# 28 SEQUENCE SELECTOR

# UNIT AND BASE

# REQUIREMENTS AND ADJUSTMENTS

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## 1. GENERAL

1.01 The material herein is arranged in three parts: Part 1 contains general pertinent information regarding the 28 Sequence Selector Unit. Part 2 contains adjusting information and spring requirements for a basic unit. Part 3 contains adjusting information and spring requirements for variable features.

1.02 This section contains the requirements and adjustments for the 28 Sequence Selector Unit and Base. The material herein, together with the section containing the general requirements on teletypewriter apparatus, provides the complete adjusting information for maintenance.

1.03 This section is reissued:

(a) To incorporate adjusting information for the selector armature downstop.

(b) To incorporate adjusting information for selector units with two anti-freeze button armatures.

(c) To rearrange text matter, page headings, and assembly grouping to conform to the new standard format.

(d) Since this is a general revision, marginal arrows are omitted.

1.04 In this practice, all references to direction are indicated viewing the apparatus from the front. Before making the adjustments, disconnect the electric power and remove the sequence selector unit from its base. It can then be placed safely in the following positions:

(1) Upright on its four feet.

(2) Tilted backward on its rear feet and the rear points of the side frames.

(3) Bottom upward, resting on the two upper points of each side frame.

1.05 When a requirement calls for the clutch to be disengaged, the clutch shoe lever must be fully latched between its trip lever and latch lever 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.

Note: When the main shaft is rotated by hand, the clutches do not fully disengage upon reaching their stop positions. In order to relieve drag on the clutches and permit the main shaft to rotate freely, use a screwdriver to apply pressure on the stop lug of each clutch disc to cause it to engage its latch lever and thus fully disengage the internal expansion clutch.

CAUTION: BE SURE ALL CLUTCHES ARE FULLY DISENGAGED BEFORE PLACING THE SEQUENCE SELECTOR UNIT ON THE BASE AND SWITCHING ON THE POWER.

1.06 Manual Selection of Characters or Functions: To manually operate the sequence selector unit while it is removed from its base, proceed as follows:

(1) Attach the armature clip to the selector magnet armature by carefully inserting the flat formed end of the armature clip over the top of the armature between the pole pieces and then hooking the projection under the edge of the armature. Finally, hook the top end of the armature clip over the top of the bakelite guard of the selector coil terminal. The spring tension of the armature clip will hold the selector magnet armature in the marking (attracted) position.

(2) While holding the selector magnet armature operated by means of the armature clip, use the handwheel included with the spe-

cial tools for servicing the 28 Sequence Selector Unit to manually rotate the main shaft in a counterclockwise direction until all clutches are brought to their disengaged position.

(3) Fully disengage all clutches in accordance with 1.05, Note.

(4) Release selector magnet armature momentarily to permit selector clutch to engage.

(5) Turn main shaft slowly until selector lever No. 5 just reaches the peak of its cam.

(6) Strip the pushlevers from the selector levers, which are spacing in the code combination of the character function that is being selected. The selector levers move in succession starting with the inner lever No. 1.

(7) Continue to rotate main shaft until all operations initiated by the selector action clear through the unit.

1.07 Conditioning Operations for the Sequence Selector Unit (Primarily Intended for Shop Use): In some cases it may be necessary to completely readjust the unit. Before performing this operation, proceed as follows:

(1) Loosen the shift lever driver arm clamp screw.

(2) Loosen function reset bail blade mounting screws.

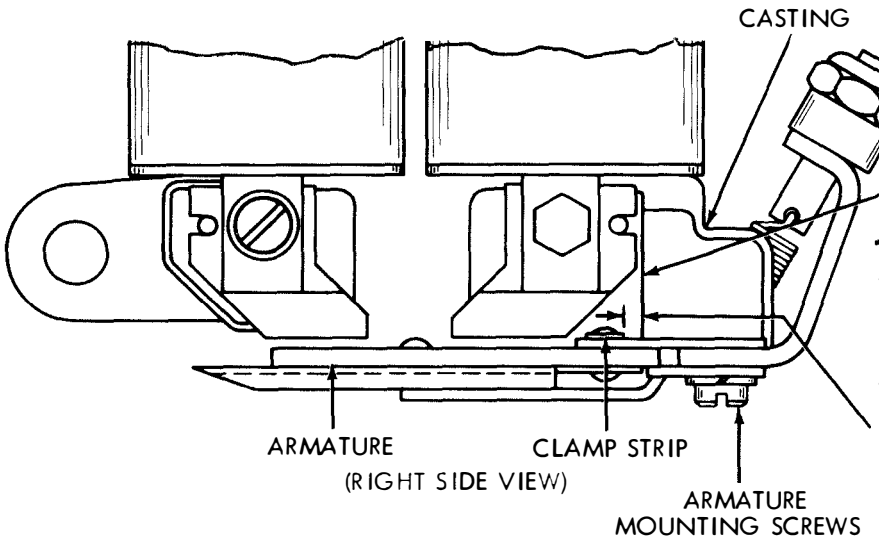
(3) Loosen the shift code bar guide clamp nuts.

1.08 The following figures show the adjusting tolerances, positions of moving parts, and spring tensions. The illustrations are arranged so that the adjustments are in the sequence that would be followed if a complete readjustment of the 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. Basic Units

### 2.01 Selector Mechanism

NOTE: TO FACILITATE MAKING THE FOLLOWING ADJUSTMENTS, REMOVE THE RANGE FINDER AND SELECTOR MAGNET ASSEMBLIES. TO INSURE BETTER OPERATION, PULL A PIECE OF KS BOND PAPER BETWEEN THE ARMATURE AND THE POLE PIECES TO REMOVE ANY OIL OR FOREIGN MATTER THAT MAY BE PRESENT. MAKE CERTAIN THAT NO LINT OR PIECES OF PAPER REMAIN BETWEEN THE POLE PIECES AND ARMATURE.

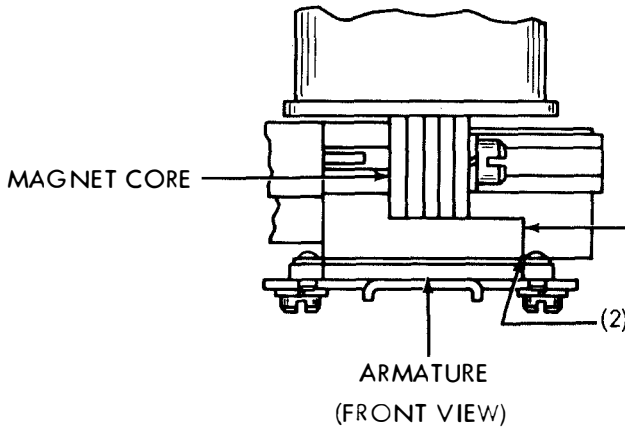



SELECTOR ARMATURE

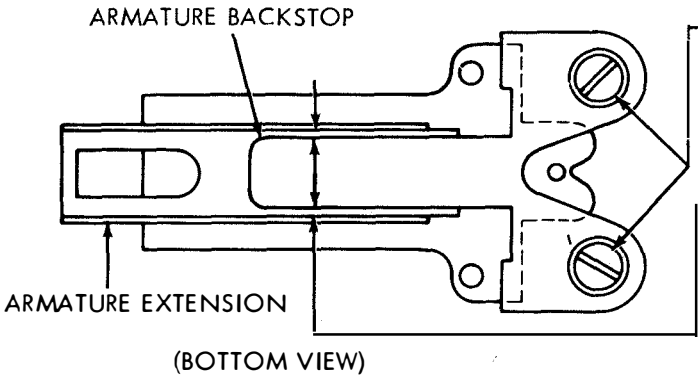
NOTE

THIS REQUIREMENT NEED NOT BE MADE NOR CHECKED IF THE SELECTOR MAGNET BRACKET AND RECEIVING MARGIN REQUIREMENTS ARE MET.

(1) REQUIREMENT (ARMATURE CLAMP STRIP)
CLEARANCE BETWEEN ARMATURE CLAMP STRIP AND CASTING.
MIN 0.025 INCH
MAX 0.045 INCH




(2) REQUIREMENT (ARMATURE ALIGNMENT)
OUTER EDGE OF ARMATURE SHOULD BE FLUSH WITHIN 0.015 INCH WITH OUTER EDGE OF POLE PIECES.




MOUNTING SCREWS

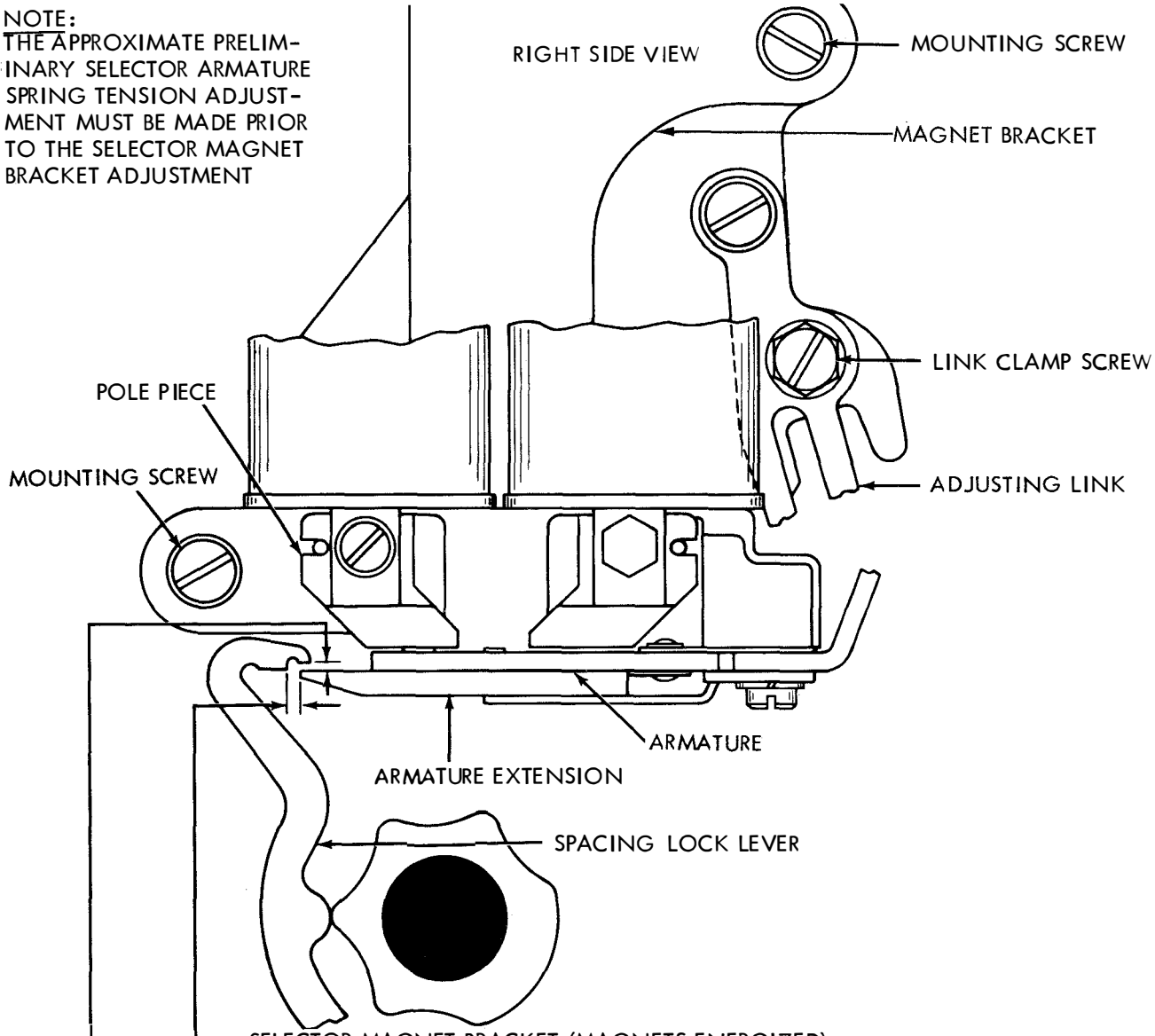
(3) REQUIREMENT (ARMATURE BACKSTOP ALIGNMENT - EARLY DESIGN)
CLEARANCE BETWEEN SIDES OF BACK-STOP AND SIDES OF ARMATURE EXTENSION.
MIN 0.010 INCH

TO ADJUST

1. POSITION ARMATURE SPRING ADJUSTING NUT TO HOLD ARMATURE FIRMLY AGAINST PIVOT EDGE OF CASTING.
2. POSITION ARMATURE AND BACKSTOP WITH MOUNTING SCREWS LOOSENED.

2.02 Selector Mechanism (continued)

NOTE:
THE APPROXIMATE PRELIMINARY SELECTOR ARMATURE SPRING TENSION ADJUSTMENT MUST BE MADE PRIOR TO THE SELECTOR MAGNET BRACKET ADJUSTMENT




SELECTOR MAGNET BRACKET (MAGNETS ENERGIZED)

(1) REQUIREMENT

SPACING LOCK LEVER ON HIGH PART OF CAM. ARMATURE IN CONTACT WITH POLE PIECE. CLEARANCE BETWEEN END OF ARMATURE EXTENSION AND SHOULDER ON SPACING LOCK LEVER.
MIN 0.020 INCH --- MAX 0.035 INCH

TO ADJUST

LOOSEN TWO MAGNET BRACKET MOUNTING SCREWS AND ADJUSTING LINK CLAMP SCREW. POSITION MAGNET BRACKET BY MEANS OF ADJUSTING LINK AND TIGHTEN LINK CLAMP SCREW ONLY.

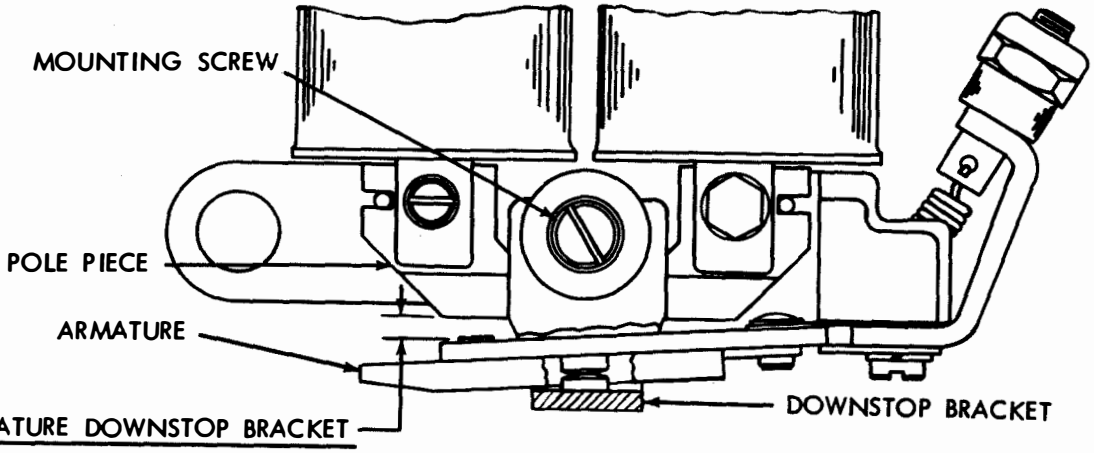
(2) REQUIREMENT

SPACING LOCK LEVER ON HIGH PART OF CAM. ARMATURE IN CONTACT WITH POLE PIECE. SOME CLEARANCE BETWEEN UPPER SURFACE OF ARMATURE EXTENSION AND LOWER SURFACE OF SPACING LOCK LEVER WHEN LOCK LEVER IS HELD DOWNWARD.
MAX 0.003 INCH

TO ADJUST

POSITION UPPER END OF MAGNET BRACKET. TIGHTEN TWO MAGNET BRACKET MOUNTING SCREWS. RECHECK REQUIREMENT (1).

2.03 Selector Mechanism (continued)




SELECTOR ARMATURE DOWNSTOP BRACKET

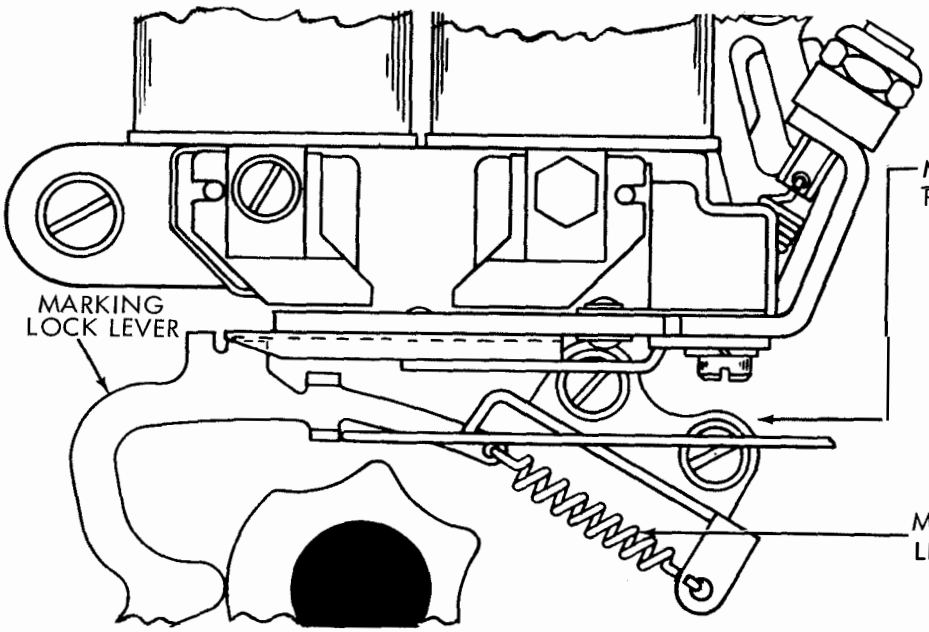
REQUIREMENT

REMOVE OIL SHIELD. WITH MAGNET DE-ENERGIZED, LOCK LEVERS ON HIGH PART OF THEIR CAM, AND ARMATURE RESTING AGAINST ITS DOWNSTOP, CLEARANCE BETWEEN END OF ARMATURE AND LEFT EDGE OF LEFT POLE PIECE.

MIN. 0.025 INCH
MAX. 0.030 INCH

TO ADJUST

POSITION DOWNSTOP BRACKET WITH MOUNTING SCREW LOOSENED.




REQUIREMENT

LETTERS COMBINATION SELECTED, MAIN SHAFT ROTATED UNTIL SELECTOR CLUTCH IS DISENGAGED. PUSH SCALE APPLIED TO LOWER EXTENSION OF LOCK LEVER.

MIN 1-1/2 OZ
MAX 3 OZ

TO START LEVER MOVING.

CAUTION

BEFORE PROCEEDING WITH THE SELECTOR ARMATURE SPRING ADJUSTMENT, THE TYPE OF ARMATURE (ONE ANTIFREEZE BUTTON OR TWO ANTIFREEZE BUTTONS) MUST BE KNOWN. EXCESSIVE TENSION ON, OR THE MISHANDLING OF A TWO BUTTON ARMATURE CAN DAMAGE THE THIN LEAF SPRING ATTACHED TO THE PIVOT END. IF REMOVAL FOR EXAMINATION IS NECESSARY, DISASSEMBLE AS FOLLOWS:

(1) DISCONNECT ARMATURE SPRING.
(2) REMOVE ARMATURE MOUNTING SCREWS.
(3) WITHDRAW ARMATURE FROM SELECTOR.

REASSEMBLE AND RECHECK THE FOLLOWING ADJUSTMENTS:

SELECTOR ARMATURE
SELECTOR ARMATURE DOWNSTOP BRACKET
SELECTOR MAGNET BRACKET

2.04 Selector Mechanism (continued)

SELECTOR ARMATURE SPRING (FOR UNITS WITH SINGLE ANTI-FREEZE BUTTON ON SELECTOR ARMATURE)

REQUIREMENT --- (PRELIMINARY) WITH START LEVER, MARKING AND SPACING LOCK LEVERS ON HIGH PART OF THEIR CAMS, HOOK SCALE UNDER END OF ARMATURE EXTENSION (HOLD AS NEARLY VERTICAL AS POSSIBLE). IT SHOULD REQUIRE

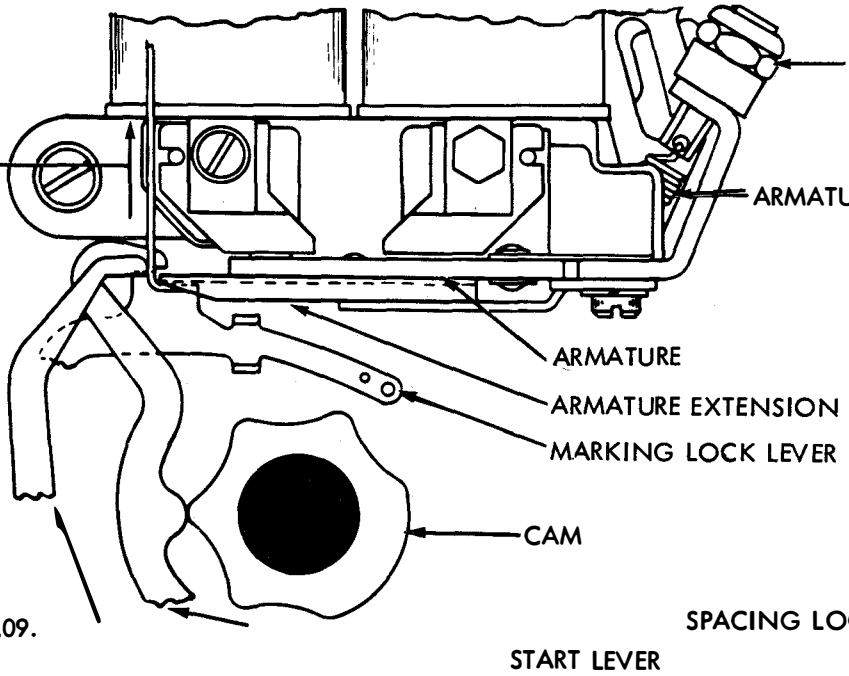
(a) MIN 1-1/2 OZ ---------- MAX 2 OZ FOR 20 MA OPERATION
(b) MIN 2-1/2 OZ ---------- MAX 3 OZ FOR 60 MA OPERATION

TO PULL ARMATURE TO MARKING POSITION.

TO ADJUST --- POSITION ADJUSTING NUT.

REQUIREMENT --- (FINAL) REFER TO SELECTOR RECEIVING MARGIN PAR. 2.09.

NOTE
SPRING TENSIONS SHOWN ON THIS PAGE PERMIT OPERATION OF PRINTER PRIOR TO MEASUREMENT OF RECEIVING MARGINS. REFINE SPRING TENSION FOR MAXIMUM SELECTOR PERFORMANCE WITH UNIT CONNECTED TO SPECIFIC CIRCUIT IN WHICH IT IS TO FUNCTION (OPERATING AT DESIRED SPEED AND LINE CURRENT). SEE PAR. 2.09.




SELECTOR ARMATURE SPRING (FOR UNITS WITH TWO ANTI-FREEZE BUTTONS ON SELECTOR ARMATURE)

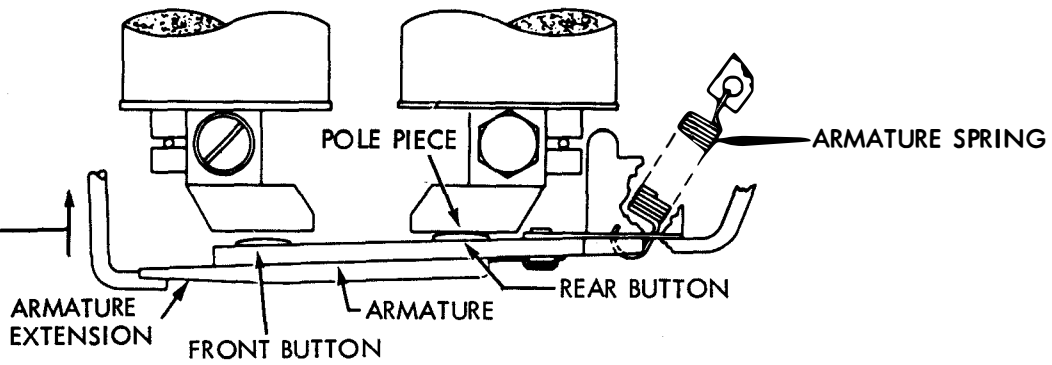
REQUIREMENT --- (PRELIMINARY) WITH START LEVER, MARKING AND SPACING LOCK LEVERS ON HIGH PART OF THEIR CAMS, HOOK SCALE UNDER END OF ARMATURE EXTENSION (HOLD AS NEARLY VERTICAL AS POSSIBLE). IT SHOULD REQUIRE

(a) APPROXIMATELY 1/2 OZ FOR 20 MA OPERATION
(b) APPROXIMATELY --- 3/4 OZ FOR 60 MA OPERATION

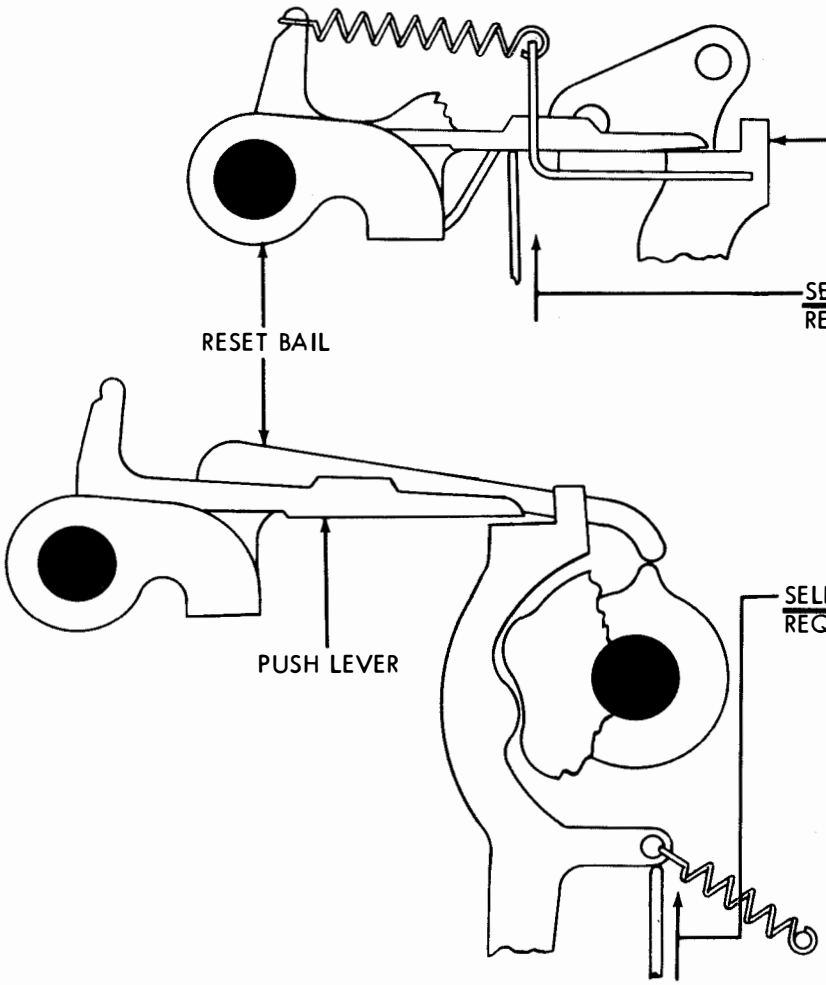
TO PULL REAR BUTTON AGAINST ITS POLE PIECE

TO ADJUST --- POSITION ADJUSTING NUT.

REQUIREMENT --- (FINAL) WHEN A DISTORTION TEST SET IS AVAILABLE, REFINE SELECTOR ARMATURE SPRING ADJUSTMENT TO MEET SELECTOR RECEIVING MARGIN PAR. 2.09. NOTE --- WITH SELECTOR MAGNETS ENERGIZED, FRONT ANTI-FREEZE BUTTON MUST BE IN CONTACT WITH ITS MAGNET CORE.



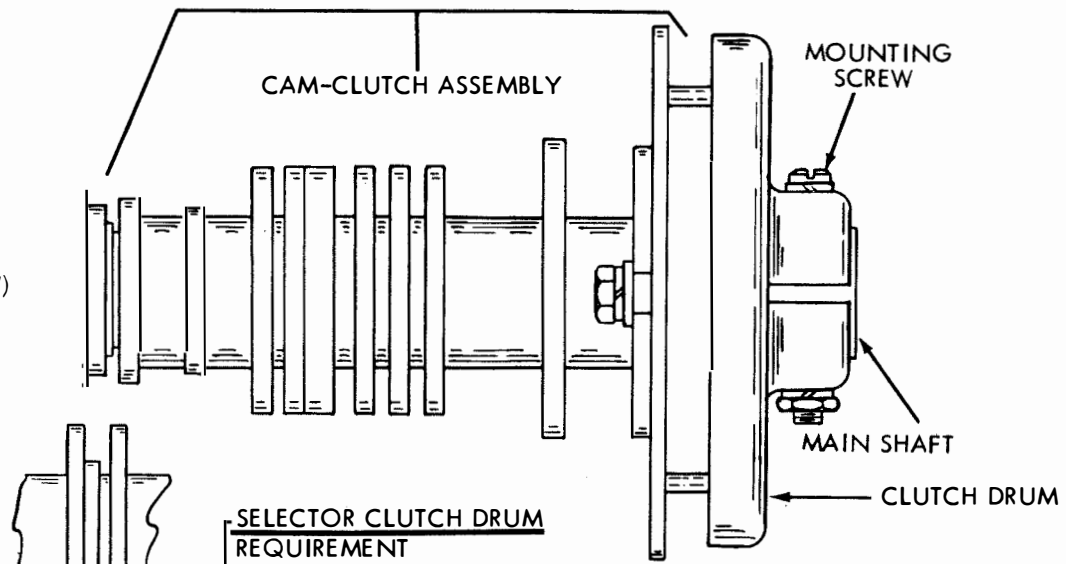
2.05 Selector Mechanism (continued)




SELECTOR PUSH LEVER SPRING
REQUIREMENT
PUSH LEVER IN SPACING POSITION
MIN 3/4 OZ
MAX 1-1/2 OZ
TO MOVE PUSH LEVER FROM SELECTOR LEVER. CHECK FIVE SPRINGS.

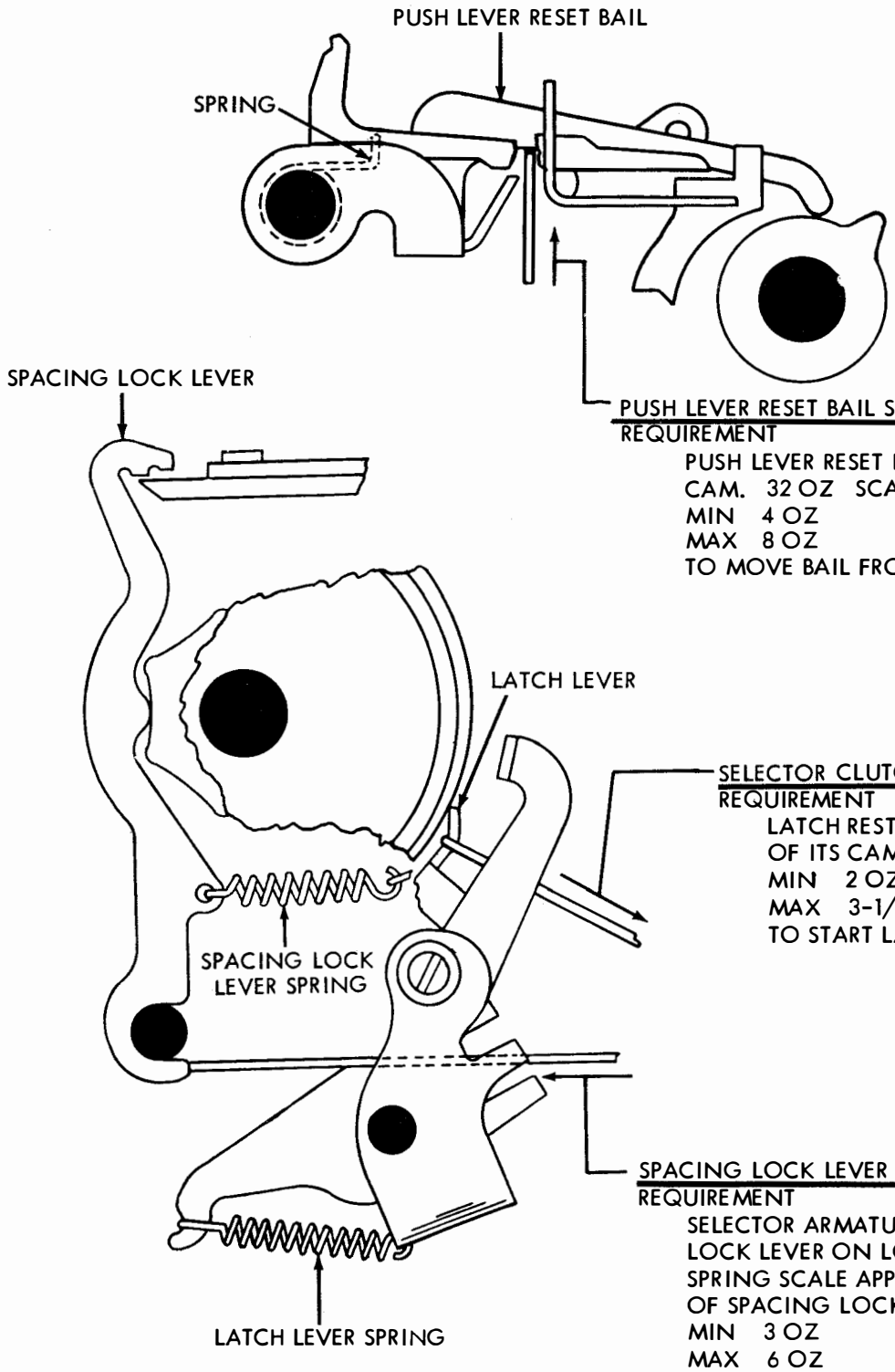
SELECTOR LEVER SPRING
REQUIREMENT
TYPING UNIT UPSIDE DOWN.
RESET BAIL ON PEAK OF ITS CAM.
MIN 1-1/4 OZ
MAX 2-1/2 OZ
TO START EACH LEVER MOVING.
CHECK FIVE SPRINGS. IF NECESSARY, UNHOOK START LEVER SPRING TO CHECK NO. 4 SELECTOR LEVER SPRING.

(FRONT VIEW)




SELECTOR CLUTCH DRUM
REQUIREMENT
CLUTCH LATCHED IN STOP POSITION. CLUTCH DRUM AGAINST SHOULDER ON MAIN SHAFT. CAM-CLUTCH ASSEMBLY SHOULD HAVE SOME END PLAY
MAX 0.010 INCH
TO ADJUST
POSITION CLUTCH DRUM WITH MOUNTING SCREW LOOSENED.

2.06 Selector Mechanism (continued)




PUSH LEVER RESET BAIL SPRING REQUIREMENT

PUSH LEVER RESET BAIL ON LOW PART OF CAM. 32 OZ SCALE APPLIED TO RESET BAIL.
MIN 4 OZ
MAX 8 OZ
TO MOVE BAIL FROM CAM.

SELECTOR CLUTCH LATCH LEVER SPRING REQUIREMENT

LATCH RESTING ON LOW PART OF ITS CAM DISK.
MIN 2 OZ
MAX 3-1/2 OZ
TO START LATCH MOVING.

SPACING LOCK LEVER SPRING REQUIREMENT

SELECTOR ARMATURE RELEASED. SPACING LOCK LEVER ON LOW PART OF ITS CAM. SPRING SCALE APPLIED TO LOWER END OF SPACING LOCK LEVER.
MIN 3 OZ
MAX 6 OZ
TO MOVE SPACING LOCK LEVER FROM ITS PIVOT SHAFT.

2.07 Selector Mechanism (continued)

NOTE: REPLACE RANGE FINDER AND SELECTOR MAGNET ASSEMBLY.

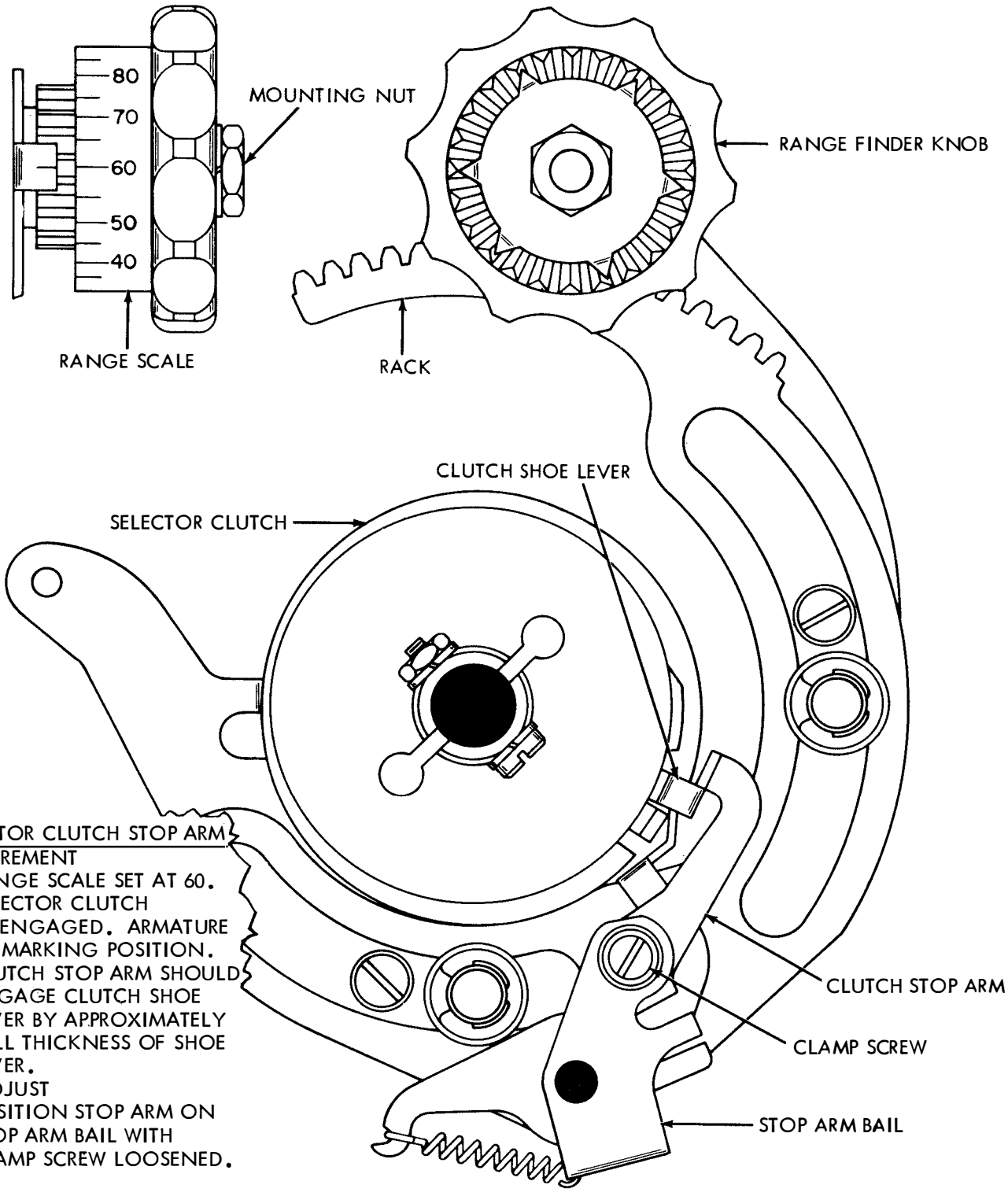
RANGE FINDER KNOB PHASING

REQUIREMENT

WITH RANGE FINDER KNOB TURNED TO EITHER END OF RACK, ZERO MARK ON SCALE SHOULD BE WITHIN 3 POINTS OF SCRIBED LINE ON RANGE FINDER PLATE.

TO ADJUST

REMOVE MOUNTING NUT, DISENGAGE KNOB FROM RACK AND POSITION KNOB. RE-ENGAGE KNOB WITH RACK AND REPLACE MOUNTING NUT.




SELECTOR CLUTCH STOP ARM

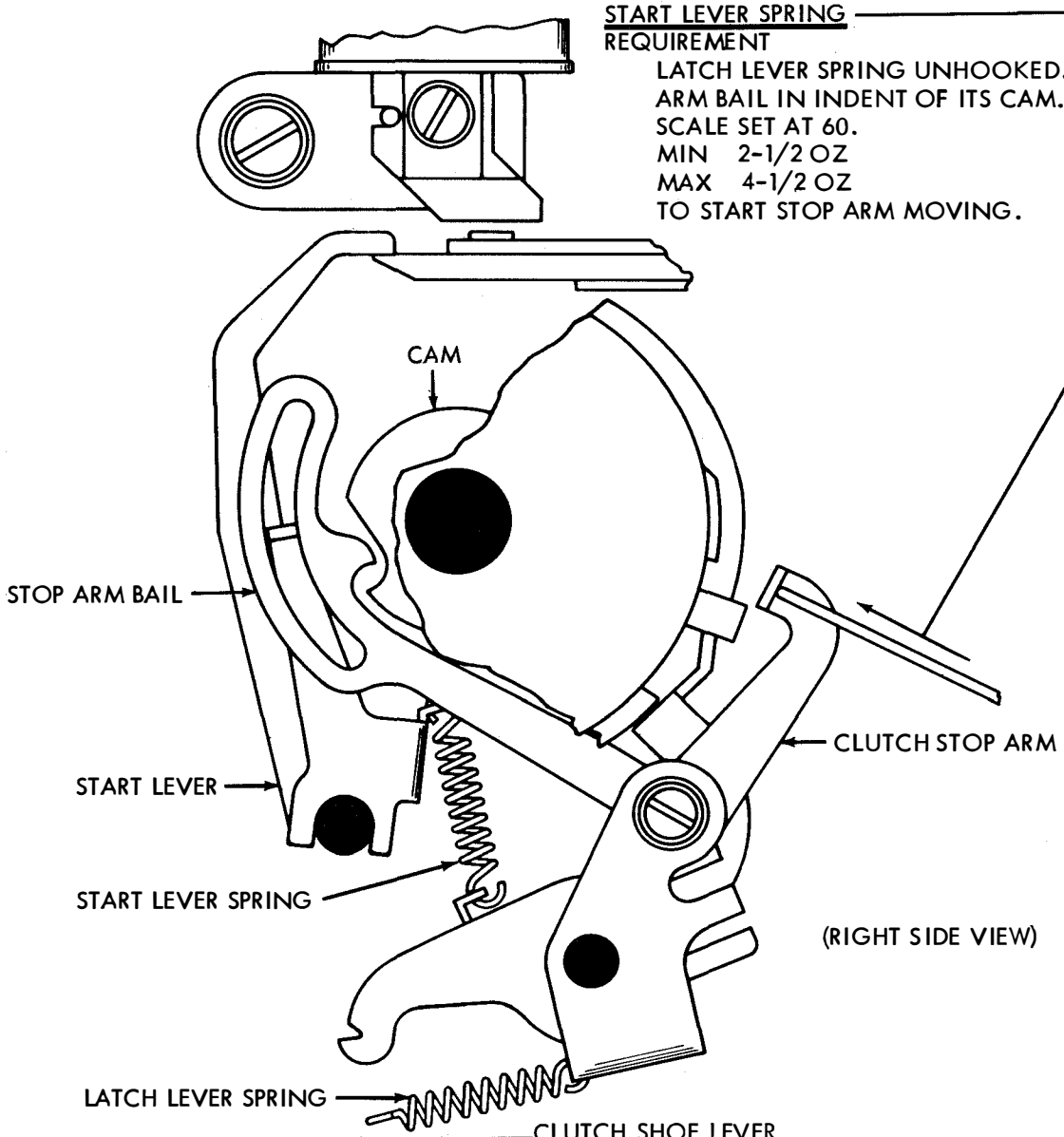
REQUIREMENT

RANGE SCALE SET AT 60. SELECTOR CLUTCH DISENGAGED. ARMATURE IN MARKING POSITION. CLUTCH STOP ARM SHOULD ENGAGE CLUTCH SHOE LEVER BY APPROXIMATELY FULL THICKNESS OF SHOE LEVER.

TO ADJUST

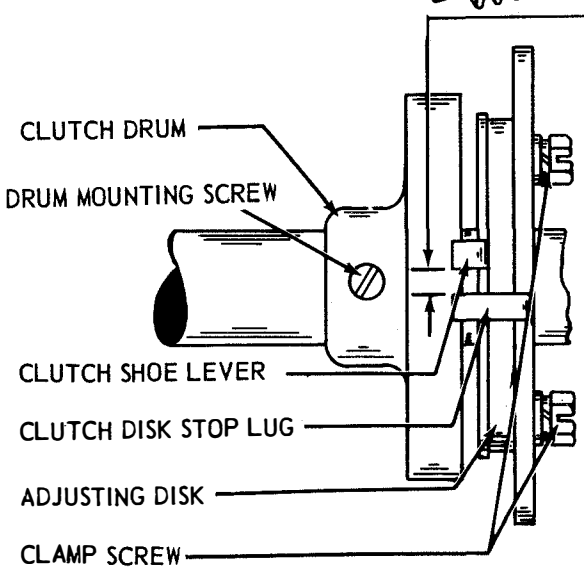
POSITION STOP ARM ON STOP ARM BAIL WITH CLAMP SCREW LOOSENED.

2.08 Selector Mechanism (continued)




START LEVER SPRING
REQUIREMENT
LATCH LEVER SPRING UNHOOKED. STOP ARM BAIL IN INDENT OF ITS CAM. RANGE SCALE SET AT 60.
MIN 2-1/2 OZ
MAX 4-1/2 OZ
TO START STOP ARM MOVING.

(RIGHT SIDE VIEW)



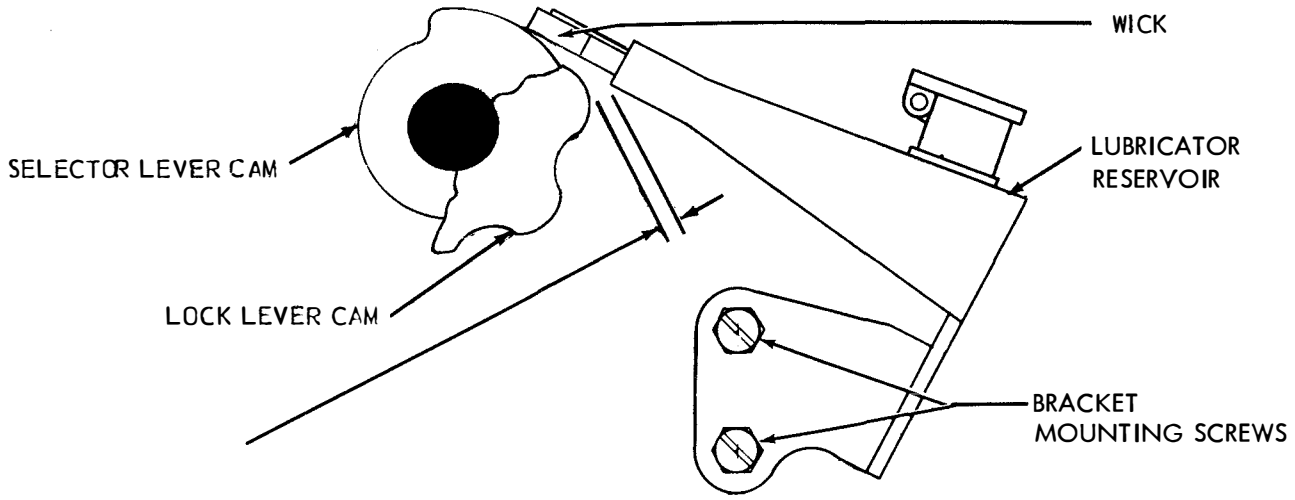

CLUTCH SHOE LEVER
REQUIREMENT
GAP BETWEEN CLUTCH SHOE LEVER AND ITS STOP LUG SHOULD BE 0.055 INCH TO 0.085 INCH GREATER WHEN CLUTCH IS ENGAGED THAN WHEN THE CLUTCH IS DISENGAGED.

TO CHECK
DISENGAGE THE CLUTCH AND MEASURE THE GAP. TRIP THE CLUTCH AND ROTATE IT UNTIL THE CLUTCH SHOE LEVER IS TOWARD THE BOTTOM OF THE UNIT. AGAIN MEASURE THE GAP WITH THE CLUTCH THUS ENGAGED.

NOTE
ON MULTIPLE STOP CLUTCHES CHECK THE CLEARANCE AT THE STOP LUG THAT IS ADJACENT TO THE FORM IN THE CLUTCH ADJUSTING DISK.

TO ADJUST
LOOSEN THE TWO CLAMP SCREWS ON THE CLUTCH DISK. ENGAGE A WRENCH OR SCREWDRIVER ON THE LUG OF THE ADJUSTING DISK AND ROTATE THE DISK.

2.09 Selector Mechanism (continued)




SELECTOR CAM LUBRICATOR

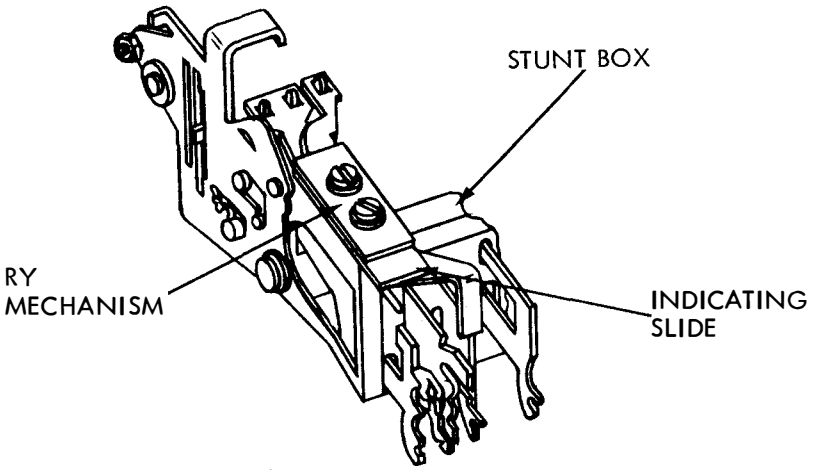
REQUIREMENT

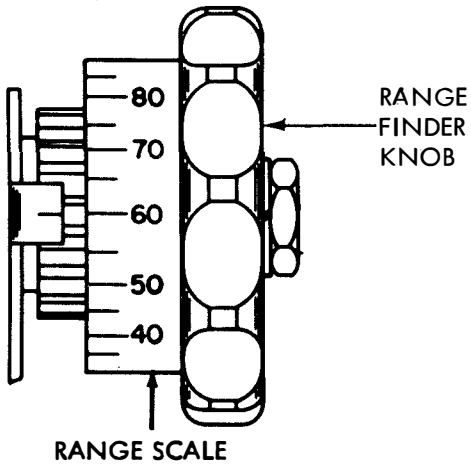
THE LUBRICATOR TUBE SHOULD CLEAR THE HIGH PART OF THE LOCK LEVER CAM MIN 0.020 INCH THE HIGH PART OF THE SELECTOR LEVER CAMS SHOULD TOUCH THE LUBRICATOR WICK, BUT SHOULD NOT RAISE IT MORE THAN 1/32 INCH.

NOTE: THERE SHOULD BE SOME CLEARANCE BETWEEN THE MARKING LOCK LEVER SPRING AND THE RESERVOIR.

TO ADJUST

POSITION THE LUBRICATOR BRACKET WITH ITS MOUNTING SCREWS LOOSENED.




SELECTOR RECEIVING MARGIN

NOTE: SINCE THE SEQUENCE SELECTOR UNIT DOES NOT HAVE A PRINTING MECHANISM, AN RY MECHANISM IS PROVIDED TO CHECK THE SELECTOR RECEIVING MARGIN. THIS MECHANISM OPERATES ONLY WHEN THE UNIT IS IN THE SELECT CONDITION (WITH THE SELECT CODE BAR SHIFTED TO THE LEFT).

REQUIREMENT

THE SEQUENCE SELECTOR SHOULD RECEIVE CONTINUOUS RY LINE SIGNALS WITHOUT ERROR.

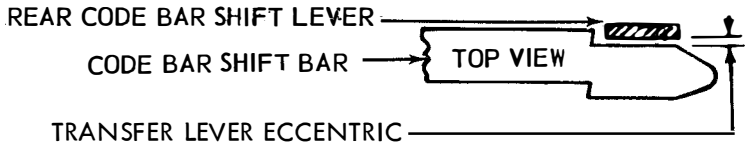
TO CHECK

SEND ALTERNATE R AND Y CODE COMBINATIONS TO THE SELECTOR CONTINUOUSLY. WHEN CORRECT SELECTION IS BEING MADE THE RY INDICATING SLIDE REMAINS VISIBLE OVER SLOTS NO. 41 AND 42 IN THE STUNT BOX. WHEN A ERROR OCCURS, THE SLIDE IS WITHDRAWN FROM VIEW TOWARD THE REAR OF THE STUNT BOX AND IS LATCHED UP. TO PLACE THE SLIDE BACK IN TEST POSITION, IT IS NECESSARY TO DEPRESS A RELEASE BUTTON AT THE REAR OF THE STUNT BOX.

TO CORRECT

ROTATE RANGE FINDER KNOB.

## 2.10 Code Bar Positioning Mechanism

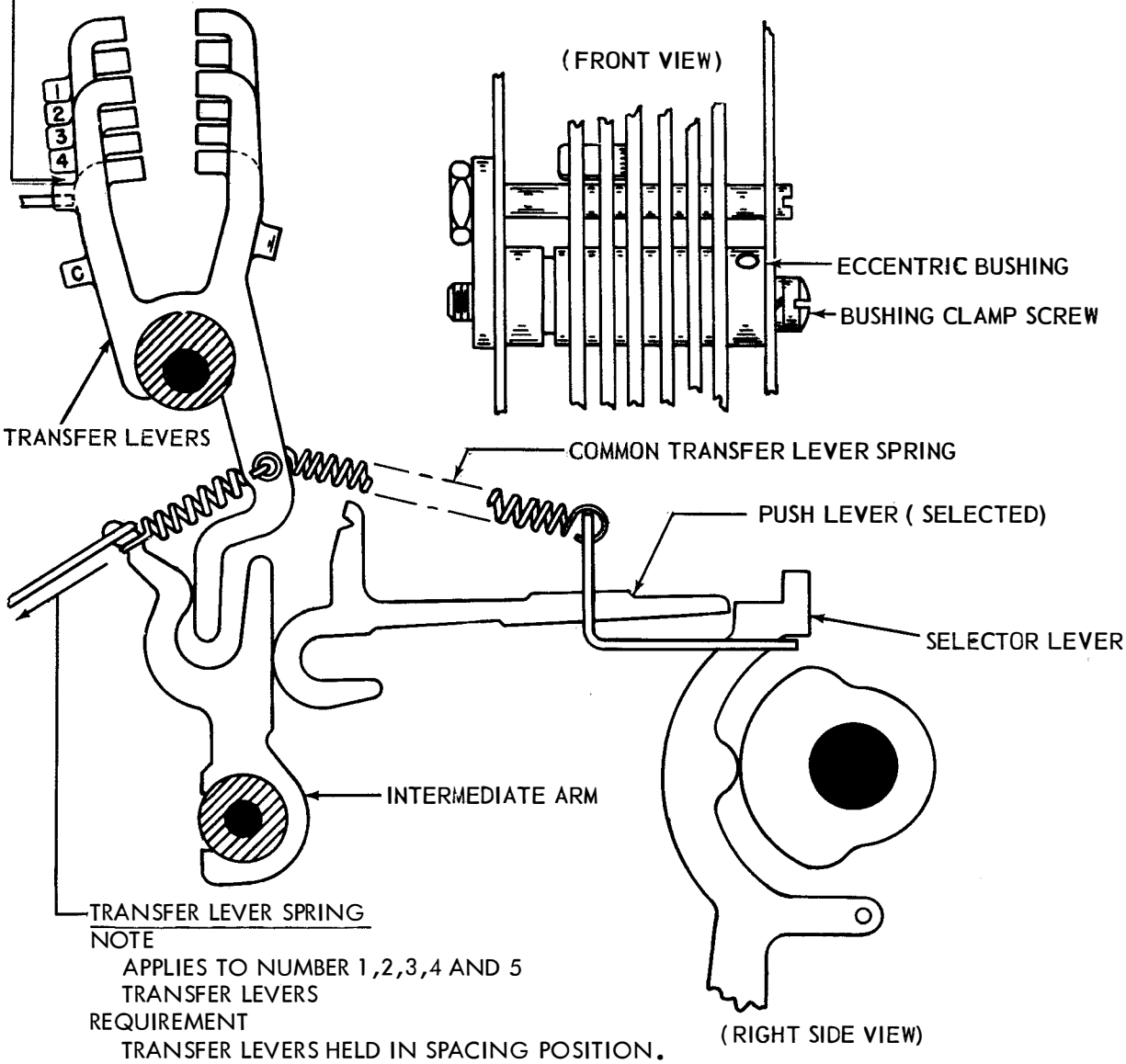



REQUIREMENT
PUSH LEVERS POSITIONED FOR E OR LF OR LETTERS. SELECTOR CLUTCH DISENGAGED. CODE BAR SHIFT LEVER LINK IN UPPERMOST POSITION. CLEARANCE BETWEEN REAR CODE BAR SHIFT LEVER AND CODE BAR SHIFT BAR FARTHEST FROM THE SHIFT LEVER
MIN 0.010 INCH --- MAX 0.025 INCH
WHEN PLAY IN SHIFT BAR IS TAKEN FOR MAXIMUM CLEARANCE.

TO ADJUST
ROTATE ECCENTRIC BUSHING WITH CLAMP SCREW LOOSENED. KEEP BOTH HOLES IN BUSHING ABOVE HORIZONTAL CENTER.

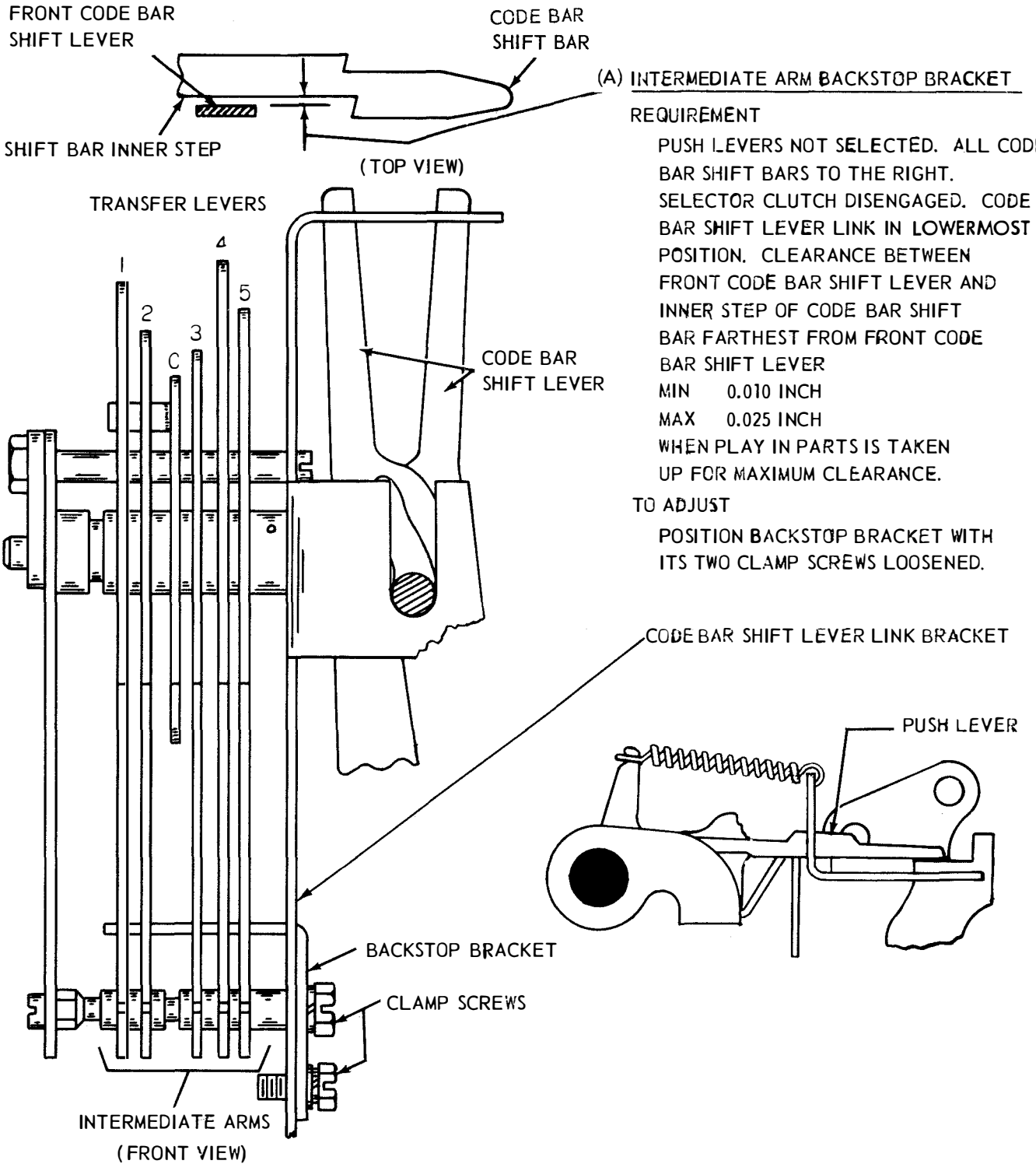
NOTE
ONE OR MORE CODE BAR SHIFT BARS CAN TOUCH SHIFT LEVERS.

COMMON TRANSFER LEVER SPRING
REQUIREMENT
TRANSFER LEVERS IN SPACING POSITION
MIN 1/2 OZ --- MAX 1-1/4 OZ
TO START COMMON TRANSFER LEVER MOVING.




TRANSFER LEVER SPRING
NOTE
APPLIES TO NUMBER 1,2,3,4 AND 5 TRANSFER LEVERS
REQUIREMENT
TRANSFER LEVERS HELD IN SPACING POSITION.
MIN 1-1/2 OZ --- MAX 2-1/2 OZ
TO START INTERMEDIATE ARM MOVING.

2.11 Code Bar Positioning Mechanism (continued)




(A) INTERMEDIATE ARM BACKSTOP BRACKET

REQUIREMENT

PUSH LEVERS NOT SELECTED. ALL CODE BAR SHIFT BARS TO THE RIGHT. SELECTOR CLUTCH DISENGAGED. CODE BAR SHIFT LEVER LINK IN LOWERMOST POSITION. CLEARANCE BETWEEN FRONT CODE BAR SHIFT LEVER AND INNER STEP OF CODE BAR SHIFT BAR FARTHEST FROM FRONT CODE BAR SHIFT LEVER

MIN 0.010 INCH

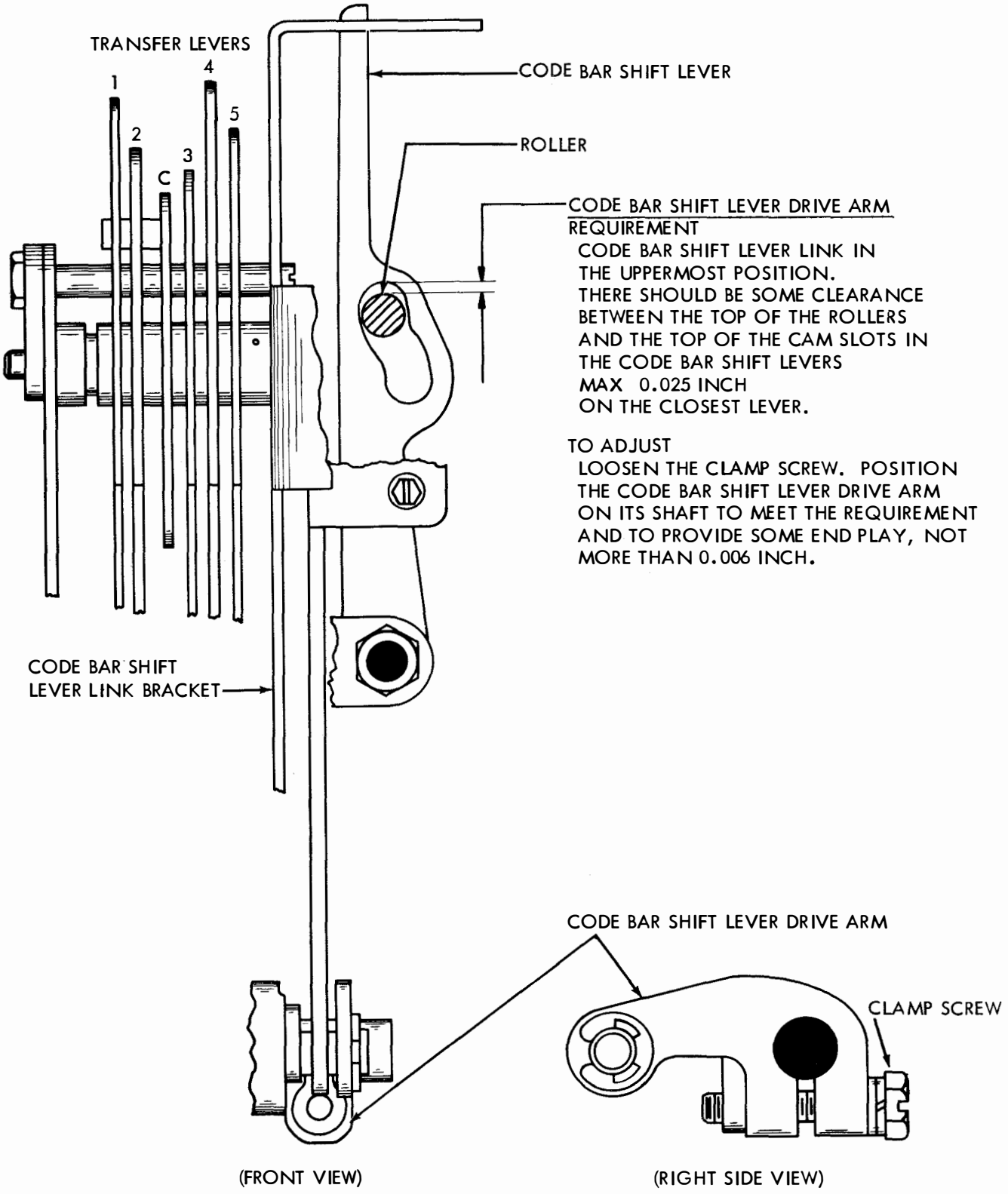
MAX 0.025 INCH

WHEN PLAY IN PARTS IS TAKEN UP FOR MAXIMUM CLEARANCE.

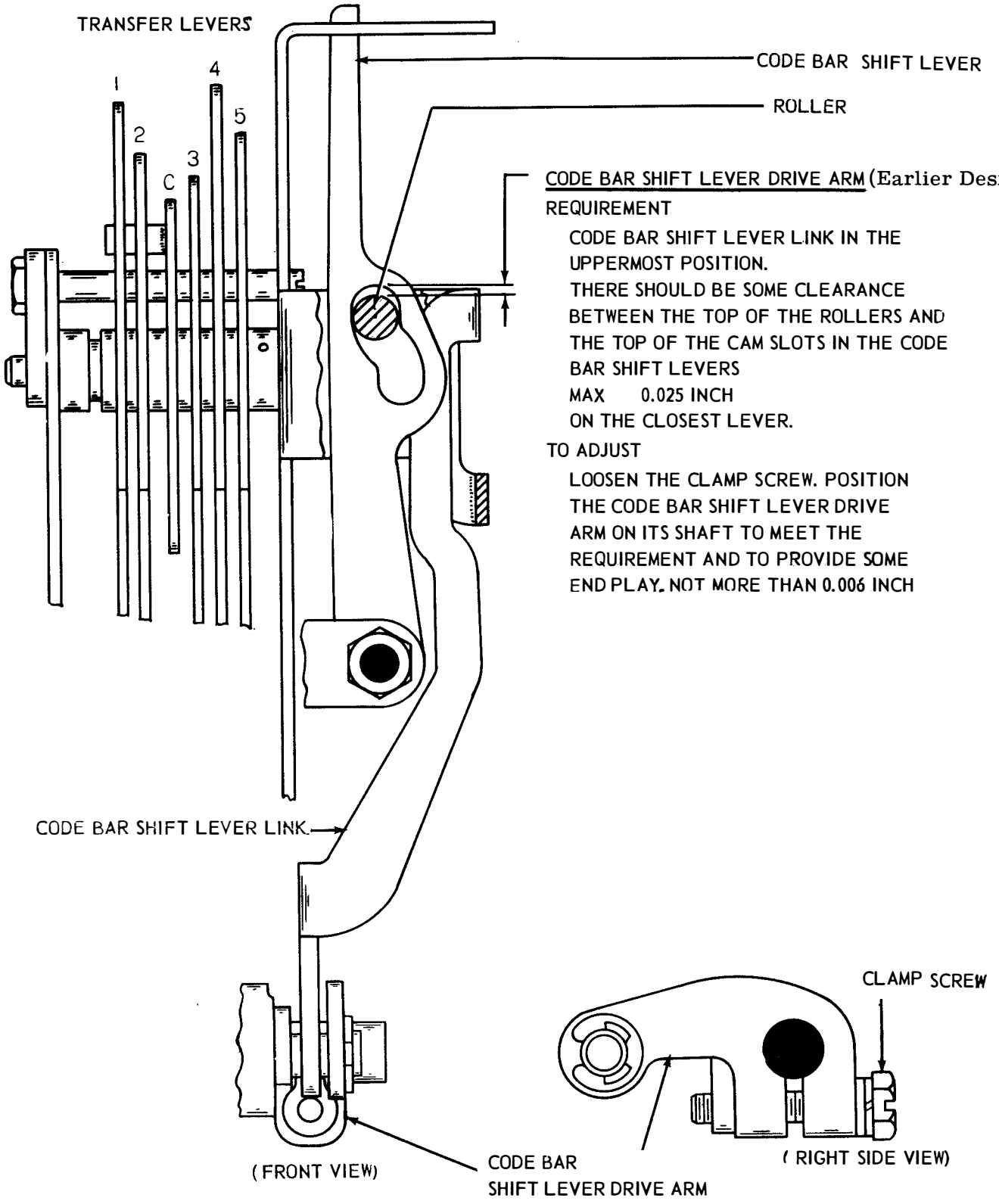
TO ADJUST

POSITION BACKSTOP BRACKET WITH ITS TWO CLAMP SCREWS LOOSENED.

2.12 Code Bar Positioning Mechanism (continued)



2.13 Code Bar Positioning Mechanism (continued)



2.14 Code Bar Positioning Mechanism (continued)

CODE BAR SHIFT LEVER LINK BRACKET

REQUIREMENT

MOTION OF FRONT AND REAR CODE BAR SHIFT LEVERS SHOULD BE EQUALIZED WITH RESPECT TO CODE BAR TRAVEL.

TO CHECK (FRONT)

SELECT BLANK COMBINATION AND ROTATE MAINSHAFT UNTIL CODE BAR SHIFT LEVER LINK REACHES HIGHEST TRAVEL. TAKE UP PLAY FOR MAXIMUM CLEARANCE. CLEARANCE BETWEEN FRONT CODE BAR SHIFT LEVER AND SHOULDER ON NEAREST CODE BAR SHIFT BAR

MIN 0.002 INCH
MAX 0.025 INCH

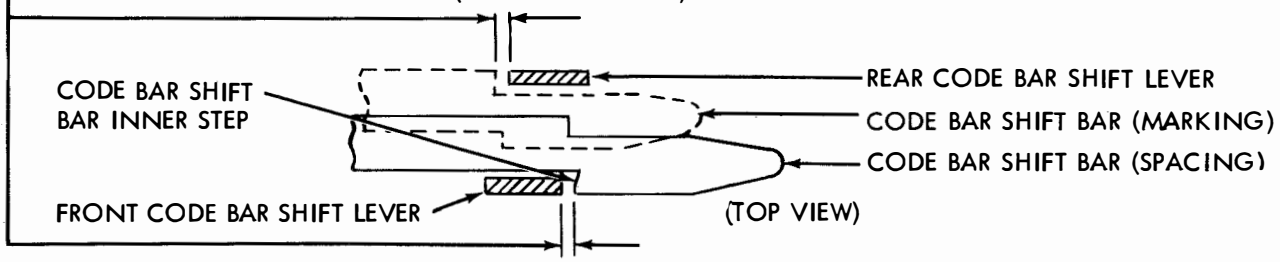
TO CHECK (REAR)

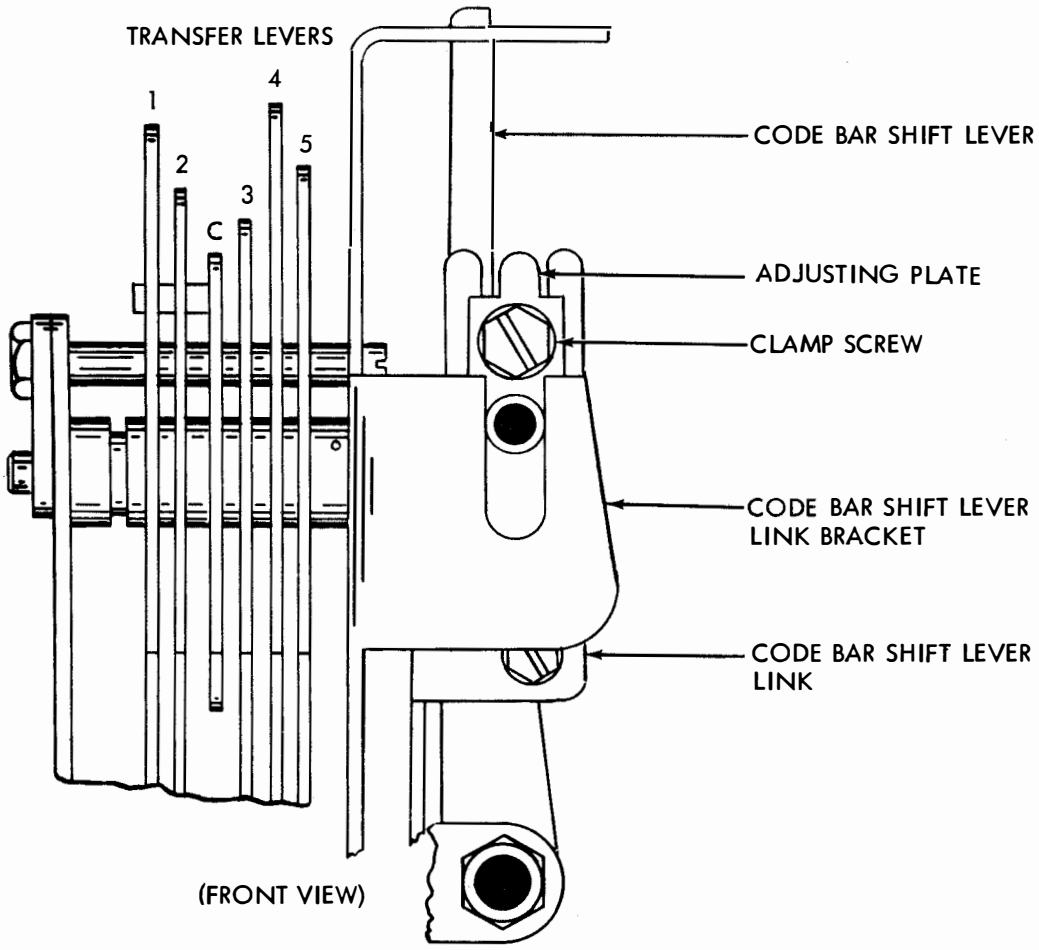
SELECT LETTERS COMBINATION. CHECK CLEARANCE BETWEEN REAR CODE BAR SHIFT LEVER AND SHOULDER OF CODE BAR SHIFT BAR IN SAME WAY.

MIN 0.002 INCH
MAX 0.025 INCH

TO ADJUST

POSITION ADJUSTING PLATES (FRONT AND REAR) WITH CLAMP SCREWS LOOSENED.



2.15 Code Bar Positioning Mechanism (continued)

CODE BAR SHIFT LEVER LINK BRACKET (Earlier Design)

REQUIREMENT

MOTION OF FRONT AND REAR CODE BAR SHIFT LEVERS SHOULD BE EQUALIZED WITH RESPECT TO CODE BAR TRAVEL

TO CHECK (FRONT)

BLANK COMBINATION SELECTED. ROTATE MAIN SHAFT UNTIL CODE BAR SHIFT LEVER LINK REACHES ITS HIGHEST POSITION. CLEARANCE BETWEEN FRONT CODE BAR SHIFT LEVER AND NEAREST CODE BAR SHIFT BAR

MIN 0.002 INCH

MAX 0.025 INCH

WHEN PLAY IS TAKEN FOR MAXIMUM CLEARANCE.

TO CHECK (REAR)

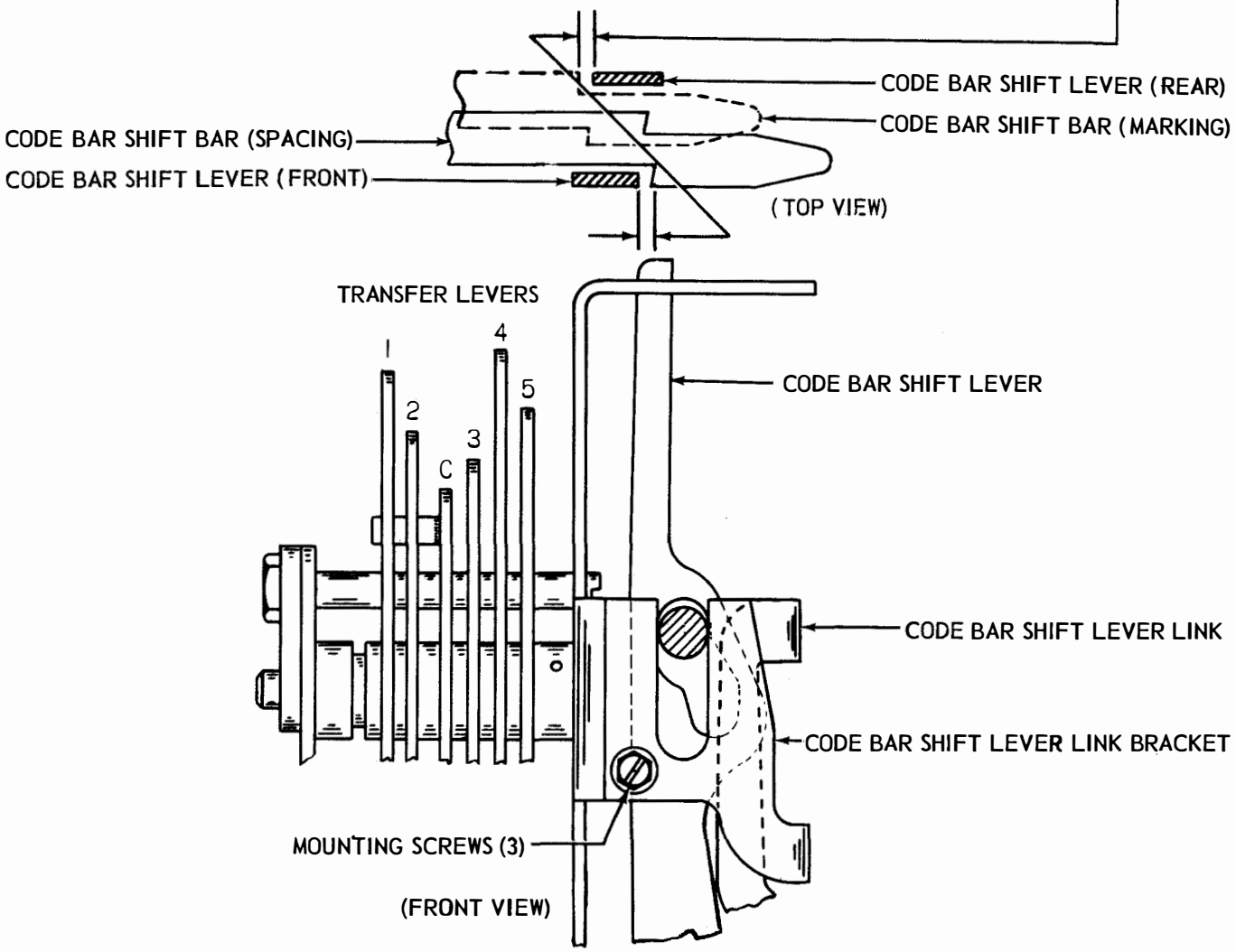
WITH LETTERS COMBINATION SELECTED, CLEARANCE BETWEEN REAR CODE BAR SHIFT LEVER AND NEAREST CODE BAR SHIFT BAR, IS CHECKED IN SAME MANNER.

MIN 0.002 INCH

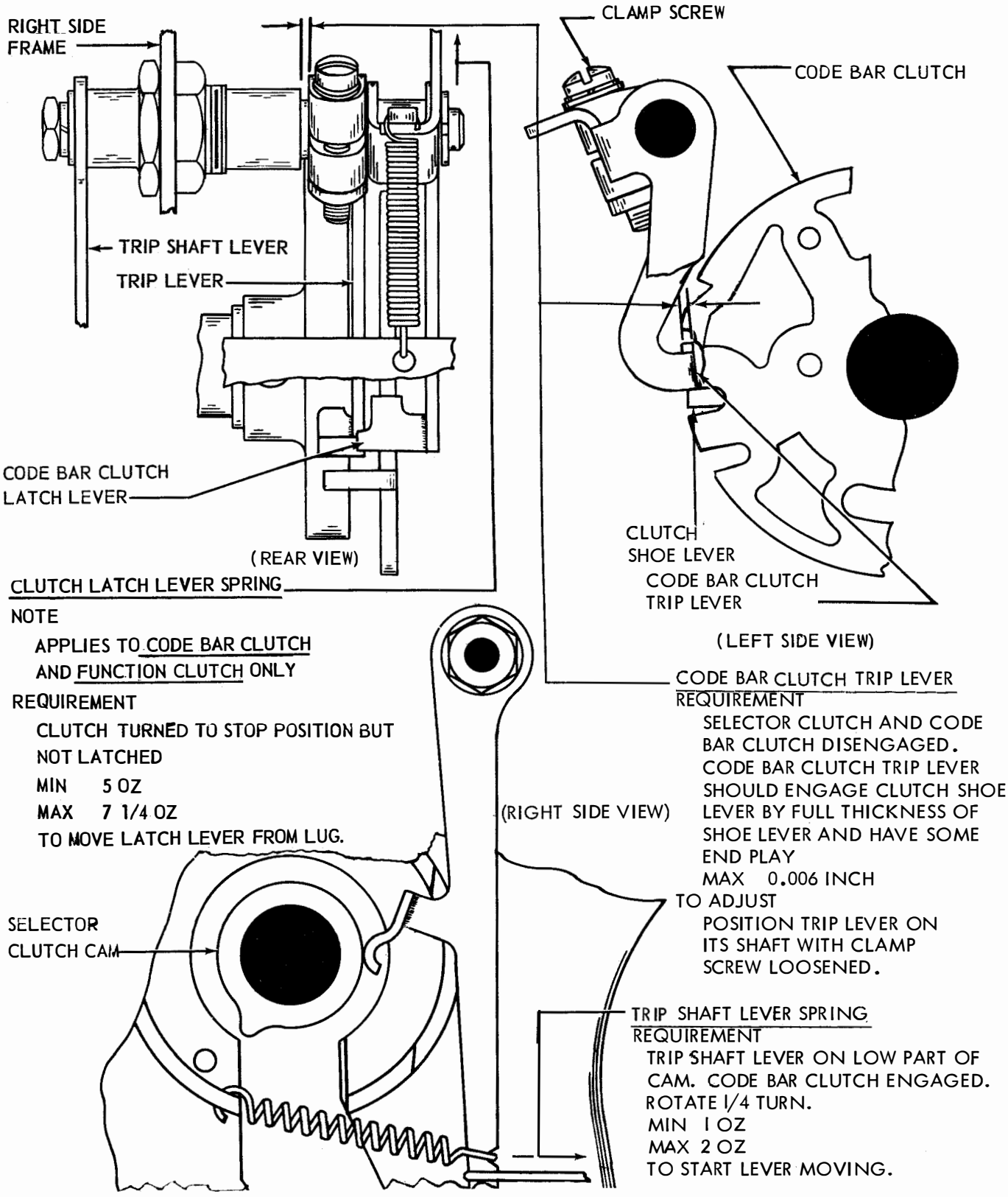
MAX 0.025 INCH

TO ADJUST

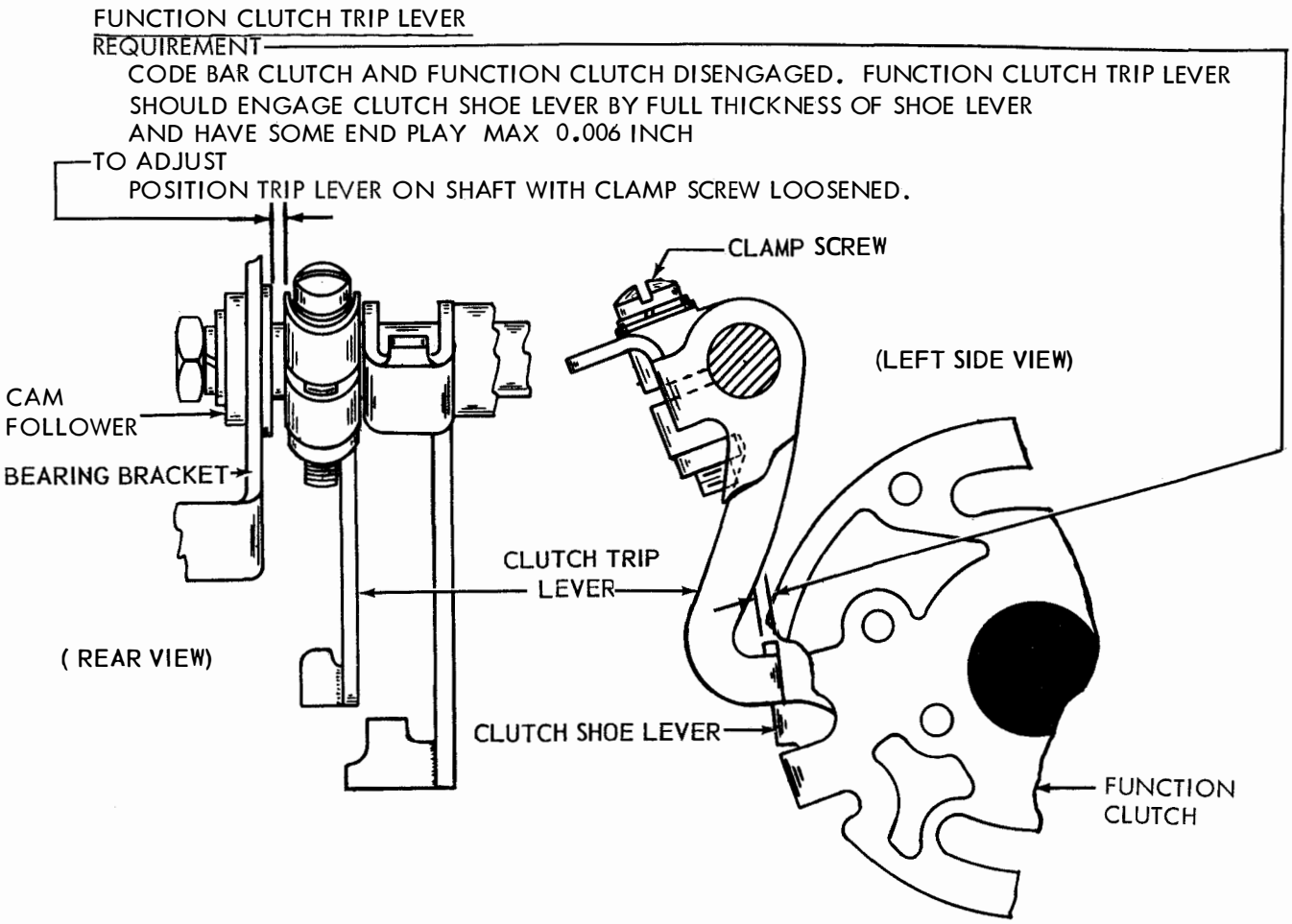
POSITION CODE BAR SHIFT LEVER LINK BRACKET WITH ITS MOUNTING SCREWS LOOSENED.

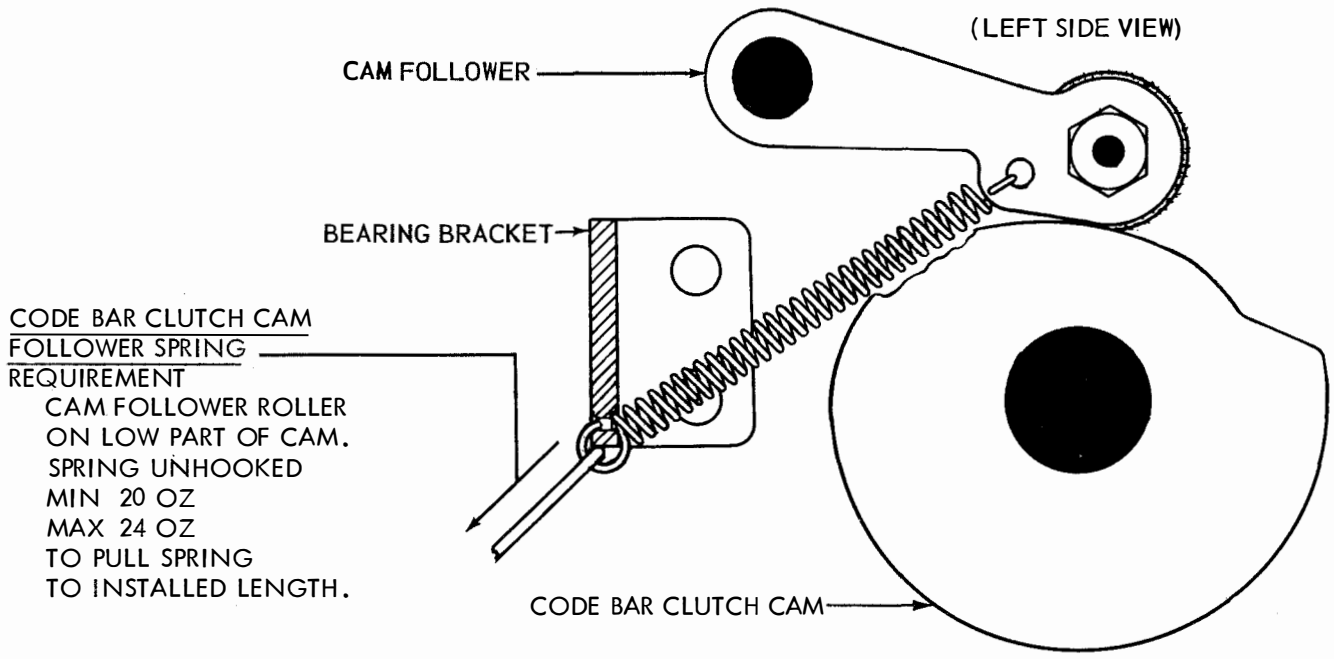


## 2.16 Main Shaft and Trip Shaft Mechanism



2.17 Main Shaft and Trip Shaft Mechanism (continued)



.18 Main Shaft and Trip Shaft Mechanism (continued)

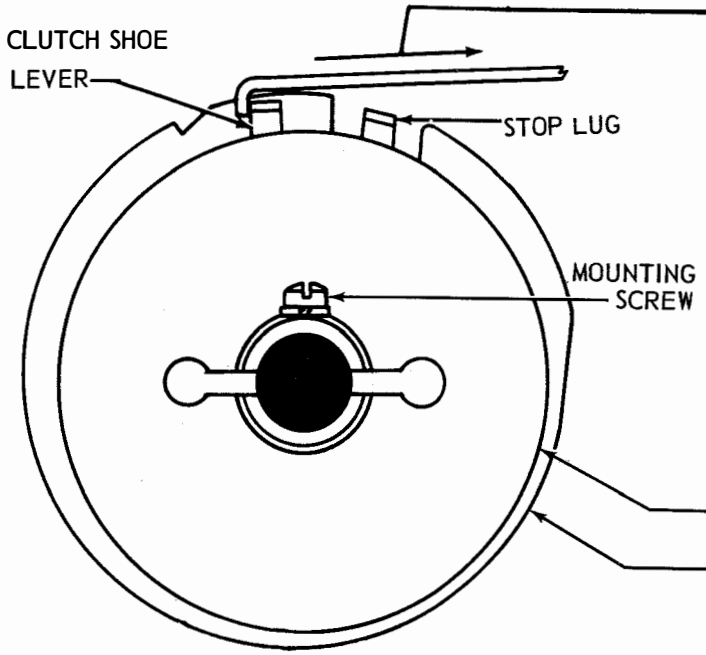
CLUTCH DRUM POSITION ( CODE BAR AND FUNCTION CLUTCHES)

REQUIREMENT

CLUTCH SHOE LEVER HELD DISENGAGED. CLUTCH SHOULD HAVE SOME END PLAY MAX 0.015 INCH

TO ADJUST

POSITION EACH DRUM WITH MOUNTING SCREW LOOSENED.




CLUTCH SHOE LEVER SPRING

REQUIREMENT

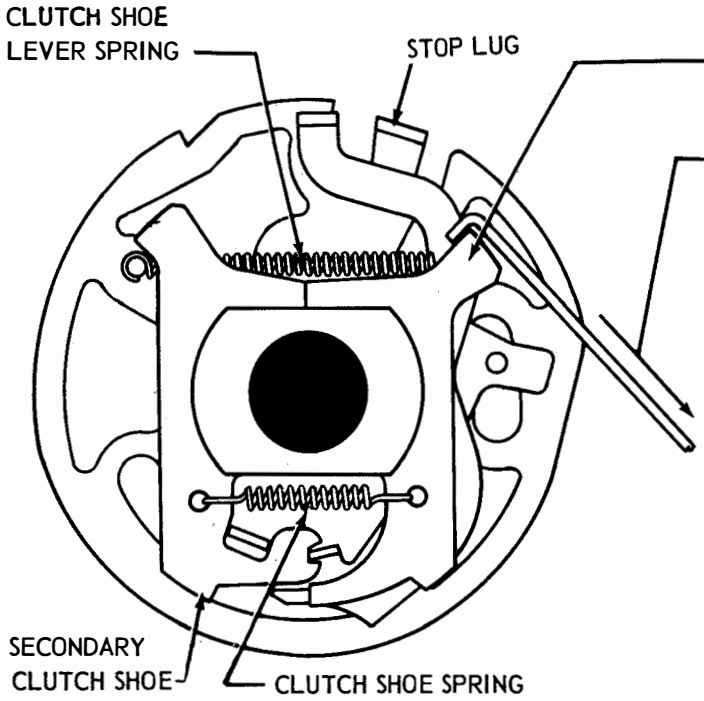
CLUTCH ENGAGED. HOLD CAM DISK TO PREVENT TURNING. SPRING SCALE PULLED AT TANGENT TO CLUTCH.

MIN 15 OZ
MAX 20 OZ

TO MOVE SHOE LEVER IN CONTACT WITH STOP LUG.

NOTE

APPLIES TO ALL CLUTCHES.




CLUTCH SHOE SPRING

NOTE

IN ORDER TO CHECK THIS SPRING TENSION, IT IS NECESSARY TO REMOVE THE CLUTCH FROM THE MAIN 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. SPRING SCALE APPLIED TO PRIMARY SHOE AT A TANGENT TO THE FRICTION SURFACE.

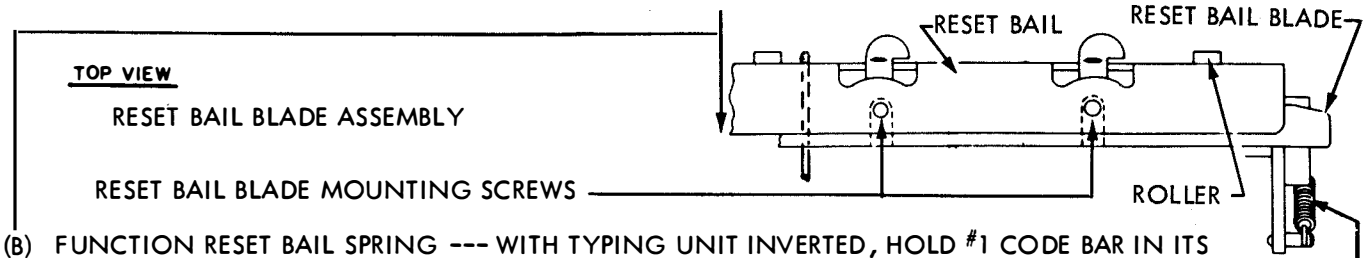
MIN 3 OZ
MAX 5 OZ

TO START THE PRIMARY SHOE MOVING AWAY FROM SECONDARY SHOE AT POINT OF CONTACT.

NOTE

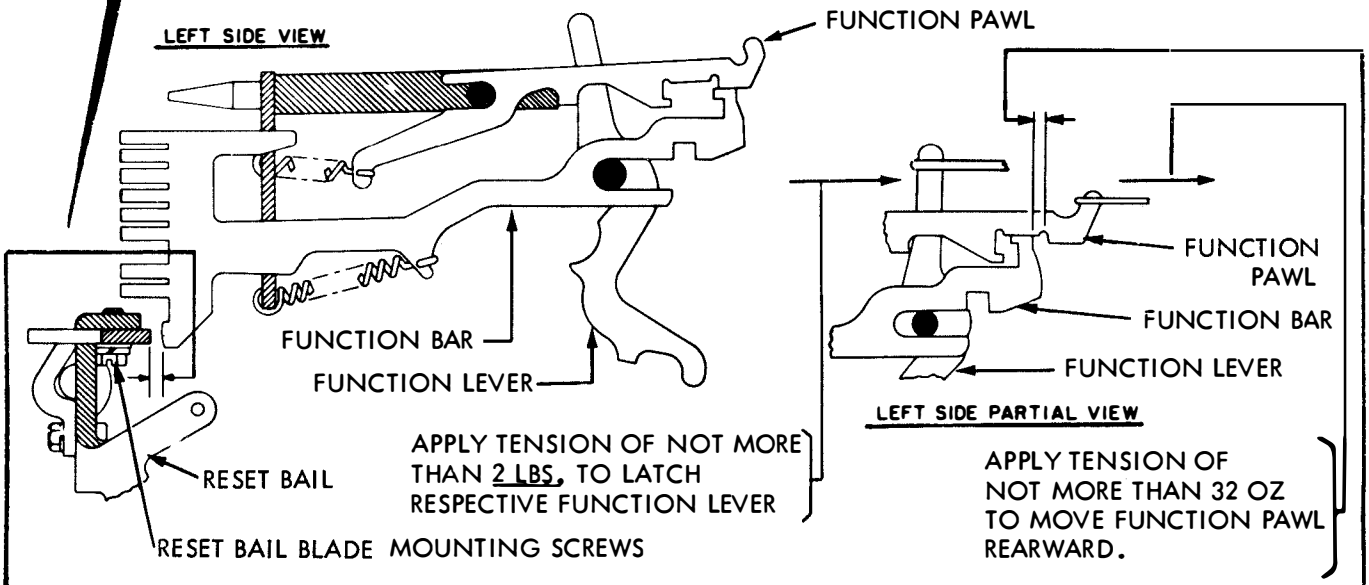
APPLIES TO ALL CLUTCHES.

## 2.19 Function Mechanism




(B) FUNCTION RESET BAIL SPRING --- WITH TYPING UNIT INVERTED, HOLD #1 CODE BAR IN ITS MARKING POSITION SO THAT NO FUNCTION BAR IS SELECTED. ROTATE MAIN SHAFT UNTIL FUNCTION RESET BAIL SPRINGS ARE IN THEIR MINIMUM LENGTH POSITION. HOOK A 32 OZ SCALE (BETWEEN CLUTCH TRIP SHAFT AND SPACE SUPPRESSOR BAIL) ON FRONT EDGE OF RESET BAIL (AT MIDDLE OF BAIL) AND PULL REARWARD.
MIN 10 OZ ---------- MAX 22 OZ (TO START BAIL MOVING).

RESET BAIL SPRING




(A) FUNCTION RESET BAIL BLADE

(1) REQUIREMENT --- WITH ALL CLUTCHES DISENGAGED, TRIP CODE BAR CLUTCH AND TURN MAIN SHAFT UNTIL CODE-BAR CLUTCH SHOE-RELEASE LEVER JUST TOUCHES ITS STOP LEVER. UNLATCH ALL FUNCTION PAWLS FROM THEIR FUNCTION BARS. HOLD RESPECTIVE FUNCTION BAR IN ITS EXTREME REARWARD POSITION WITH SPRING HOOK; CLEARANCE BETWEEN FUNCTION BAR AND RESET BAIL BLADE SHOULD BE
MIN 0.018 INCH ---------- MAX 0.035 INCH

TO CHECK --- MEASURE CLEARANCE AT BARS IN STUNT BOX SLOTS, NO'S 1, 4, 11, 18, 23, 33, 38 AND 41. IF A DESIGNATED SLOT IS VACANT, USE NEAREST BAR OR SELECT BAR WITH HIGHEST NUMBERED SLOT WHEN A BAR IS LOCATED ON BOTH SIDES OF VACANT SLOT. (VIEW SLOTS FROM REAR, NUMBERING FROM LEFT TO RIGHT).

TO ADJUST --- POSITION BLADE ON RESET BAIL WITH ITS MOUNTING SCREWS FRICTION TIGHT.

(2) REQUIREMENT --- EACH FUNCTION PAWL SHOULD OVER TRAVEL ITS FUNCTION BAR BY AT LEAST 0.002 INCH WITH INDICATED TENSIONS APPLIED. CHECK PAWLS ONE AT-A-TIME AT SLOT NO'S. USED ABOVE.

TO CHECK --- IF CARRIAGE RETURN LEVER ADJUSTMENT HAS NOT BEEN MADE, LOOSEN ITS CLAMP SCREW. LATCH FUNCTION PAWLS BY LOWERING STRIPPER BLADE; TRIP CODE BAR CLUTCH AND POSITION ITS RELEASE LEVER AS IN (1) ABOVE. STRIP OFF ANY FUNCTIONS WHICH MAY HAVE BEEN SELECTED.

TO ADJUST --- REFINE REQUIREMENT (1) ABOVE, HOLDING THE READJUSTMENT WITHIN LIMITS
MIN 0.018 INCH ---------- MAX 0.035 INCH

2. 20 Function Mechanism (continued)

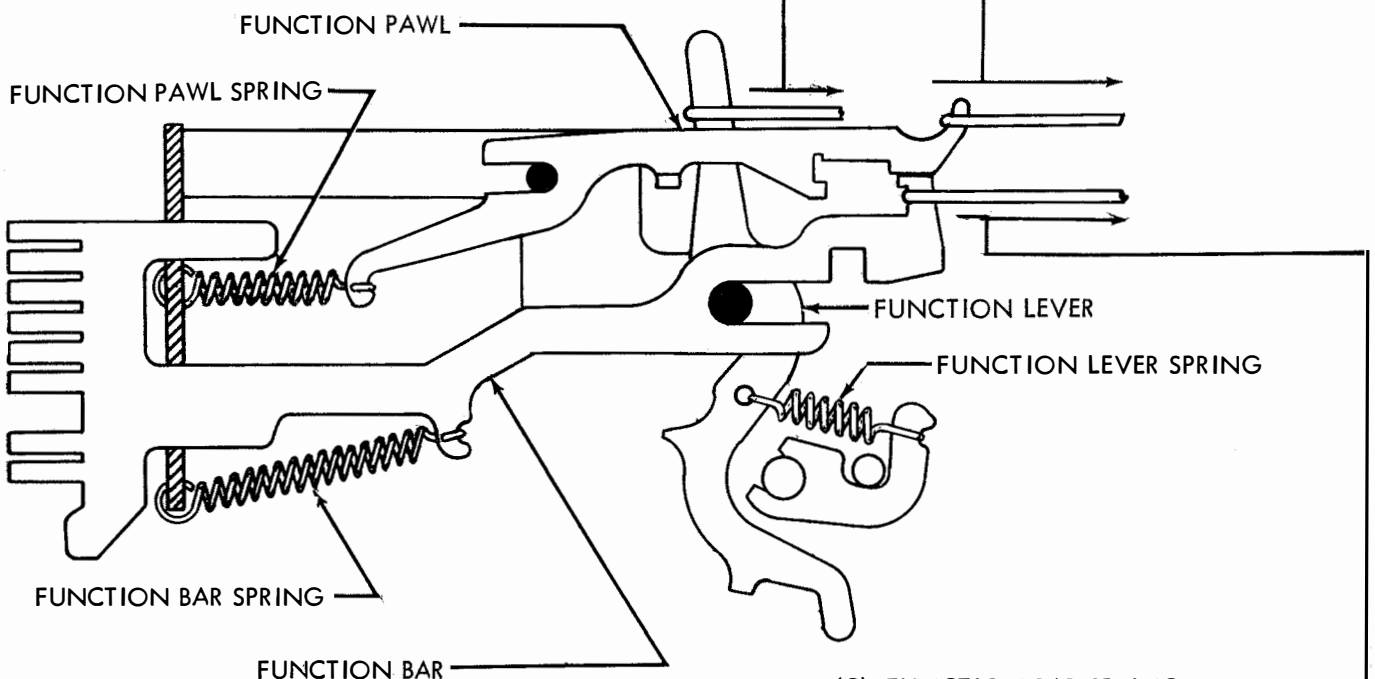
(A) FUNCTION LEVER SPRING

NOTE:
IF A FUNCTION LEVER OPERATES A CONTACT, HOLD OFF CONTACT WHEN CHECKING SPRING TENSION.

REQUIREMENT
FUNCTION LEVER IN UNOPERATED POSITION.
MIN 1-1/2 OZ
MAX 2-3/4 OZ
TO START FUNCTION LEVER MOVING.
CHECK EACH SPRING

(B)
FUNCTION PAWL SPRING

REQUIREMENT
REAR END OF FUNCTION PAWL RESTING ON FUNCTION BAR.
MIN 3 OZ
MAX 5 OZ
TO START PAWL MOVING.
CHECK EACH SPRING.




(RIGHT SIDE VIEW)

(C) FUNCTION BAR SPRING

REQUIREMENT
FUNCTION CLUTCH DISENGAGED.
FUNCTION PAWL HELD AWAY.
MIN 2-1/2 OZ
MAX 3-1/2 OZ
TO START FUNCTION BAR MOVING.
CHECK EACH SPRING.

CAUTION

SEVERE WEAR TO THE POINT OF OPERATIONAL FAILURE WILL RESULT IF THE TELETYPEWRITER IS OPERATED WITHOUT EACH FUNCTION PAWL HAVING EITHER A RELATED FUNCTION BAR OR, WHERE A FUNCTION BAR IS MISSING, A RELATED FUNCTION PAWL CLIP TO HOLD THE FUNCTION PAWL AWAY FROM THE STRIPPER BLADE.

2. 21 Function Mechanism (continued)

STRIPPER BLADE DRIVE CAM POSITION

REQUIREMENT

STRIPPER BLADE DRIVE CAM SHOULD MOVE EACH STRIPPER BLADE CAM ARM AN EQUAL DISTANCE ABOVE AND BELOW CENTER LINE OF ITS PIVOT ( GAUGE BY EYE)

A. UPWARD DIRECTION

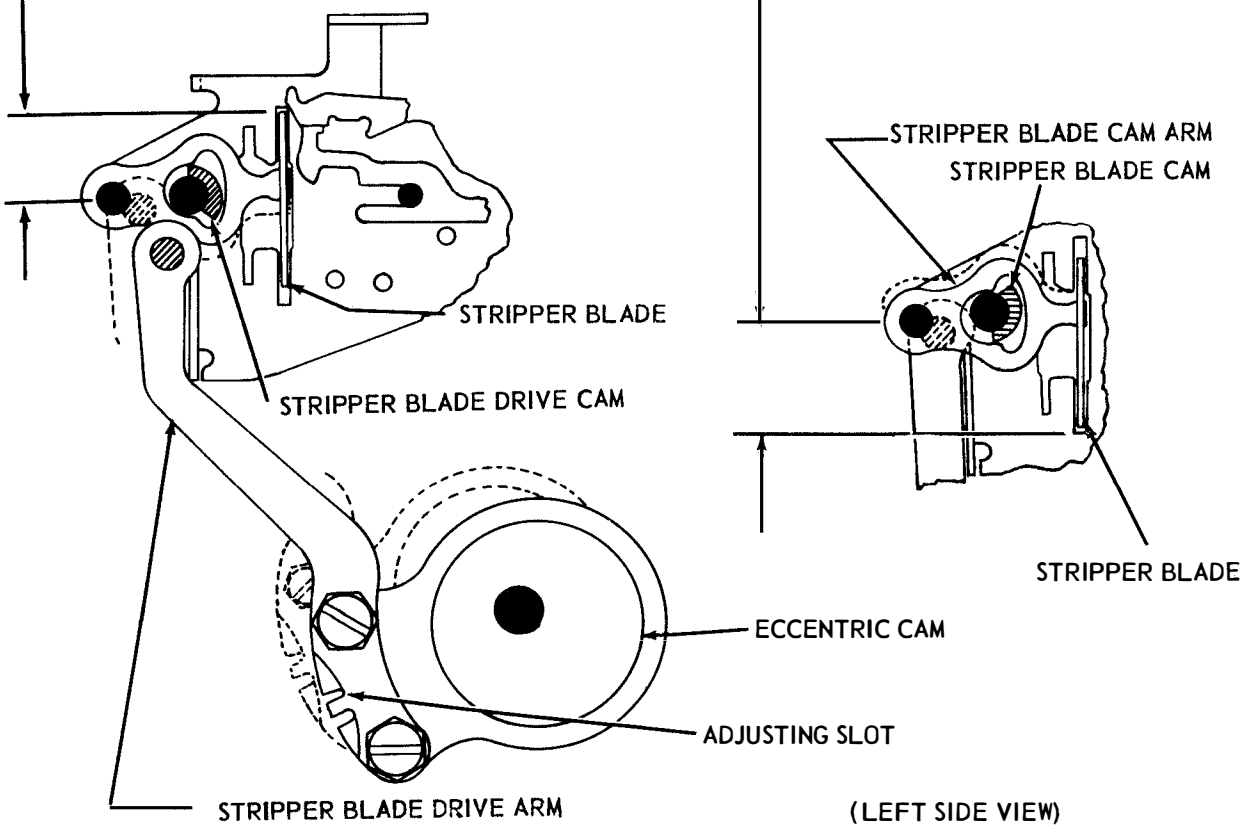
B. DOWNWARD DIRECTION

TO CHECK

WITH FUNCTION CLUTCH DISENGAGED OBSERVE ENGAGEMENT OF STRIPPER BLADE DRIVE CAM ( UPPER PEAK) WITH STRIPPER BLADE CAM ARM. THEN ROTATE CLUTCH TO TURN CAM TO ITS EXTREME DOWNWARD POSITION AND OBSERVE ENGAGEMENT OF LOWER CAM PEAK.

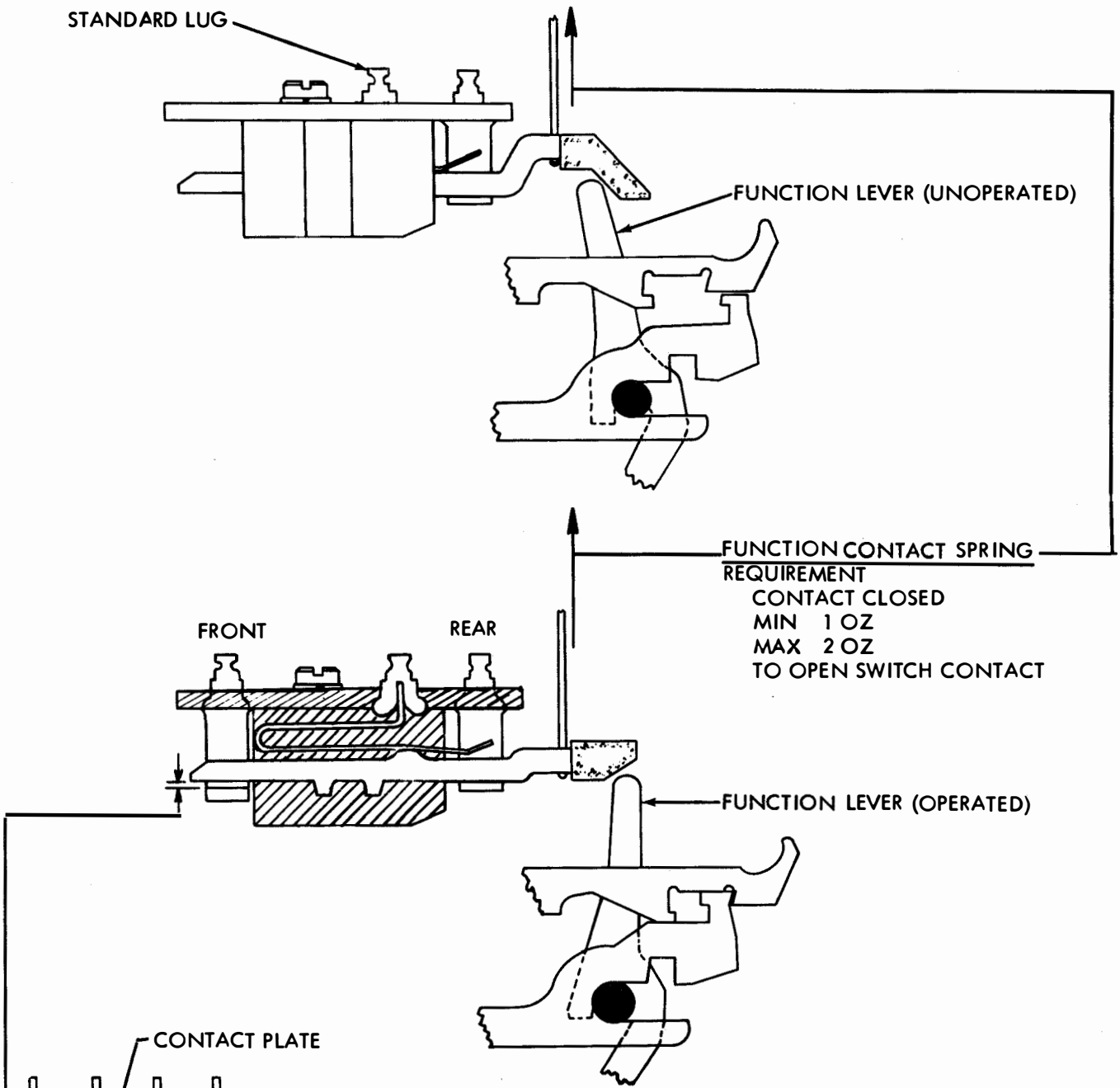
TO ADJUST

WITH STRIPPER BLADE DRIVE ARM MOUNTING SCREWS LOOSENED, EQUALIZE THE OVERTRAVEL OF EACH CAM PEAK.




(LEFT SIDE VIEW)

2.22 Function Contact Assembly with Staked Center Terminal

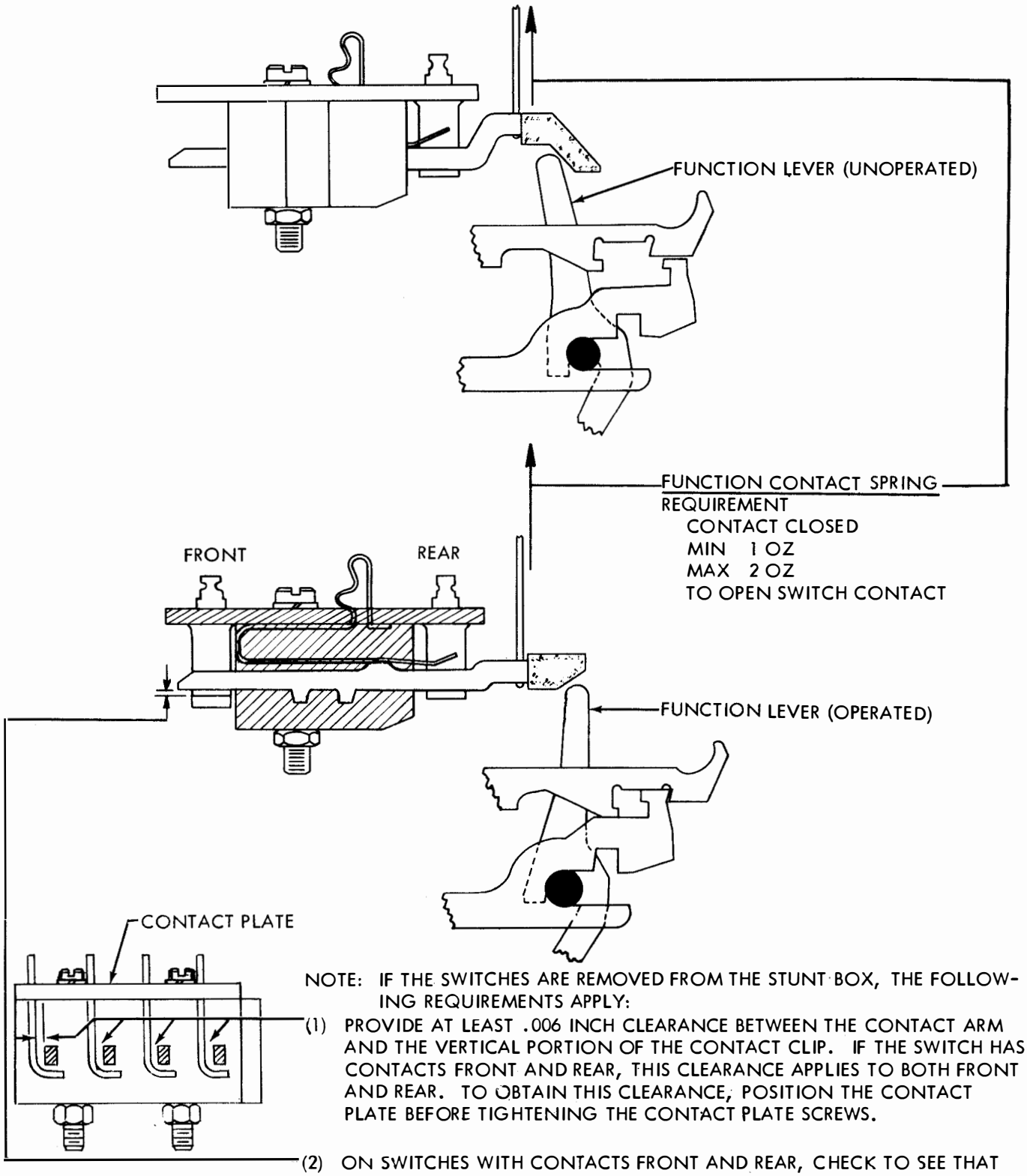



NOTE: IF THE SWITCHES ARE REMOVED FROM THE STUNT BOX, THE FOLLOWING REQUIREMENTS APPLY:

(1) PROVIDE AT LEAST .006 INCH CLEARANCE BETWEEN THE CONTACT ARM AND THE VERTICAL PORTION OF THE CONTACT CLIP. IF THE SWITCH HAS CONTACTS FRONT AND REAR, THIS CLEARANCE APPLIES TO BOTH FRONT AND REAR. TO OBTAIN THIS CLEARANCE, POSITION THE CONTACT PLATE BEFORE TIGHTENING THE CONTACT PLATE SCREWS.

(2) ON SWITCHES WITH CONTACTS FRONT AND REAR, CHECK TO SEE THAT THERE IS A GAP OF NOT LESS THAN .008 INCH BETWEEN THE FORMED-OVER END OF THE FRONT CONTACT CLIP AND THE BOTTOM OF THE CONTACT ARM WHEN THE REAR CONTACT IS CLOSED.

## 2. 23 Function Contact Assembly with Spring Loop Center Terminal

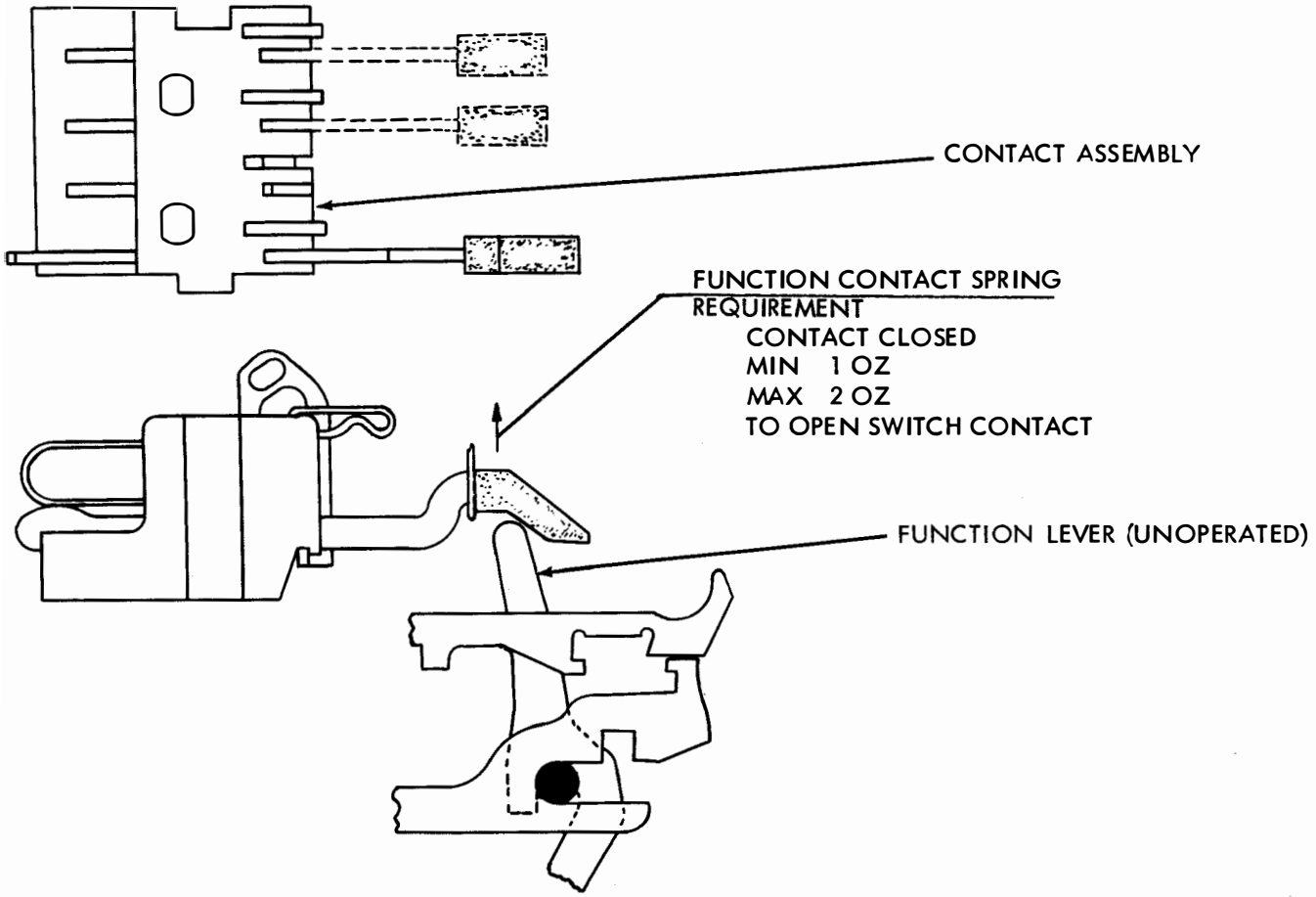



NOTE: IF THE SWITCHES ARE REMOVED FROM THE STUNT BOX, THE FOLLOWING REQUIREMENTS APPLY:

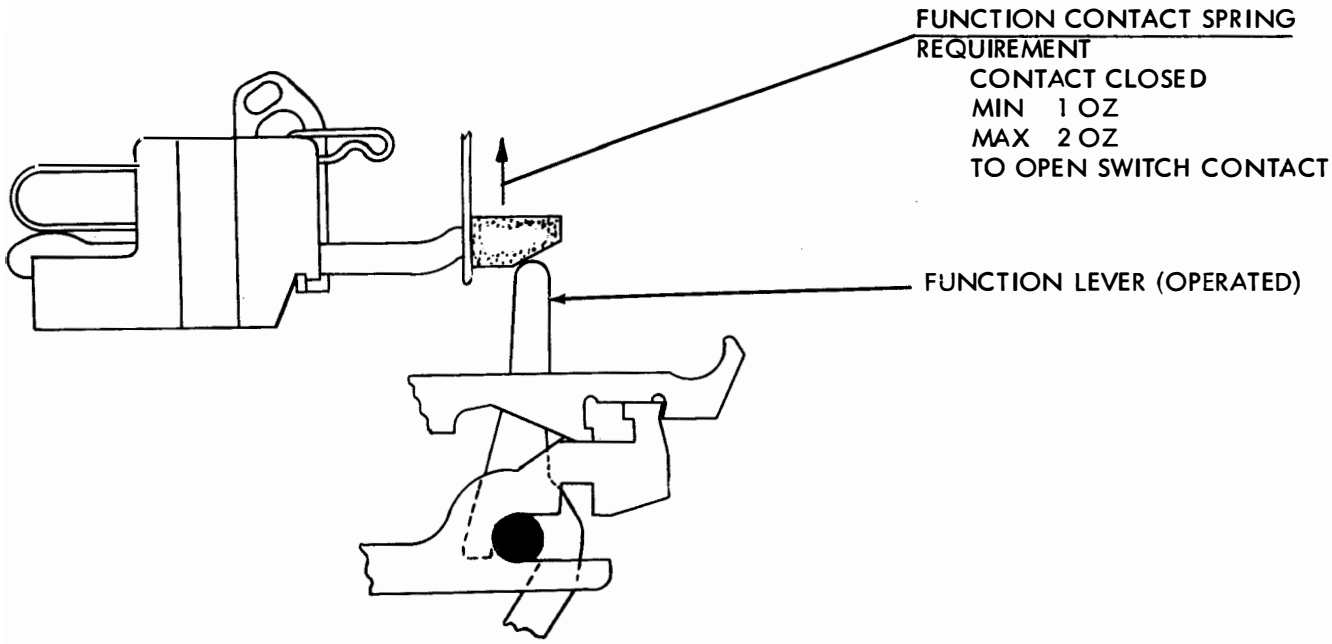
(1) PROVIDE AT LEAST .006 INCH CLEARANCE BETWEEN THE CONTACT ARM AND THE VERTICAL PORTION OF THE CONTACT CLIP. IF THE SWITCH HAS CONTACTS FRONT AND REAR, THIS CLEARANCE APPLIES TO BOTH FRONT AND REAR. TO OBTAIN THIS CLEARANCE, POSITION THE CONTACT PLATE BEFORE TIGHTENING THE CONTACT PLATE SCREWS.

(2) ON SWITCHES WITH CONTACTS FRONT AND REAR, CHECK TO SEE THAT THERE IS A GAP OF NOT LESS THAN .008 INCH BETWEEN THE FORMED-OVER END OF THE FRONT CONTACT CLIP AND THE BOTTOM OF THE CONTACT ARM WHEN THE REAR CONTACT IS CLOSED.

2.24 Function Contact Assembly with One-Piece Control Block




CAUTION: CARE SHOULD BE EXERCISED IN SOLDERING TO CONTACT SPRINGS SINCE EXCESSIVE HEAT WILL ANNEAL THE SPRINGS.



## 2.25 Code Bar Mechanism

### CODE BAR DETENT

REQUIREMENT

FRONT PLATE REMOVED. ALL CLUTCHES DISENGAGED SUPPRESSION AND SHIFT CODE BARS SHOULD DETENT EQUALLY (GAUGED BY EYE)

TO ADJUST

EQUALIZE THE DETENTING OF THE CODE BARS BY ADDING OR REMOVING SHIMS BETWEEN THE CASTING AND THE CODE BAR BRACKET.

### CODE BAR DETENT SPRING TENSION

NOTE

UNLESS THERE IS REASON TO BELIEVE THAT THESE SPRINGS ARE CAUSING OPERATING FAILURE DO NOT CHECK THIS REQUIREMENT.

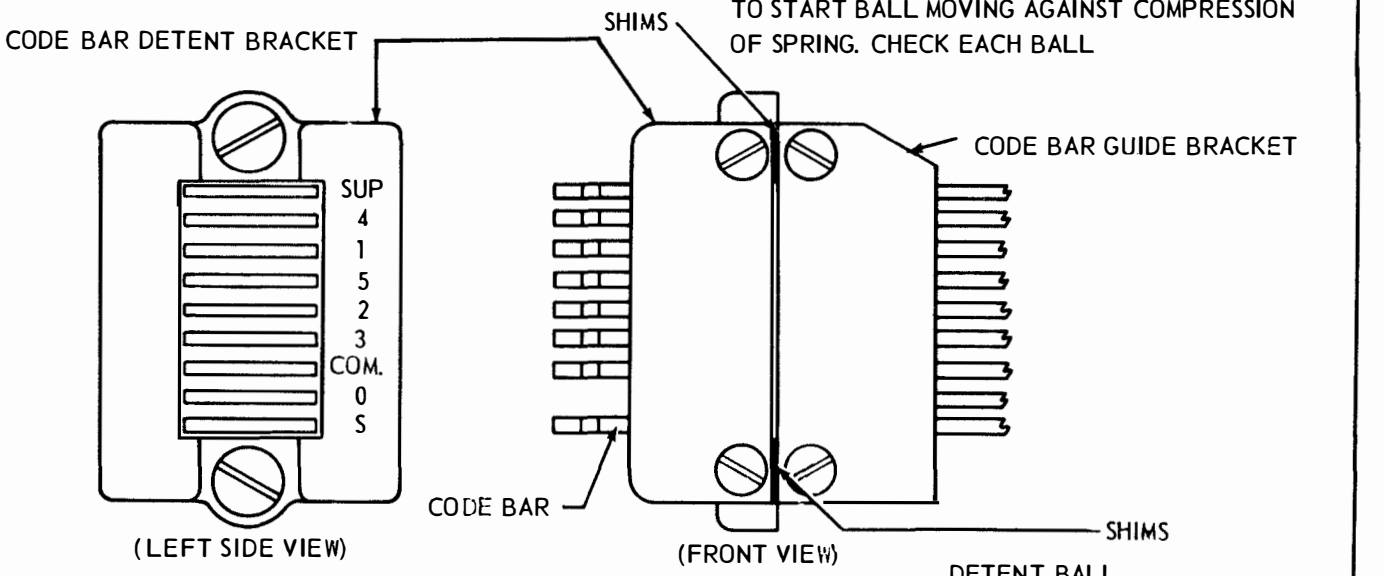
REQUIREMENT

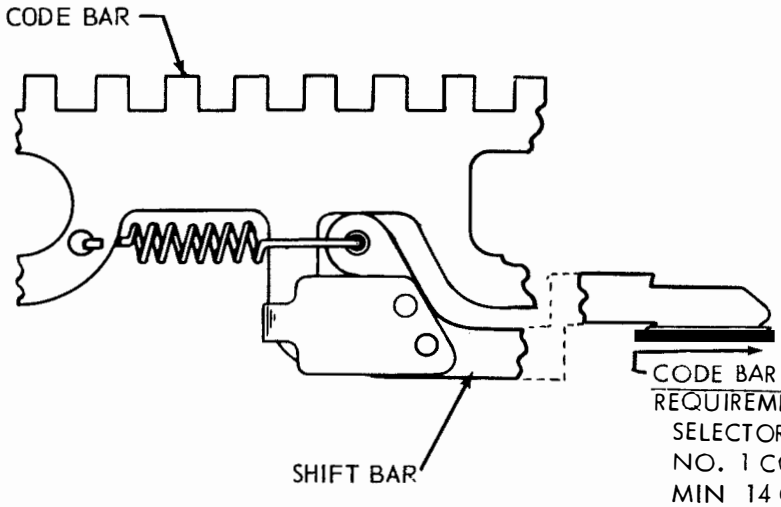
CODE BAR DETENT BRACKET CAREFULLY REMOVED AND CODE BARS REMOVED FROM DETENT BRACKET. SCALE APPLIED TO DETENT BALL AND PULLED IN DIRECTION OF BALL TRAVEL

MIN 1 1/2 OZ

MAX 3 1/2 OZ

TO START BALL MOVING AGAINST COMPRESSION OF SPRING. CHECK EACH BALL




### CODE BAR YIELD SPRING

REQUIREMENT

SELECTOR CLUTCH AND CODE BAR CLUTCH DISENGAGED. NO. 1 CODE BAR IN SPACING POSITION.

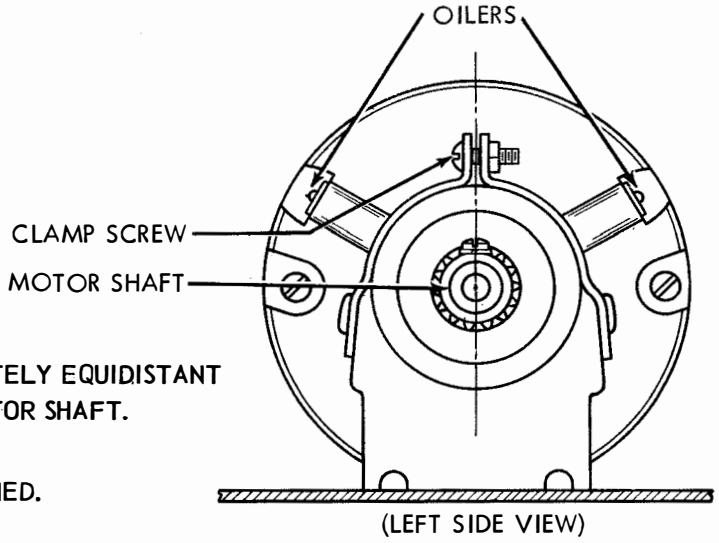
MIN 14 OZ --- MAX 23 OZ

TO START CODE BAR SHIFT BAR PIVOT MOVING AWAY FROM CODE BAR. CHECK NO. 2 AND COMMON CODE BAR SHIFT BAR IN THE SAME MANNER.

## 2.26 Motor and Base

**CAUTION**

IF THE MOTOR SHOULD BECOME BLOCKED FOR SEVERAL SECONDS, THE THERMAL CUT-OUT SWITCH WILL BREAK THE CIRCUIT. SHOULD THIS HAPPEN, ALLOW THE MOTOR TO COOL AT LEAST 5 MINUTES BEFORE MANUALLY DEPRESSING THE RED BUTTON. AVOID REPEATED DEPRESSION.



(LEFT SIDE VIEW)

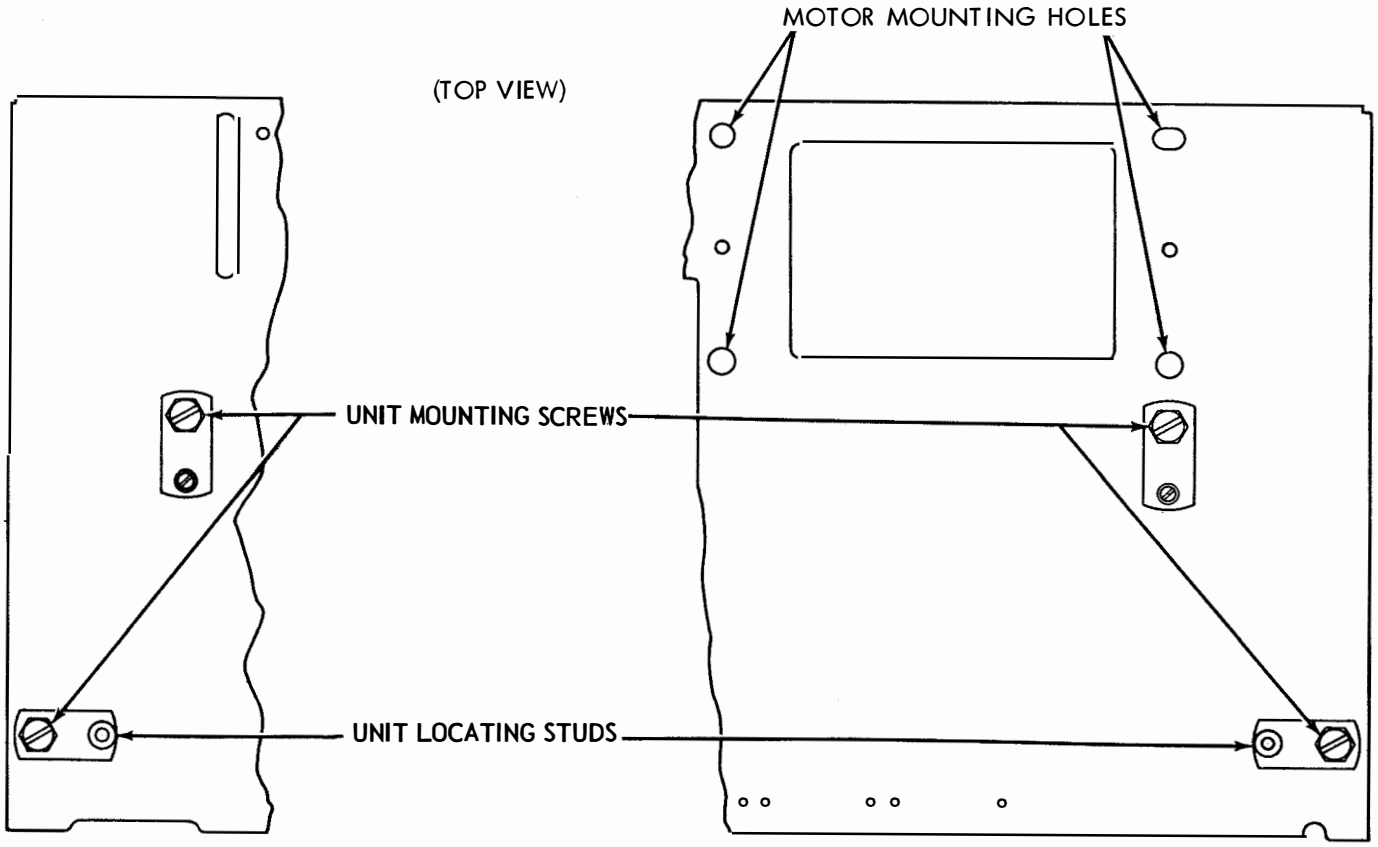
### SYNCHRONOUS MOTOR POSITIONING

REQUIREMENT

TWO OILERS SHOULD BE UPWARD AND APPROXIMATELY EQUIDISTANT FROM A VERTICAL LINE THROUGH CENTER OF MOTOR SHAFT.

TO ADJUST

POSITION MOTOR WITH TWO CLAMP SCREWS LOOSENED.




### MOUNTING UNIT ON BASE

REQUIREMENT

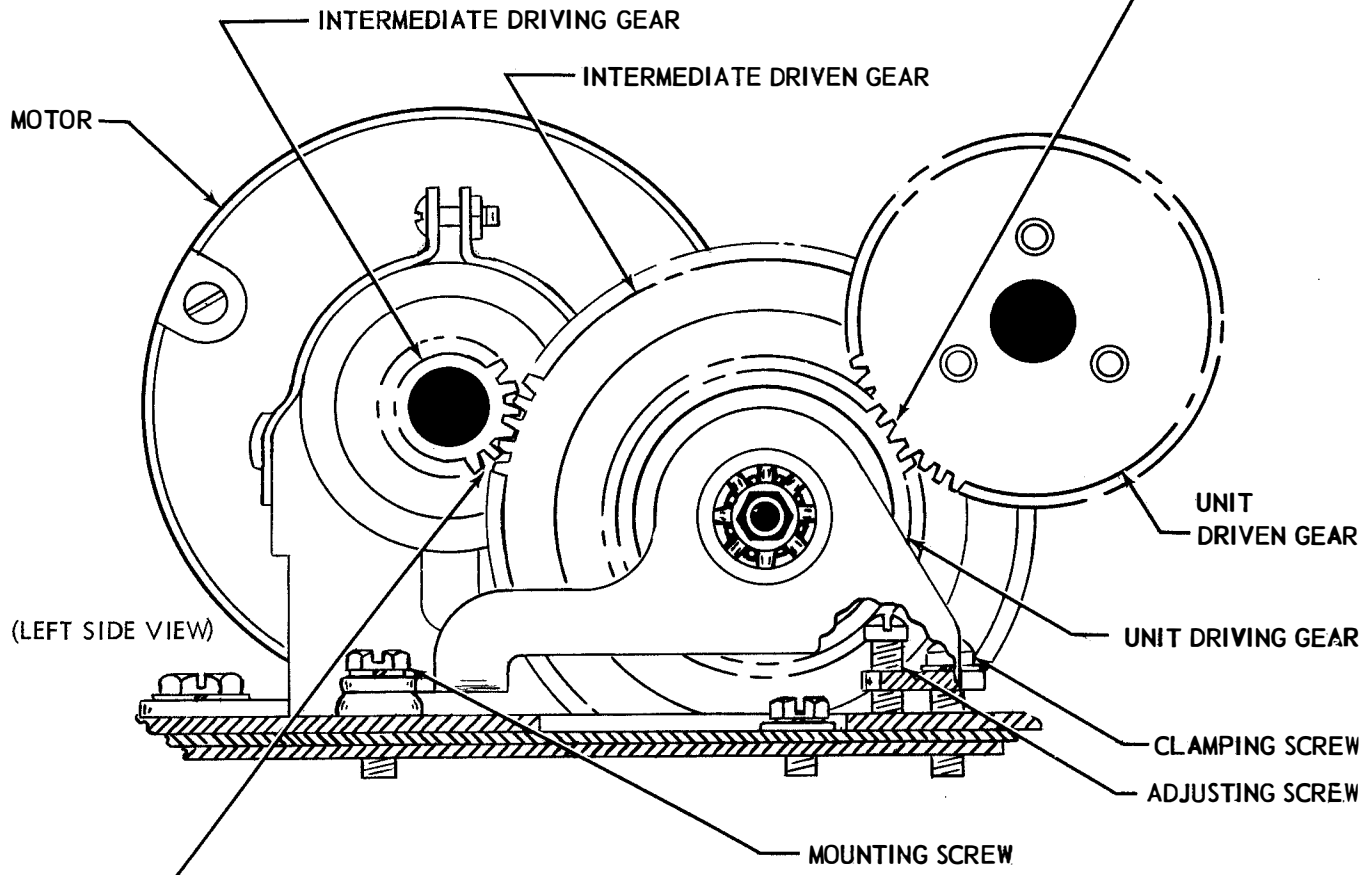
HOLD UNIT TILTED SLIGHTLY TO RIGHT. LOWER RIGHT END INTO ENGAGEMENT WITH RIGHT LOCATING STUD. WHILE EASING LEFT END DOWN, ROTATE MOTOR BY HAND TO MESH THE GEARS. SECURE BY FOUR MOUNTING SCREWS. THEN ROTATE MOTOR BY HAND TO INSURE PROPER MESHING OF GEARS.

## 2. 27 Intermediate Gearing

INTERMEDIATE GEAR BRACKET

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

TO ADJUST
POSITION THE COMPLETE INTERMEDIATE GEAR MECHANISM BRACKET WITH THE THREE SLOTTED HEX HEAD MOUNTING SCREWS LOOSENED.
ALIGN THE GEARS AT THIS TIME.




(2) REQUIREMENT
THERE SHOULD BE A BARELY PERCEPTIBLE 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.

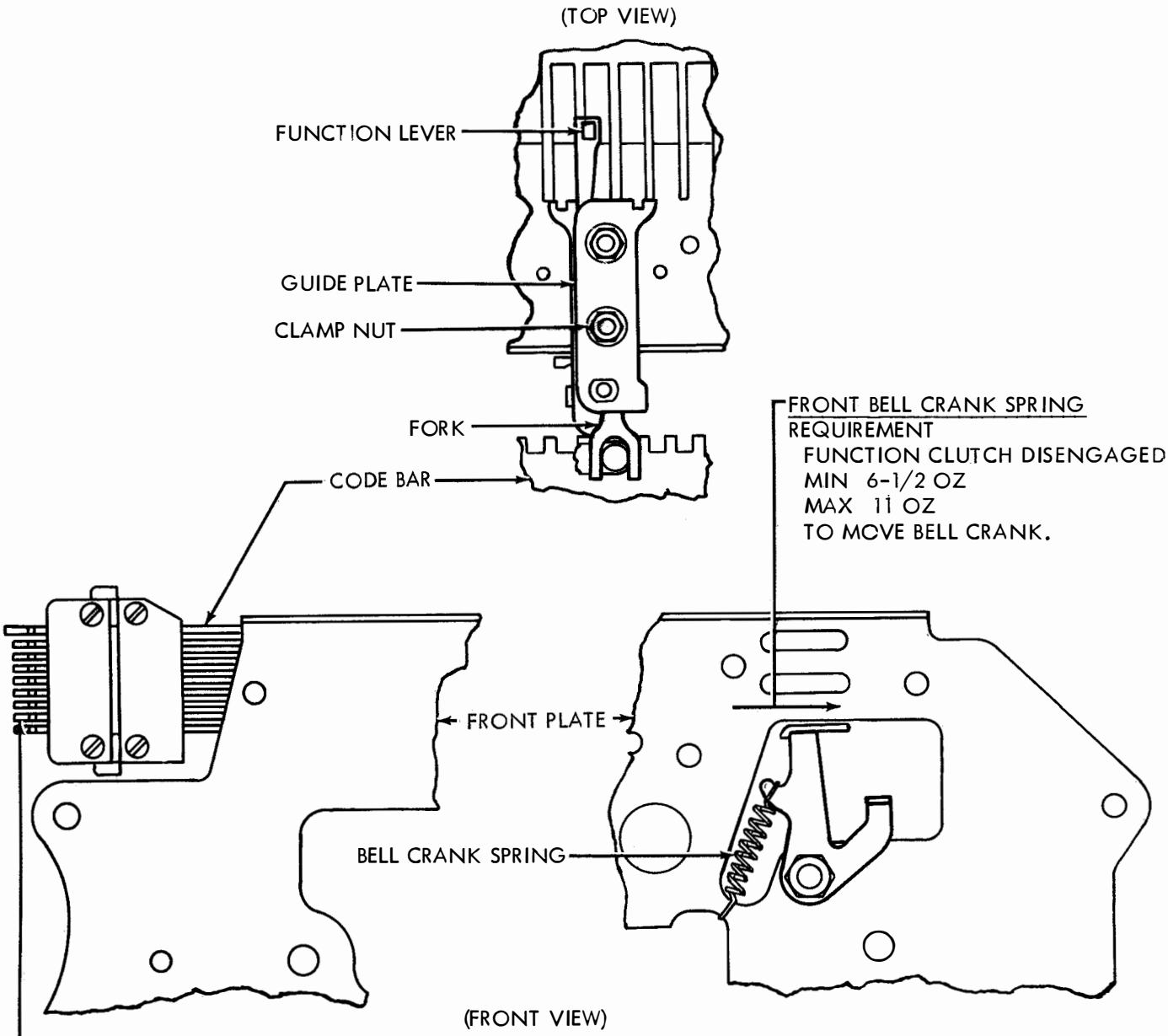
NOTE
WHEN A MULTIPLE WIRE DISTRIBUTOR IS USED WITH THE SEQUENCE SELECTOR, THE FOLLOWING APPLIES:

REQUIREMENT
THERE SHALL BE A BARELY PERCEPTIBLE AMOUNT OF BACKLASH BETWEEN THE DISTRIBUTOR DRIVEN AND DRIVING GEARS AT THE POINT WHERE THE BACKLASH IS THE LEAST.

TO ADJUST
POSITION DISTRIBUTOR WITH ITS MOUNTING NUTS LOOSENED

## 3. Variable Features

### 3.01 Code Bars and Front Bell Crank




CONDITION CODE (ZERO) CODE BAR SHIFT MECHANISM

REQUIREMENT

WITH FUNCTION CLUTCH IN STOP POSITION, LATCH FUNCTION LEVER (SHIFT MECH). THE NOTCH IN CONDITION CODE (ZERO) CODE BAR SHOULD ALIGN WITH NOTCHES IN OTHER CODE BARS WHEN ALL CODE BARS ARE SHIFTED TO THE RIGHT.

TO ADJUST

POSITION THE UPPER OR LOWER GUIDE PLATE WITH ITS CLAMP NUTS LOOSENED.

NOTE----POSITION THE ASSOCIATED GUIDE PLATE SO THAT THE MOVEMENT OF THE FORK IS NOT RESTRICTED WITHIN THE RANGE OF ADJUSTMENT.

## 3.02 Universal Contact (Stunt Box) Mechanism

NOTE: 1. THESE ADJUSTMENTS SHOULD BE MADE WITH THE CONTACT BRACKET ASSEMBLY REMOVED
NOTE: 2. IF CONTACT SCREWS ARE DISTURBED TO OBTAIN A REQUIREMENT, THEY MUST BE RETIGHTENED AND ALL PRECEDING REQUIREMENTS RECHECKED.

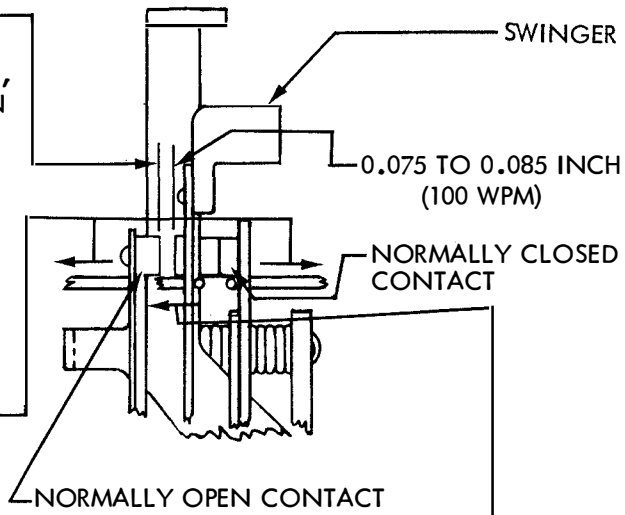
CAUTION: IF IT IS NECESSARY TO INCREASE THE CONTACT SPRING TENSIONS, IT IS ADVISABLE TO REMOVE THE CONTACT SPRING TO INCREASE ITS CURVATURE. AVOID DAMAGE TO CONTACT SPRINGS WHEN ADJUSTING THE STIFFENERS IN THE ASSEMBLY.

(A) CONTACT

1. REQUIREMENT
   CONTACT SPRINGS AND STIFFENERS MOUNTED VERTICALLY AND CONTACT POINTS IN ALIGNMENT (GAUGE BY EYE).
   TO ADJUST
   POSITION THE CONTACT SPRINGS AND STIFFENERS WITH ASSEMBLY SCREWS LOOSENED.
2. REQUIREMENT
   STIFFENERS SHOULD BE PARALLEL WITH THE CONTACT BRACKETS.
   TO ADJUST
   FORM THE STIFFENER
3. REQUIREMENT
   CONTACT SPRINGS SHOULD REST AGAINST THEIR STIFFENERS THROUGHOUT THEIR WIDTH.
   TO ADJUST
   BEND TOP FORMED SECTION OF STIFFENER. IF NECESSARY, BEND CONTACT SPRINGS.

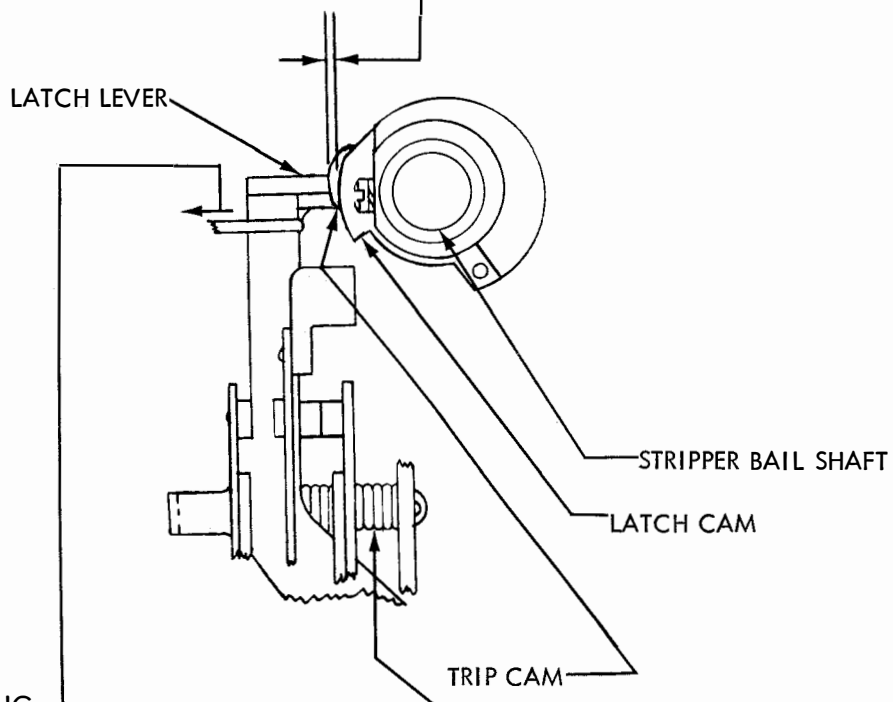
(B) NORMALLY OPEN CONTACT GAP
REQUIREMENT
WITH THE NORMALLY CLOSED CONTACTS CLOSED, THE NORMALLY OPEN CONTACT SHOULD BE OPEN
MIN 0.020 INCH
MAX 0.025 INCH
TO ADJUST
BEND STIFFENER

(C) CONTACT SPRING TENSION (TWO SPRINGS)
REQUIREMENT
MIN 2 OZ
MAX 3 OZ
TO MOVE EACH CONTACT SPRING AWAY FROM ITS STIFFENER, WITH THE SWINGER HELD AWAY
TO ADJUST
REMOVE AND FORM THE SPRING.




(D) SWINGER SPRING
REQUIREMENT
MIN 4 OZ
MAX 6 OZ
TO MOVE SWINGER FROM NORMALLY CLOSED CONTACT.
TO ADJUST
BEND SWINGER

3.03 Universal Contact (Stunt Box) Mechanism (continued)



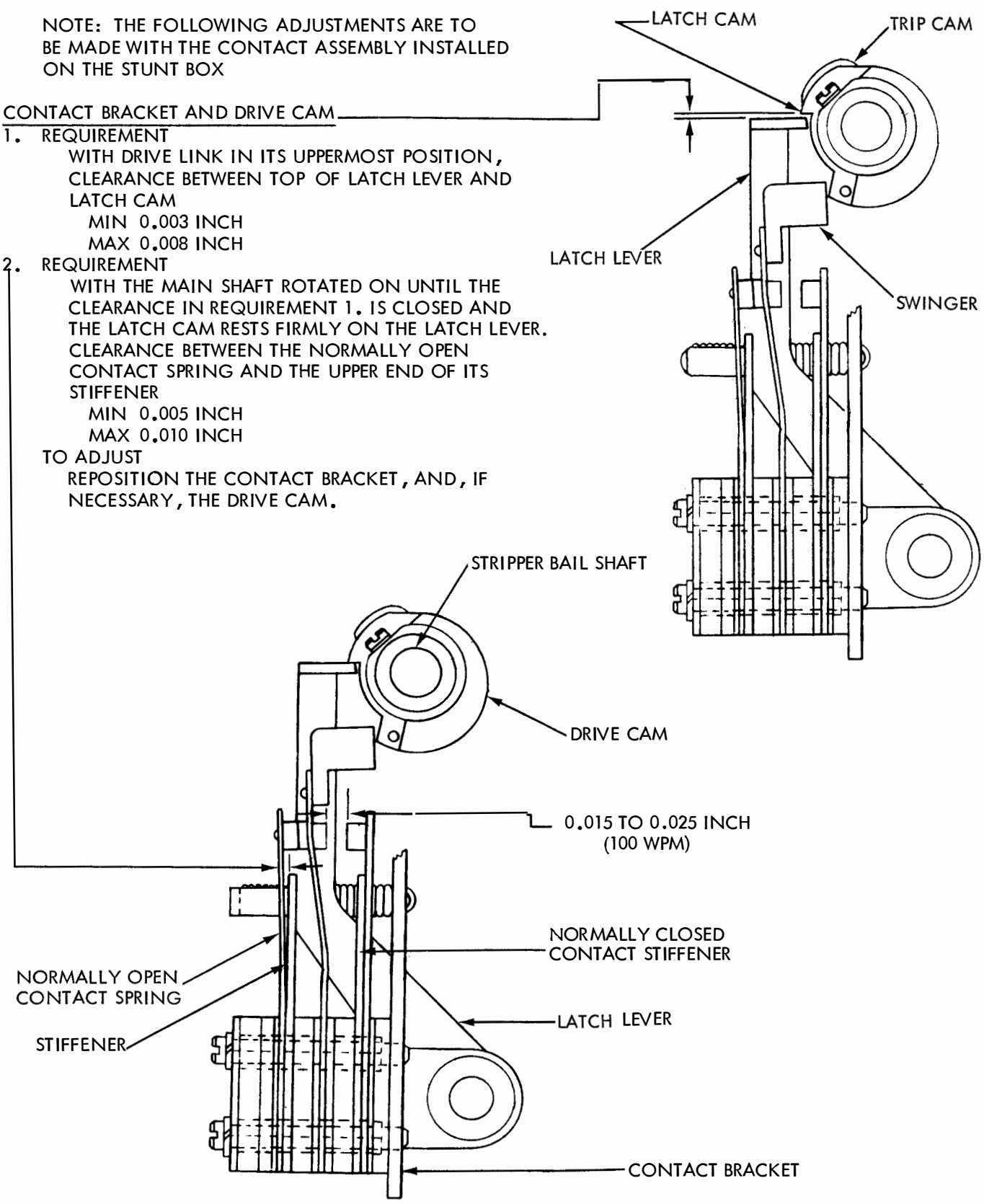
3.04 Universal Contact (Stunt Box) Mechanism (continued)

NOTE: THE FOLLOWING ADJUSTMENTS ARE TO BE MADE WITH THE CONTACT ASSEMBLY INSTALLED ON THE STUNT BOX

CONTACT BRACKET AND DRIVE CAM

1. REQUIREMENT
   WITH DRIVE LINK IN ITS UPPERMOST POSITION, CLEARANCE BETWEEN TOP OF LATCH LEVER AND LATCH CAM
   MIN 0.003 INCH
   MAX 0.008 INCH
2. REQUIREMENT
   WITH THE MAIN SHAFT ROTATED ON UNTIL THE CLEARANCE IN REQUIREMENT 1. IS CLOSED AND THE LATCH CAM RESTS FIRMLY ON THE LATCH LEVER. CLEARANCE BETWEEN THE NORMALLY OPEN CONTACT SPRING AND THE UPPER END OF ITS STIFFENER
   MIN 0.005 INCH
   MAX 0.010 INCH

   TO ADJUST
   REPOSITION THE CONTACT BRACKET, AND, IF NECESSARY, THE DRIVE CAM.



3.05 Universal Contact (Stunt Box) Mechanism (continued)

GENERAL APPLICATION TIMING - FINAL (USING DXD OR SIMILAR EQUIPMENT)

CONTACT BRACKET AND DRIVE CAM POSITION
REQUIREMENT
THE NORMALLY OPEN UNIVERSAL CONTACTS SHOULD CLOSE WITHIN ± 5 MILLISECONDS OF THE CLOSURE OF THE NORMALLY OPEN STUNT BOX CONTACT.
TO ADJUST
REFINE THE DRIVE CAM (AND, IF NECESSARY, THE BRACKET) ADJUSTMENT BY ROTATING THE DRIVE CAM WITHIN THE SPECIFIED LIMITS.

TRIP CAM
REQUIREMENT
THE NORMALLY OPEN UNIVERSAL CONTACTS SHOULD OPEN WITHIN -5 +0 MILLISECONDS OF THE OPENING OF THE NORMALLY OPEN STUNT BOX CONTACT.
TO ADJUST
REFINE THE TRIP CAM ADJUSTMENT BY ROTATING THE TRIP CAM ON ITS SHAFT WITHIN THE SPECIFIED LIMITS.

SPECIAL ADJUSTMENTS (FOR 100 WPM)

NOTE: TO PREVENT EXCESSIVE FLEXING OF THE SWINGER, THE NORMALLY OPEN CONTACT SPRING STIFFENER MUST BE BENT TO HOLD THE SPRING AWAY FROM THE SWINGER WITH THE DRIVE LINK IN ITS UPPERMOST POSITION.

NORMALLY OPEN CONTACT GAP (100 WPM)
REQUIREMENT
WITH THE SWINGER RESTING AGAINST THE NORMALLY CLOSED CONTACT THE GAP SHOULD BE
MIN 0.075 INCH
MAX 0.085 INCH
TO ADJUST
BEND THE CONTACT SPRING STIFFENER.

CONTACT BRACKET AND DRIVE CAM POSITION (100 WPM)
REQUIREMENT
WITH THE LATCH CAM IN ITS FULLY LATCHED POSITION
MIN 0.015 INCH
MAX 0.025 INCH
BETWEEN THE NORMALLY OPEN CONTACT SPRING AND ITS STIFFENER.
TO ADJUST
POSITION THE DRIVE CAM AND/OR, IF NECESSARY, THE CONTACT BRACKET.

SPECIAL APPLICATION TIMING (USING DXD OR SIMILAR EQUIPMENT)

A. NORMALLY CLOSED CONTACTS (100 WPM FOR 83B2 SWITCHING SYSTEM)

1. THE NORMALLY CLOSED CONTACTS SHOULD CLOSE WITHIN 50 TO 80 DIVISIONS AFTER THE START OF THE STOP PULSE.
2. THE NORMALLY OPEN CONTACT SHOULD CLOSE PRIOR TO THE END OF NO. 3 PULSE.
3. THE NORMALLY OPEN CONTACTS SHOULD REMAIN CLOSED FOR AT LEAST 238 DIVISIONS (100 WPM DXD WITH 742 SCALE DIVISIONS).

NOTE: THE RELATION BETWEEN THE NORMALLY CLOSED UNIVERSAL CONTACT MARKING PULSE AND THE STOP IMPULSE OF THE RECEIVED SIGNAL VARIES WITH THE RANGE SCALE SETTING OF THE UNIT.

3.06 Universal Contact (Stunt Box) Mechanism (continued)

B. NORMALLY CLOSED CONTACTS (100 WPM USED IN DELTA AND UNITED AIRLINES SYSTEM)

WHEN THE NORMALLY OPEN CONTACTS ARE NOT USED, THE NORMALLY CLOSED CONTACTS SHOULD REMAIN OPEN FOR 53.88 MILLISECONDS OR 400 ± 15 DXD DIVISIONS.

TO ADJUST

REFINE THE DRIVE CAM, TRIP CAM AND, IF NECESSARY, THE BRACKET POSITIONS TO MEET THE TIMING REQUIREMENTS.

NOTE 1:
THE NORMAL 0.003 TO 0.008 INCH OVERTRAVEL OF THE LATCH CAM OVER THE LATCH LEVER WITH THE DRIVE LINK IN ITS UPPERMOST POSITION MUST BE INCREASED IN ORDER TO DECREASE NORMALLY CLOSED CONTACT GAP IN THE LATCHED POSITION OF THE LATCH CAM. THIS PREVENTS THE CONTACT FROM BOUNCING WHEN THE LATCH LEVER IS RELEASED.

NOTE 2:
WITH THE LATCH CAM IN ITS LATCHED POSITION, THERE SHOULD BE 0.015 INCH MINIMUM CONTACT GAP BETWEEN THE NORMALLY CLOSED CONTACTS.

GENERAL REQUIREMENTS AFTER TIMING ADJUSTMENTS

NOTE: IT IS VERY IMPORTANT THAT THE FOLLOWING REQUIREMENTS BE MET

A. WITH THE DRIVE LINK IN ITS UPPERMOST POSITION:

1. THE LATCH CAM SHALL NOT OVERTRAVEL OR HANG UP ON THE SWINGER INSULATOR.

2. THERE SHALL BE AT LEAST 0.003 INCH CLEARANCE BETWEEN THE LATCHING SURFACE OF THE LATCH CAM AND THE LATCHING SURFACE OF THE LATCH LEVER.

3. THE CLEARANCE BETWEEN THE NORMALLY OPEN CONTACT SPRING AND ITS STIFFENER SHALL NOT EXCEED 0.025 INCH.

B. WITH THE DRIVE LINK IN ITS LOWERMOST POSITION:

1. THE TOP OF THE SWINGER INSULATOR MUST CLEAR THE CUT-OUT SECTION OF THE LATCH CAM.

2. THERE SHALL BE AT LEAST 0.003 INCH CLEARANCE BETWEEN THE FRONT EDGE OF THE LATCH LEVER LATCHING SURFACE AND THE HIGH PART OF THE LATCH CAM.

C. WITH THE LATCH CAM IN ITS LATCHED POSITION, THERE SHALL BE AT LEAST 0.005 INCH CLEARANCE BETWEEN THE NORMALLY OPEN CONTACT SPRING AND THE UPPER END OF ITS STIFFENER.

D. THE LATCHING SURFACE OF THE LATCH LEVER SHALL COVER THE WIDTH OF THE TRIP CAM AND LATCH CAM.