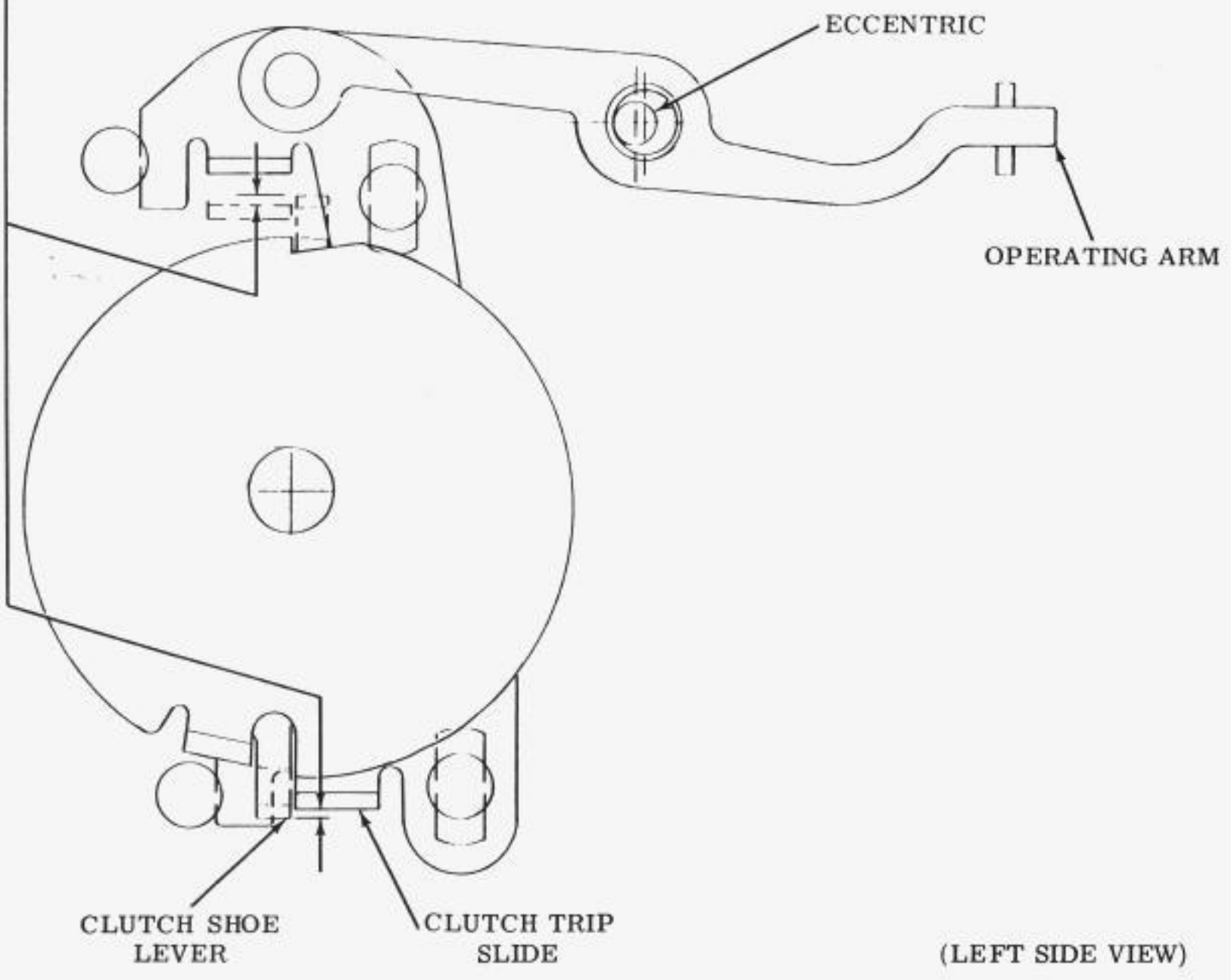
2.24 Positioning Mechanism (continued)

TYPEBOX RAIL POSITIONING TRIP SLIDE

To Check
Detent the no. 5 codebar alternately in the marking and spacing position.

Requirement
The clutch shoe lever should engage the marking and spacing stop surfaces of the trip slide by approximately equal amount when the no. 5 codebar is detented to each position.

To Adjust
Position the trip slide arm operating arm by rotating the eccentric.



(LEFT SIDE VIEW)

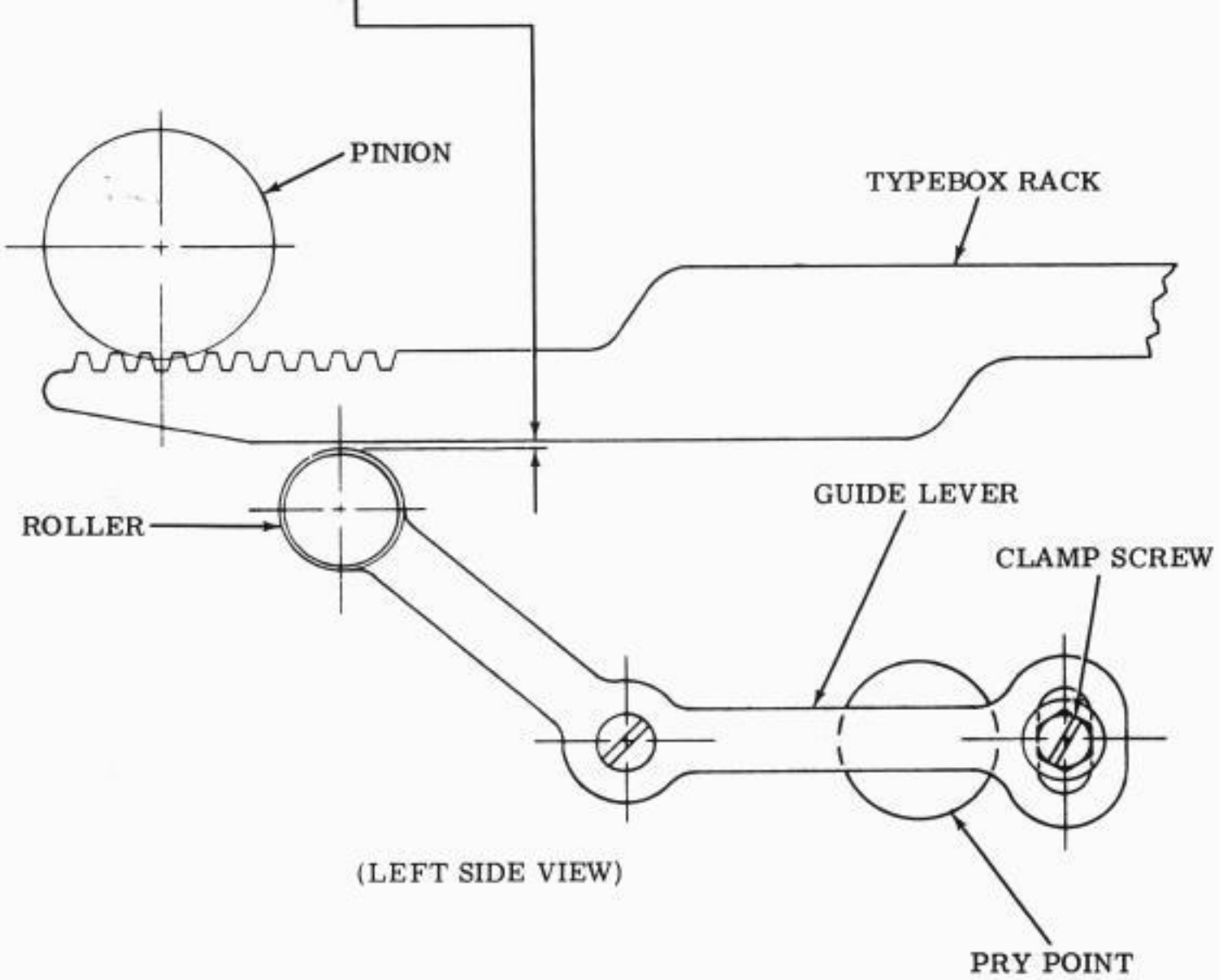
2.25 Positioning Mechanism (continued)

TYPEBOX RACK AND PINION

To Check
Take up play between typebox rack and pinion.

Requirement
Some---to---0.003 inch clearance between the typebox rack and its roller. This requirement applies to both racks.

To Adjust
Position the guide lever at its pry point with its clamp screw loosened.



(LEFT SIDE VIEW)

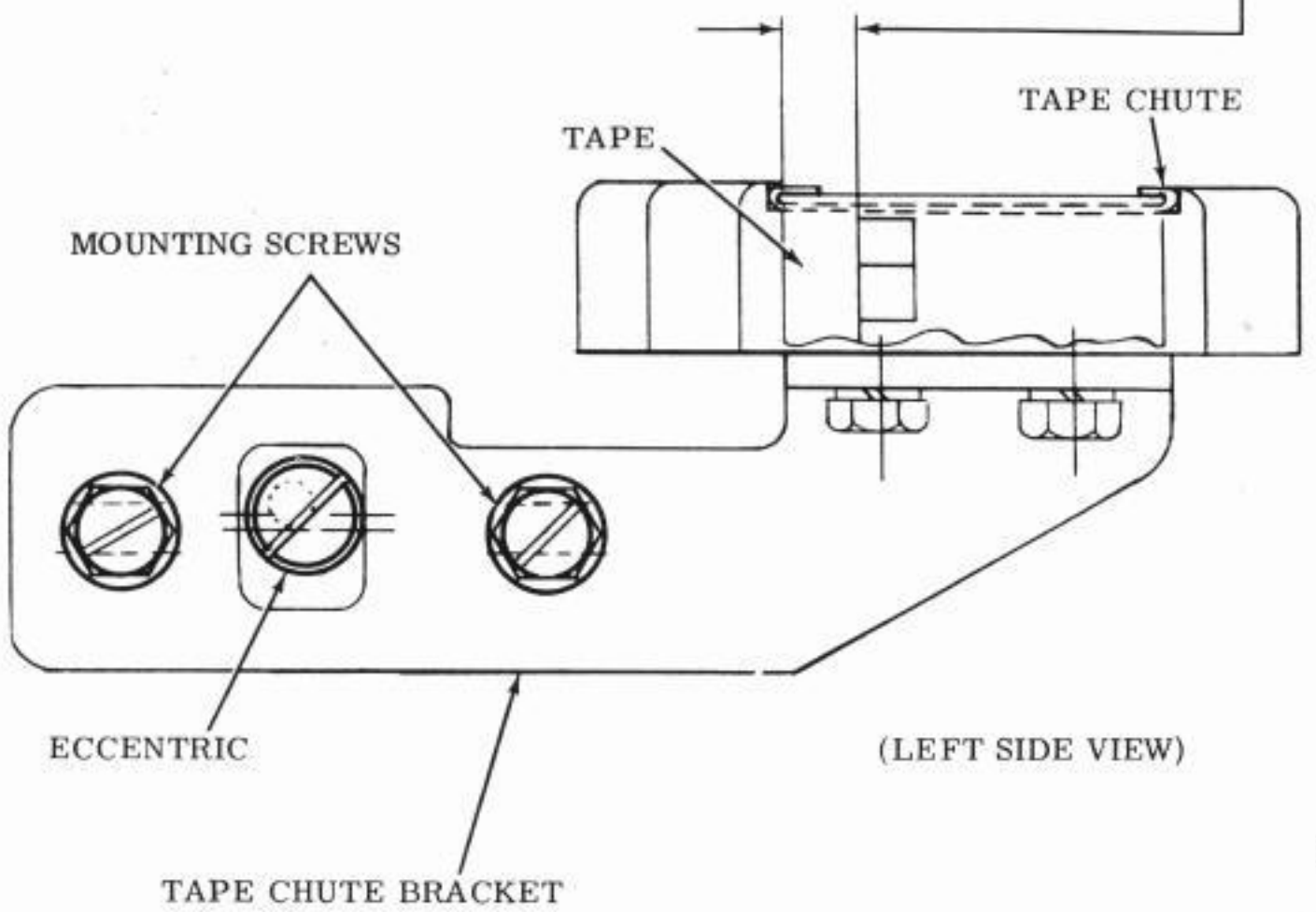
2.26 Function Mechanism (continued)

TAPE MARGIN

To Check
Hold the tape against the rear edge of the tape guide.

Requirement
The margin between the top edge of the tape and the top edge of the letter T
Min 0.170 inch---Max 0.210 inch (Min 11/64 inch---Max 7/32 inch)

To Adjust
Position the mounting bracket by means of the eccentric with the bracket mounting screws loosened.

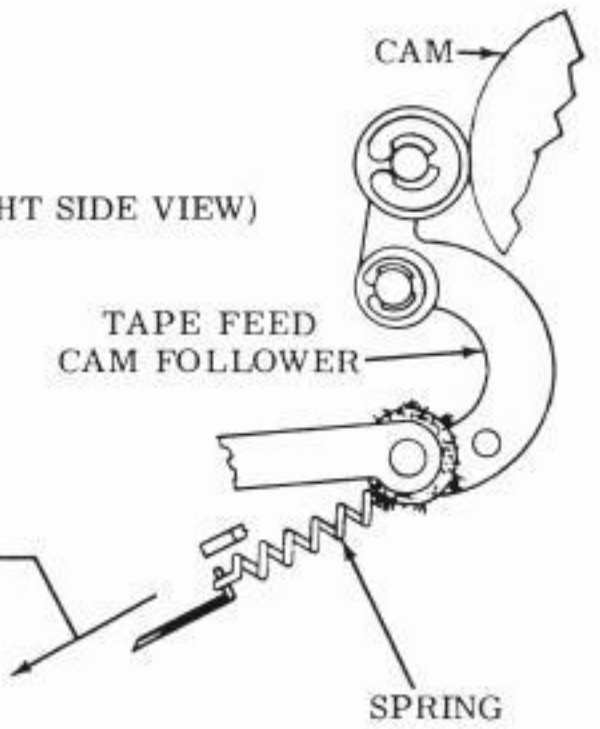


(LEFT SIDE VIEW)

TAPE FEED - RIBBON FEED CAM FOLLOWER SPRING

To Check
Unhook the function cam follower spring from its bracket.

Requirement
Min 18 oz---Max 23 oz
to pull spring to installed length.



(RIGHT SIDE VIEW)

2.27 Function Mechanism (continued)

TAPE FEED PAWL SPRING

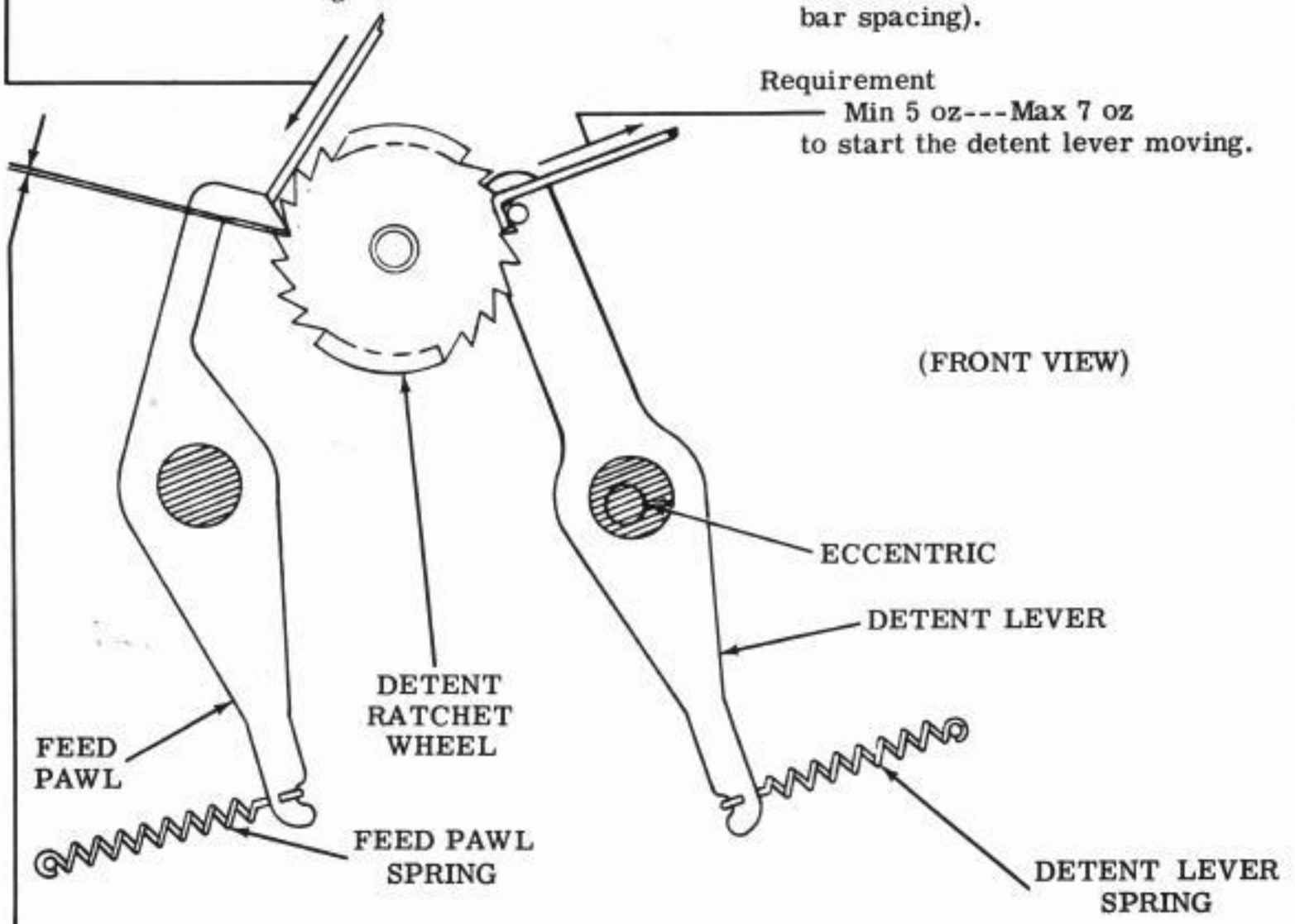
To Check
Place unit in stop position with typebox rail toward rear (no. 5 codebar marking).

Requirement
Min 2 oz---Max 3 oz to start lever moving.

TAPE FEED RATCHET DETENT

To Check
Place unit in stop position with typebox rail toward the front (no. 5 codebar spacing).

Requirement
Min 5 oz---Max 7 oz to start the detent lever moving.



TAPE FEED WHEEL DETENT

To Check
Trip codebar clutch, rotate main shaft until feed pawl just contacts ratchet tooth. Step feed shaft to detented position. Rotate main shaft until feed pawl is in lowest position.

Requirement
Feed pawl should advance feed ratchet one full tooth with minimum perceptible overtravel beyond fully detented position.

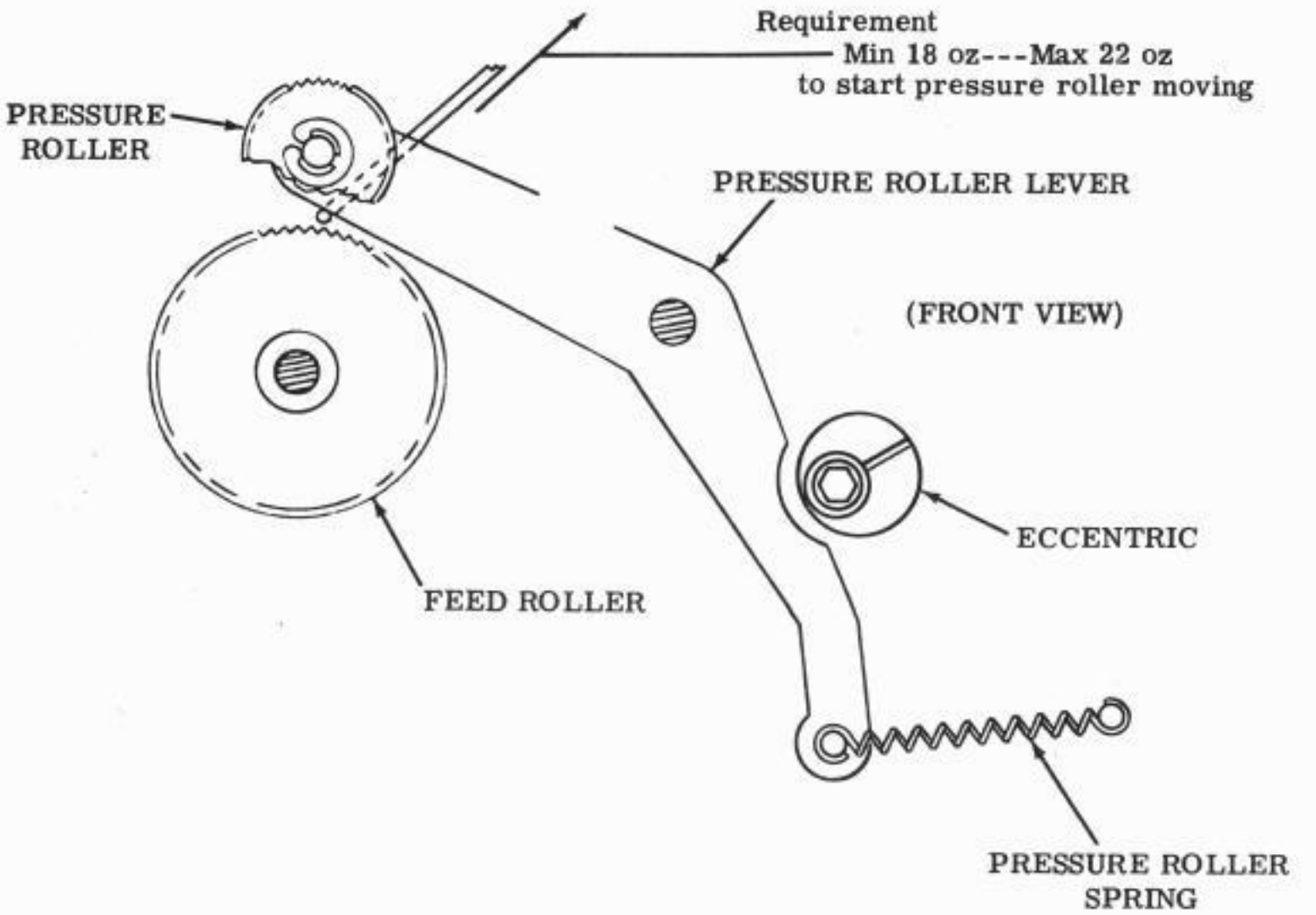
To Adjust

Position detent by rotating the detent eccentric. Keep high part of eccentric to left of center.

Note: If necessary, loosen clamp screw on feed arm hub and take up play in hole to favor adjustment.

2.28 Function Mechanism (continued)

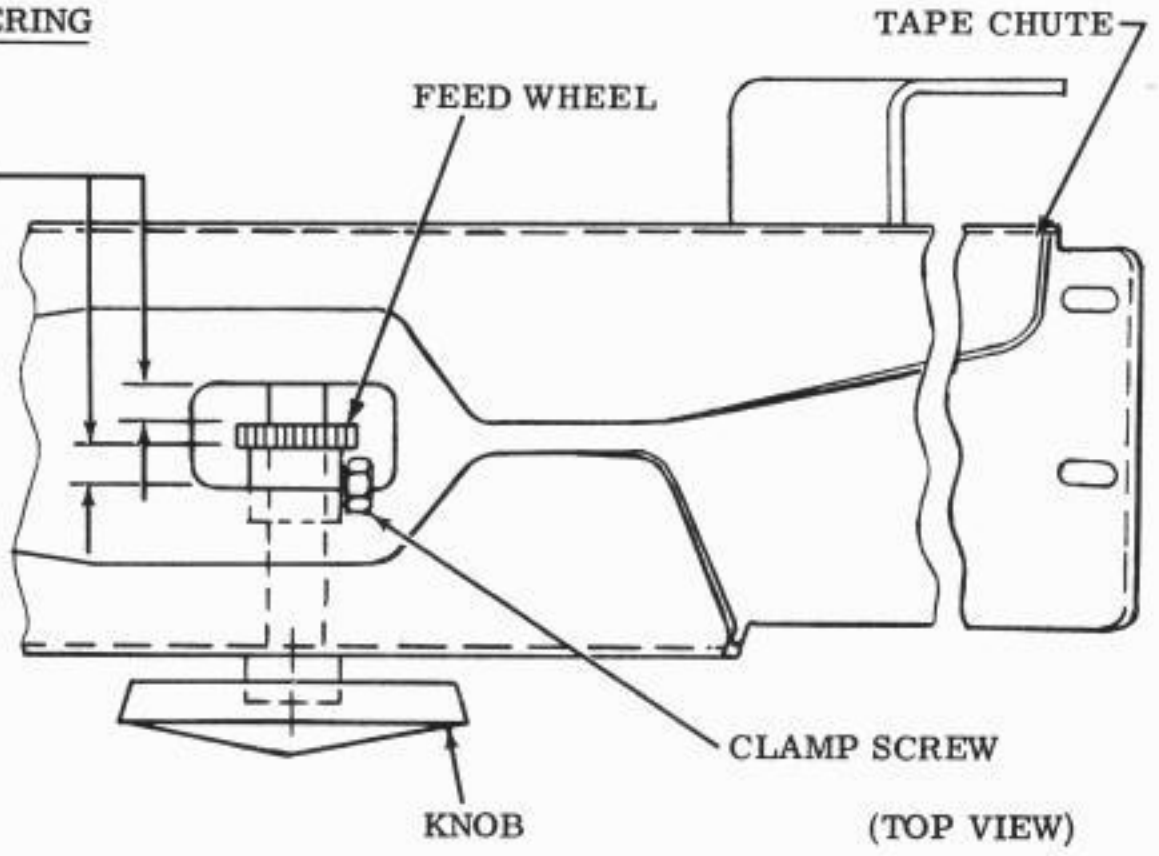
PRESSURE ROLLER SPRING TENSION



TAPE FEED WHEEL CENTERING

Requirement
The tape feed wheel should be centered within the tape chute opening, as gauged by eye.

To Adjust
Position the feed wheel on its shaft with its clamp screw loosened.



2.29 Function Mechanism (continued)

RIBBON FEED MECHANISM DRIVE SLIDE

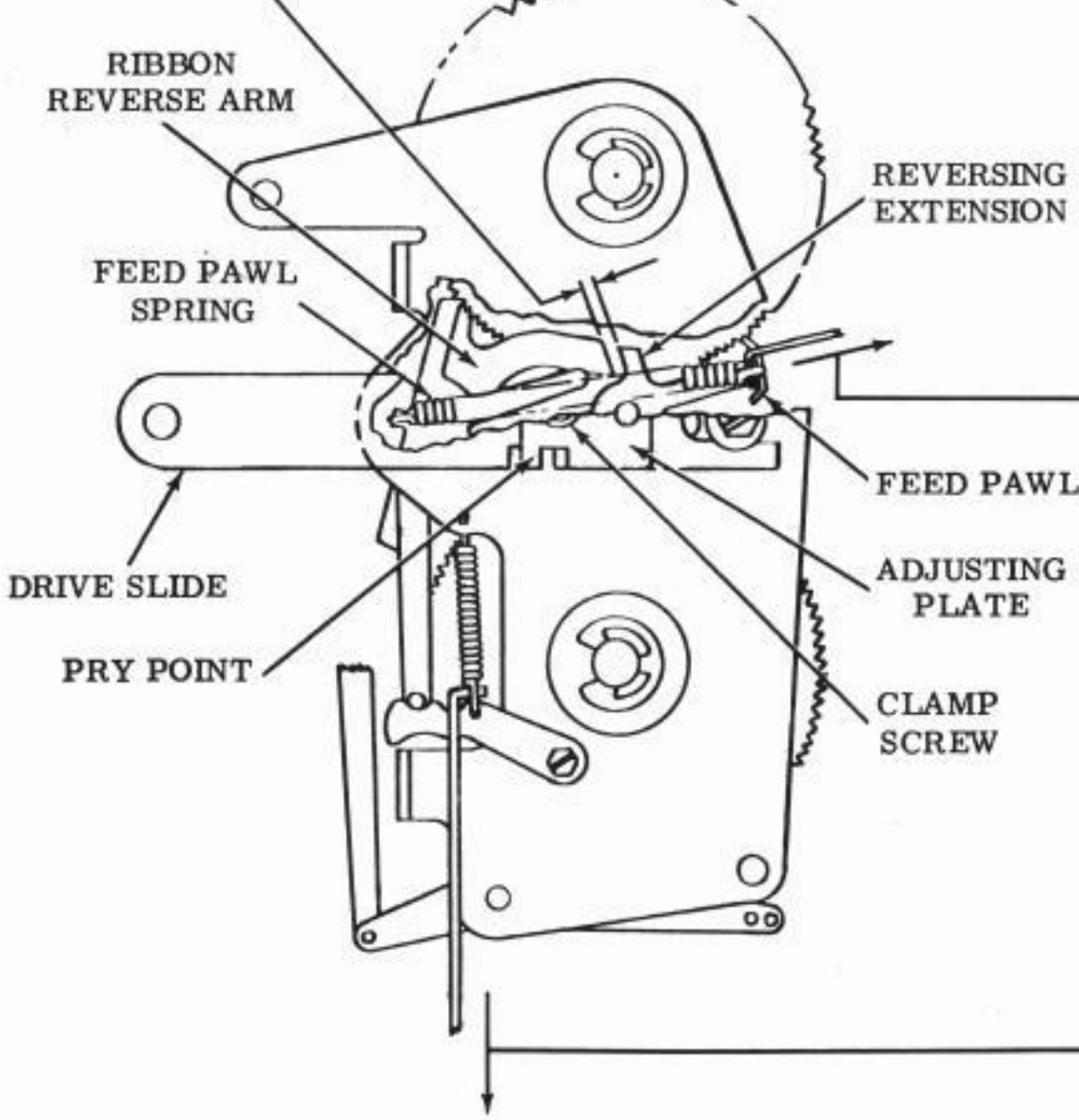
To Check
Place ribbon feed cam follower on high part of function cam.

Requirement
Some clearance between the blocking edge of the ribbon reverse arm and the reversing extension of the feed pawl when the ribbon is moved under the lower reversing extension of the feed pawl. The feed pawl should not feed more than two teeth. This applies to both upper and lower feed pawl extensions.

To Adjust
Position adjusting plate with clamp screw loosened.

RIBBON RATCHET WHEEL TORSION

Requirement
Min 1 oz---Max 3 oz
to start ratchet wheel moving



(RIGHT SIDE VIEW)

FEED PAWL SPRING

Requirement
Min 4 oz---Max 6 oz
to pull spring to
installed length.

DETENT SPRING

To Check
Place detent in either fully detented position.

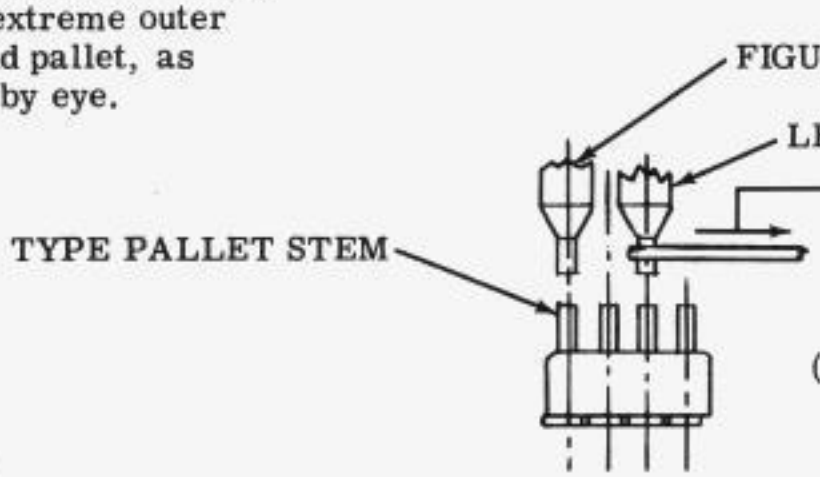
Requirement
Min 2 oz---Max 4 oz
to pull spring to
installed length

2.30 Positioning Mechanism (continued)
and Function Mechanism (continued)

TYPEBOX ALIGNMENT (FRONT TO REAR)

To Check
Select no. 5 and 6 codebars marking, and place unit in stop position. Push Figures print hammer down against pallet stem.

Requirement
Print hammer should be centered (front to rear) on the extreme outer left hand pallet, as gauged by eye.



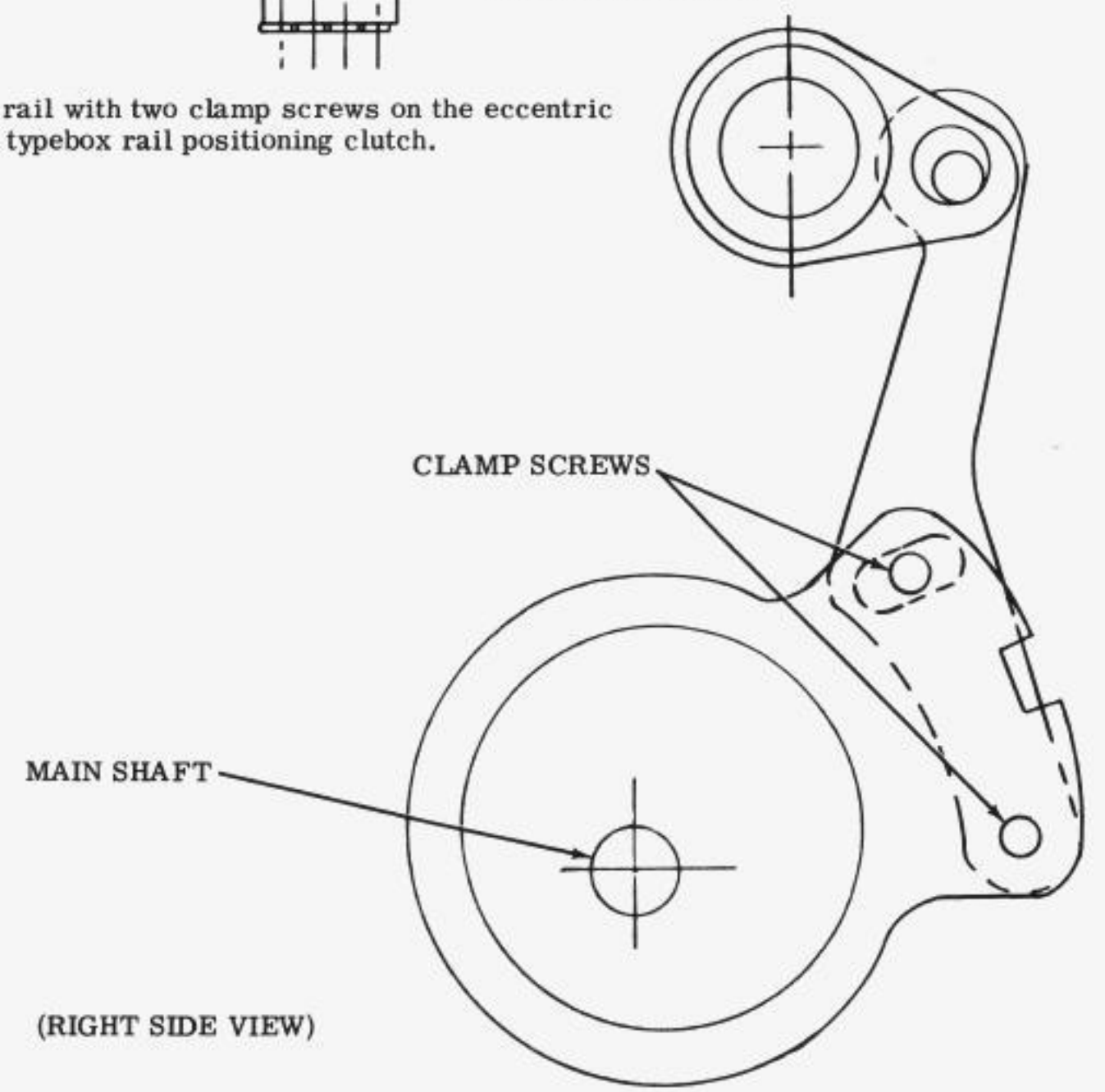
(LEFT SIDE VIEW)

To Adjust
Position the typebox rail with two clamp screws on the eccentric follower lever of the typebox rail positioning clutch.

PRINT HAMMER HEAD SPRING

To Check
Place unit in stop position.

Requirement
Min 2 oz---Max 3 oz to start hammer head moving.



(RIGHT SIDE VIEW)

2.31 Positioning Mechanism (continued)

TYPEBOX ALIGNMENT (TRANSVERSE)

To Check
Under power, select rubout (1, 2, 3, 4, 5, 6 marking) followed by E (1 marking). Push print hammer straight downward.

(1) Requirement
The print hammer should be centered on the stem of the E type pallet. Gauged by eye.

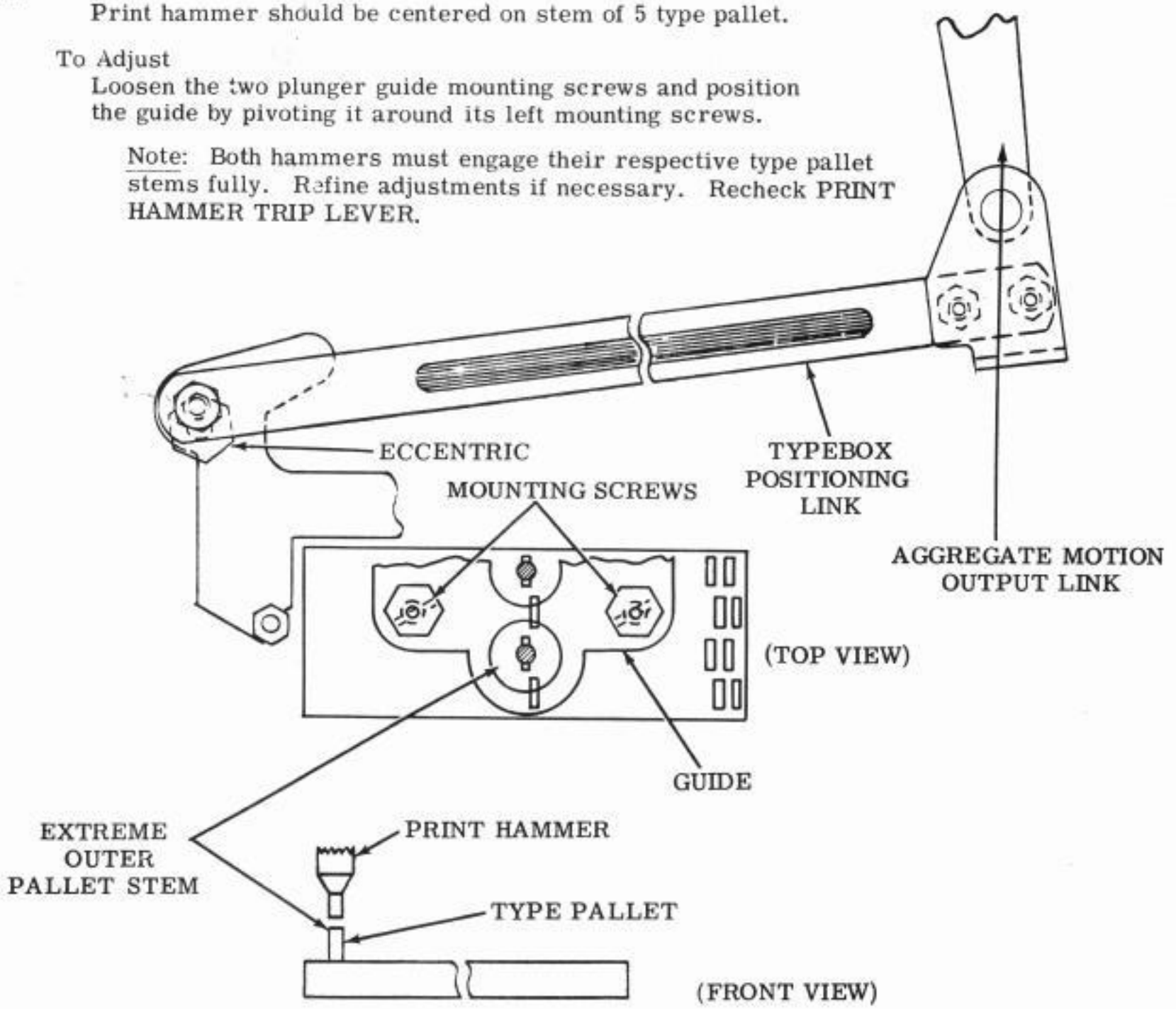
To Adjust
Rotate the eccentric on the typebox positioning link.

To Check
Under power, select rubout followed by selection of 5 (1 and 6 marking). Push figures print hammer straight downward.

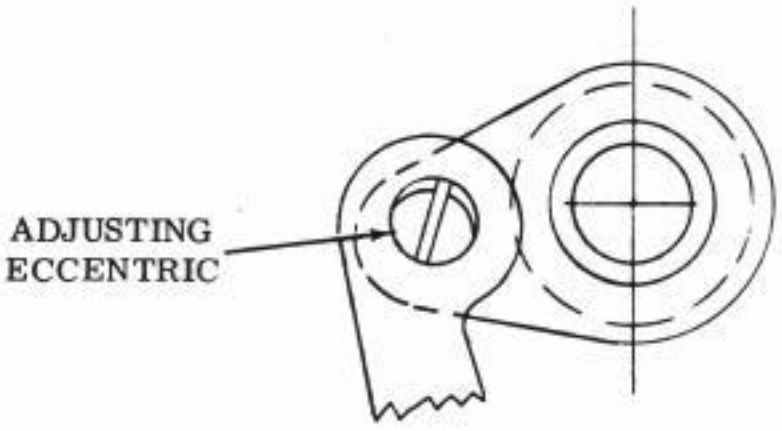
(2) Requirement
Print hammer should be centered on stem of 5 type pallet.

To Adjust
Loosen the two plunger guide mounting screws and position the guide by pivoting it around its left mounting screws.

Note: Both hammers must engage their respective type pallet stems fully. Refine adjustments if necessary. Recheck PRINT HAMMER TRIP LEVER.



2.32 Positioning Mechanism (continued)



(LEFT SIDE VIEW)

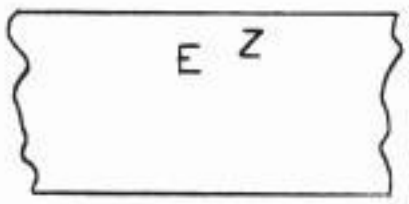
CHARACTER ALIGNMENT

To Check
Select two character code combinations "E" and "Z."

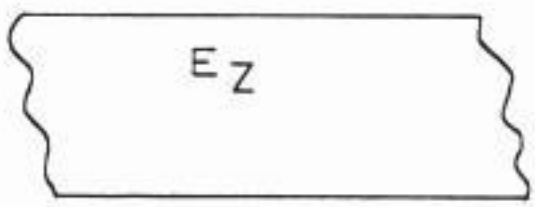
Requirement
Characters should be in line within Max 0.008 inch.

To Adjust
Position the eccentric on the typebox rail drive arm so that the slot is aligned vertically and the large chamfer on its head is facing upward. Under power, select "E" code combination (no. 1 codebar marking) and "Z" code combination (no. 1 and 5 codebars marking). If E is higher than Z, turn the eccentric screw clockwise. If Z is higher than E, turn the eccentric screw counterclockwise. Recheck TYPEBOX ALIGNMENT (FRONT TO REAR).

(TOP VIEW)



TURN ADJUSTING SCREW COUNTERCLOCKWISE



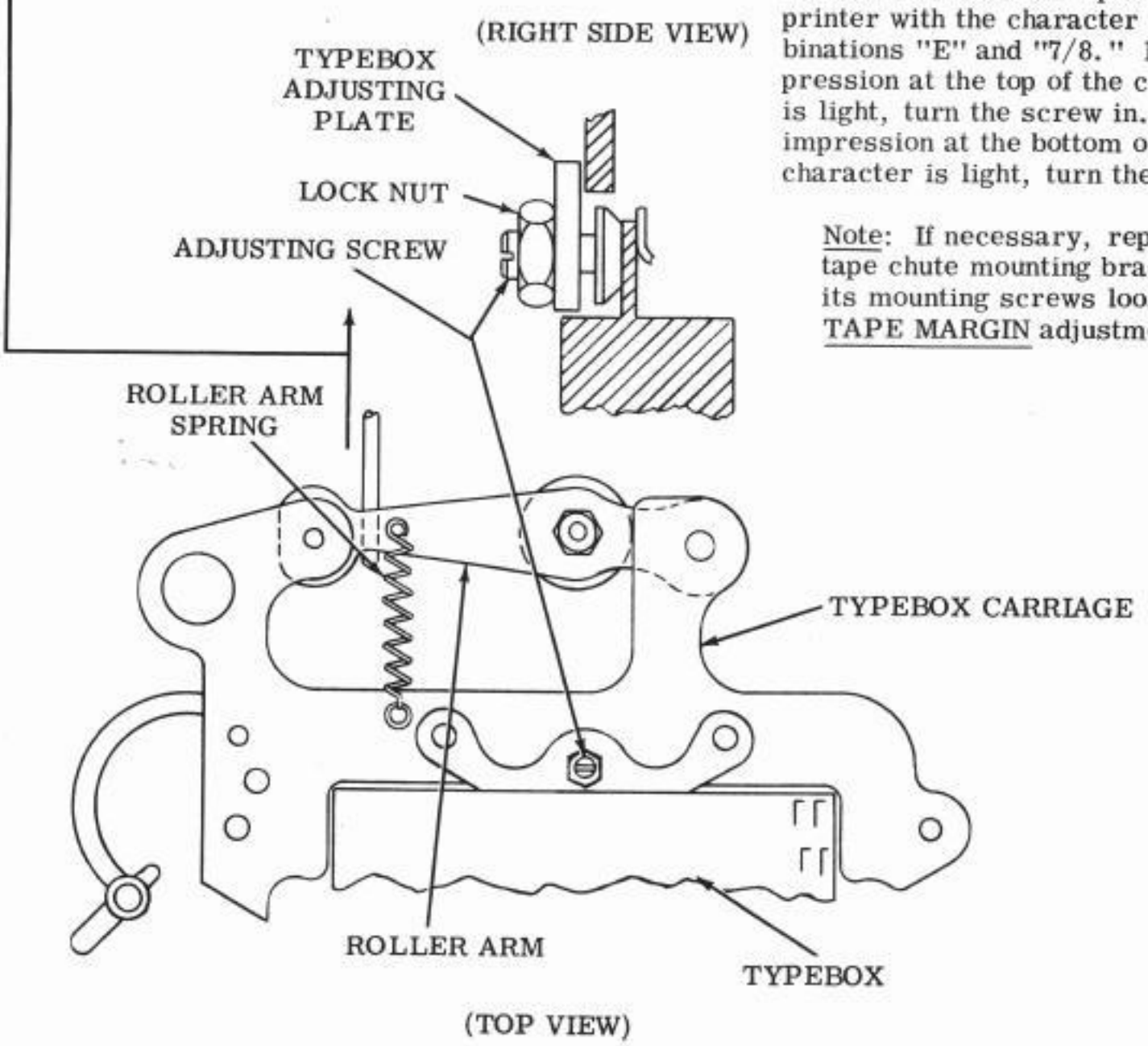
TURN ADJUSTING SCREW CLOCKWISE

2.33 Positioning Mechanism (continued)

TYPEBOX CARRIAGE ROLLER ARM SPRING

Requirement

Min 18 oz---Max 23 oz to start front roller nearest typebox latch moving away from carriage track.



TYPEBOX ALIGNMENT

Requirement

The impression printed by a type pallet should be equal at the top and bottom of the characters, as gauged by eye.

To Adjust

Position the typebox carriage so that the adjusting screw is accessible. Loosen its lock nut. Operate the printer with the character code combinations "E" and "7/8." If the impression at the top of the character is light, turn the screw in. If the impression at the bottom of the character is light, turn the screw out.

Note: If necessary, reposition the tape chute mounting bracket with its mounting screws loosened. See TAPE MARGIN adjustment.