

28F, 28G, 28LA, AND 28LB

TRANSMITTER-DISTRIBUTOR UNITS

REQUIREMENTS AND ADJUSTMENTS

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1. GENERAL

1.01 This section contains the requirements and adjusting procedures for the maintenance of the 28F, 28G, 28LA, and 28LB transmitter-distributor units.

1.02 This section is reissued to include adjustment information for modification kits which have been approved for use with these transmitter-distributor units, and to bring all adjustment information up to date.

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

1.04 When the requirement calls for the 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.

Note: When either the sensing or distributor shaft is rotated by hand, the clutch does not fully disengage upon reaching its stop position. In order to relieve the drag on the clutch and permit the main shaft to rotate freely, apply pressure on a lug of the clutch disc with a screwdriver to cause it to engage its latchlever and thus disengage the internal-expansion clutch shoes.

1.05 The covers may be removed for inspection and minor repair of the unit; however, when more extensive maintenance is to be undertaken, it is recommended that the unit be removed from its subbase to disconnect the power and to permit the unit to be inverted. Separate the unit from its subbase by sliding the unit toward the front to disconnect the electrical connectors and then lift upward.

1.06 In addition to the usual teletypewriter tools and materials, the following are required to maintain the transmitter-distributor units with pull-back mechanism.

- (a) TP172060 Adjusting Tool: To bend the storing switch mechanism, transfer-type reading contacts.
- (b) TP170283 Gauge: To adjust the tape guide.
- (c) 28B Stroboscopic Test Set: To check contact-timing measurements.

1.07 Unless otherwise indicated, the requirements and adjustments in 2. of this section are common to the units both with and without the pull-back mechanism.

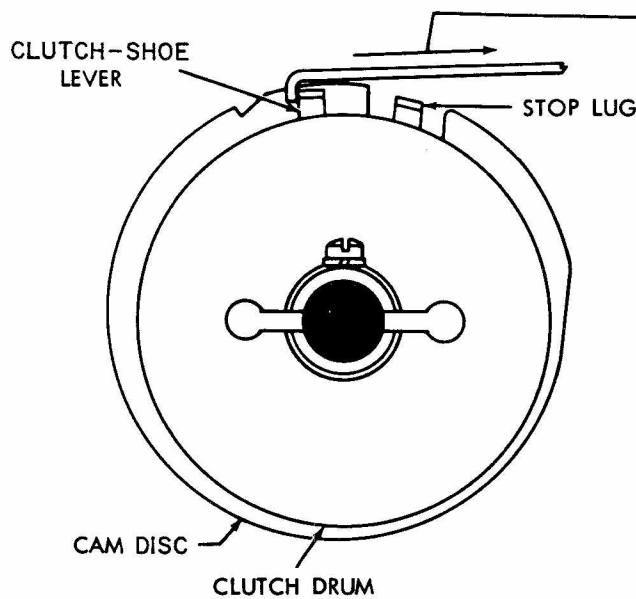
2. REQUIREMENTS AND ADJUSTMENTS

2.01 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 shown is indicated by the letters (A), (B), (C), etc.

A. Transmitter-Distributor Unit

2.02 Clutch Mechanism

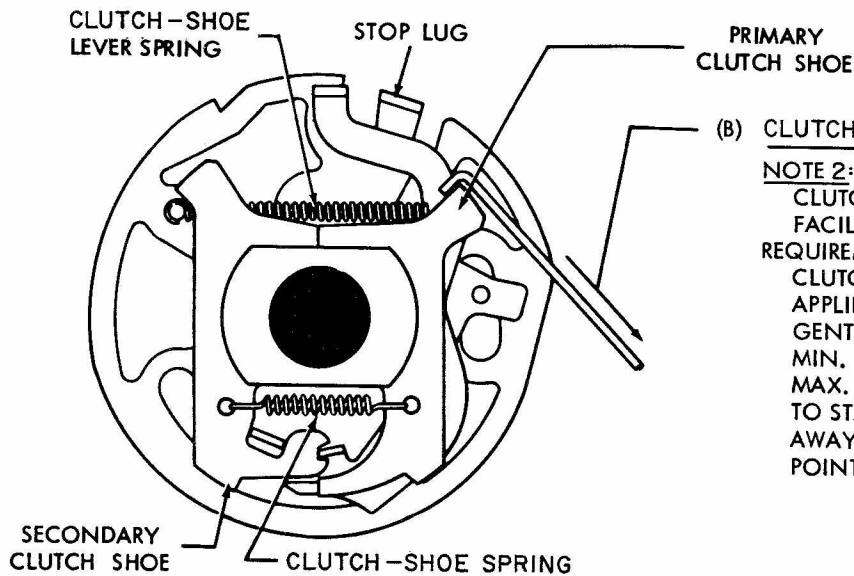
NOTE 1: REQUIREMENTS A AND B ARE ADJUSTED AT THE FACTORY AND SHOULD NOT BE DISTURBED UNLESS ASSOCIATED MECHANISMS HAVE BEEN REMOVED FOR SERVICING OR THERE IS REASON TO BELIEVE THAT THE REQUIREMENTS ARE NOT MET. THE FOLLOWING REQUIREMENTS APPLY TO BOTH THE SENSING CLUTCH AND DISTRIBUTOR CLUTCH.



(A) CLUTCH-SHOE LEVER SPRING

REQUIREMENT

CLUTCH ENGAGED AND CAM DISC HELD TO PREVENT TURNING. SCALE PULLED AT TANGENT TO CLUTCH. MIN. 15 OZS. MAX. 20 OZS. TO MOVE CLUTCH-SHOE LEVER IN CONTACT WITH STOP LUG.



(B) CLUTCH-SHOE SPRING

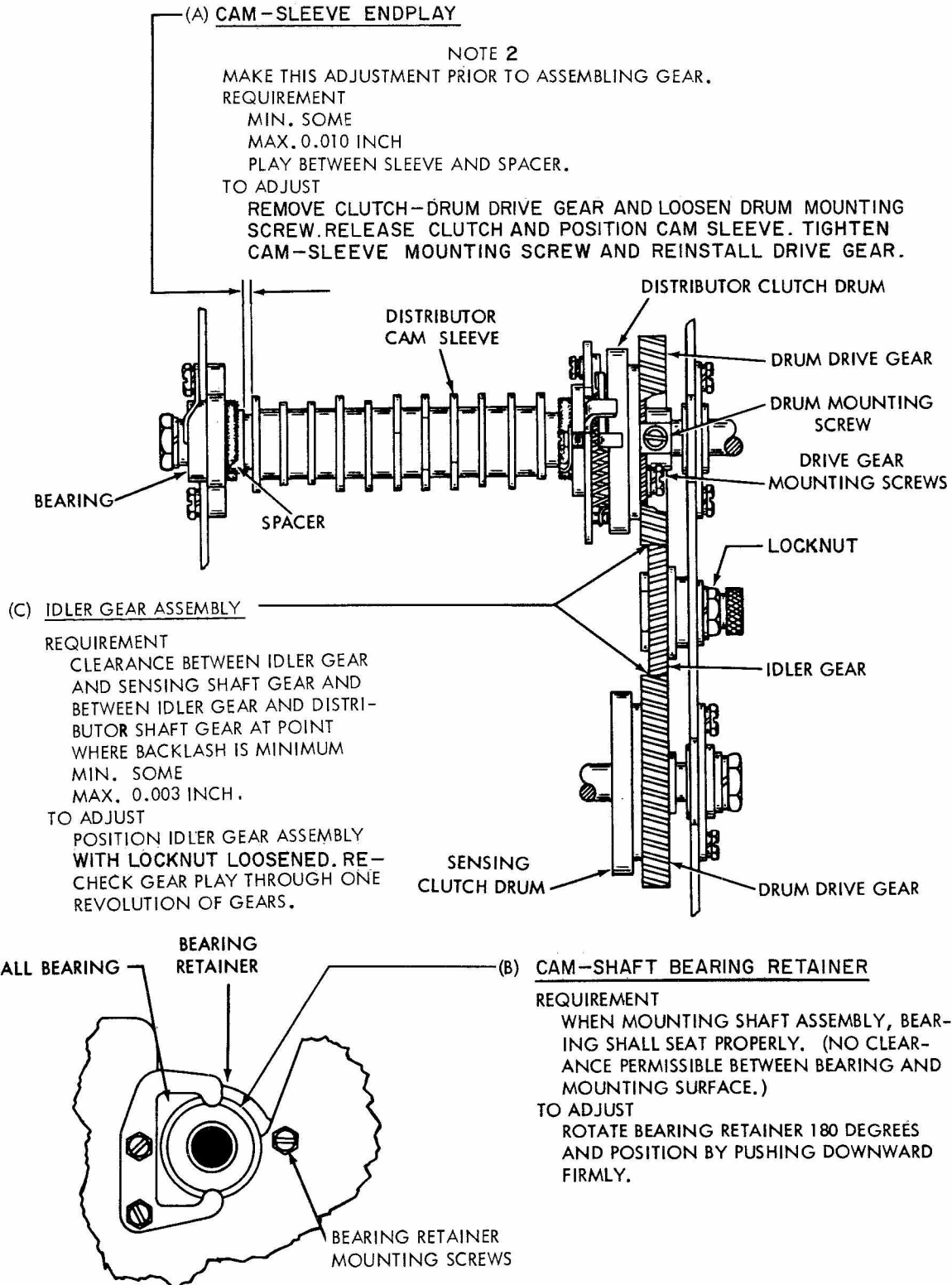
NOTE 2: IT IS NECESSARY TO REMOVE THE CLUTCH FROM THE MAIN SHAFT TO FACILITATE THIS CHECK.

REQUIREMENT

CLUTCH DRUM REMOVED. SCALE APPLIED TO PRIMARY SHOE AT A TANGENT TO THE FRICTION SURFACE. MIN. 3 OZS. MAX. 5 OZS. TO START PRIMARY SHOE MOVING AWAY FROM SECONDARY SHOE AT POINT OF CONTACT.

2.03 Cam Shafts

NOTE 1: THE FOLLOWING REQUIREMENTS APPLY TO BOTH THE DISTRIBUTOR AND SENSING CAM SLEEVES. THESE MECHANISMS SHOULD NOT BE DISTURBED UNLESS THERE IS REASON TO BELIEVE THE REQUIREMENTS ARE NOT MET.



2.04 Clutch Trip Mechanism

NOTE: REQUIREMENTS APPLY TO BOTH CLUTCH TRIP MECHANISMS, TOP PLATE AND COVER PLATE REMOVED.

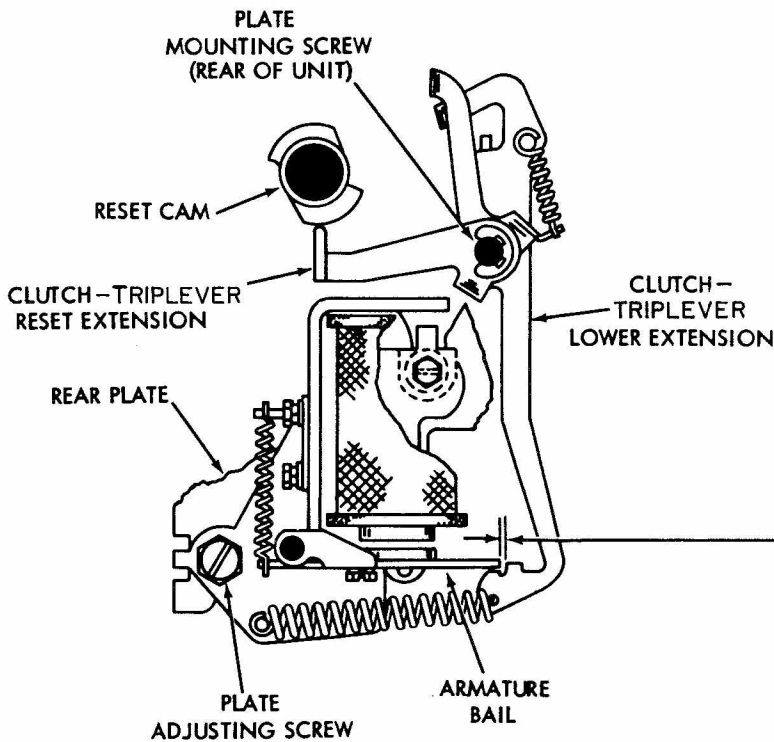
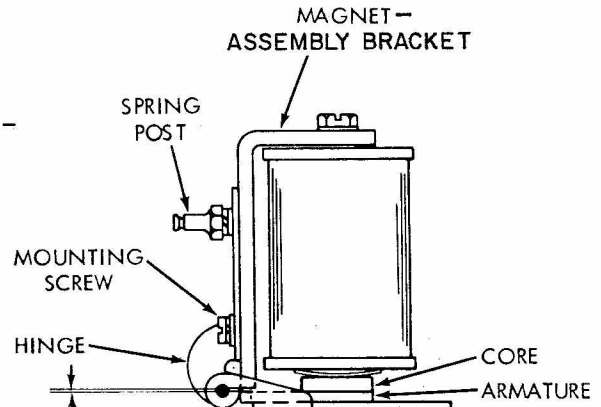
(A) CLUTCH ARMATURE AIR GAP

REQUIREMENT

AIR GAP BETWEEN ARMATURE AND MAGNET-ASSEMBLY BRACKET WITH ARMATURE FLUSH AGAINST MAGNET CORE
 MIN. 0.004 INCH
 MAX. 0.008 INCH.

TO ADJUST

REMOVE ARMATURE-EXTENSION SPRING, POSITION HINGE WITH SPRING POST AND HINGE MOUNTING SCREW LOOSENED, RECHECK AIR GAP AND REPLACE SPRING.



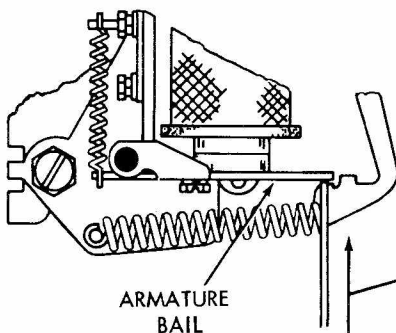
(B) CLUTCH TRIP ASSEMBLY MOUNTING PLATE

REQUIREMENT

CLEARANCE BETWEEN END OF ARMATURE BAIL AND LATCHING SURFACE OF CLUTCH-TRIP LEVER LOWER EXTENSION WITH CLUTCH-TRIP LEVER RESET EXTENSION ON HIGH PART OF CAM (TAKE UP PLAY IN PARTS FOR MINIMUM CLEARANCE.)
 MIN. 0.020 INCH
 MAX. 0.030 INCH.

TO ADJUST

POSITION PLATE WITH SCREWDRIVER IN LOWER ADJUSTING SLOT WITH PLATE ADJUSTING SCREW AND PLATE MOUNTING SCREW LOOSENED. (TAKE UP PLAY IN TRIPLEVER IN DIRECTION OF CAM.)



(C) ARMATURE-BAIL SPRING

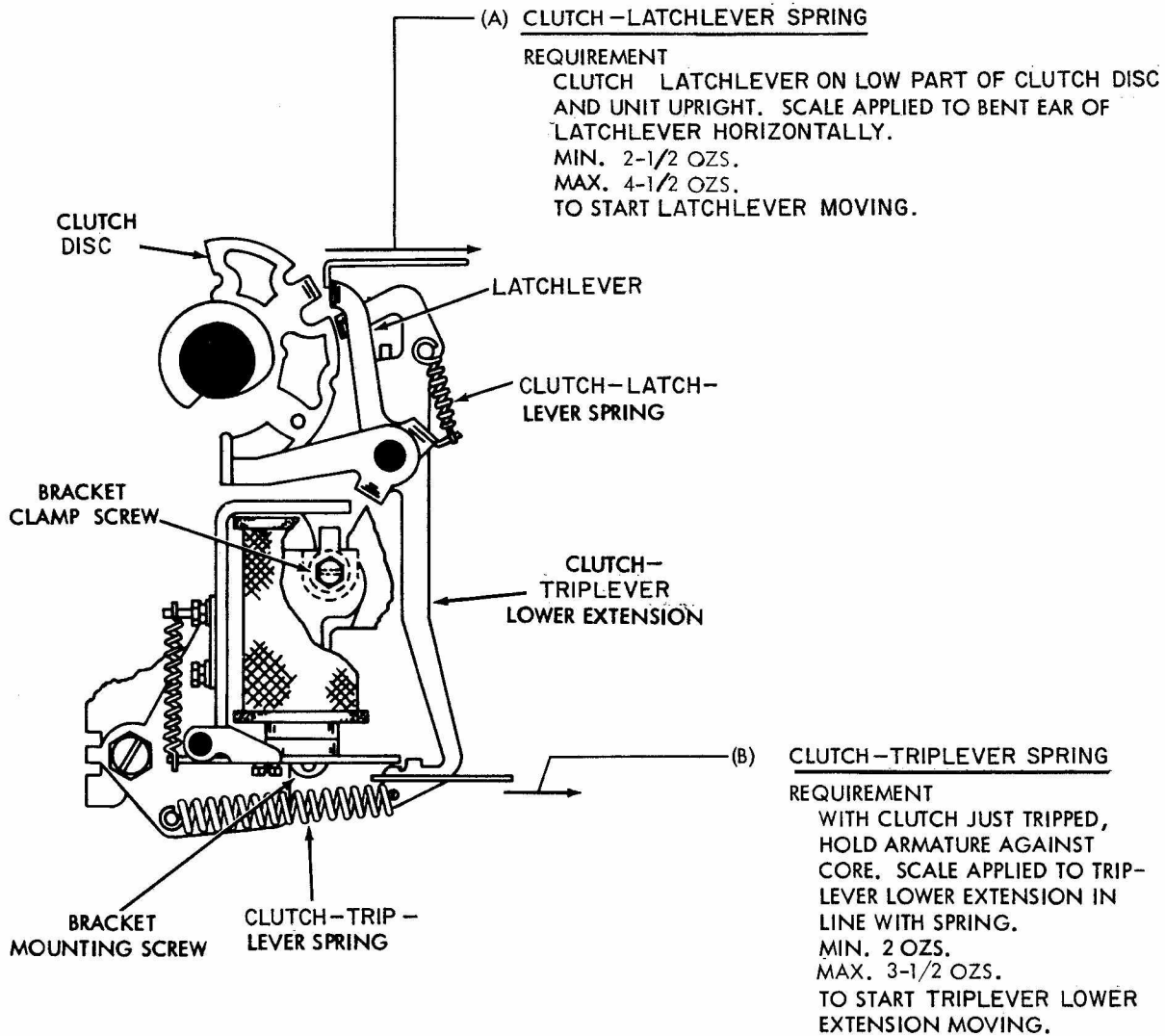
REQUIREMENT

TRIPLEVER RESET EXTENSION ON HIGH PART OF CAM, SCALE APPLIED TO LATCHING END OF ARMATURE BAIL.
 MIN. 3 OZS.
 MAX. 4-1/2 OZS.

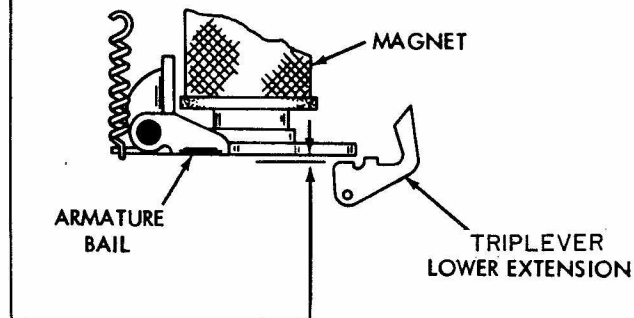
TO START ARMATURE BAIL MOVING.

2.04 Clutch Trip Mechanism (Cont)

NOTE: REFER TO REQUIREMENTS IN PRECEDING PARAGRAPH.
TAPE-GUIDE PLATE REMOVED.

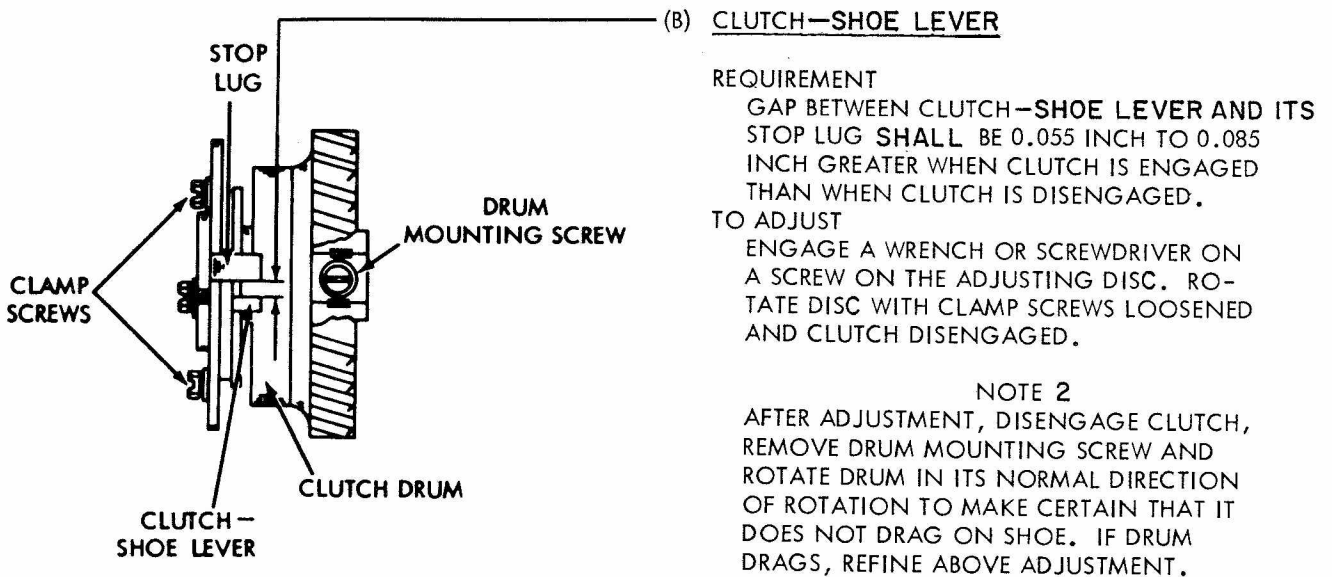
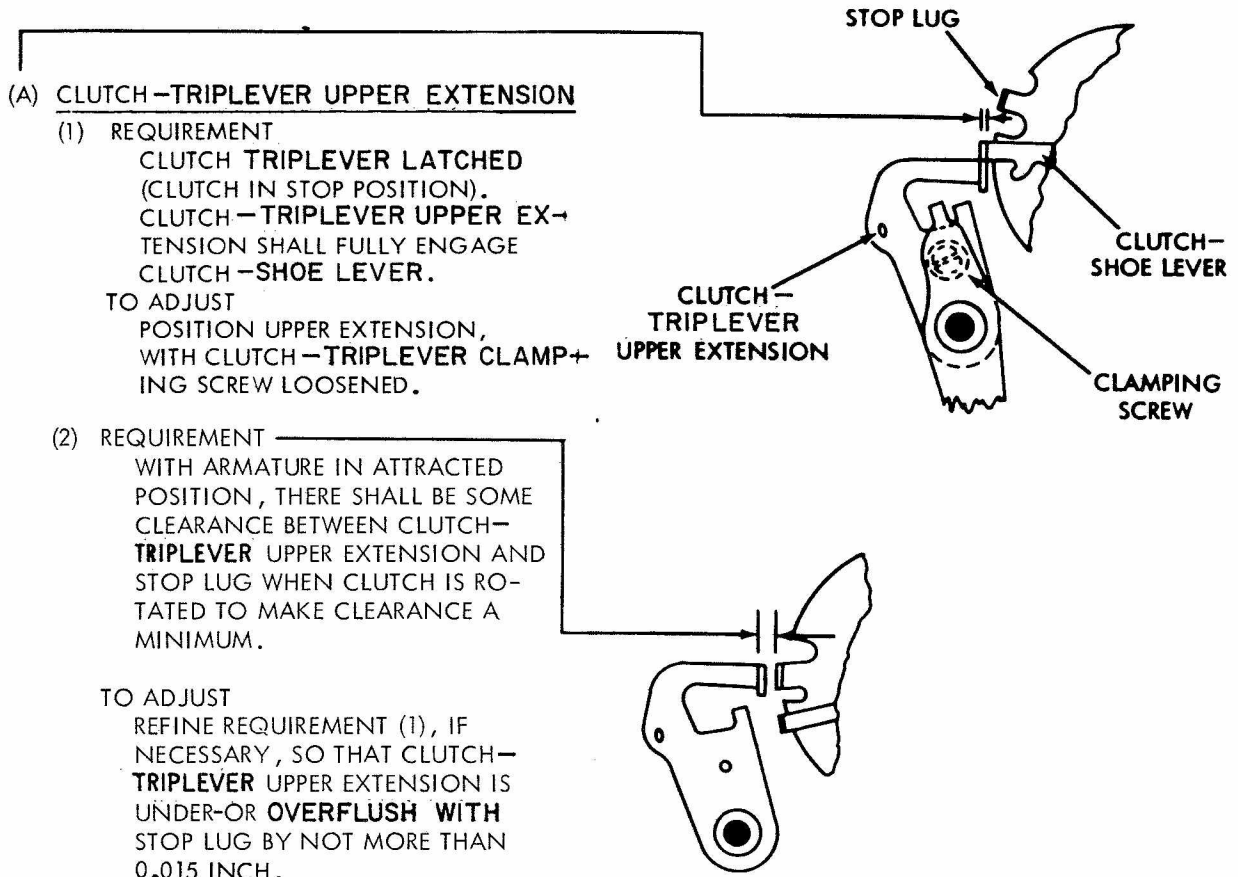


(C) MAGNET BRACKET
 REQUIREMENT
 CLEARANCE BETWEEN ARMATURE BAIL AND TOP EDGE OF TRIPLEVER LOWER EXTENSION WITH CLUTCH-TRIPLEVER RESET EXTENSION ON HIGH PART OF CAM AND ARMATURE FLUSH AGAINST CORE (TAKE UP PLAY FOR MINIMUM CLEARANCE.)
 MIN. 0.030 INCH
 MAX. 0.040 INCH.
 TO ADJUST
 INSERT SCREWDRIVER IN UPPER SLOT AND PIVOT BRACKET, WITH BRACKET MOUNTING SCREW AND CLAMP SCREW LOOSENED.



2.05 Clutch Mechanism

NOTE 1: REQUIREMENTS A AND B APPLY TO BOTH CLUTCHES. TOP PLATE REMOVED.

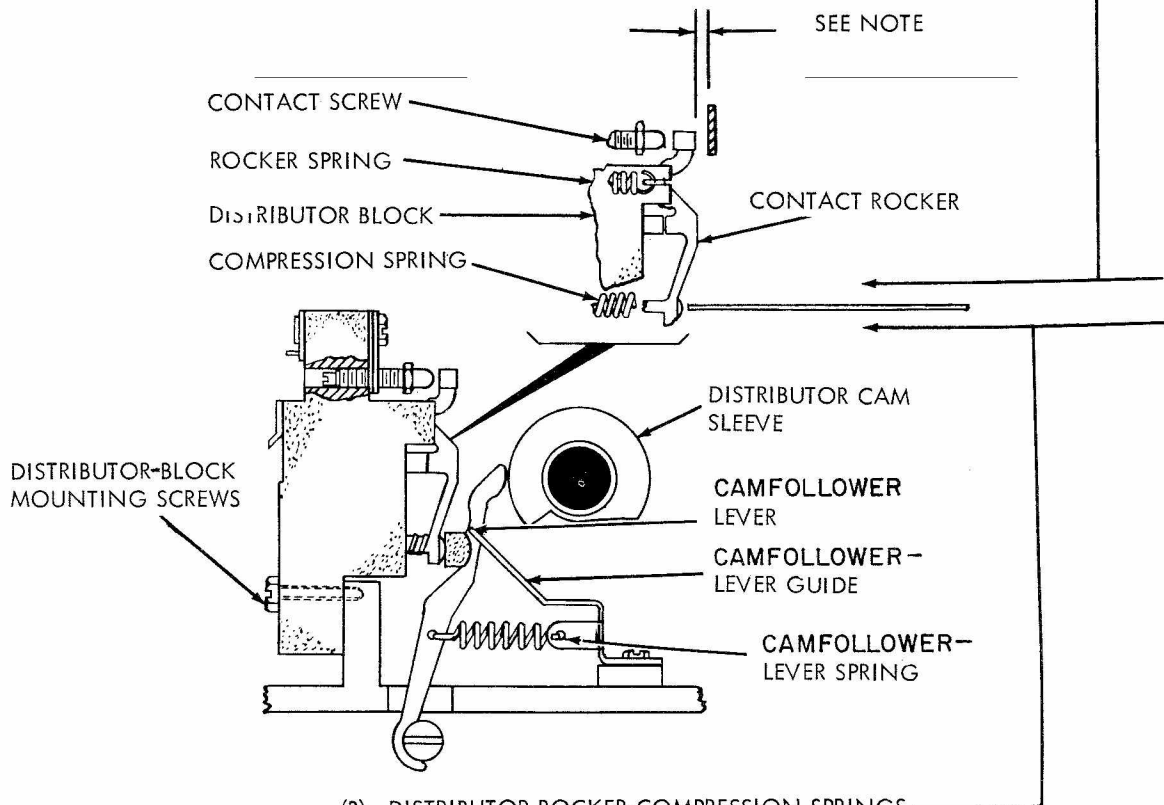


(A) DISTRIBUTOR ROCKER SPRING TO CHECK

POSITION EACH CONTACT SCREW SO ITS CONTACT SURFACE IS ABOUT 1/32 INCH FROM EDGE OF BLOCK.

REQUIREMENT

WITH COMPRESSION SPRINGS REMOVED, HOLD DISTRIBUTOR BLOCK IN HORIZONTAL POSITION. PUSH SPRING SCALE DOWNWARD (VERTICALLY).
 MIN. 3 OZS.
 MAX. 4 OZS.
 TO SEPARATE CONTACTS.



(B) DISTRIBUTOR ROCKER-COMPRESSION SPRINGS

REQUIREMENT

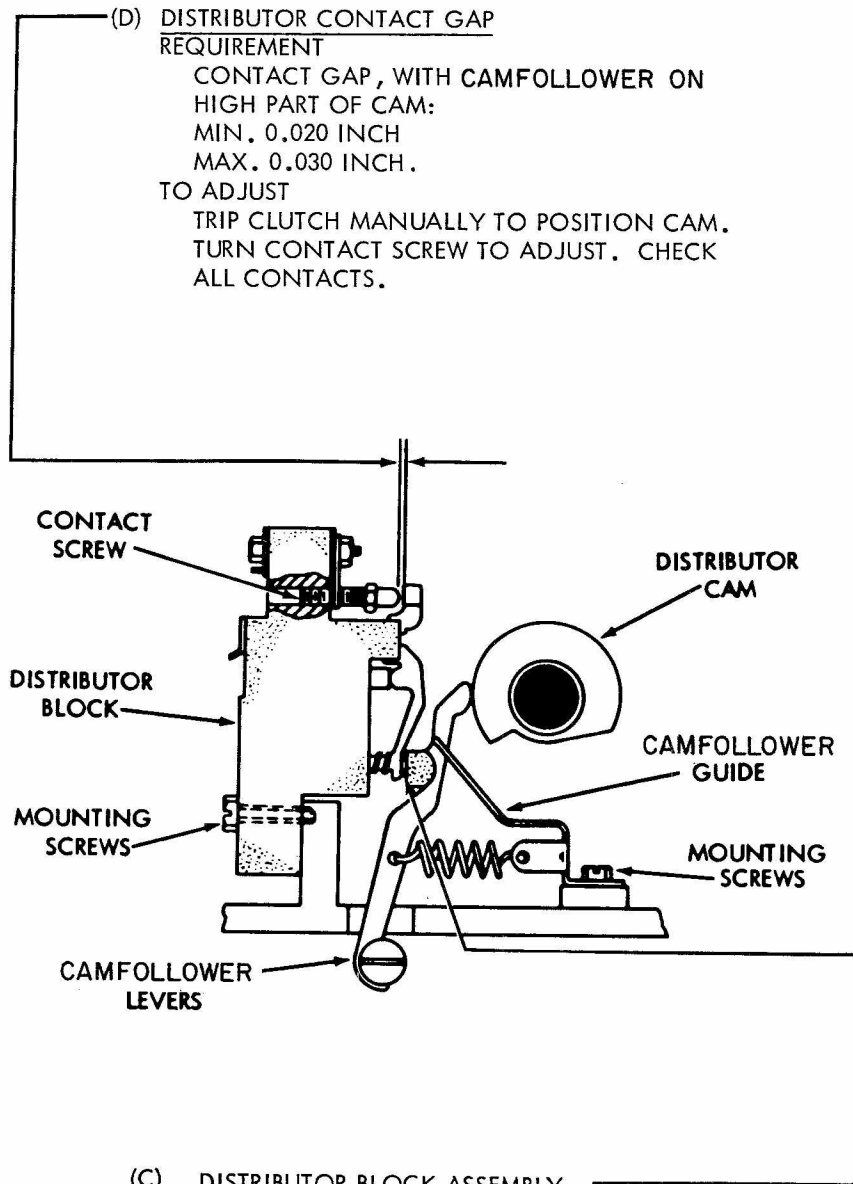
WITH COMPRESSION SPRINGS INSTALLED, AND BLOCK IN A HORIZONTAL POSITION, APPLY SPRING SCALE AT LOWER END OF ROCKER AND PUSH DOWNWARD.

MIN. 6-1/2 OZS.
 MAX. 9-1/2 OZS.
 TO SEPARATE CONTACTS.

NOTE

WITH DISTRIBUTOR BLOCK REMOVED, ADJUST CONTACTS SO THAT THERE IS 0.070 TO 0.080 INCH BETWEEN ROCKER LEVERS AND OIL GUARD.

2.06 Distributor Contact Mechanism (Cont)

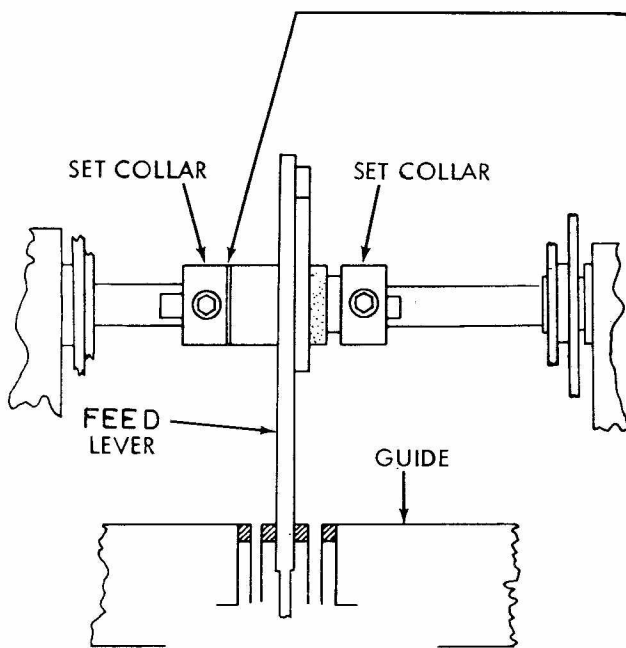


(D) DISTRIBUTOR CONTACT GAP REQUIREMENT
CONTACT GAP, WITH CAMFOLLOWER ON HIGH PART OF CAM:
MIN. 0.020 INCH
MAX. 0.030 INCH.
TO ADJUST TRIP CLUTCH MANUALLY TO POSITION CAM. TURN CONTACT SCREW TO ADJUST. CHECK ALL CONTACTS.

(C) DISTRIBUTOR BLOCK ASSEMBLY REQUIREMENT
ROCKERS SHALL FULLY ENGAGE INSULATED PORTIONS OF RESPECTIVE CAMFOLLOWER LEVERS.
TO ADJUST POSITION DISTRIBUTOR BLOCK WITH MOUNTING SCREWS LOOSENED.

NOTE
FOR REFINEMENT OF DISTRIBUTOR CONTACT ADJUSTMENTS, REFER TO CONTACT TIMING REQUIREMENTS.

2.07 Feed-Lever Mechanism



(A) FEED-LEVER SET COLLAR

REQUIREMENT

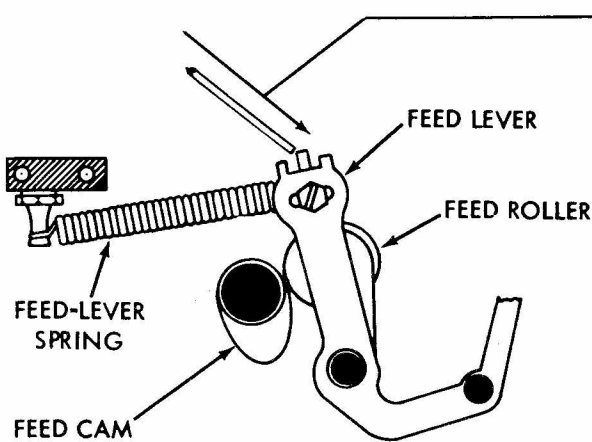
MIN. SOME
 MAX. 0.015 INCH
 CLEARANCE BETWEEN FEED LEVER AND
 COLLAR WHEN FEED LEVER IS FREE IN
 ITS GUIDE SLOT.

TO ADJUST

POSITION FEED LEVER WITH **SET-COLLAR**
 SCREWS LOOSENED. FEED LEVER **SHALL**
 MOVE FREELY WITHOUT BINDING AT
 GUIDE OR COLLARS.

NOTE

AFTER TIGHTENING SET SCREWS, RECHECK
 ADJUSTMENT FOR BINDS BETWEEN FEED LEVER
 AND COLLARS, AND BETWEEN FEED LEVER
 AND GUIDE.

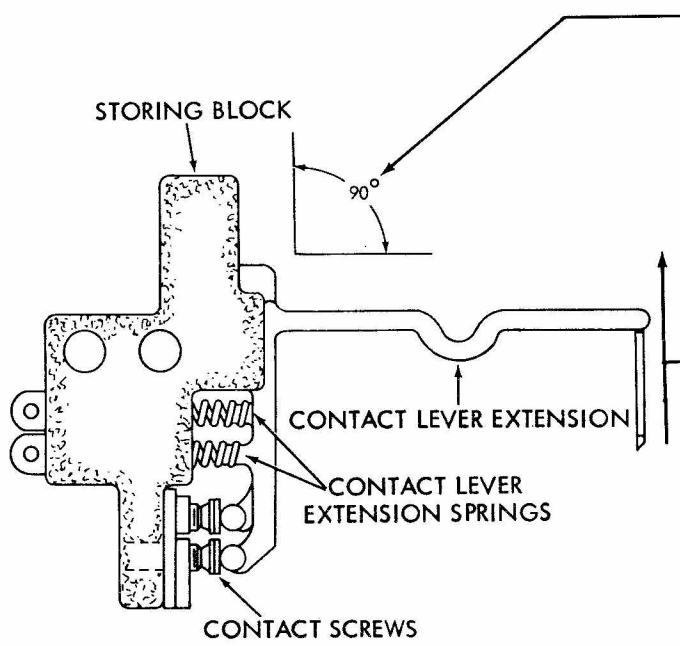


(B) FEED-LEVER SPRING

REQUIREMENT

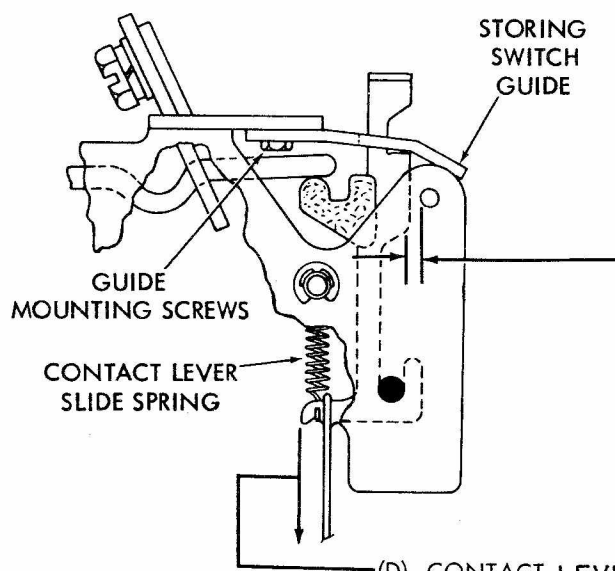
WITH THE FEED-LEVER CAMFOLLOWER
 ROLLER ON THE LOW PART OF THE
 SENSING CAM
 MIN. 10 OZS.
 MAX. 17 OZS.
 TO MOVE FEED LEVER AWAY FROM CAM.

2.08 Storing Switch Mechanism (Nontransfer Type) (Unit Without Pull-back Mechanism)



(A) STORING SWITCH CONTACTS
 TO CHECK
 REMOVE STORING SWITCH ASSEMBLY.
 REQUIREMENT
 CONTACT LEVER EXTENSIONS **SHALL**
 BE PERPENDICULAR TO STORING BLOCK.
 TO ADJUST
 TURN EACH CONTACT SCREW WITH
 HEX WRENCH. GAUGE BY EYE.

(B) STORING SWITCH CONTACT LEVER
 EXTENSION SPRING
 REQUIREMENT
 MIN. 1-3/4 OZS.
 MAX. 3-1/2 OZS.
 TO START EACH CONTACT LEVER
 EXTENSION MOVING.



(C) STORING SWITCH GUIDES
 PRELIMINARY - BEFORE SWITCH ASSEMBLY IS SECURED
 TO UNIT, ROTATE SLIDE ECCENTRIC TO MAKE CLEAR-
 ANCE BETWEEN SLIDE STOP POST AND END CONTACT
 LEVER SLIDES MINIMUM.
 (1) REQUIREMENT
 MIN. 0.005 INCH
 MAX. 0.012 INCH
 CLEARANCE BETWEEN END SLIDES AND STOP
 POST. (HOLD SLIDES AWAY FROM STOP POST.)
 NOTE
 AFTER CONTACT LEVER SLIDE ADJUSTMENT,
 CLEARANCE MAY BE 0.005 TO
 0.015 INCH.

(2) REQUIREMENT
 CONTACT LEVER SLIDES FREE IN GUIDE SLOTS
 AND PARALLEL TO SIDE PLATES (GAUGE BY
 EYE).
 TO ADJUST
 POSITION GUIDE WITH ITS MOUNTING SCREWS
 LOOSENED.

(D) CONTACT LEVER SLIDE SPRINGS
 TO CHECK
 SELECT BLANK COMBINATION, TRIP SENSING CLUTCH AND ROTATE
 SHAFT UNTIL LATCHES MOVE AWAY FROM SLIDES. HOLD CONTACT
 EXTENSION LEVERS AWAY.
 REQUIREMENT
 MIN. 4 OZS.
 MAX. 6 OZS.
 TO START EACH LEVER SLIDE MOVING.

INSTRUCTIONS FOR REPLACING
STORING SWITCH ASSEMBLY

REQUIREMENT

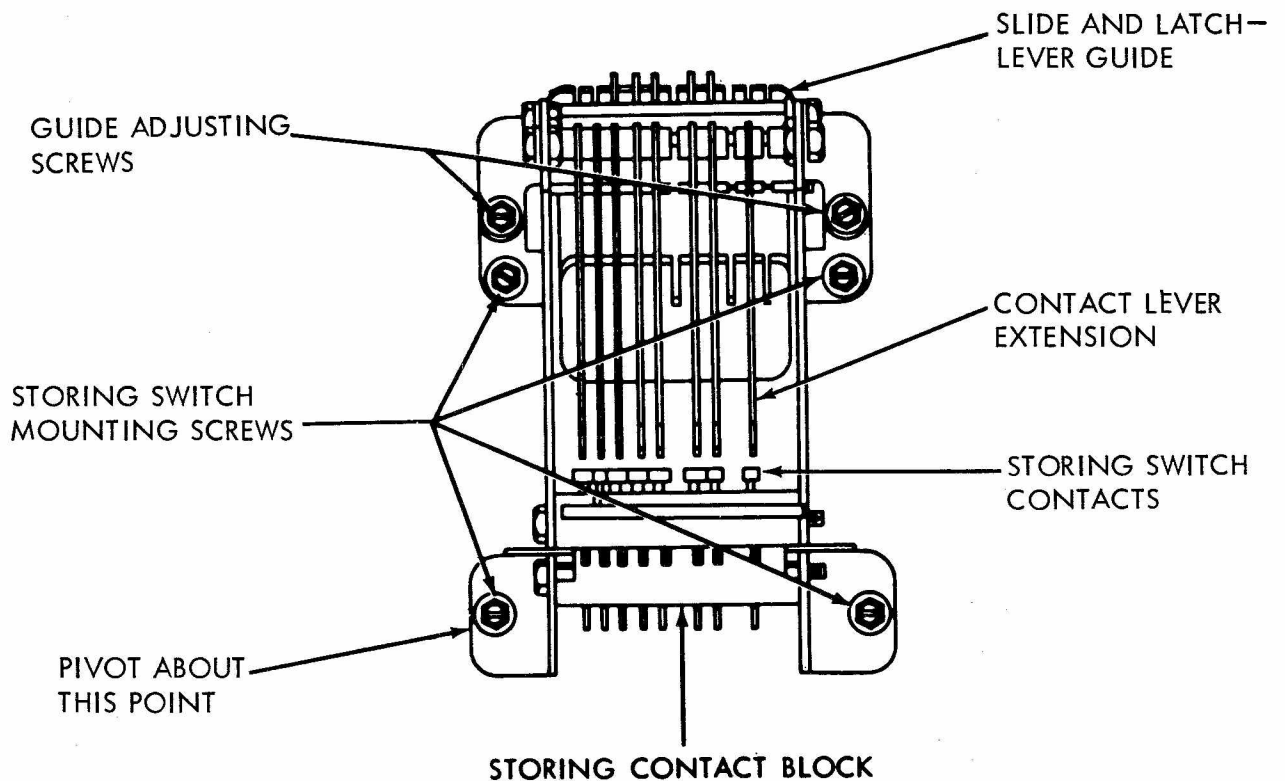
STORING SWITCH ASSEMBLY SHALL ALIGN WITH LATCHLEVERS SO THAT LATCHLEVERS AND SLIDES FUNCTION WITHOUT BINDING.

TO CHECK

MANUALLY PUSH LATCH-BAIL FOLLOWER AWAY FROM CAM UNTIL LATCHES ARE FREE FROM GUIDE. RELEASE LATCH-BAIL FOLLOWER AND NOTE IF LATCHES FALL INTO THEIR RESPECTIVE SLOTS.

TO ADJUST

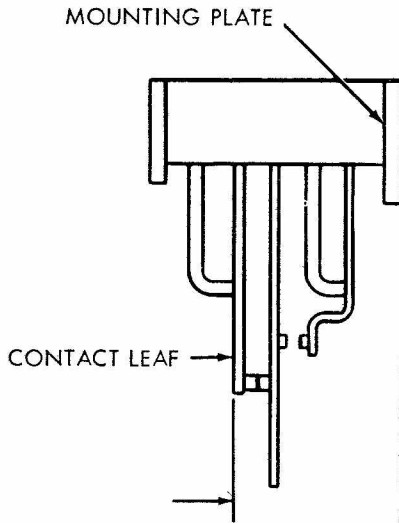
PIVOT STORING SWITCH WITH STORING SWITCH MOUNTING SCREWS LOOSENED. RECHECK REQUIREMENT.



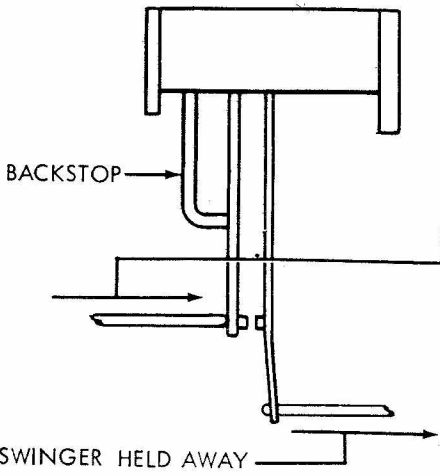
2.09 Transfer-type Storing Switch Mechanism (Unit With Pull-back Mechanism)

NOTE 1

FOLLOWING ADJUSTMENTS (A THROUGH E) ARE TO BE MADE WITH THE CONTACT ASSEMBLIES REMOVED FROM THE UNIT. USE A TPI72060 ADJUSTING TOOL TO BEND THE CONTACTS. FOR EACH ADJUSTMENT START WITH THE CONTACT PILE-UP FARTHEST FROM THE HANDLE OF THE BENDING TOOL TO AVOID DISTURBING COMPLETED ADJUSTMENTS.



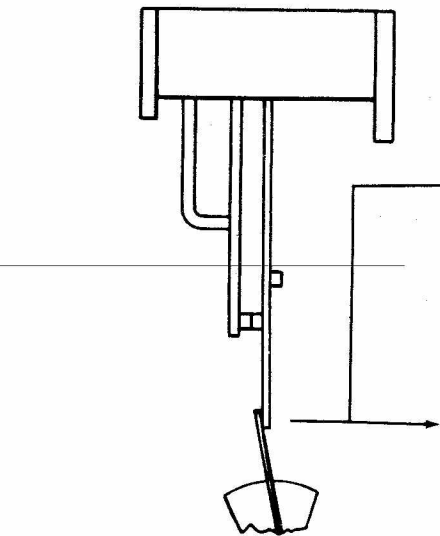
(A) BACKSTOP - NORMALLY CLOSED CONTACT REQUIREMENT
 NORMALLY CLOSED CONTACT LEAVES PARALLEL TO MOUNTING PLATE AND IN LINE WITH EACH OTHER AS GAUGED BY EYE.
 TO ADJUST
 BEND BACKSTOP.



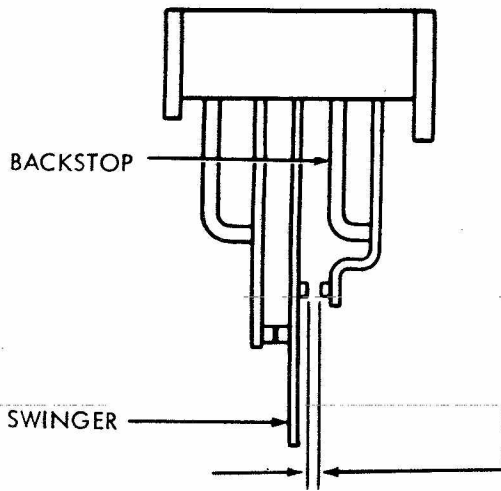
(B) SPRING TENSION - NORMALLY CLOSED CONTACT REQUIREMENT
 WITH SWINGER CONTACT HELD AWAY
 MIN. 2 OZS.
 MAX. 6 OZS.
 TO MOVE EACH NORMALLY CLOSED LEAF AWAY FROM BACKSTOP.
 TO ADJUST
 BEND NORMALLY CLOSED LEAF SPRING

NOTE 2

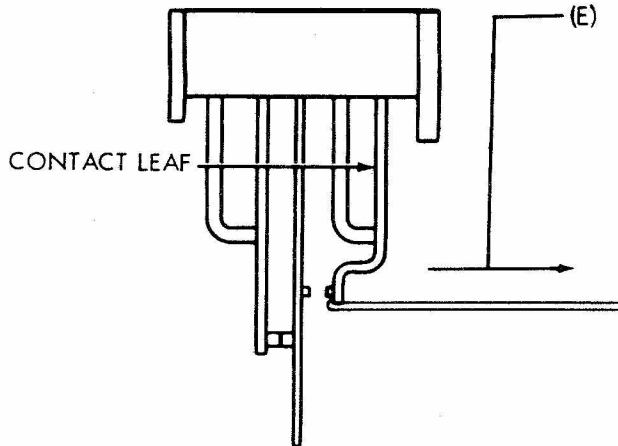
TO INCREASE TENSION OF NORMALLY CLOSED LEAF, IT MAY BE NECESSARY TO BEND BACKSTOP AWAY FROM LEAF, BEND LEAF, AND THEN REMAKE ADJUSTMENT (A).



(C) SWINGER SPRING TENSION REQUIREMENT
 MIN. 35 GRAMS
 MAX. 50 GRAMS
 TO OPEN NORMALLY CLOSED CONTACT.
 TO ADJUST
 BEND SWINGER LEAF.



(D) NORMALLY OPEN CONTACT GAP
REQUIREMENT
MIN. 0.010 INCH
MAX. 0.015 INCH
CLEARANCE.
TO ADJUST
BEND NORMALLY OPEN CONTACT BACKSTOP.



(E) SPRING TENSION - NORMALLY OPEN CONTACT
REQUIREMENT
MIN. 35 GRAMS
MAX. 50 GRAMS
TO MOVE EACH NORMALLY OPEN LEAF AWAY FROM
ITS BACKSTOP.
TO ADJUST
BEND NORMALLY OPEN LEAF SPRING.

NOTE
TO INCREASE TENSION OF NORMALLY OPEN LEAF SPRING,
IT MAY BE NECESSARY TO BEND BACKSTOP AWAY FROM
LEAF, BEND LEAF, AND THEN REMAKE ADJUSTMENT (E).

2.09 Transfer-type Storing Switch Mechanism (Unit With Pull-back Mechanism) (Cont)

INSTRUCTIONS FOR REPLACING STORING SWITCH ASSEMBLY (TRANSFER TYPE)

PLACE SWITCH ASSEMBLY ON LOWER SURFACE OF MAIN CASTING. EXERCISE CARE IN SEATING LEVER SLIDES AGAINST PUSHLEVERS AND LATCHLEVERS IN APPROPRIATE SLOT OF LEVER SLIDE GUIDE.

STORING SWITCH ASSEMBLY

REQUIREMENT

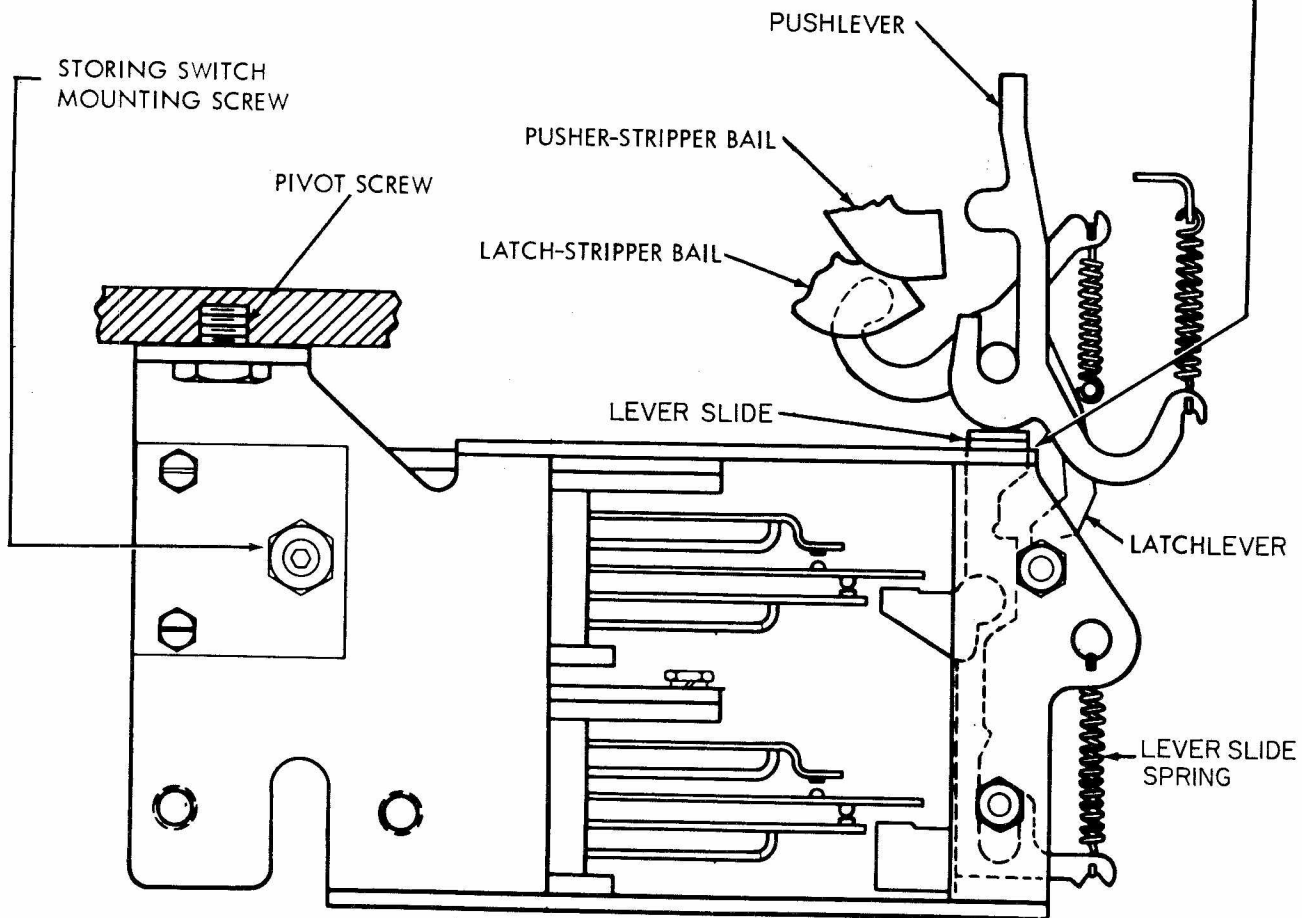
WITH TOP PLATE IN PLACE, SELECT A LTRS-BLANK-LTRS COMBINATION AND OBSERVE LATCH-AND PUSHLEVER ACTION. STORING SWITCH SHALL ALIGN WITH LATCHLEVER SO THAT LATCHLEVERS AND SLIDES FUNCTION WITHOUT BINDING.

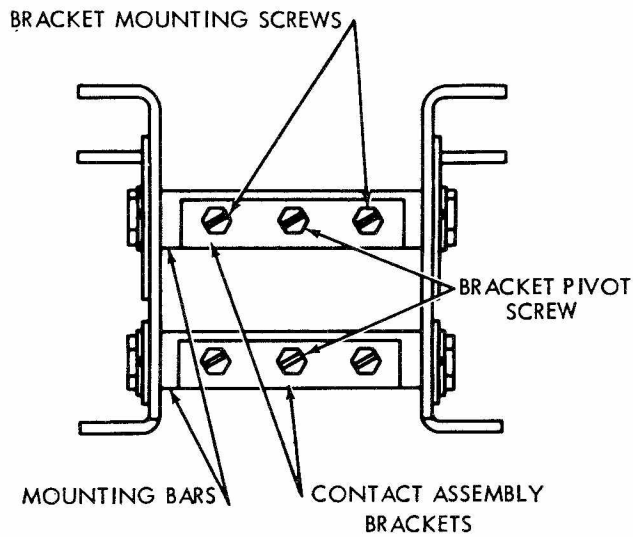
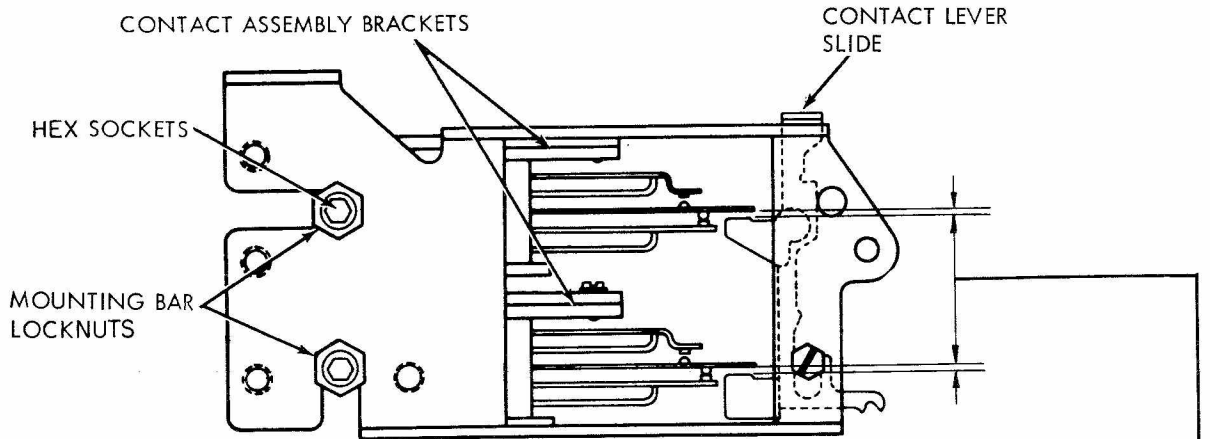
TO ADJUST

POSITION SWITCH ASSEMBLY WITH ITS MOUNTING SCREWS LOOSENED. RECHECK REQUIREMENT AFTER TIGHTENING SCREWS.

NOTE

A MINOR ADJUSTMENT OF THE SENSING PIN AND PUSHLEVER GUIDE MAY BE NECESSARY.



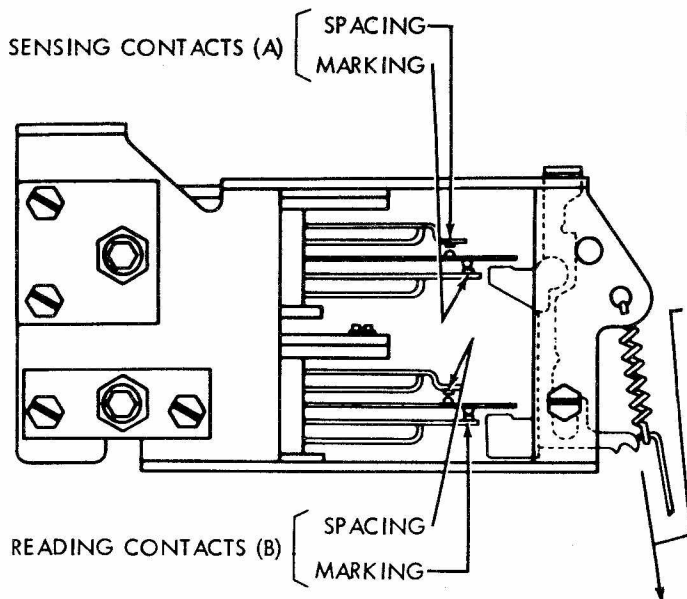


LEVER SLIDE (FINAL EXCEPT WHERE TEST SET IS AVAILABLE)

TO CHECK
STORING SWITCH ASSEMBLY INSTALLED AND SENSING SLIDES SELECTED AND LATCHED.

REQUIREMENT
MIN. 0.005 INCH
MAX. 0.020 INCH
CLEARANCE BETWEEN ALL SENSING SLIDES AND CONTACT SWINGERS.

TO ADJUST
LOOSEN MOUNTING BAR LOCKNUTS AND BRACKET MOUNTING SCREWS TO FRICTION TIGHT. INSERT A HEX WRENCH IN END OF CONTACT ASSEMBLY MOUNTING BAR. POSITION CONTACT ASSEMBLY BY ROTATING BAR TO PIVOT CONTACT ASSEMBLY. CHECK AT ALL SWINGERS.



LEVER SLIDE SPRING

TO CHECK
PLACE LEVER SLIDES IN UPPERMOST POSITION (BLANK SELECTED LATCHES STRIPPED). HOOK SPRING SCALE IN THE SPRING LOOP.

REQUIREMENT
MIN. 6 OZS.
MAX. 9 OZS.
TO PULL EACH SPRING TO ITS INSTALLED LENGTH.

2.10 Tape Lid Mechanism (Tape Lid Assembly Without Tape-lid Spring) (Unit Without Pull-back Mechanism)

NOTE 1

REMOVE TOP AND TAPE-GUIDE PLATES. LUBRICATE PRIOR TO ADJUSTMENT.

(1) REQUIREMENT (PRELIMINARY)

MIN. SOME
 MAX. 0.010 INCH.
 CLEARANCE BETWEEN PIVOT SHOULDER AND TAPE LID WHEN LID IS PRESSED AGAINST NOTCH IN TAPE-GUIDE PLATE, AND FEED-WHEEL SLOTS AND TAPE-OUT PIN HOLES ARE LINED UP.

TO ADJUST

LOOSEN TAPE-LID BRACKET MOUNTING NUTS. USING A TP 156743 GAUGE, LINE UP FEED-WHEEL GROOVE IN TAPE LID WITH SLOT IN TAPE-GUIDE PLATE. POSITION TAPE-LID BRACKET TO MEET REQUIREMENT.

(2) REQUIREMENT

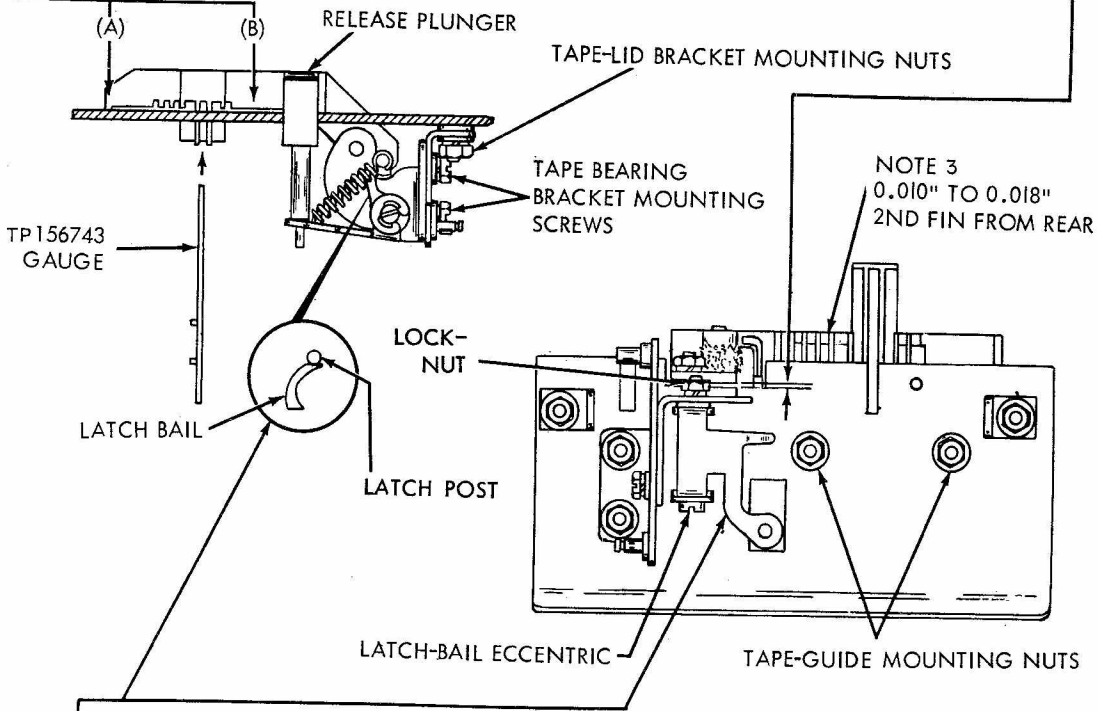
TAPE-LID FRONT BEARING SURFACE (A) SHALL TOUCH TAPE-GUIDE PLATE. CLEARANCE (B) MEASURED AT FIN OF TAPE LID IN LINE WITH REAR TAPE GUIDE (SEE NOTE 3):
 MIN. 0.010 INCH
 MAX. 0.018 INCH.

NOTE 2

WHEN BOTH PLATES ARE ASSEMBLED ON UNIT, LEFT EDGE OF LID MAY TOUCH TOP PLATE AND SOME CHANGE IN THIS CLEARANCE MAY BE EXPECTED.

TO ADJUST

WITH TAPE-LID BEARING BRACKET MOUNTING SCREWS FRICTION TIGHT, AND TAPE LID PRESSED AGAINST TAPE-GUIDE PLATE, POSITION BRACKET. RECHECK REQUIREMENT (1).



(3) REQUIREMENT

RELEASE PLUNGER SHALL HAVE SOME ENDPLAY WHEN LID IS LATCHED AGAINST TAPE-GUIDE PLATE.

TO ADJUST

WITH ECCENTRIC MOUNTING POST LOCKNUT FRICTION TIGHT AND LID RAISED, ROTATE HIGH PART OF ECCENTRIC TOWARD TAPE-GUIDE PLATE. CLOSE LID AND ROTATE ECCENTRIC TOWARD BRACKET UNTIL LATCH JUST FALLS UNDER FLAT ON POST. RECHECK BY DEPRESSING PLUNGER WITH LID HELD DOWN. TIP OF LATCH SHOULD CLEAR POST AS PLUNGER IS OPERATED.

2.11 Tape Lid Mechanism (With Tape-lid Spring)

NOTE 1

REMOVE TOP AND TAPE-GUIDE PLATES. LUBRICATE MATING SURFACES PRIOR TO ADJUSTMENT.

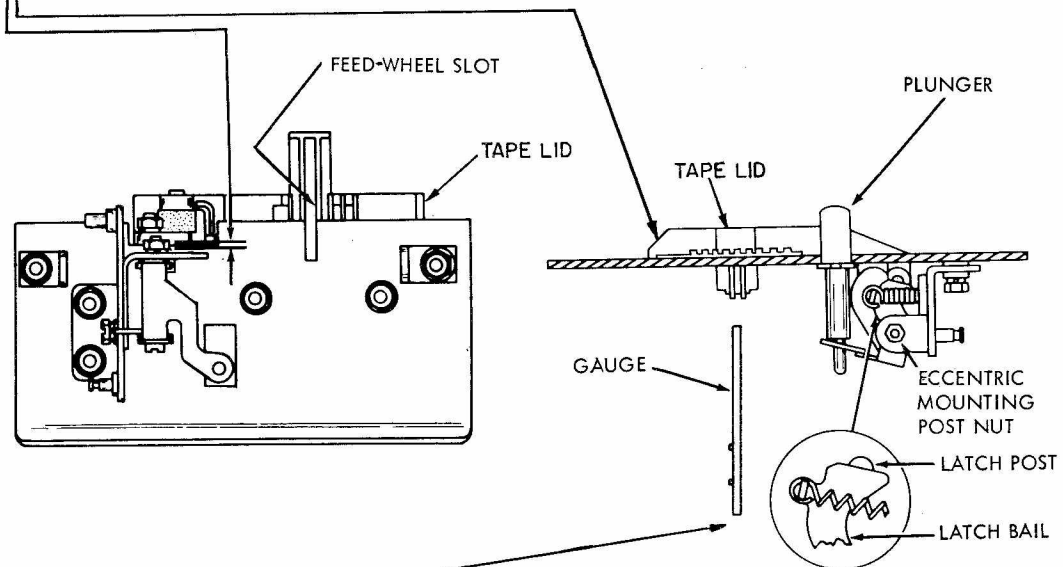
- (1) REQUIREMENT
MIN. SOME
MAX. 0.010 INCH
CLEARANCE BETWEEN PIVOT SHOULDER AND TAPE LID WHEN LID IS PRESSED AGAINST NOTCH IN TAPE-GUIDE PLATE, AND FEED-WHEEL SLOTS AND TAPE-OUT PIN HOLES ARE LINED UP.
TO ADJUST
LOOSEN TAPE-LID BRACKET MOUNTING NUTS. USING A TPI56743 GAUGE, LINE UP FEED-WHEEL GROOVE IN TAPE LID WITH SLOT IN TAPE-GUIDE PLATE. POSITION TAPE-LID BRACKET TO MEET REQUIREMENT.

- (2) REQUIREMENT
WITH TAPE-LID FRONT BEARING SURFACE TOUCHING TAPE-GUIDE PLATE, CLEARANCE BETWEEN TAPE LID AND TAPE GUIDE PLATE
MIN. 0.010 INCH
MAX. 0.018 INCH
MEASURED AT TAPE-LID FIN IN LINE WITH REAR TAPE GUIDE (2ND. FIN FROM REAR).

NOTE 2

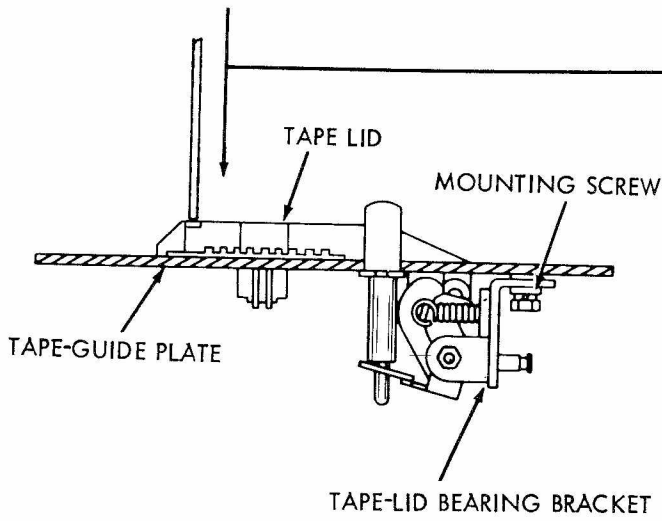
WHEN BOTH TOP AND TAPE-GUIDE PLATES ARE ASSEMBLED ON UNIT, LEFT EDGE OF LID MAY TOUCH TOP PLATE AND SOME CHANGE IN THIS CLEARANCE MAY BE EXPECTED.

- TO ADJUST
WITH TAPE-LID BEARING BRACKET MOUNTING SCREWS FRICTION TIGHT, AND TAPE LID PRESSED AGAINST TAPE-GUIDE PLATE, POSITION BEARING BRACKET. RECHECK REQUIREMENT (1).



- (3) REQUIREMENT
SOME ENDPLAY IN RELEASE PLUNGER WHEN LID IS LATCHED AGAINST TAPE-GUIDE PLATE.
TO ADJUST
WITH ECCENTRIC MOUNTING POST NUT FRICTION TIGHT AND TAPE LID RAISED, ROTATE HIGH PART OF ECCENTRIC POST TOWARDS MOUNTING BRACKET. CLOSE TAPE LID. ROTATE ECCENTRIC COUNTERCLOCKWISE (AS VIEWED FROM SLOTTED END OF ECCENTRIC POST) UNTIL FLAT OF LATCH POST FULLY ENGAGES LATCH-BAIL FLAT. ROTATE ECCENTRIC CLOCKWISE TO TAKE UP ALL PLAY IN PARTS, AND TO SEAT OPEN END OF TAPE LID AGAINST TAPE-GUIDE PLATE.
TO CHECK
WITH TAPE LID HELD DOWN MANUALLY, LATCH TIP SHOULD CLEAR LATCH POST WHEN RELEASE BUTTON IS OPERATED. WITH TAPE LID LATCHED, TIP OF LATCH SHOULD PROJECT BEYOND FLAT OF LATCH POST, AND THERE SHOULD BE SOME ENDPLAY IN RELEASE BUTTON.

2.11 Tape Lid Mechanism (With Tape-lid Spring) (Cont)

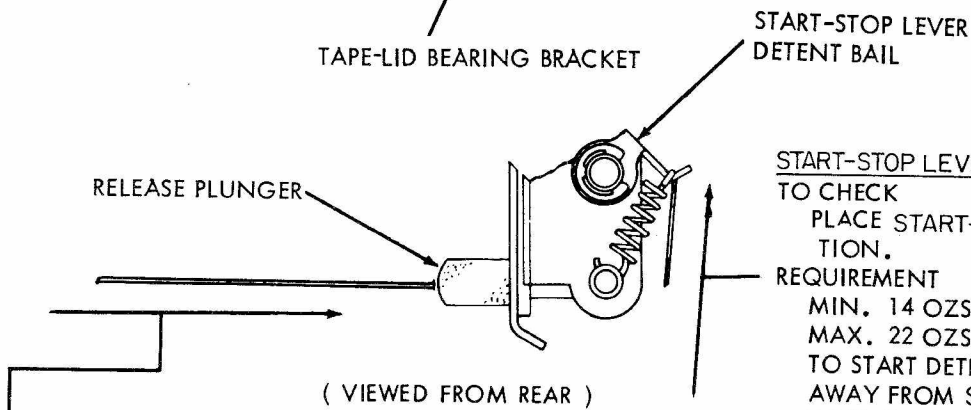


TAPE-LID SPRING
TO CHECK

OPEN TAPE LID. HOLD UNIT SO TAPE-GUIDE PLATE IS HORIZONTAL. APPLY SCALE AT TOP OF LID IMMEDIATELY LEFT OF TAPE-OUT PIN HOLE. HOLD PLUNGER FULLY DEPRESSED.

REQUIREMENT

MIN. 3 OZS. *MIN. 1/8 OZ.
MAX. 4-1/2 OZS. *MAX. 1 OZ.
TO MOVE OPEN END OF TAPE LID AGAINST TAPE-GUIDE PLATE. *UNITS WITH PULL-BACK MECHANISM



START-STOP LEVER DETENT SPRING
TO CHECK

PLACE START-STOP LEVER IN RUN POSITION.

REQUIREMENT

MIN. 14 OZS.
MAX. 22 OZS.
TO START DETENT BAIL MOVING AWAY FROM START-STOP LEVER DETENT.

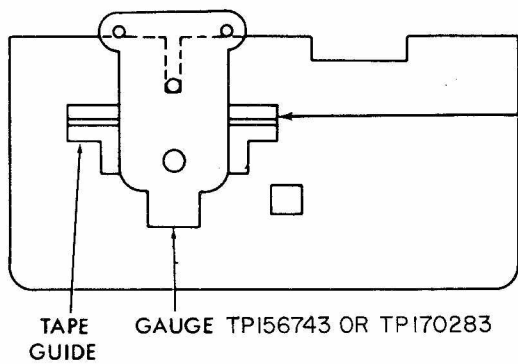
TAPE-LID RELEASE-PLUNGER SPRING
TO CHECK

HOLD TAPE-GUIDE PLATE SO TOP SURFACE IS HORIZONTAL. OPEN TAPE LID.

REQUIREMENT

MIN. 28 OZS.
MAX. 48 OZS.
TO START TAPE-LID BAIL MOVING.

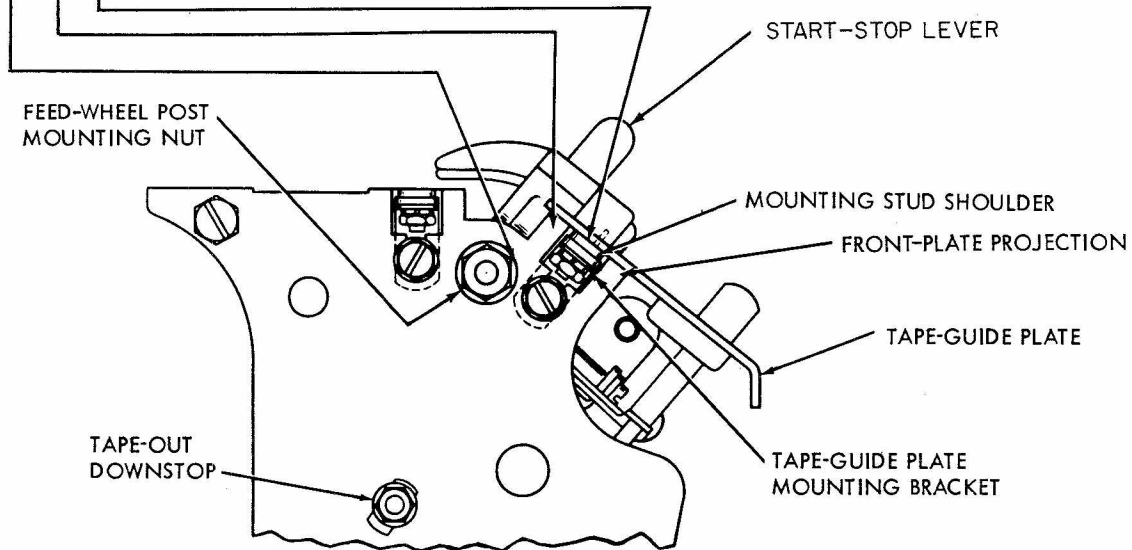
2.12 Tape-guide Plate



TAPE GUIDE REQUIREMENT
 WITH GAUGE PROPERLY POSITIONED
 MIN. SOME
 MAX. 0.003 INCH
 BETWEEN GAUGE AND TAPE GUIDES.
TO ADJUST
 LOOSEN TAPE-GUIDE MOUNTING NUTS TO FRICTION TIGHT. PROPERLY POSITION GAUGE ON TAPE-GUIDE PLATE. POSITION TAPE GUIDES TO MEET REQUIREMENT.

TAPE-GUIDE PLATE

- (1) **REQUIREMENT**
 SHOULDER OF FEED-WHEEL POST SHALL NOT INTERFERE WITH TOP-PLATE OR TAPE-GUIDE PLATE MOUNTING BRACKETS.
TO ADJUST
 ROTATE FEED-WHEEL POST WITH ITS MOUNTING NUT LOOSENED.
- (2) **REQUIREMENT**
 TAPE-GUIDE PLATE SHALL REST FIRMLY AGAINST AT LEAST THREE PROJECTIONS OF THE FRONT AND REAR PLATES.
TO ADJUST
 WITH TAPE-OUT DOWNSTOP IN ITS LOWERMOST POSITION, AND TAPE-GUIDE PLATE MOUNTING BRACKET (FRONT AND REAR) NUTS FRICTION TIGHT, TRIP CLUTCH AND ROTATE SHAFT UNTIL SENSING PINS ARE IN THEIR UPPERMOST POSITION. WITH TAPE LID RAISED AND START-STOP LEVER IN RUN POSITION, PRESS TAPE-GUIDE PLATE INTO POSITION. GUIDE MOUNTING SCREWS INTO NOTCHES OF FRONT AND REAR PLATES, AND PLACE SENSING PINS ADJACENT TO LEFT EDGE OF GUIDE PLATE. PLACE TAPE-OUT PIN INTO ITS HOLE. TIGHTEN EACH BRACKET MOUNTING NUT.
- (3) **REQUIREMENT**
 OUTER EDGES OF MOUNTING BRACKETS AND OUTER EDGES OF MOUNTING STUD SHOULDERS SHALL ALIGN AND PROJECT EQUALLY ON FRONT AND REAR BRACKETS.
TO ADJUST
 MOVE TAPE-GUIDE PLATE TOWARD FRONT OR REAR. TIGHTEN NUTS ONLY AFTER TOP PLATE IS ADJUSTED.



2.13 Top Plate Assembly

TOP PLATE

(1) REQUIREMENT

TOP PLATE FLUSH TO 0.003 INCH UNDERFLUSH WITH TAPE-GUIDE PLATE WITHIN WIDTH OF TAPE LID.

TO ADJUST

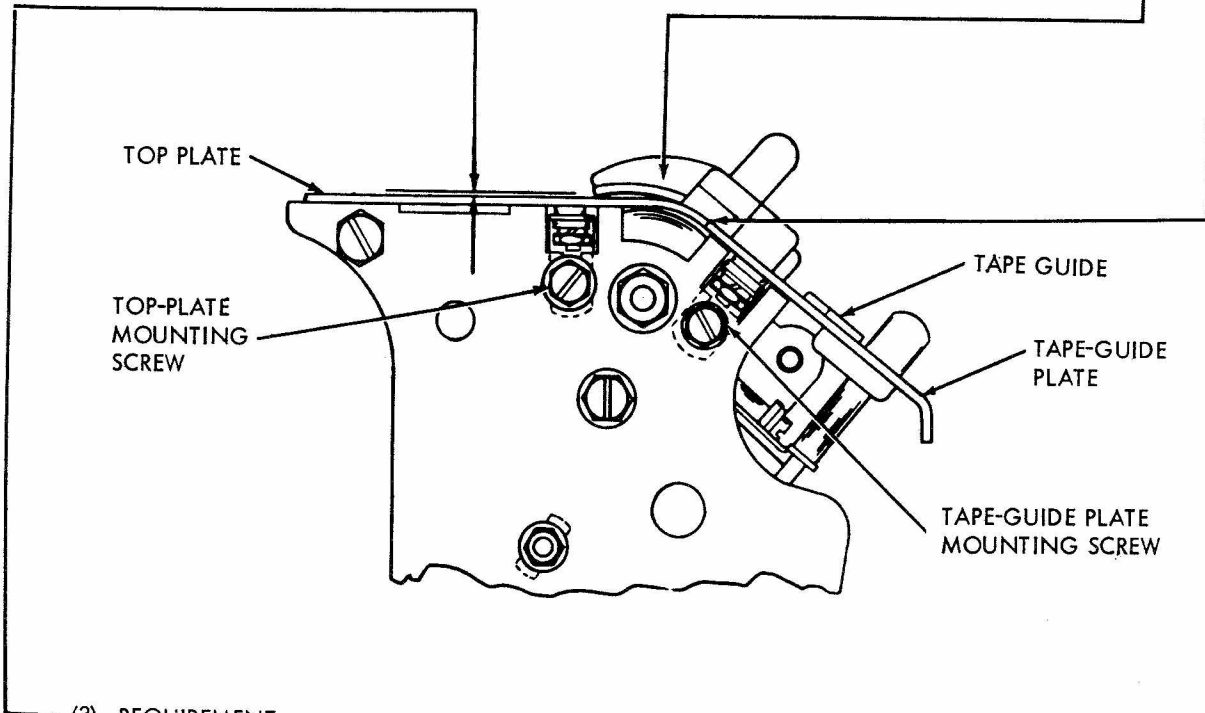
LOOSEN MOUNTING BRACKET NUTS UNTIL BRACKETS ARE FRICTION TIGHT. PRESS TOP PLATE INTO POSITION. TOP PLATE SHALL REST ON AT LEAST THREE PROJECTIONS OF SIDE PLATES. MAKE SURE THE TIGHT-TAPE ARM EXTENSION IS UNDER THE TOP PLATE.

(2) REQUIREMENT

FEED-WHEEL SLOT AND TAPE-GUIDE PLATE SLOT SHALL LINE UP.

TO ADJUST

MOVE TOP PLATE TO LINE UP FEED-WHEEL SLOT. DO NOT DISTURB REQUIREMENT (2) OF TAPE-GUIDE PLATE ADJUSTMENT.



(3) REQUIREMENT

WITH TAPE LID LATCHED, CLEARANCE BETWEEN TAPE-LID EXTENSION COVERING FEED-WHEEL SLOT, AND TOP PLATE

MIN. 0.010 INCH

MAX. 0.020 INCH

MEASURED AT CURVED PORTION OF TOP PLATE, AND

MIN. 0.010 INCH

MAX. 0.025 INCH

MEASURED AT FLAT PORTION OF TOP PLATE.

ALSO

MIN. 0.010 INCH

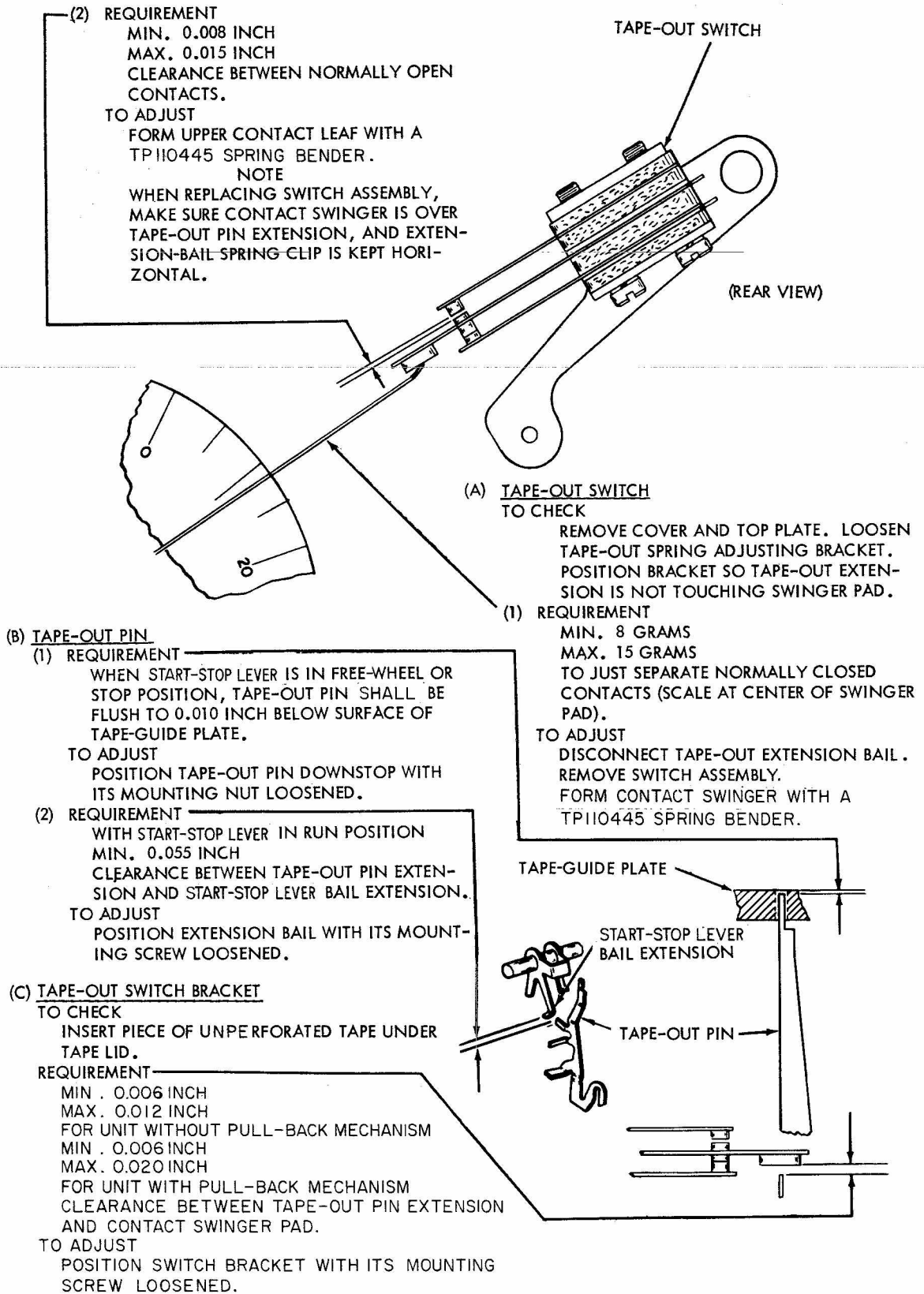
MAX. 0.018 INCH

CLEARANCE BETWEEN TAPE LID AND TAPE-GUIDE PLATE MEASURED IN AREA BETWEEN TAPE GUIDES (PLAY IN TAPE LID TAKEN UP TOWARD TAPE-GUIDE PLATE).

TO ADJUST

LOOSEN TWO SCREWS HOLDING TAPE-LID MOUNTING BRACKETS TOGETHER, AND POSITION TAPE LID. RECHECK ADJUSTMENTS (1) AND (2) OF TAPE LID ADJUSTMENT.

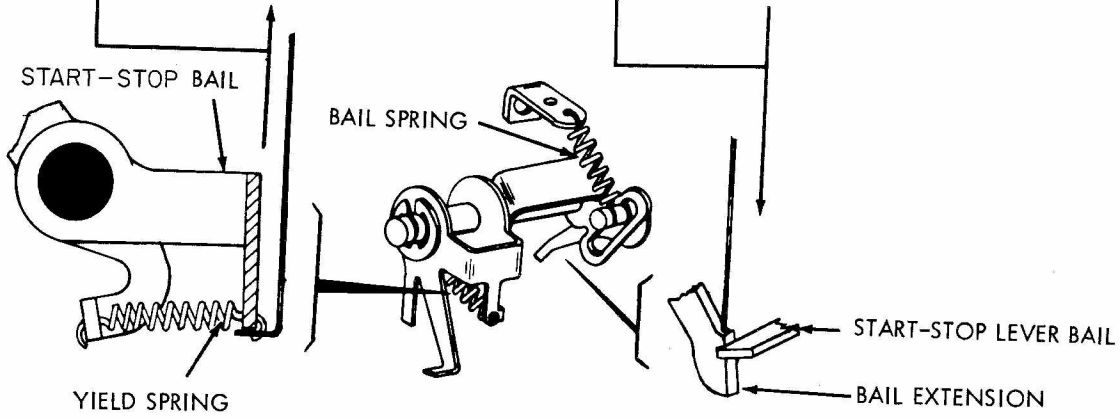
2.14 Tape-out Switch Assembly



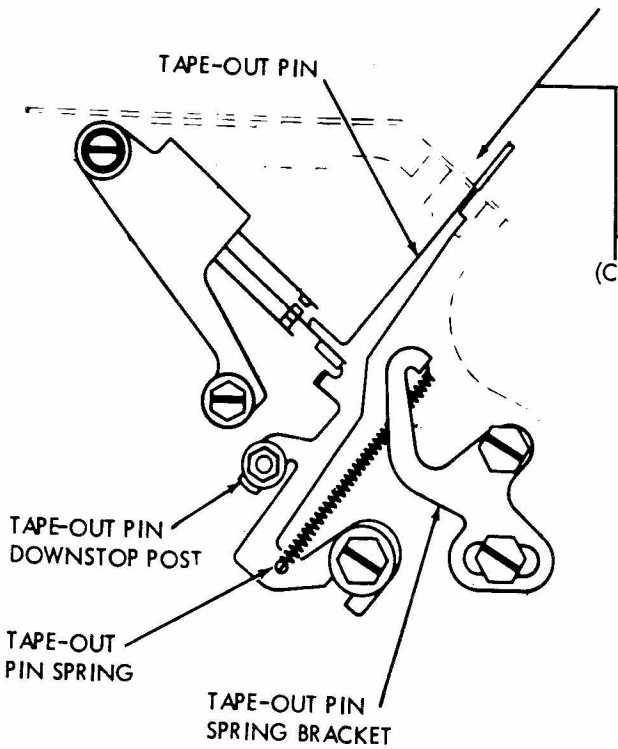
2.15 Tape-out Pin and Bail Assembly

(A) TAPE-OUT BAIL YIELD SPRING
 TO CHECK
 PLACE START-STOP LEVER
 IN RUN POSITION.
 REQUIREMENT
 MIN. 3 OZS.
 MAX. 5 OZS.
 TO SEPARATE BAILS.

(B) TAPE-OUT EXTENSION BAIL SPRING
 TO CHECK
 PLACE START-STOP LEVER IN RUN POSITION.
 REQUIREMENT
 MIN. 1 OZ.
 MAX. 2-1/2 OZS.
 TO START BAIL MOVING.



(C) TAPE-OUT PIN SPRING
 TO CHECK
 PLACE START-STOP LEVER IN RUN POSITION.
 REQUIREMENT
 MIN. 38 GRAMS
 MAX. 45 GRAMS
 TO MOVE PIN FLUSH WITH TAPE-GUIDE PLATE.
 TO ADJUST
 POSITION SPRING BRACKET WITH ITS MOUNTING
 SCREWS LOOSENED. RECHECK REQUIREMENT.



2.16 START-STOP Switch Assembly

START-STOP BAIL YIELD SPRING

TO CHECK

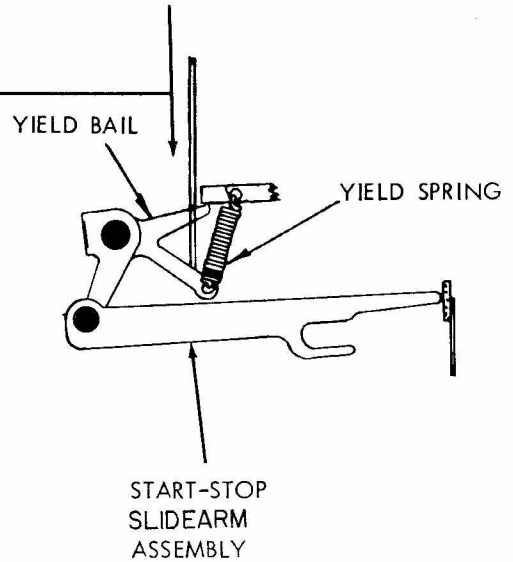
PLACE START-STOP LEVER IN RUN POSITION.

REQUIREMENT

MIN. 4 OZS.

MAX. 6 OZS.

TO SEPARATE BAILS.



START-STOP LEVER SWITCH BRACKET

(1) REQUIREMENT

WITH START-STOP LEVER IN RUN POSITION

MIN. 0.006 INCH

MAX. 0.015 INCH

CLEARANCE BETWEEN SWITCH ACTUATOR AND BAKELITE PAD ON SWINGER.

(2) REQUIREMENT

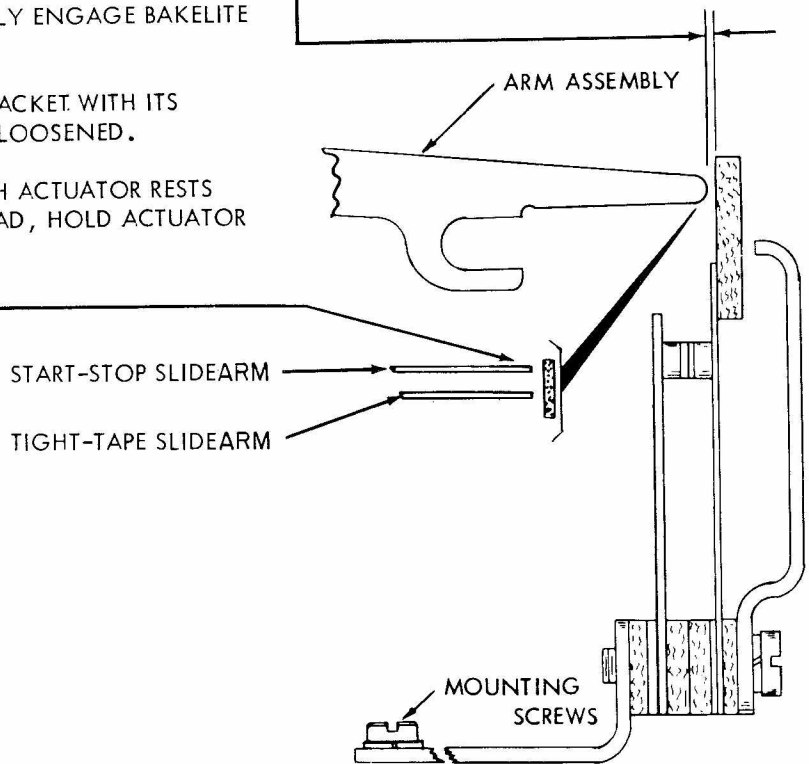
START-STOP AND TIGHT-TAPE SWITCH ACTUATORS SHALL FULLY ENGAGE BAKELITE PAD ON SWINGER.

TO ADJUST

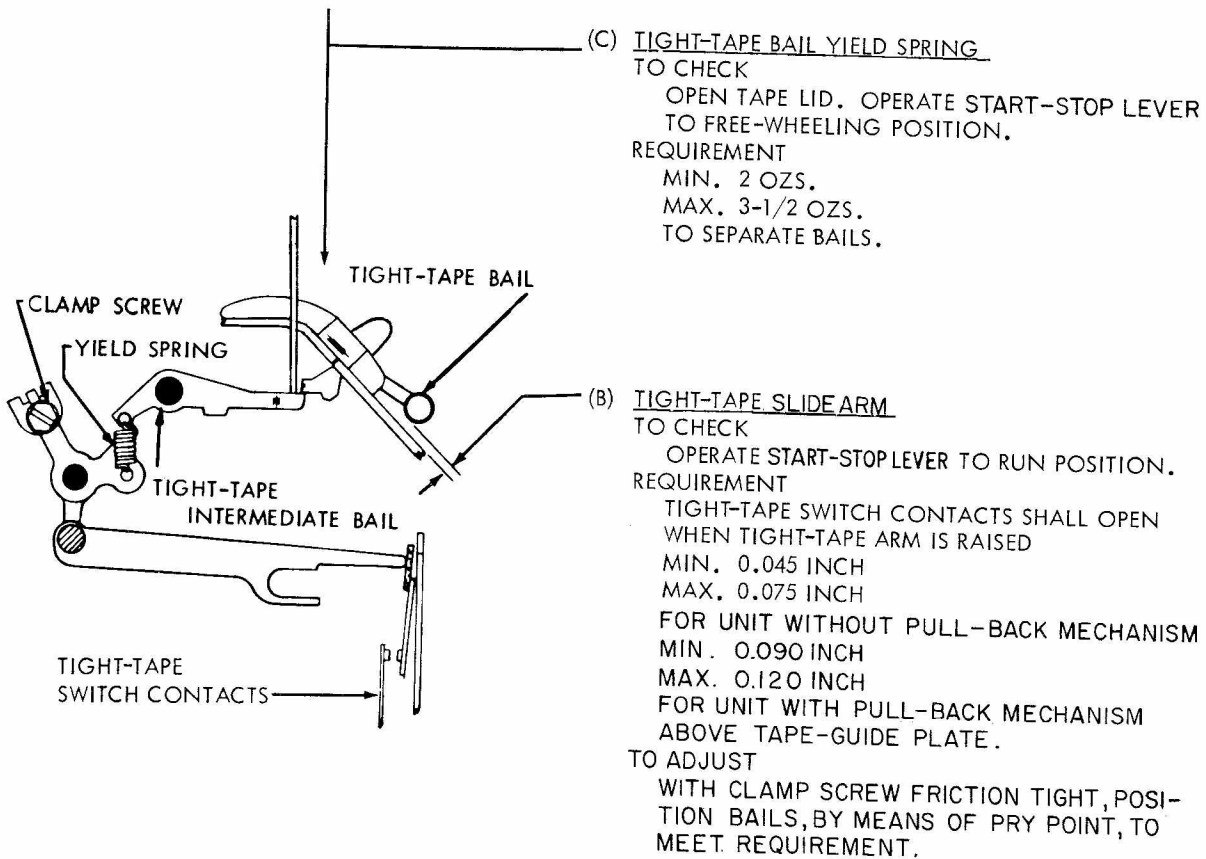
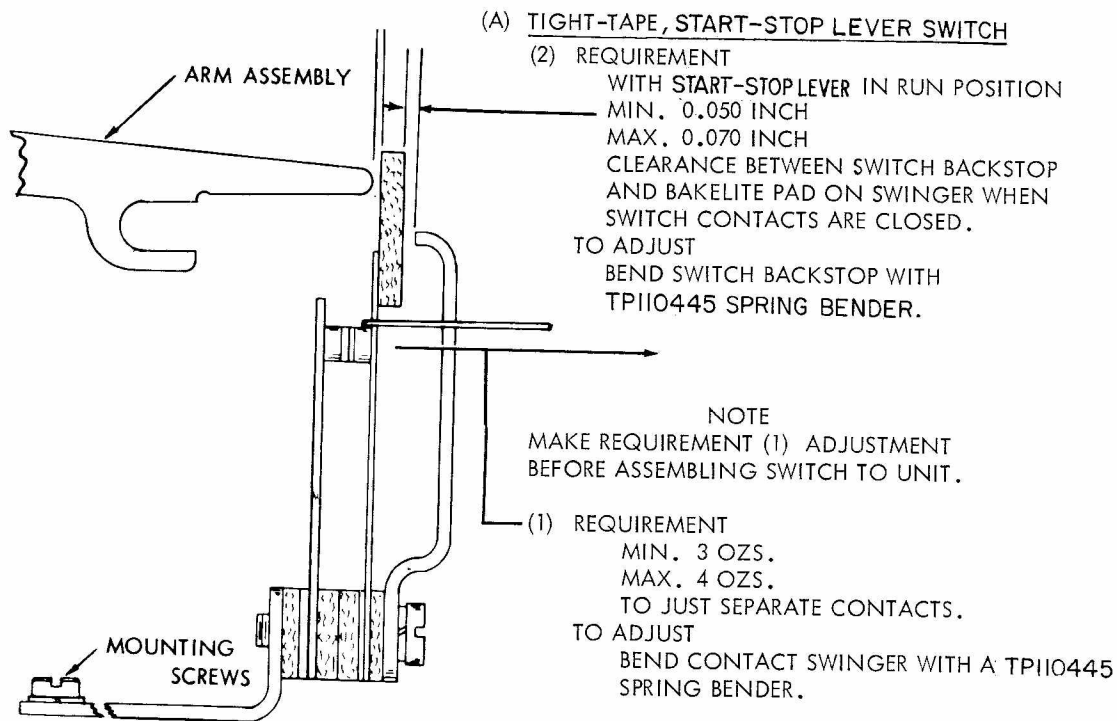
POSITION SWITCH BRACKET WITH ITS MOUNTING SCREWS LOOSENED.

NOTE

IF TIGHT-TAPE SWITCH ACTUATOR RESTS AGAINST BAKELITE PAD, HOLD ACTUATOR AWAY.

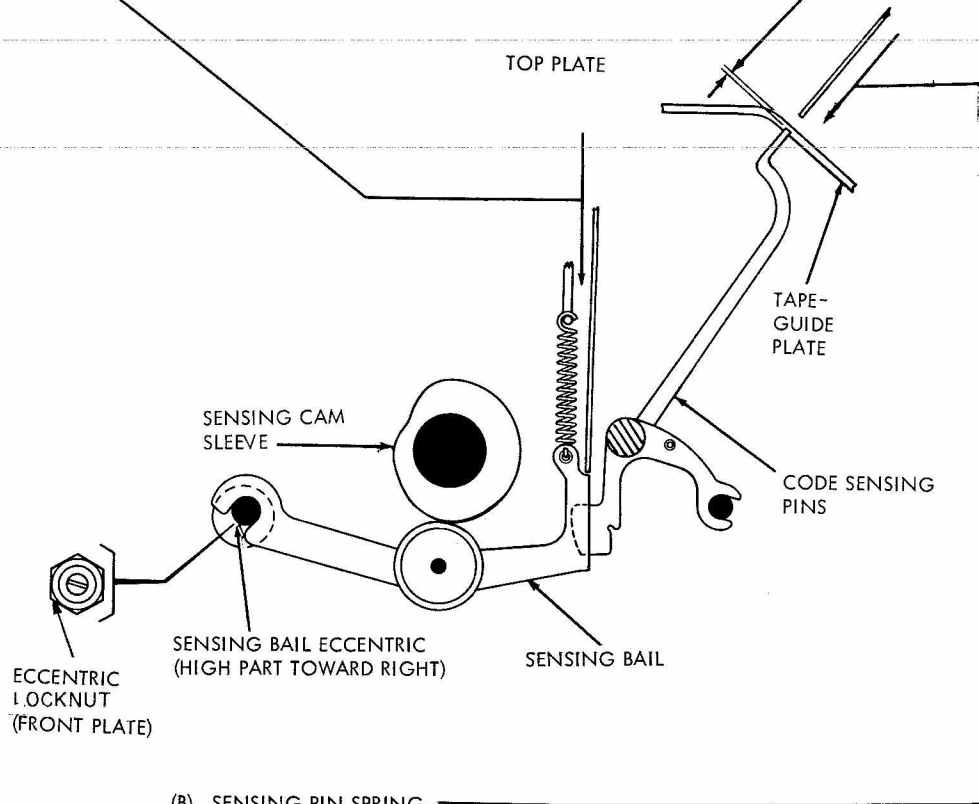


2.17 Tight-tape Mechanism (Units Equipped With Tight-Tape, START-STOP Lever)



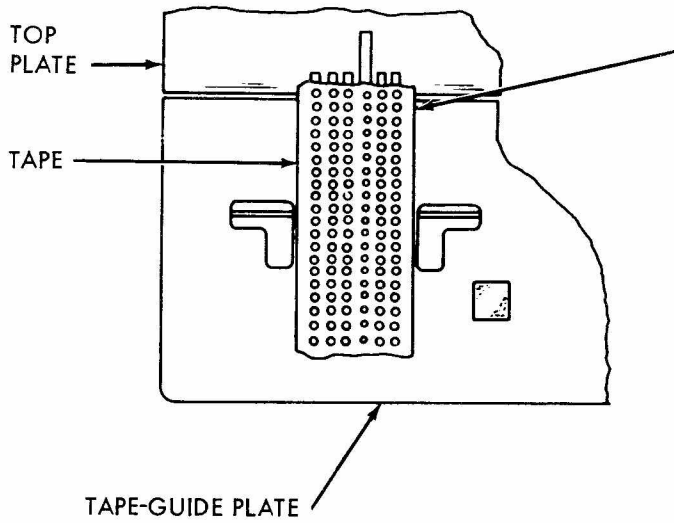
2.18 Sensing Pin Assembly

- (A) SENSING BAIL SPRINGS
TO CHECK
 REMOVE TOP PLATE. WITH BLANK TAPE UNDER TAPE LID, TRIP CLUTCH MAGNET AND MANUALLY ROTATE SHAFT UNTIL SENSING BAIL IS IN UPPERMOST POSITION. APPLY SCALE TO BAIL BETWEEN SPRINGS.
 REQUIREMENT
 MIN. 1/4 OZ.
 MAX. 2 OZS.
 TO START BAIL MOVING.
- (C) SENSING PIN
TO CHECK
 REPLACE TOP PLATE. DISENGAGE SENSING CLUTCH.
 REQUIREMENT
 WITH SENSING BAIL ECCENTRIC INDENT TOWARD RIGHT, TIP OF HIGHEST SENSING PIN SHALL BE FLUSH TO 0.005 INCH BELOW TOP SURFACE OF TAPE-GUIDE PLATE.
 TO ADJUST
 LOOSEN ECCENTRIC-SHAFT LOCKNUT AND POSITION ECCENTRIC. RECHECK REQUIREMENT AFTER LOCKNUT IS TIGHTENED.



- (B) SENSING PIN SPRING
TO CHECK
 TRIP SENSING CLUTCH AND ROTATE SHAFT UNTIL SENSING PINS ARE IN THEIR UPPERMOST POSITION. HOLD PUSH-LEVERS AWAY MANUALLY.
 REQUIREMENT
 MIN. 2 OZS.
 MAX. 3 OZS.
 FOR UNIT WITHOUT PULL-BACK MECHANISM
 NO.1 TO NO.5 AND NO.7 SPRINGS
 MIN. 2 OZS.
 MAX. 3 OZS.
 NO.6 AND NO.8 SPRINGS
 MIN. 4-1/2 OZS.
 MAX. 6 OZS.
 FOR UNIT WITH PULL-BACK MECHANISM
 TO MOVE EACH PIN FLUSH WITH TOP SURFACE OF TAPE-GUIDE PLATE.

2.19 Tape Feed Mechanism



(A) FEED-WHEEL DETENT

NOTE 1

PLACE START-STOP LEVER IN STOP POSITION. IF UNIT HAS A SPRING-BIASED START-STOP LEVER, MAKE ADJUSTMENT WITH LEVER IN RUN POSITION.

TO CHECK

PLACE A LTRS PERFORATED TAPE OVER FEED WHEEL, TAKING UP PLAY IN FEED HOLES TOWARD THE RIGHT.

REQUIREMENT

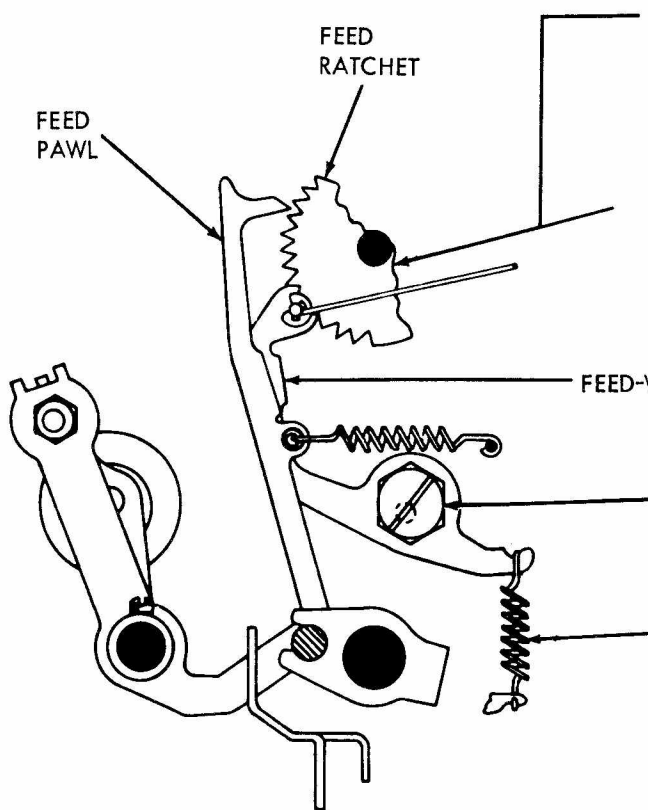
SENSING PINS CENTRALLY LOCATED IN CODE HOLES.

TO ADJUST

POSITION FEED-WHEEL DETENT ECCENTRIC WITH ITS LOCK SCREW FRICTION TIGHT. HIGH PART OF ECCENTRIC SHOULD BE TOWARD RIGHT. HOLD ECCENTRIC AND TIGHTEN GUIDE POST AND LOCK SCREW. RECHECK ADJUSTMENT.

NOTE 2

HOLD FEED PAWL AWAY TO FACILITATE ADJUSTMENT.



(B) FEED-RATCHET DETENT SPRING

REQUIREMENT

WITH FEED PAWL HELD AWAY FROM RATCHET WHEEL

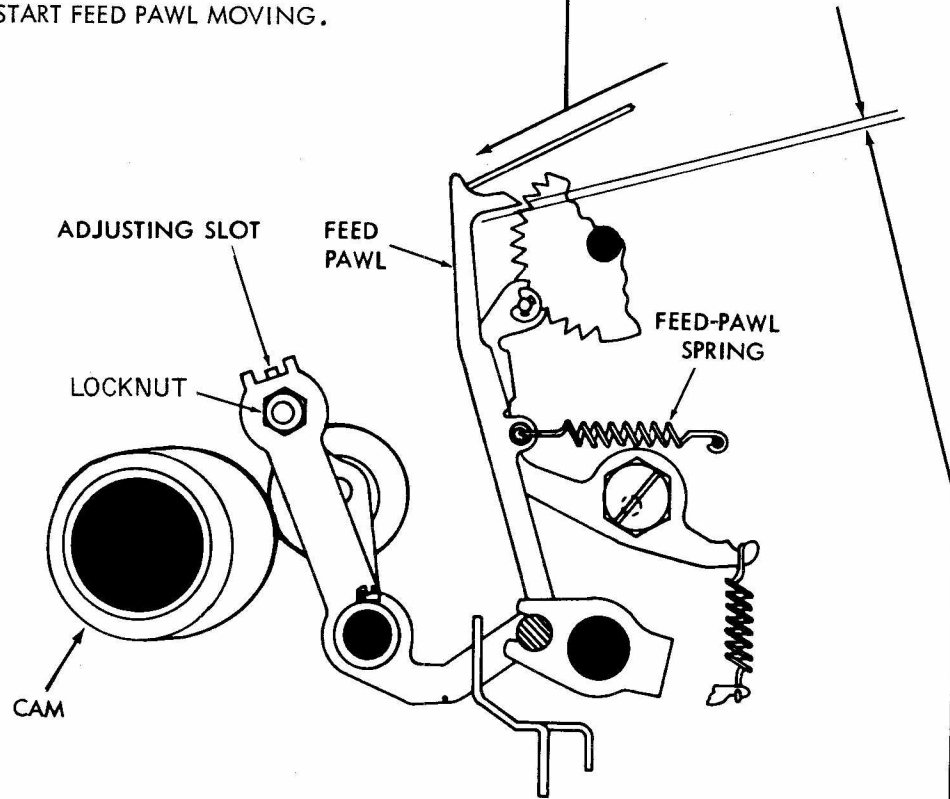
MIN. 7 OZS.

MAX. 13 OZS.

TO MOVE DETENT ROLLER AWAY FROM FULLY DETENTED POSITION.

(B) FEED-PAWL SPRING
TO CHECK

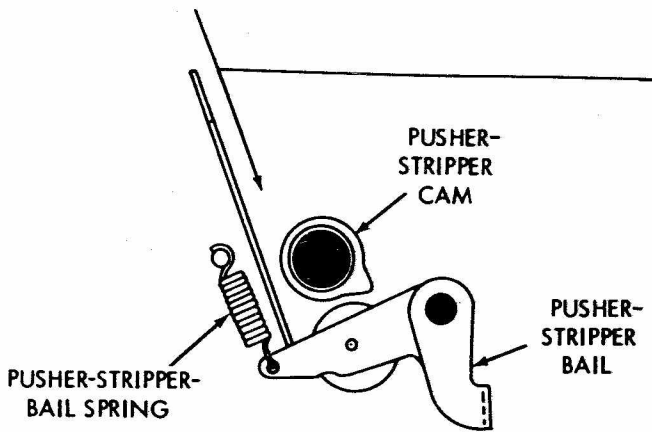
PLACE START-STOP LEVER IN STOP POSITION.
REMOVE TOP PLATE. DISENGAGE CLUTCH.
REQUIREMENT
MIN. 1/4 OZ.
MAX. 1-1/2 OZS.
TO START FEED PAWL MOVING.



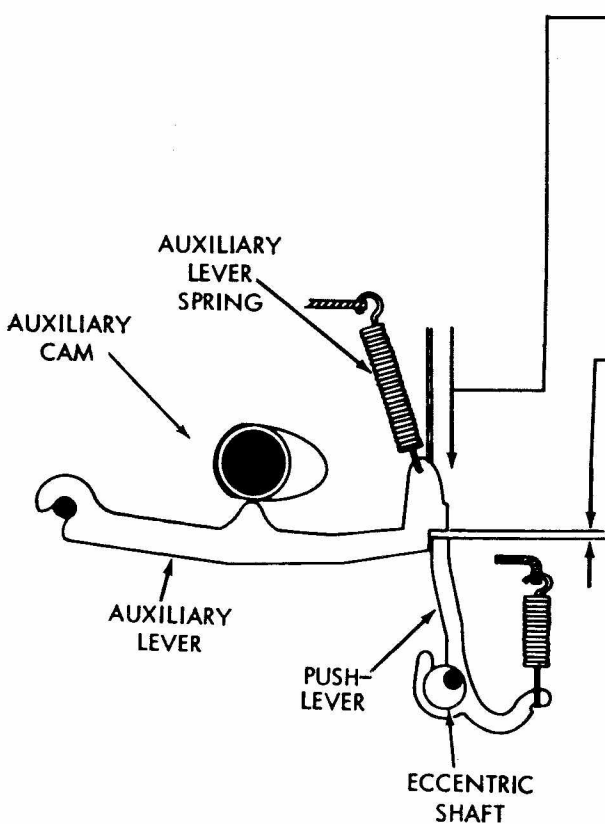
(A) FEED PAWL
TO CHECK

PLACE START-STOP LEVER IN RUN POSITION.
REMOVE TOP PLATE. TRIP CLUTCH, AND ROTATE CAM
SHAFT UNTIL FEED ROLLER IS ON HIGH PART OF CAM.
ROTATE RATCHET WHEEL UNTIL OIL HOLE IS UP. TAKE
UP PLAY BY PRESSING DOWN LIGHTLY ON RIGHT END
OF FEED-PAWL BAIL.
REQUIREMENT
MIN. SOME
MAX. 0.003 INCH
CLEARANCE BETWEEN FEED PAWL AND RATCHET TOOTH.
TO ADJUST
POSITION FEED LEVER BY MEANS OF THE ADJUSTING
SLOT WITH ITS LOCKNUT LOOSENED.

2.20 Sensing Mechanism



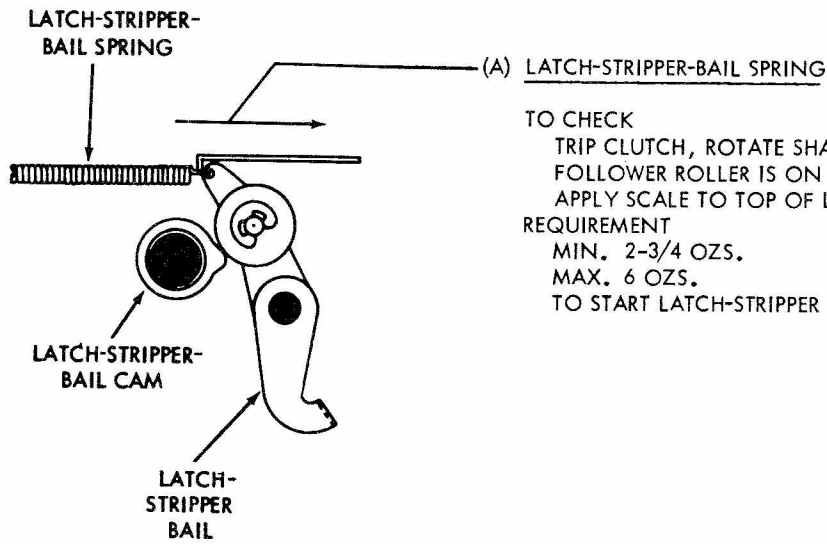
(A) PUSHER-STRIPPER-BAIL SPRING
TO CHECK
 SELECT BLANK COMBINATION. TRIP CLUTCH AND ROTATE SHAFT TO STOP POSITION.
 REQUIREMENT
 MIN. 7 OZS.
 MAX. 11 OZS.
 TO START BAIL MOVING AWAY FROM CAM.



(C) AUXILIARY LEVER SPRING
TO CHECK
 EACH AUXILIARY LEVER ON LOW PART OF ITS CAM. SCALE APPLIED TO LEVER JUST RIGHT OF SPRING. PUSHLEVER HELD AWAY.
 REQUIREMENT
 MIN. 1/2 OZ.
 MAX. 3 OZS.
 TO START AUXILIARY LEVER MOVING.

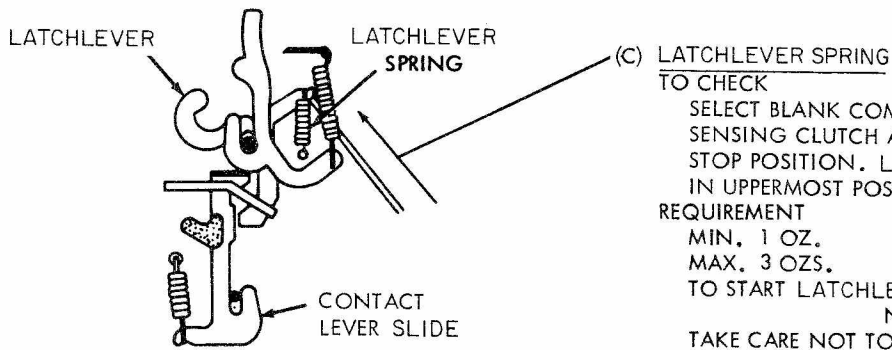
(B) PUSHLEVER
 REQUIREMENT
 WITH FIRST ONE AND THEN THE OTHER OF THE TWO AUXILIARY LEVERS ON THE LOW PART OF THE CAM, THE AUXILIARY LEVER WITH THE LEAST CLEARANCE SHALL CLEAR THE TIP OF ITS PUSHLEVER BY
 MIN. 0.020 INCH
 MAX. 0.045 INCH
 FOR UNIT WITHOUT PULL-BACK MECHANISM
 MIN. 0.010 INCH
 MAX. 0.020 INCH
 FOR UNIT WITH PULL-BACK MECHANISM
TO ADJUST
 WITH PUSHLEVER ECCENTRIC SHAFT LOCKNUT (FRONT PLATE) LOOSENED AND HIGH PART OF ECCENTRIC LOCATED TOWARD THE UPPER RIGHT, ROTATE ECCENTRIC TOWARD RIGHT OR LEFT.

2.21 Sensing Mechanism Springs



TO CHECK
 TRIP CLUTCH, ROTATE SHAFT SO LATCH-BAIL FOLLOWER ROLLER IS ON LOW PART OF CAM. APPLY SCALE TO TOP OF LATCH-STRIPPER BAIL.

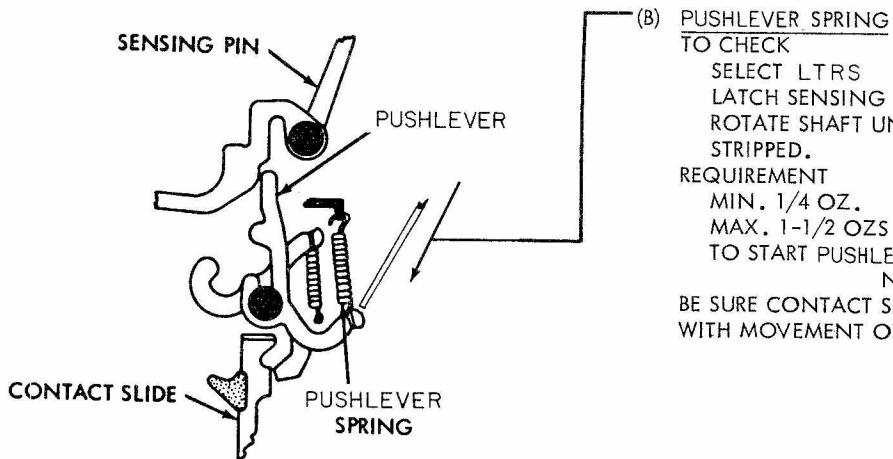
REQUIREMENT
 MIN. 2-3/4 OZS.
 MAX. 6 OZS.
 TO START LATCH-STRIPPER BAIL MOVING.



TO CHECK
 SELECT BLANK COMBINATION. TRIP SENSING CLUTCH AND ROTATE SHAFT TO STOP POSITION. LEVER SLIDES SHOULD BE IN UPPERMOST POSITION.

REQUIREMENT
 MIN. 1 OZ.
 MAX. 3 OZS.
 TO START LATCHLEVER MOVING.

NOTE 1
 TAKE CARE NOT TO DAMAGE PUSHLEVER SPRINGS IN CHECKING REQUIREMENT.

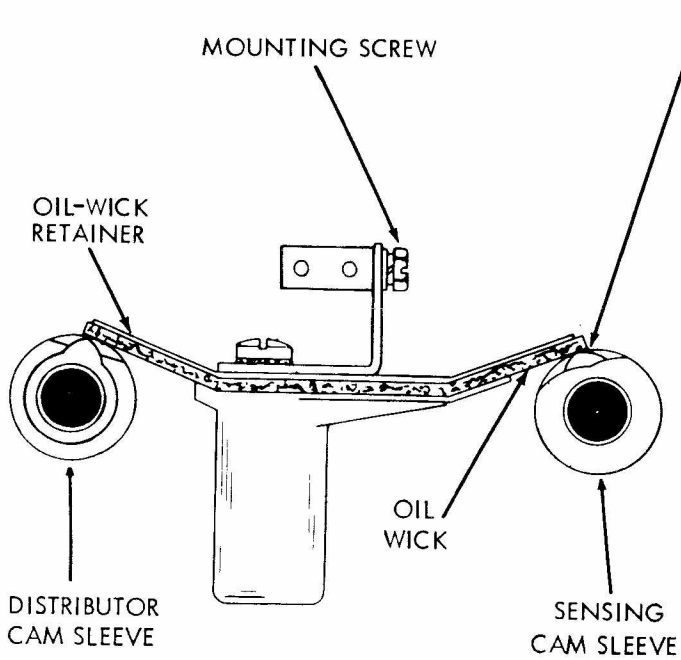


TO CHECK
 SELECT LTRS COMBINATION, AND LATCH SENSING CLUTCH. TRIP CLUTCH AND ROTATE SHAFT UNTIL PUSHLEVERS ARE STRIPPED.

REQUIREMENT
 MIN. 1/4 OZ.
 MAX. 1-1/2 OZS.
 TO START PUSHLEVER MOVING.

NOTE 2
 BE SURE CONTACT SLIDES DO NOT INTERFERE WITH MOVEMENT OF PUSHLEVERS.

2.22 Oil Reservoir Assembly



OIL RESERVOIR

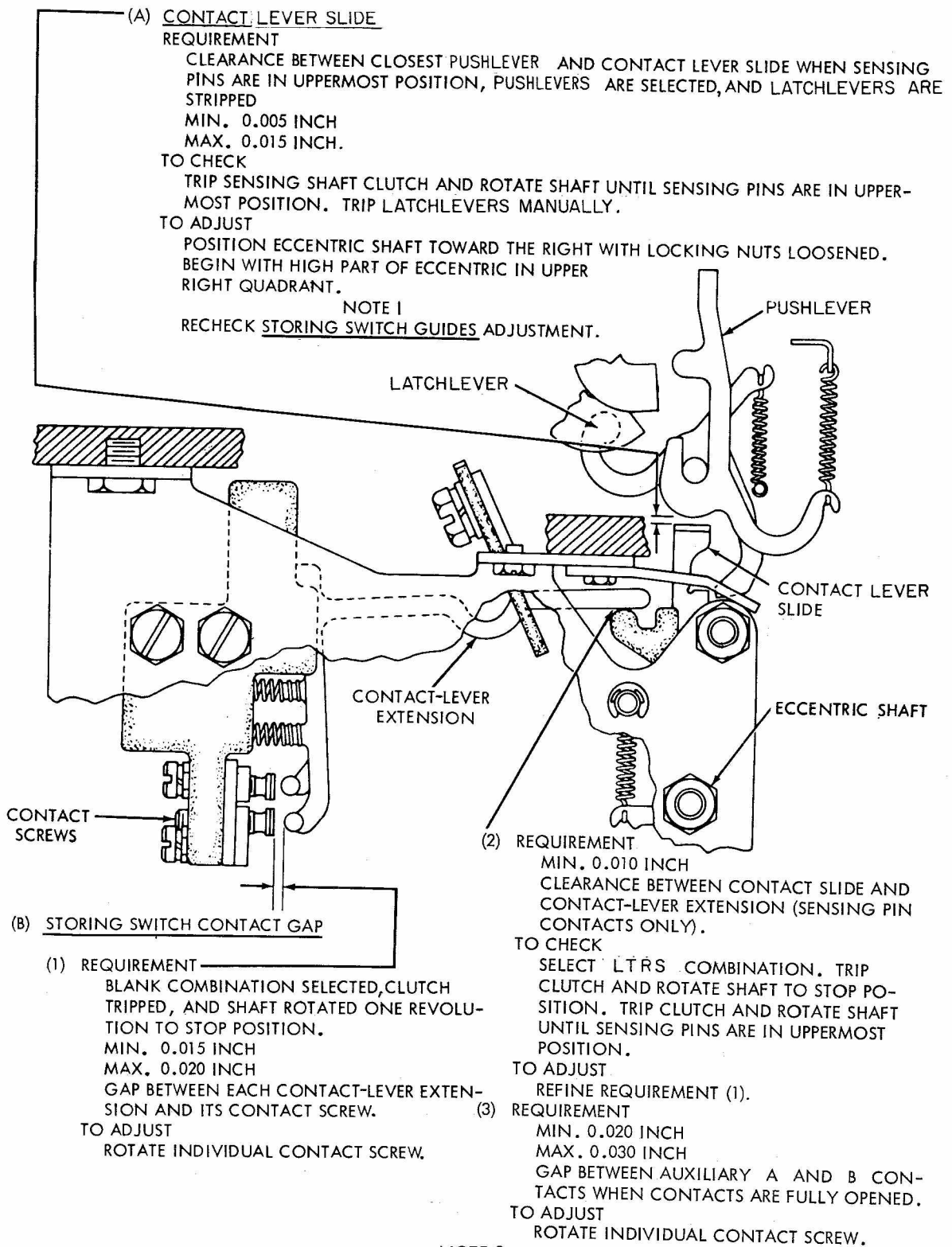
REQUIREMENT

EACH OIL WICK RESTS LIGHTLY ON HIGH PARTS OF FRONT AND REAR CAM OF EACH CAM SLEEVE.

TO ADJUST

TRIP BOTH ARMATURES AND ROTATE SHAFT UNTIL HIGH PART OF FRONT AND REAR CAM OF EACH SLEEVE IS UNDER ITS WICK. POSITION OIL RESERVOIR ASSEMBLY WITH ITS MOUNTING SCREWS (4) LOOSENED. WHEN CAM SLEEVE IS ROTATED, TEETH OF WICK RETAINER SHALL NOT DEFLECT UPWARD MORE THAN 1/32 INCH (GAUGE BY EYE). REFINE ADJUSTMENT BY SLIGHTLY BENDING TEETH ON WICK COMB SPRING.

2.23 Storing Switch Mechanism



2.24 Cover and Panel Assembly

(A) COVER PLATE

(1) REQUIREMENT

COVER PLATE HELD FLUSH AGAINST TOP PLATE BY DETENT ACTION.

(2) REQUIREMENT

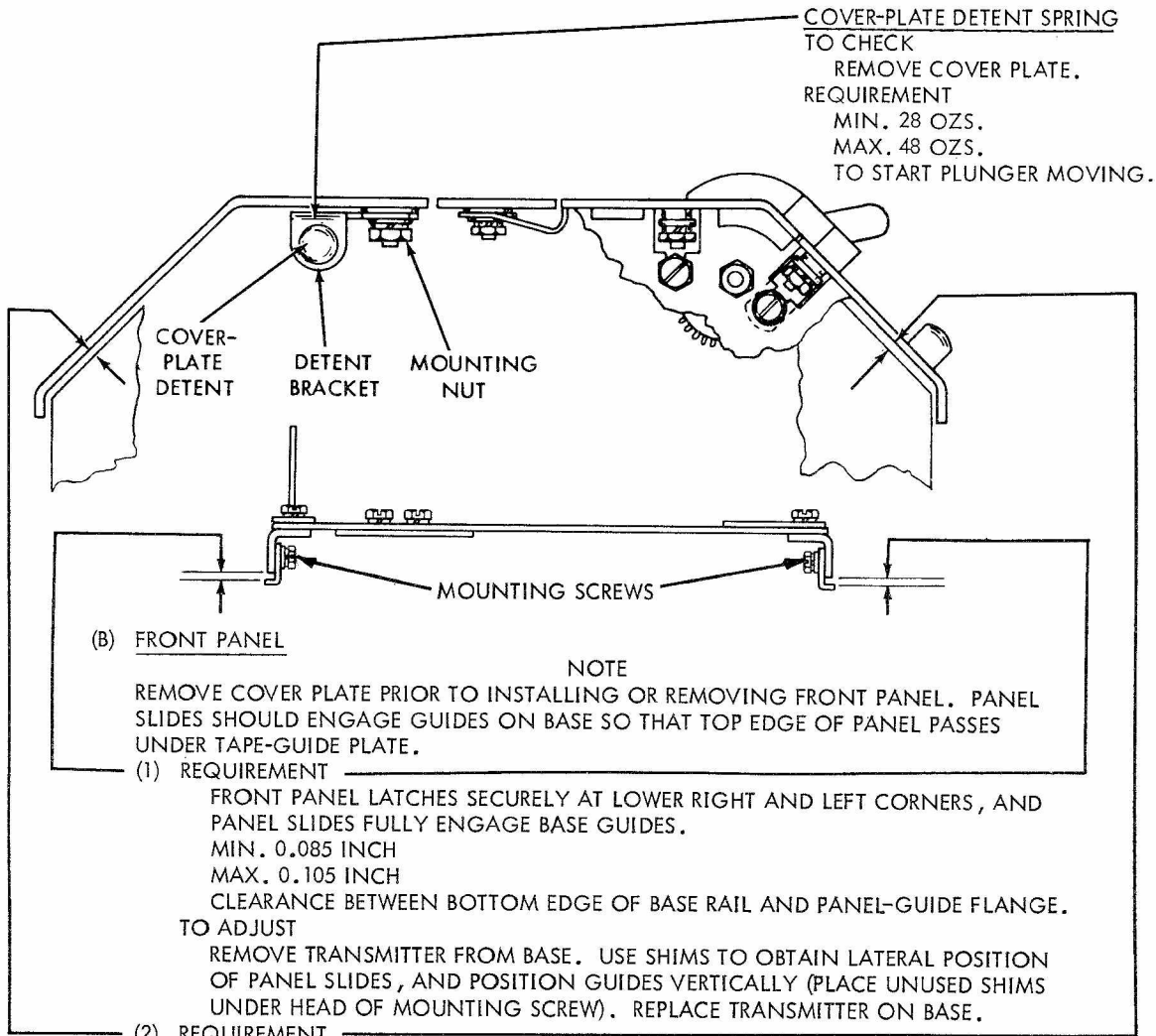
COVER PLATE RESTS ON AT LEAST THREE SIDE-FRAME PROJECTIONS.

(3) REQUIREMENT

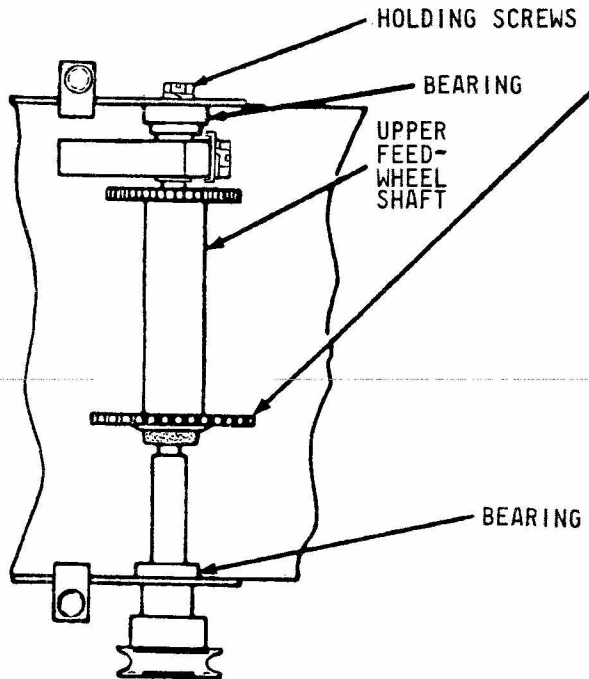
FRONT EDGE OF COVER AND TOP PLATES IN LINE.

TO ADJUST

LOOSEN DETENT NUTS ON SIDE FRAMES, AND MOVE THEM TO EXTREME LOWER RIGHT POSITION. TIGHTEN NUTS. LOOSEN FOUR BRACKET MOUNTING NUTS ON COVER PLATE. PLACE COVER INTO POSITION, AND POSITION TO MEET REQUIREMENTS. TIGHTEN NUTS. RECHECK AND REFINE REQUIREMENTS.



2.25 Upper Feed Wheel (Units With Bearings Mounted on Side Plates) and Upper Feed-wheel Detent (Unit With Pull-back Mechanism)



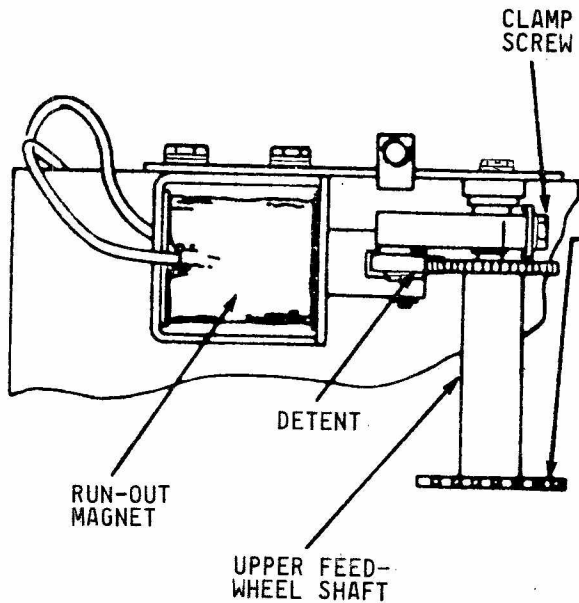
UPPER FEED WHEEL (FOR UNITS WITH BEARINGS MOUNTED ON SIDE PLATES)

REQUIREMENT

WITH DETENT DISENGAGED AND DRIVE PULLEY REMOVED, UPPER FEED WHEEL SHALL ROTATE FREELY WITHOUT INTERFERENCE.

TO ADJUST

LOOSEN SCREWS (2) HOLDING EACH BEARING FRICTION TIGHT. POSITION UPPER FEED-WHEEL SHAFT TO MEET REQUIREMENT. TIGHTEN SCREWS.



UPPER FEED-WHEEL DETENT

REQUIREMENT

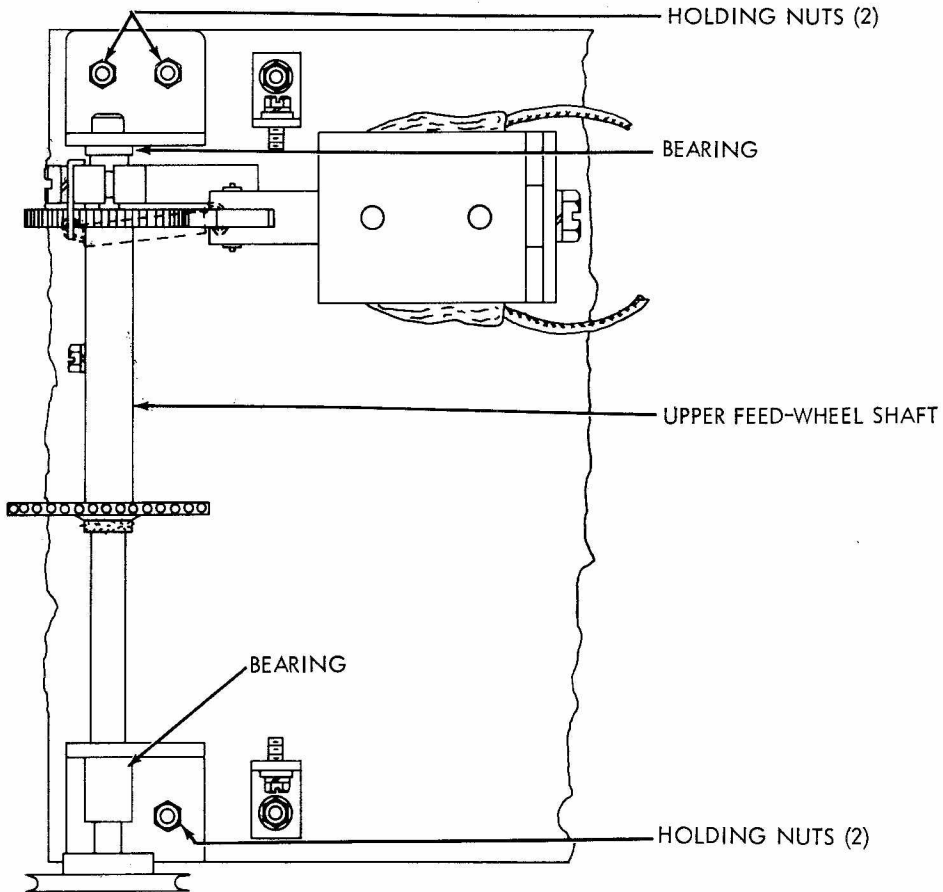
WITH REPEAT RUB-OUT TAPE IN UNIT, LOWER AND UPPER TAPE LIDS LATCHED, MANUALLY OPERATE PULL-BACK SOLENOID UNTIL TAPE IS TAUT BETWEEN UPPER AND LOWER TAPE FEED WHEELS. CODE HOLES SHALL BE CENTERED OVER RESPECTIVE SENSING PINS.

TO ADJUST

LOOSEN DETENT MOUNTING CLAMP SCREW FRICTION TIGHT. WITH TAPE PULL-BACK SOLENOID HELD IN ENERGIZED CONDITION, ROTATE UPPER FEED-WHEEL DETENT ON MOUNTING POST UNTIL CODE HOLES ARE CENTERED OVER SENSING PINS AND DETENT ENGAGES UPPER FEED-WHEEL RATCHET AT SECOND TOOTH BELOW CENTER OF UPPER FEED-WHEEL SHAFT.

NOTE: AFTER MAKING THIS ADJUSTMENT, THE REQUIREMENT MUST BE MET WHEN THE UNIT IS OPERATED UNDER POWER, CHECKING FIRST AFTER TAPE RUN-OUT AND THEN AFTER TAPE PULL-BACK. IN BOTH CASES, THE SENSING PINS SHALL BE VISIBLE THROUGH THE TAPE CODE HOLES. REFINE THE ADJUSTMENT IF NECESSARY.

2.26 Upper Feed Wheel (Units With Bearings Mounted on Top Plate) (Unit With Pull-back Mechanism)



UPPER FEED WHEEL
REQUIREMENT

WITH DETENT DISENGAGED AND DRIVE PULLEY REMOVED, UPPER FEED WHEEL SHALL ROTATE FREELY WITHOUT INTERFERENCE.

TO ADJUST

NOTE: PERFORM ADJUSTMENT WITH TOP PLATE, FEED WHEEL AND BEARINGS, AND RUN-OUT SOLENOID MECHANISM REMOVED FROM UNIT. REMOVE BY LOOSENING TWO MOUNTING SCREWS AND LIFTING OFF TOP PLATE.

LOOSEN HOLDING NUTS (2) HOLDING EACH BEARING. FRICTION TIGHT AND ALIGN BEARINGS SO FEED WHEEL ROTATES FREELY. RECHECK AFTER NUTS ARE TIGHTENED.

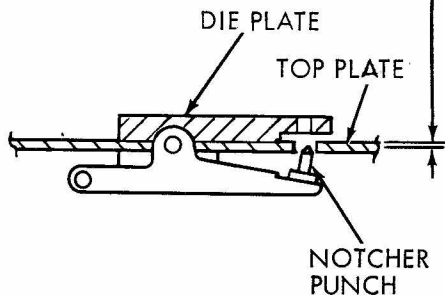
FOLLOWING THIS ADJUSTMENT, CHECK UPPER FEED-WHEEL DETENT.

2.27 Notcher Armature Travel and Notcher Springs (Unit With Pull-back Mechanism)

NOTCHER ARMATURE TRAVEL

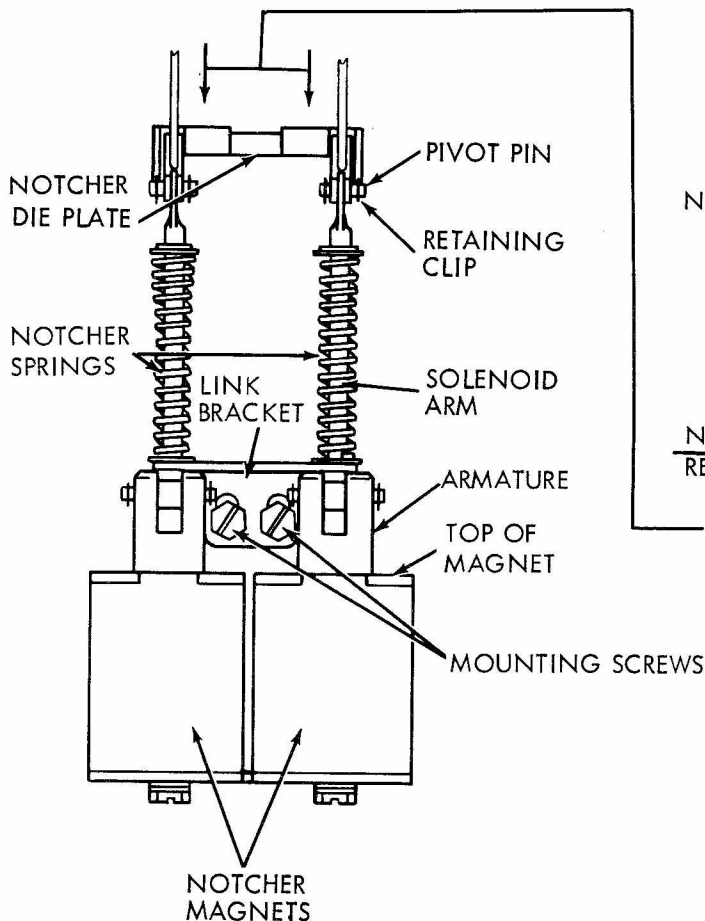
REQUIREMENT (EACH NOTCHER)

- (1) WITH ARMATURE IN UPPERMOST POSITION, NOTCHER PUNCH BELOW TOP SURFACE OF TOP PLATE.
- (2) NOTCHER PUNCH FULLY SEATED IN DIE PLATE BEFORE ARMATURE QUITE REACHES LOWERMOST POSITION.
- (3) OPERATING STROKE OF ARMATURE MIN. 0.090 INCH --- MAX. 0.100 INCH.



TO ADJUST (EACH NOTCHER)

- (A) REMOVE PIVOT PIN AND RETAINING CLIP. PLACE ARMATURE IN LOWERMOST POSITION. DRAW PENCIL LINE ON ARMATURE AT TOP OF MAGNET. REPLACE PIVOT PIN. MOVE ARMATURE DOWN UNTIL PUNCH IS FULLY SEATED IN DIE PLATE. PENCIL LINE SHOULD BE 1/32 INCH ABOVE TOP OF MAGNET. IF NOT, REMOVE PIN AND ADJUST BY ROTATING SOLENOID ARM. REPLACE PIVOT PIN AND RETAINING CLIP.
- (B) WITH MOUNTING SCREWS LOOSENED, POSITION LINK BRACKET SO THAT, WHEN ARMATURE IS IN UPPERMOST POSITION, PENCIL LINE IS 1/8 INCH ABOVE TOP OF MAGNET.



NOTE: WITH NOTCHER MAGNETS DE-ENERGIZED, PLACE START-STOP LEVER IN FREE WHEELING POSITION. LOAD UNIT WITH TAPE. PULL TAPE TOWARD REAR OF UNIT. TAPE SHOULD NOT BE SNAGGED ON NOTCHER POINTS. CHECK AND REFINE BOTH NOTCHER PUNCH ADJUSTMENTS.

NOTCHER SPRINGS (2)

REQUIREMENT (EACH SPRING)

WITH MAGNET DE-ENERGIZED:
MIN. 1 OZ. --- MAX. 2 OZS.
TO START SOLENOID ARM MOVING.

2.28 Notcher Punches (Left and Right) (Unit With Pull-back Mechanism)

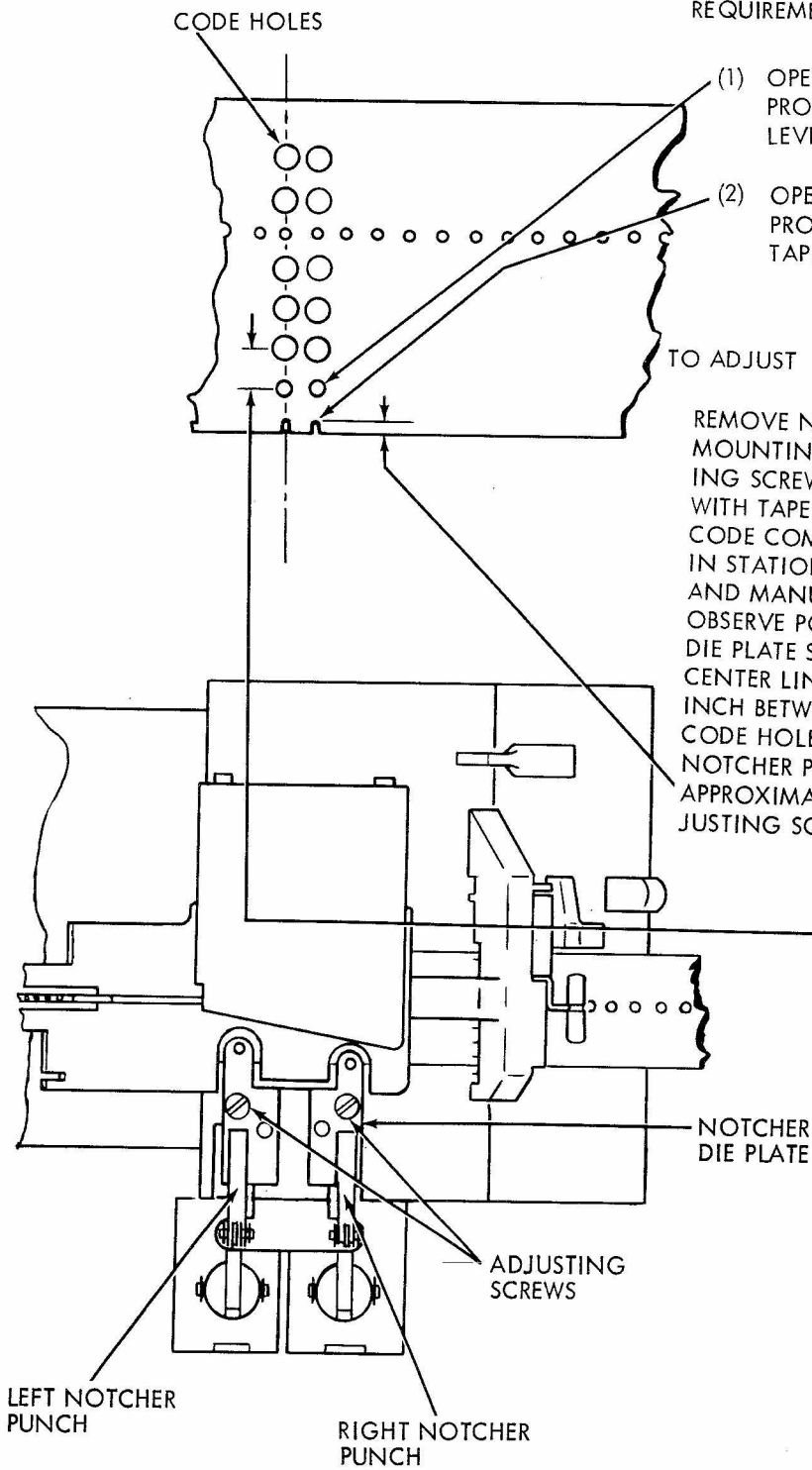
NOTCHER PUNCH ALIGNMENT

REQUIREMENT

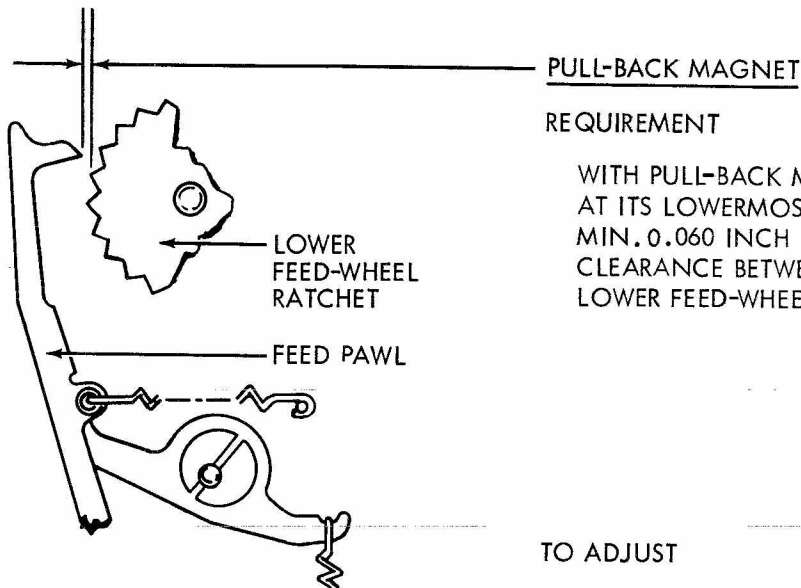
- (1) OPERATION OF LEFT NOTCHER PUNCH MUST PRODUCE A READABLE HOLE IN NORMAL SIXTH-LEVEL CODE HOLE POSITION.
- (2) OPERATION OF RIGHT NOTCHER MUST PRODUCE READABLE NOTCH AT EDGE OF TAPE IN LINE WITH CODE HOLES.

TO ADJUST

REMOVE NOTCHER COVER BY REMOVING ITS MOUNTING SCREWS. LOOSEN DIE-PLATE ADJUSTING SCREWS UNTIL FRICTION TIGHT. LOAD UNIT WITH TAPE PERFORATED WITH REPEATED LTRS CODE COMBINATIONS. WITH LOWER FEED WHEEL IN STATIONARY POSITION, HOLD TAPE LID DOWN AND MANUALLY OPERATE BOTH NOTCHER PUNCHES. OBSERVE POSITION OF PERFORATIONS. POSITION DIE PLATE SO THAT LEFT NOTCHER HOLE IS ON CENTER LINE OF CODE HOLES AND THERE IS 0.1 INCH BETWEEN CENTERS OF IT AND FIFTH-LEVEL CODE HOLE. ROTATE DIE PLATE SO THAT RIGHT NOTCHER PRODUCES A NOTCH IN EDGE OF TAPE APPROXIMATELY 0.060 INCH WIDE. TIGHTEN ADJUSTING SCREWS.



2.29 Pull-back Magnet (Unit With Pull-back Mechanism)



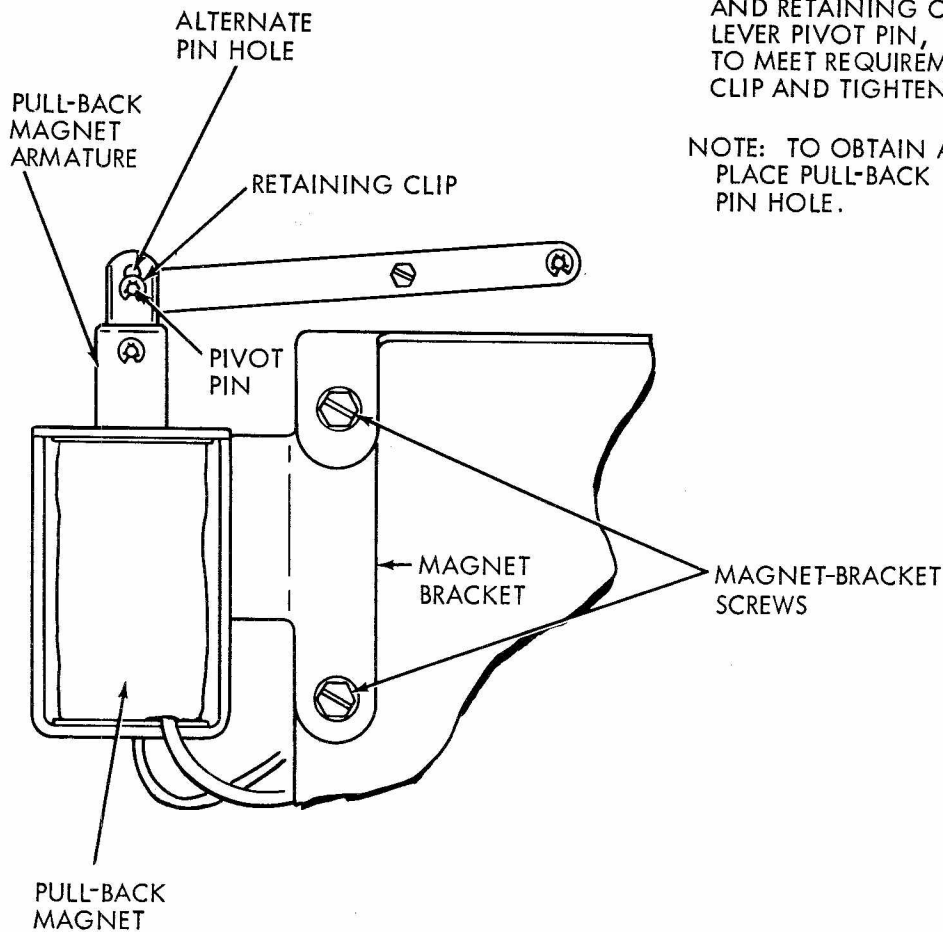
REQUIREMENT

WITH PULL-BACK MAGNET ARMATURE HELD AT ITS LOWERMOST POSITION
MIN. 0.060 INCH
CLEARANCE BETWEEN FEED PAWL AND
LOWER FEED-WHEEL RATCHET TEETH.

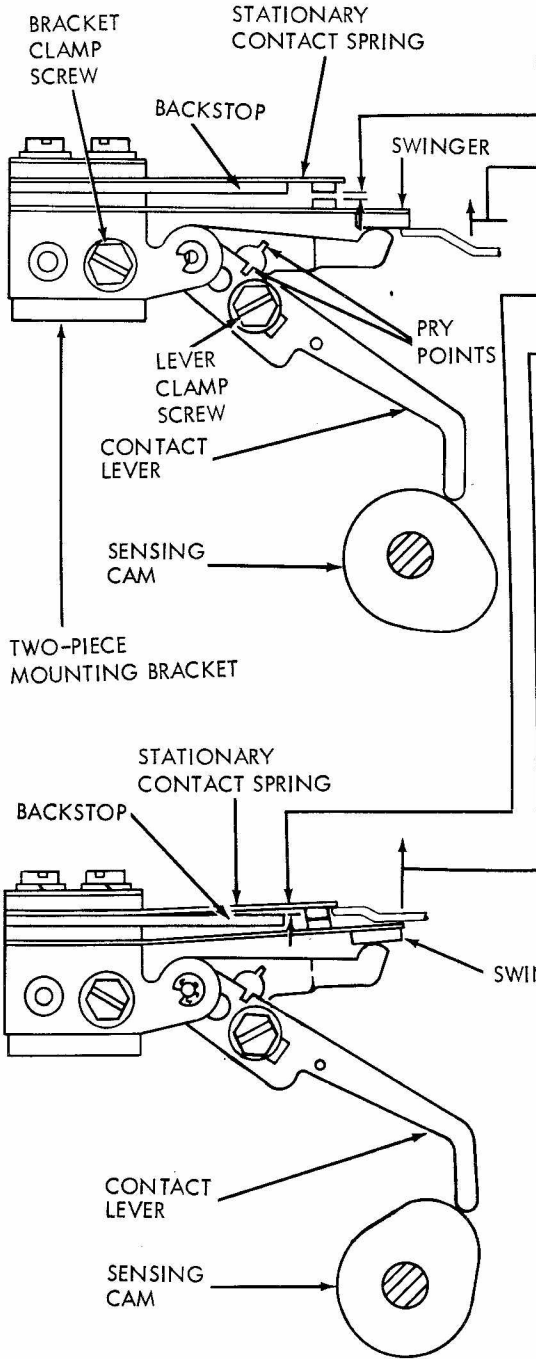
TO ADJUST

WITH MAGNET-BRACKET SCREWS FRICTION TIGHT AND RETAINING CLIP REMOVED FROM PULL-BACK LEVER PIVOT PIN, POSITION MAGNET BRACKET TO MEET REQUIREMENT. REPLACE RETAINING CLIP AND TIGHTEN SCREWS.

NOTE: TO OBTAIN A GREATER ADJUSTMENT RANGE, PLACE PULL-BACK LEVER PIVOT PIN IN ALTERNATE PIN HOLE.



2.30 Sensing Auxiliary Contacts (Preliminary) With Two-piece Mounting Bracket
(Unit With Pull-back Mechanism)



SENSING AUXILIARY CONTACTS (PRELIMINARY)

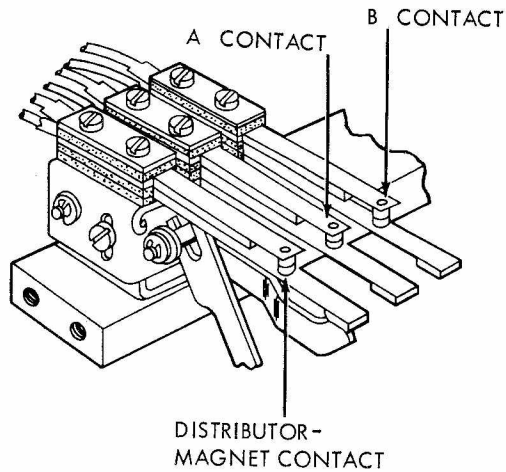
REQUIREMENTS-EACH CONTACT

- (1) WITH CONTACT OPEN, GAP
MIN. 0.010 INCH.
- (2) WITH CONTACT OPEN:
MIN. 5 GRAMS --- MAX. 30 GRAMS
TO START SWINGER MOVING AWAY FROM
CONTACT LEVER.
- (3) WITH CONTACT CLOSED, STATIONARY CONTACT
SPRING RAISED ABOVE BACKSTOP:
MIN. 0.002 INCH.
- (4) WITH CONTACT CLOSED:
MIN. 40 GRAMS --- MAX. 60 GRAMS
TO START STATIONARY CONTACT SPRING MOVING.

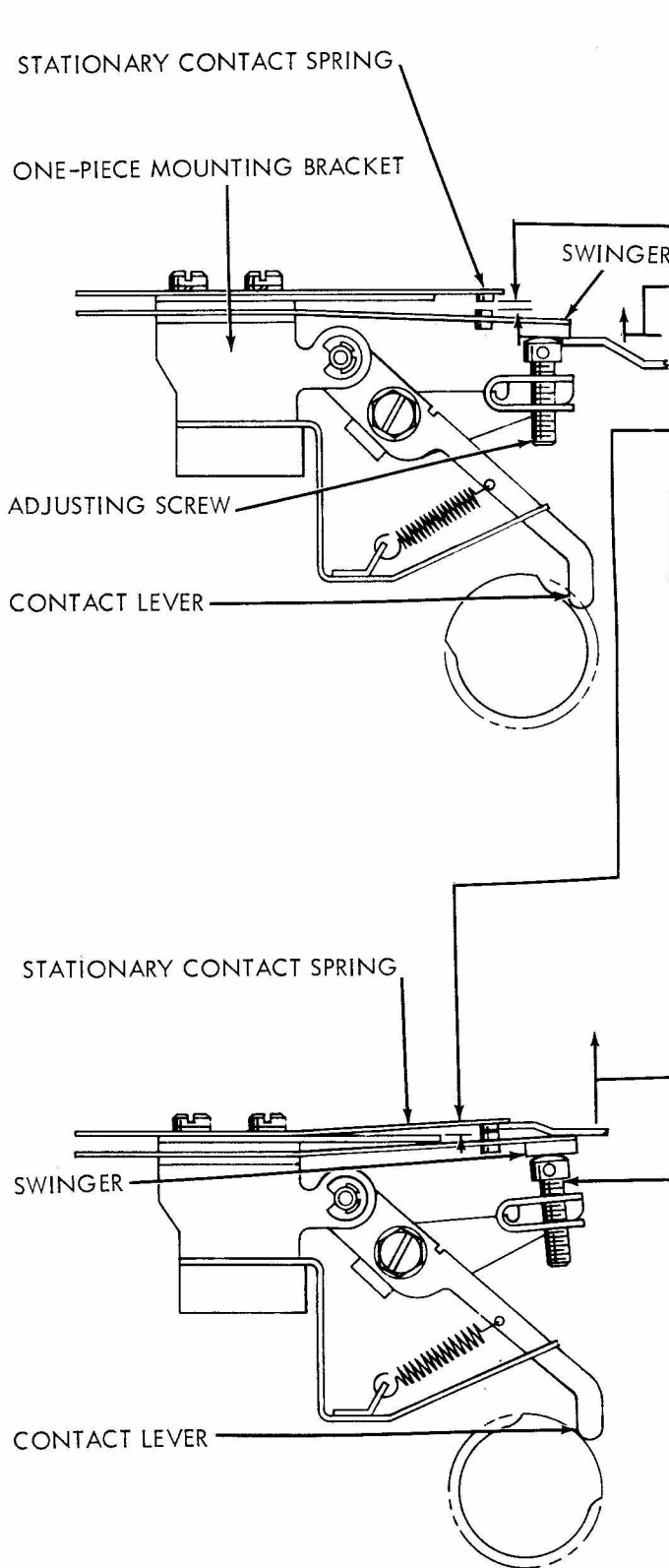
TO ADJUST - EACH CONTACT

- (A) WITH BRACKET CLAMP SCREW LOOSENED, POSITION
BRACKET SO THAT, WHEN CONTACT LEVER IS ON
LOW PART OF CAM, ACTUATING LEVER TOUCHES
SWINGER AND CONTACT GAP IS APPROX 0.015
INCH. TIGHTEN CLAMP SCREW. DO NOT DISTURB
THIS ADJUSTMENT DURING REST OF PROCEDURE.
- (B) BEND STATIONARY CONTACT SPRING SO THAT
FORCE OF 1 OZ. APPLIED AT END WILL GIVE CLEAR-
ANCE OF APPROX 0.020 INCH AT END OF BACKSTOP.
BEND STATIONARY CONTACT SPRING AND BACKSTOP
TO OBTAIN GAP OF 0.015 - 0.025 INCH AT A AND
B CONTACTS AND 0.010 - 0.025 INCH AT DISTRIBUTOR-
MAGNET CONTACTS.
- (C) POSITION SHAFT SO THAT CONTACT LEVER IS ON
HIGH PART OF CAM. CHECK REQUIREMENTS (3)
AND (4). IF THEY ARE NOT MET, BEND STATIONARY
CONTACT SPRING.
- (D) POSITION SHAFT SO THAT LEVER IS ON LOW PART
OF CAM. BEND SWINGER TO MEET REQUIREMENT (2).

NOTE: FOR FINAL REQUIREMENTS, SEE
CONTACT TIMING REQUIREMENTS
(UNIT WITH PULL-BACK MECHANISM).



2.31 Sensing Auxiliary Contacts (Preliminary) With One-piece Mounting Bracket
(Unit With Pull-back Mechanism)



SENSING AUXILIARY CONTACTS (PRELIMINARY)
WITH ONE-PIECE MOUNTING BRACKET

NOTE 1: FOR CONTACTS WITH TWO-PIECE MOUNTING BRACKET, SEE PREVIOUS PARAGRAPH.

REQUIREMENTS EACH CONTACT

- (1) WITH CONTACT OPEN, GAP
MIN. 0.010 INCH.
- (2) WITH CONTACT OPEN:
MIN. 5 GRAMS --- MAX. 30 GRAMS
TO START SWINGER MOVING AWAY FROM
CONTACT LEVER.
- (3) WITH CONTACT CLOSED, STATIONARY
CONTACT SPRING RAISED ABOVE BACKSTOP:
MIN. 0.002 INCH.
- (4) WITH CONTACT CLOSED:
MIN. 40 GRAMS --- MAX. 60 GRAMS
TO START STATIONARY CONTACT SPRING
MOVING.

TO ADJUST - EACH CONTACT

BEND STATIONARY CONTACT SPRING SO THAT
1 OZ. APPLIED AT END OF SPRING WILL PRODUCE
CLEARANCE OF APPROX 0.020 INCH BETWEEN
SPRING AND BACKSTOP. POSITION ADJUSTING
SCREW SO THAT, WHEN CONTACT LEVER IS ON
LOW PART OF CAM, CONTACT GAP IS 0.015 -
0.025 INCH. BEND SWINGER SO THAT IT CON-
TACTS ADJUSTING SCREW THROUGHOUT
ROTATION OF CAM.

NOTE 2: FOR FINAL REQUIREMENTS, SEE
CONTACT TIMING REQUIREMENTS
(UNIT WITH PULL-BACK MECHANISM).

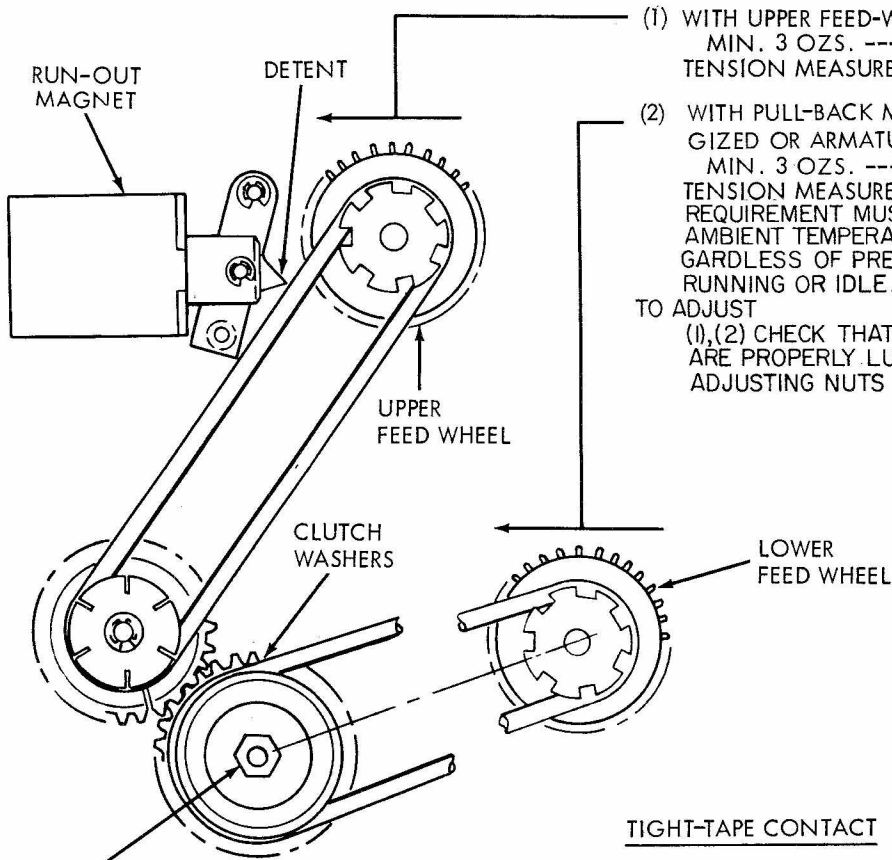
NOTE 3:

RELATIVE POSITION OF DISTRIBUTOR-
MAGNET CONTACT AND A AND B
CONTACTS IS SAME AS SHOWN ON
FIGURE FOR SENSING AUXILIARY
CONTACTS (PRELIMINARY) WITH TWO-
PIECE MOUNTING BRACKET.

2. 32 Pull-back Run-out Clutch and Tight-tape Contact (Unit With Pull-back Mechanism)

PULL-BACK RUN-OUT CLUTCH

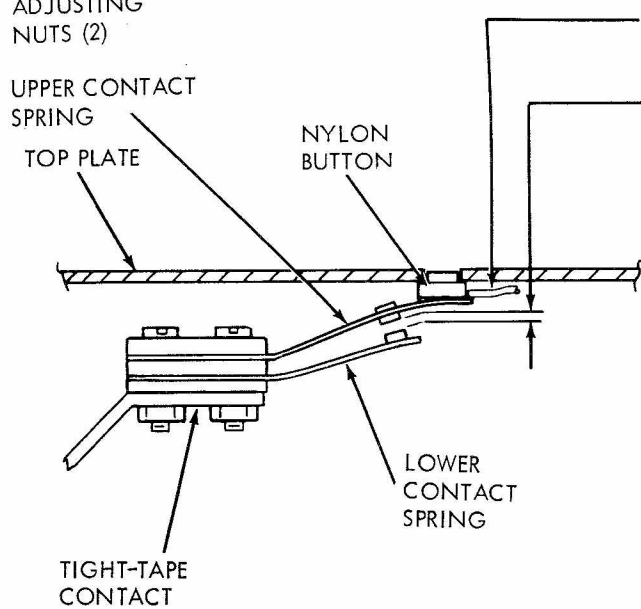
REQUIREMENT (UNDER POWER)



- (1) WITH UPPER FEED-WHEEL DETENT DISENGAGED
MIN. 3 OZS. --- MAX. 5 OZS.
TENSION MEASURED AT TAPE-FEED PINS.
 - (2) WITH PULL-BACK MAGNET ENER-
GIZED OR ARMATURE MANUALLY DEPRESSED:
MIN. 3 OZS. --- MAX. 6 OZS.
TENSION MEASURED AT TAPE-FEED PINS. THIS
REQUIREMENT MUST BE MET WHEN THE
AMBIENT TEMPERATURE IS 60° TO 80 F RE-
GARDLESS OF PREVIOUS CONDITION,
RUNNING OR IDLE.
- TO ADJUST
(1), (2) CHECK THAT CLUTCH FELT WASHERS
ARE PROPERLY LUBRICATED. SET TORQUE
ADJUSTING NUTS TO MEET REQUIREMENTS.

TIGHT-TAPE CONTACT

REQUIREMENT

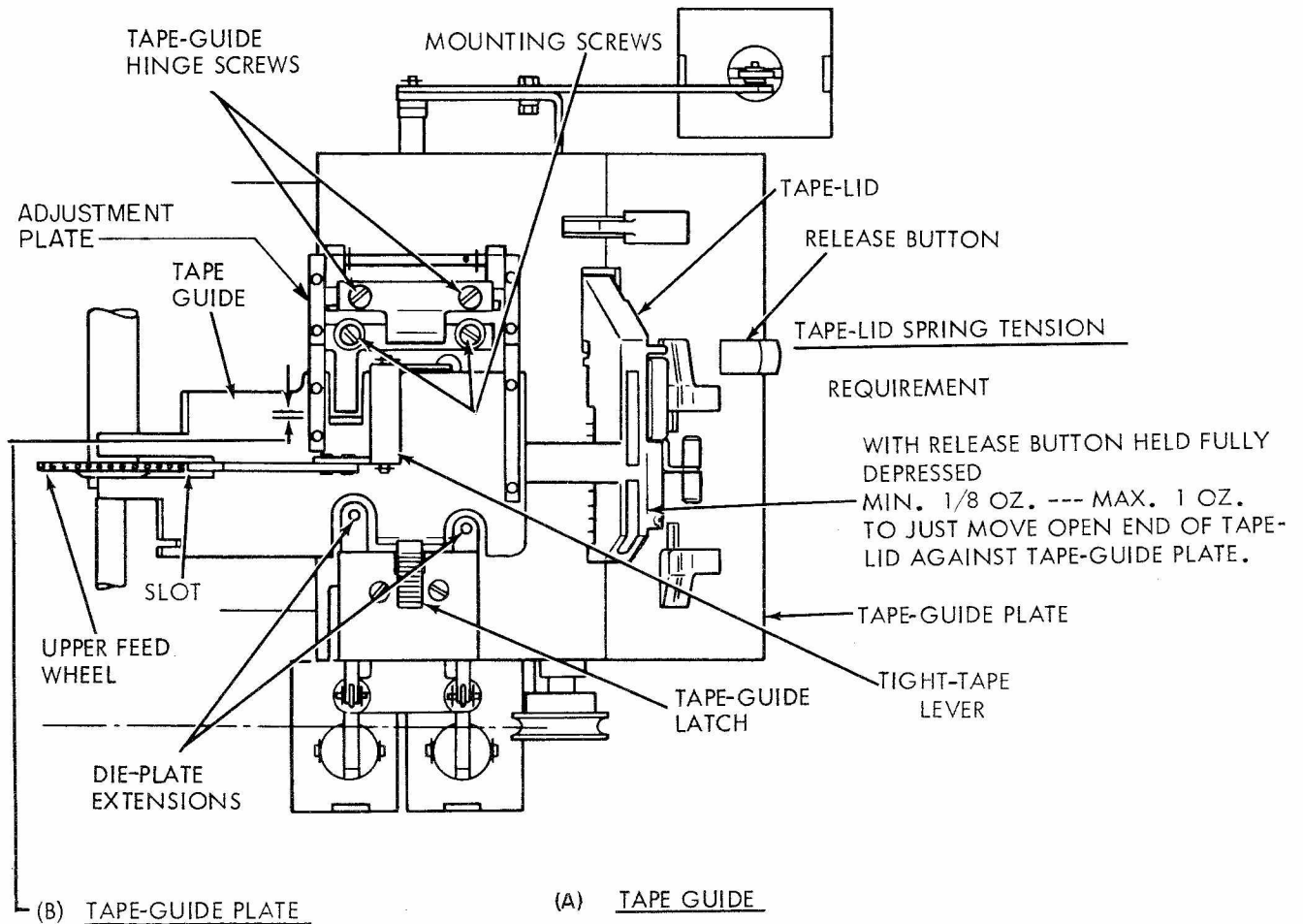


- (1) MIN. 40 GRAMS --- MAX. 50 GRAMS
TO HOLD CONTACT CLOSED.
- (2) WITH CONTACT OPEN, GAP:
MIN: 0.010 INCH --- MAX. 0.020 INCH.

TO ADJUST

- (1) BEND UPPER CONTACT SPRING SO THAT
NYLON BUTTON RESTS AGAINST TOP
PLATE AND A FORCE OF 2 TO 3 OZS.
IS REQUIRED TO START SPRING MOVING.
- (2) BEND LOWER CONTACT SPRING TO MEET
REQUIREMENT (2).
- (3) RECHECK REQUIREMENT (1). REFINES
ADJUSTMENTS IF NECESSARY.

2.33 Adjustment Plate, Tape Guide, Tape-guide Plate and Tape-lid Spring (Unit With Pull-back Mechanism)



(B) TAPE-GUIDE PLATE REQUIREMENT

WITH TAPE IN UNIT AND AGAINST GUIDING EDGE OF DIE PLATE, APPROX 0.010 INCH CLEARANCE BETWEEN TAPE-GUIDE PLATE AND EDGE OF TAPE.

TO ADJUST
POSITION TAPE-GUIDE PLATE WITH MOUNTING SCREWS LOOSENED.

(C) ADJUSTMENT PLATE REQUIREMENT

POSITION ADJUSTMENT PLATE SO THAT IT GUIDES TAPE CORRECTLY.

TO ADJUST
(1) WITH 1-INCH TAPE IN THE UNIT, AND LOWER EDGE OF TAPE AGAINST THE GUIDING EDGE OF THE DIE PLATE, SET THE ADJUSTMENT PLATE SO THAT THERE IS APPROX 0.010 INCH CLEARANCE BETWEEN THE EDGE OF THE TAPE AND THE ADJUSTMENT PLATE.
(2) CHECK THAT TAPE CAN BE DRAWN FREELY THROUGH THE UNIT, BEING GUIDED BUT NOT BINDING BETWEEN THE DIE PLATE AND THE ADJUSTMENT PLATE.

(A) TAPE GUIDE REQUIREMENT

WITH TAPE GUIDE IN LATCHED POSITION, TAPE GUIDE SHALL CLEAR DIE-PLATE EXTENSIONS AND BE CENTERED ON THE UPPER FEED WHEEL.

TO ADJUST

WITH TAPE-GUIDE COVER REMOVED, LOOSEN GUIDE HINGE SCREWS FRICTION TIGHT. LATCH TAPE GUIDE IN POSITION. POSITION TAPE GUIDE TO MEET REQUIREMENT. TAPE GUIDE SHOULD ENGAGE LATCH BY APPROXIMATELY 0.020 INCH TO 0.030 INCH. WHEN UNLATCHED, TAPE GUIDE SHOULD NOT INTERFERE WITH DIE PLATE. TIGHTEN HINGE SCREWS. REPLACE TAPE-GUIDE COVER.

2.34 Lower Feed-wheel Check Pawl and Tight-tape Lever (Unit With Pull-back Mechanism)

LOWER FEED-WHEEL CHECK PAWL

REQUIREMENT

(1) AT END OF FEEDING OPERATION, CHECK PAWL DROPPED BEHIND A TOOTH ON RATCHET WHEEL AND
MIN. 0.003 INCH ---- MAX. 0.006 INCH
CLEARANCE BETWEEN PAWL AND TOOTH.
THIS REQUIREMENT SHALL BE MET WITH
THE TOOTH WHICH PROVIDES THE LEAST
CLEARANCE.

(2) WITH PULL-BACK MAGNET MANUALLY
OPERATED, CHECK PAWL DISENGAGED
FROM RATCHET WHEEL AND
MIN. 0.020 INCH --- MAX. 0.040 INCH
CLEARANCE BETWEEN PAWL AND OUTSIDE
DIAMETER OF RATCHET WHEEL.

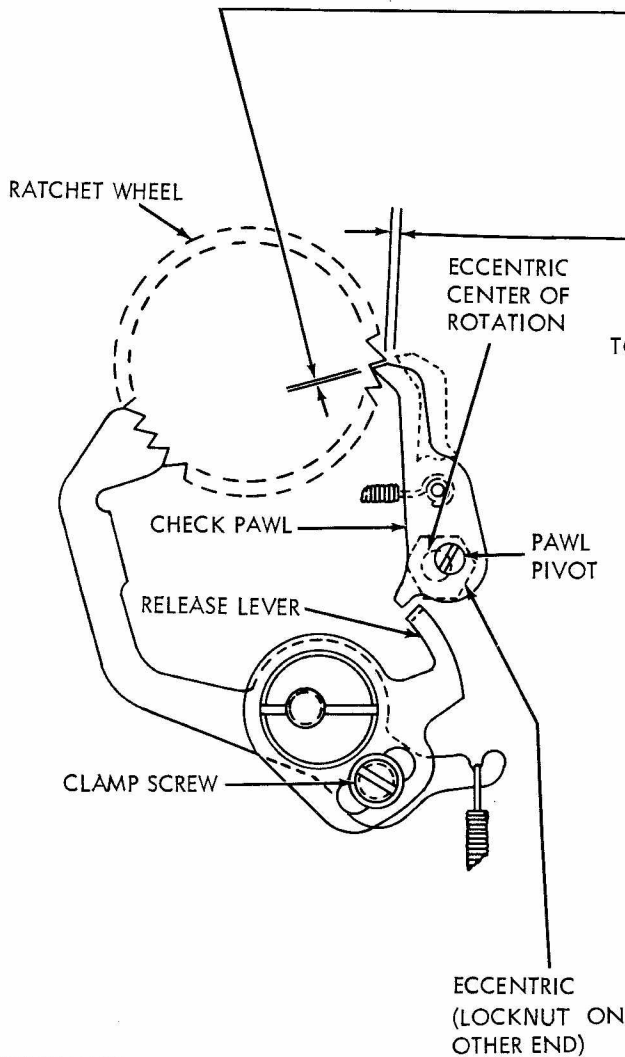
TO ADJUST

(A) MAKE SURE THAT FEED PAWL IS ADJUSTED
PROPERLY.

(B) REMOVE PULL-BACK DRIVE BELT TO PREVENT
BACKWARD MOVEMENT OF FEED WHEEL
DURING ADJUSTMENT.

(C) WITH LOCKNUT LOOSENED, POSITION
CHECK-PAWL ECCENTRIC TO MEET RE-
QUIREMENT (1). KEEP CENTER OF PAWL
PIVOT TO RIGHT OF ECCENTRIC CENTER
OF ROTATION. TIGHTEN LOCKNUT AND
RECHECK REQUIREMENT (1).

(D) LOOSEN CLAMP SCREW. HOLD PULL-BACK
MAGNET IN OPERATED POSITION AND
POSITION RELEASE LEVER TO MEET REQUIRE-
MENT (2). TIGHTEN CLAMP SCREW. HOLD
PULL-BACK MAGNET OPERATED AND SPIN
RATCHET WHEEL TO CHECK THAT IT IS FREE
THROUGHOUT ROTATION.



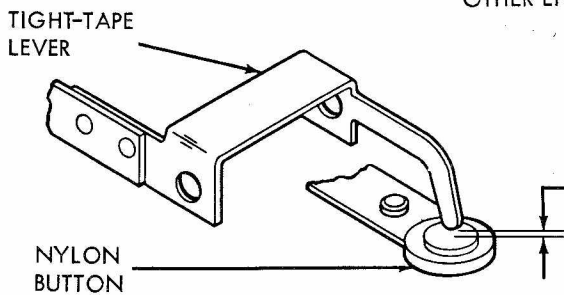
TIGHT-TAPE LEVER

REQUIREMENT

(1) WITH TIGHT-TAPE LEVER RESTING
AGAINST TAPE GUIDE
MIN. SOME --- MAX. 0.005 INCH
BETWEEN LEVER AND TIGHT-TAPE
CONTACT NYLON BUTTON.

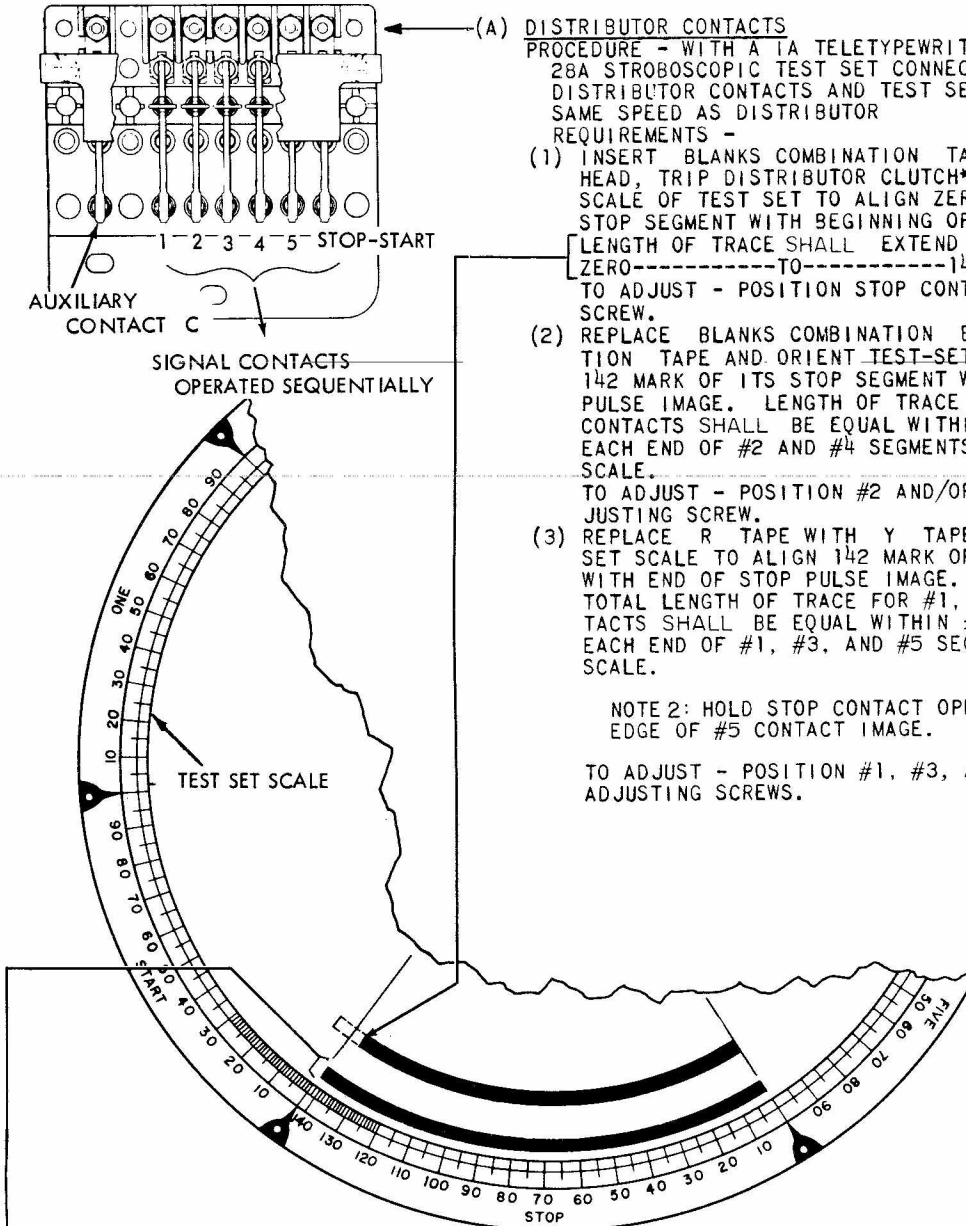
(2) BAKELITE PORTION OF TIGHT-TAPE
LEVER SHALL ALWAYS FALL INTO
ITS SLOT IN THE UPPER TAPE GUIDE.
CHECK WITH GUIDE UP AS WELL AS
DOWN.

TO ADJUST
BEND TIGHT-TAPE LEVER.



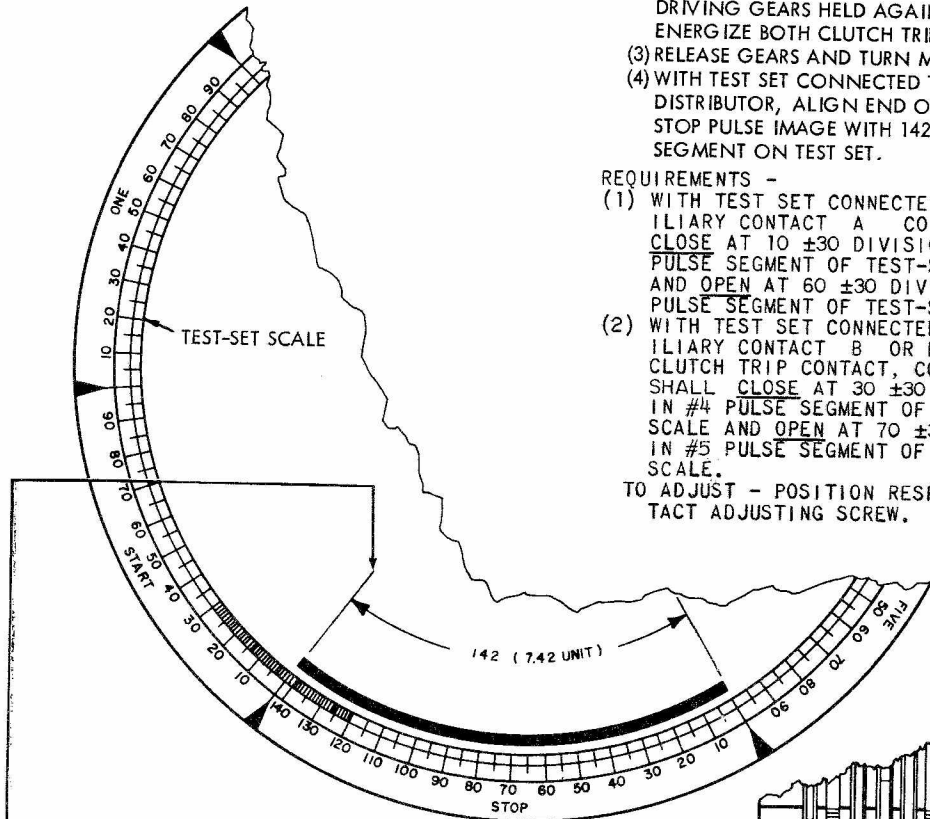
2.35 Contact Timing Requirements (Unit Without Pull-back Mechanism)

(1) Distributor Contacts



2.35 Contact Timing Requirements (Unit Without Pull-back Mechanism) (Cont)

(2) Storing Switch Contacts



(B) AUXILIARY CONTACTS

PROCEDURE ---

- (1) WITH BOTH MAGNETS DE-ENERGIZED, DISTRIBUTOR AND SENSING SHAFT CLUTCHES LATCHED AND IN THEIR STOP POSITION, TURN MOTOR OFF.
- (2) WITH SENSING AND DISTRIBUTOR SHAFT DRIVING GEARS HELD AGAINST ROTATION, ENERGIZE BOTH CLUTCH TRIP MAGNETS.
- (3) RELEASE GEARS AND TURN MOTOR ON.
- (4) WITH TEST SET CONNECTED TO OUTPUT OF DISTRIBUTOR, ALIGN END OF DISTRIBUTOR STOP PULSE IMAGE WITH 142 MARK ON STOP SEGMENT ON TEST SET.

REQUIREMENTS -

- (1) WITH TEST SET CONNECTED TO AUXILIARY CONTACT A CONTACT SHALL CLOSE AT 10 ±30 DIVISIONS IN START PULSE SEGMENT OF TEST-SET SCALE AND OPEN AT 60 ±30 DIVISIONS IN #4 PULSE SEGMENT OF TEST-SET SCALE.
- (2) WITH TEST SET CONNECTED TO AUXILIARY CONTACT B OR DISTRIBUTOR CLUTCH TRIP CONTACT, CONTACT SHALL CLOSE AT 30 ±30 DIVISIONS IN #4 PULSE SEGMENT OF TEST-SET SCALE AND OPEN AT 70 ±30 DIVISIONS IN #5 PULSE SEGMENT OF TEST-SET SCALE.

TO ADJUST - POSITION RESPECTIVE CONTACT ADJUSTING SCREW.

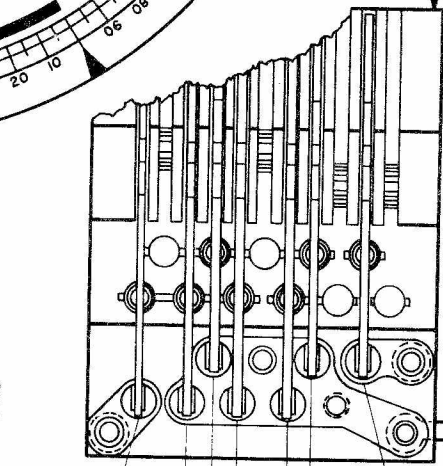
(A) STORING CONTACTS (#1 THROUGH #5)

REQUIREMENTS - WITH TEST SET CONNECTED TO TRANSMITTER-DISTRIBUTOR, A LTRS TAPE (OR ALTERNATE R AND Y TAPE) PLACED IN SENSING HEAD

ALIGN END OF STOP PULSE IMAGE WITH 142 MARK ON STOP SEGMENT OF TEST-SET SCALE. THEN CONNECT INPUT OF TEST SET TO RESPECTIVE CONTACT (#1 THROUGH #5) OF STORING SWITCH.

- (1) (WITH ALTERNATE R AND Y TAPE USED) THE BEGINNING AND END OF EACH TRACE SHALL OCCUR 20 DIVISIONS OR MORE AFTER THE BEGINNING OF THE STOP SEGMENT AND 20 DIVISIONS OR MORE BEFORE THE END OF THE START SEGMENT ON THE TEST-SET SCALE.
- (2) READING OF SUCCESSIVE MARKING CODE PERFORATIONS IN THE TAPE (WITH LTRS TAPE USED) SHALL NOT CAUSE THE RESPECTIVE CONTACT TO OPEN IN EXCESS OF 1.5 MILLISECONDS. CONTACTS #1 THROUGH #5 SHALL HAVE NO ELECTRICAL BREAK DURING THE CODE PULSE SEGMENTS GREATER THAN 2-1/2 SCALE DIVISIONS AT 100 WPM, 2 SCALE DIVISIONS AT 75 WPM, 1-1/2 SCALE DIVISIONS AT 60 WPM. NO MORE THAN ONE BREAK IS PERMITTED. HOWEVER, BREAKS OCCURRING WITHIN ±4% TOLERANCE LIMITS OF DISTRIBUTOR ARE ACCEPTABLE.

TO ADJUST - POSITION RESPECTIVE CONTACT ADJUSTING SCREW.



AUXILIARY CONTACT #5 #4 #3 #2 #1 B
 AUXILIARY CONTACT

CODE CONTACTS
 NO. 1 THROUGH NO. 5

2.36 Contact Timing Requirements (Unit With Pull-back Mechanism)

(a) DISTRIBUTOR CONTACTS

(1) To Check: Use a 28B stroboscopic test set in accordance with the instructions for strobing distributor contacts as given in the appropriate section.

(2) Tests: The requirements and adjustments for Distributor Contacts (Unit Without Pull-back Mechanism) of this section apply except that, for the unit with pull-back mechanism, all references to ± 4 divisions are changed to ± 3 divisions.

(b) DISTRIBUTOR AUXILIARY CONTACT

(1) To Check: Use a 28B stroboscopic test set in accordance with the instructions for strobing distributor contacts as given in the appropriate section.

(2) Tests: The requirements and adjustments for Distributor Auxiliary Contact (Unit Without Pull-back Mechanism) of this section apply except that, for the unit with pull-back mechanism the following requirements are substituted:

Close: 110 ± 5 divisions in STOP segment.
Open: 31 ± 8 divisions in STOP segment.

(c) TRANSMITTER SENSING CODE CONTACTS, ZERO THROUGH EIGHTH LEVEL

(1) To Check: Use a 28B stroboscopic test set in accordance with the instructions for strobing transmitter sensing code and auxiliary contacts as given in the appropriate section.

(2) Tests: The requirements and adjustments are the same as those for Storing Contacts (1 Through 5) (Unit Without Pull-back Mechanism) of this section. In addition, when testing the transmitter-distributor unit with pull-back mechanism, note the position of the latest transition (eg 85 divisions in the STOP segment) for use in checking the requirements for the transmitter sensing auxiliary contacts, sequential clutch operation.

(d) TRANSMITTER SENSING AUXILIARY CONTACTS, SIMULTANEOUS CLUTCH OPERATION.

(1) To Check: Use a 28B stroboscopic test set in accordance with instructions for strobing transmitter sensing auxiliary and code contacts as given in the appropriate section.

(2) Requirements:

(a) A Contact:

Close: 107 ± 18 divisions in STOP segment.
Open: 89 ± 15 divisions in TWO segment.

(b) B Contact:

Close: 2 (± 15) divisions in THREE segment.
Open: 4 (± 25 , -15) divisions in ONE segment.

(c) Distributor Magnet Contact

Close: 85 ± 10 divisions in START segment.
Remain Closed: 180 to 220 divisions.

(3) To Adjust (Each Contact): With lever clamp screw loosened, position contact lever shown in Sensing Auxiliary Contact (Preliminary), With Two-piece Mounting Bracket (Unit With Pull-back Mechanism) or Sensing Auxiliary Contacts (Preliminary) With One-piece Mounting Bracket (Unit With Pull-back Mechanism). Move lever upward to advance timing and downward to retard timing.

Note: The A contact on the two-piece mounting bracket is not adjustable.

(e) TRANSMITTER SENSING AUXILIARY CONTACTS, SEQUENTIAL CLUTCH OPERATION.

(1) To Check: Use a 28B stroboscopic test set in accordance with the instructions for strobing transmitter sensing code and auxiliary contacts as given in the appropriate section.

(2) Requirements:

(a) When reading alternate rub-out and Blank characters, the mark-to-space and space-to-mark overlap transitions shall be between 25 and 85 divisions in STOP segment.

(b) With repeat rub-out tape being read, breaks in marking image shall be less than 3 divisions in transition range and no breaks outside transition range.

(c) The B contact must open in the FIVE segment. There shall be a minimum of 74 divisions between latest transition of sensing code contacts (see Transmitter Sensing Code Contacts, Zero Through Eighth Level (Unit With Pull-back Mechanism)) and closure of B contact.

(3) To Adjust:

(a) Refine preliminary adjustment in Sensing Auxiliary Contacts (Preliminary) With Two-piece Mounting Bracket (Unit With Pull-back Mechanism) or Sensing Auxiliary Contacts

(Preliminary) With One-piece Mounting Bracket (Unit With Pull-back Mechanism) and contact-lever adjustment in Transmitter Sensing Auxiliary Contacts, Simultaneous Clutch Operation (Unit With Pull-back Mechanism) for distributor magnet contact to meet the requirements in (b) (1) and (b) (2).

(b) Refine the adjustments in (c) (1) for B contact to meet requirement (b) (3).

(f) GENERAL STROBING NOTES

(1) Make sure that there is overtravel in the sensing auxiliary contacts after the strobing adjustments have been made and that the contacts open with a minimum gap of 0.010 inch.

(2) To obtain overlap transitions, refine the lever slide adjustment shown in Transfer-type Storing Switch Mechanism within its 0.005- to 0.020-inch range, or refine the pushlever adjustment shown in Sensing Mechanism to within its 0.010- to 0.020-inch range. Increasing either of these gaps will increase the overlap.

B. Auxiliary Features (Unit Without Pull-back Mechanism)

Modification Kit to Provide Combination Tape-out and Tape-lid Switch

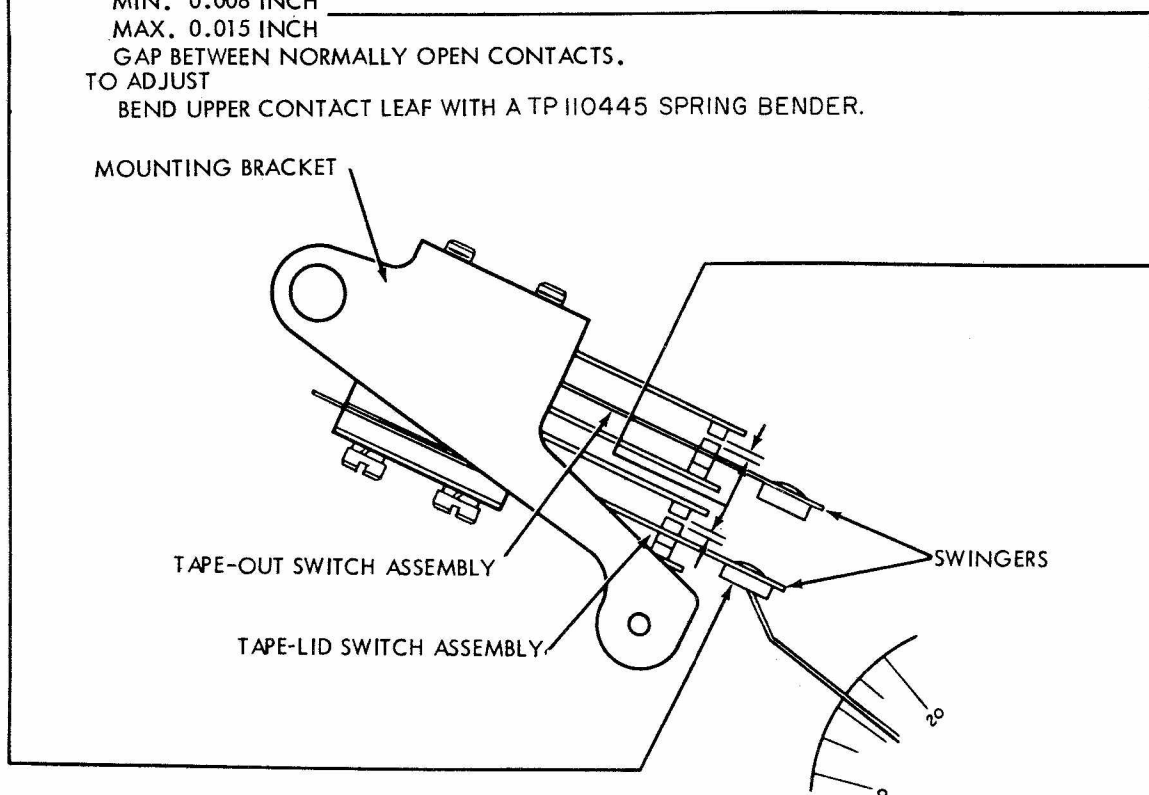
2.37 Tape-out and Tape-lid Switch Assembly

TAPE-OUT AND TAPE-LID SWITCH

NOTE 1

MAKE THIS ADJUSTMENT BEFORE ASSEMBLING SWITCH TO UNIT.

- (1) REQUIREMENT
 MIN. 8 GRAMS
 MAX. 15 GRAMS
 TO JUST SEPARATE NORMALLY CLOSED CONTACTS (APPLY SCALE TO CENTER OF NYLON PAD).
 TO ADJUST
 BEND CONTACT SWINGER WITH A TP 110445 SPRING BENDER.
- (2) REQUIREMENT
 MIN. 0.008 INCH
 MAX. 0.015 INCH
 GAP BETWEEN NORMALLY OPEN CONTACTS.
 TO ADJUST
 BEND UPPER CONTACT LEAF WITH A TP 110445 SPRING BENDER.



NOTE 2

TO REMOVE TAPE-OUT AND TAPE-LID SWITCH ASSEMBLY

- (1) REMOVE COVER AND TOP PLATES.
- (2) REMOVE SPRING ATTACHED TO BRACKET ON GUIDE POST.
- (3) LOOSEN SCREW SECURING GUIDE POST TO REAR PLATE.
- (4) REMOVE SCREW AND LOCKWASHER FROM FRONT END OF GUIDE POST.
- (5) REMOVE ADJUSTING SCREW FROM LOWER END OF SWITCH BRACKET.
- (6) GUIDE POST AND SWITCH ASSEMBLY CAN NOW BE REMOVED. TAKE CARE NOT TO DISTORT SWITCH LEAF SPRINGS.

TO REPLACE SWITCH ASSEMBLY

REVERSE DISASSEMBLY PROCEDURE.

2.38 Tape-out and Tape-lid Pin Mechanism

(B) TAPE-OUT PIN SPRING BRACKET

REQUIREMENT

MIN. 38 GRAMS
 MAX. 45 GRAMS
 TO DEPRESS TAPE-OUT PIN UNTIL FLUSH WITH TAPE-GUIDE PLATE.

TO ADJUST

POSITION TAPE-OUT PIN SPRING BRACKET WITH ITS MOUNTING SCREWS FRICTION TIGHT. TIGHTEN SCREWS AND RECHECK REQUIREMENT.

(A) TAPE-OUT AND TAPE-LID SWITCH BRACKET

REQUIREMENT

MIN. 0.006 INCH
 MAX. 0.020 INCH
 CLEARANCE BETWEEN TAPE-OUT PIN EXTENSION AND CONTACT SWINGER INSULATOR WHEN TAPE-OUT PIN IS HELD DOWN.

TO ADJUST

INSERT A LENGTH OF UNPERFORATED TAPE UNDER TAPE LID. ADJUST SWITCH BRACKET WITH ITS MOUNTING SCREW LOOSENED.

(C) TAPE-OUT AND TAPE-LID PIN DOWNSTOP

REQUIREMENT

WHEN DEPRESSED TO THEIR LOWERMOST POSITIONS TAPE-OUT AND TAPE-LID PINS SHALL BE FLUSH TO 0.005 INCH BELOW SURFACE OF TAPE-GUIDE PLATE.

TO ADJUST

POSITION RESPECTIVE DOWNSTOP POST WITH ITS MOUNTING NUT LOOSENED.

(D) TAPE-LID PIN SPRING

REQUIREMENT

MIN. 1-1/2 OZS.
 MAX. 3 OZS.
 TO MOVE TAPE-LID PIN FLUSH WITH TOP SURFACE OF TOP PLATE.

(E) TAPE-LID PIN

TO CHECK

REMOVE COVER PLATE.

(2) REQUIREMENT

WITH TAPE-LID OPEN, AND NORMALLY OPEN CONTACTS CLOSED BY TAPE-LID PIN:

MIN. 0.010 INCH
 CLEARANCE BETWEEN SHOULDER ON PIN AND BOTTOM SURFACE OF TAPE-GUIDE PLATE.

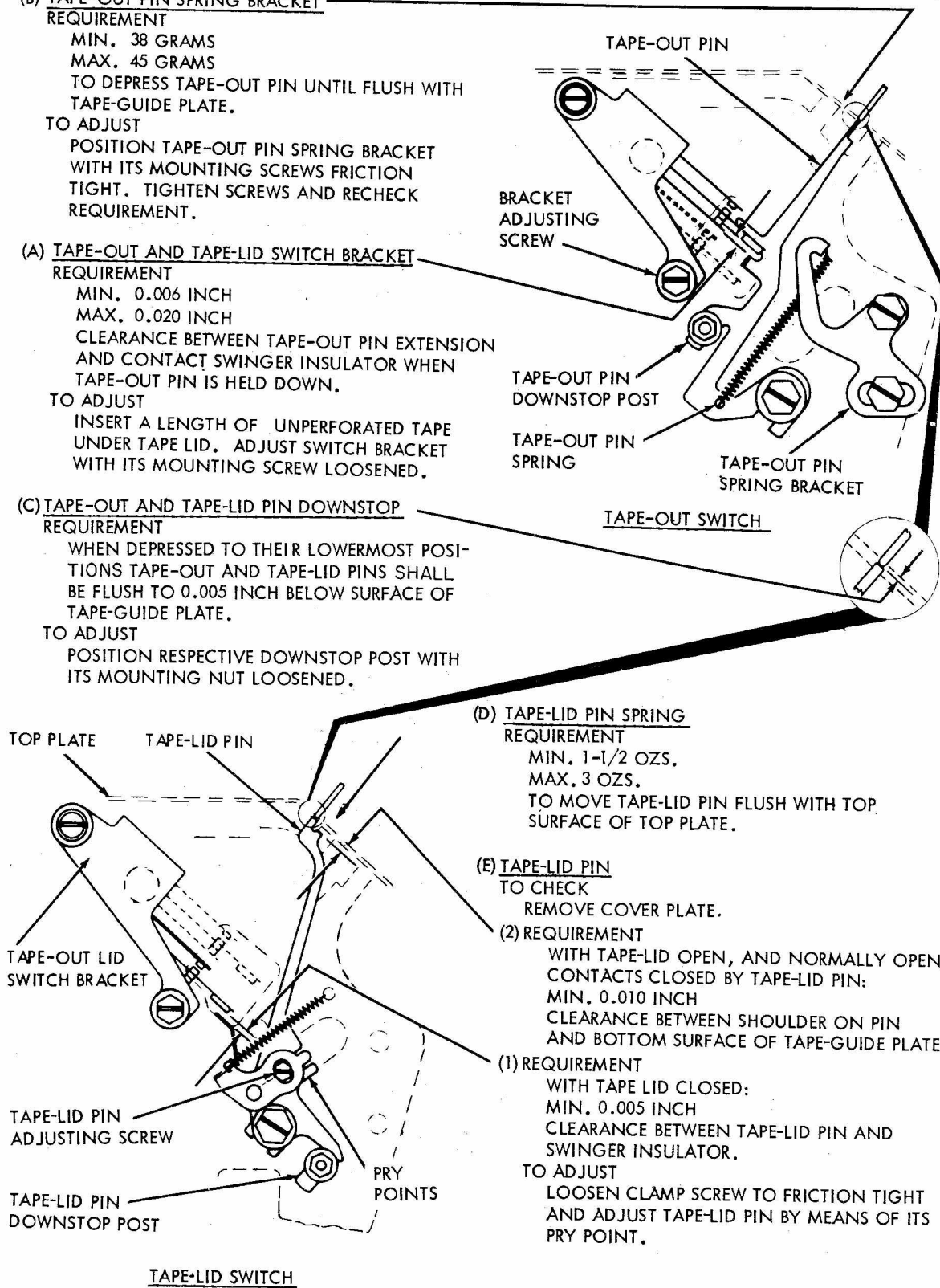
(1) REQUIREMENT

WITH TAPE LID CLOSED:

MIN. 0.005 INCH
 CLEARANCE BETWEEN TAPE-LID PIN AND SWINGER INSULATOR.

TO ADJUST

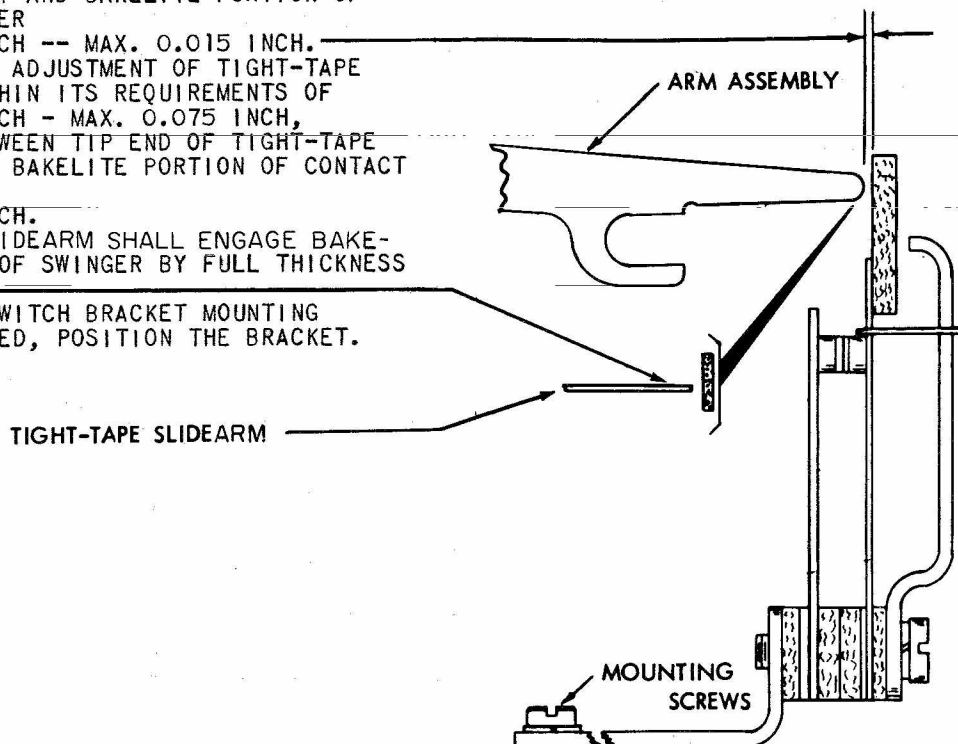
LOOSEN CLAMP SCREW TO FRICTION TIGHT AND ADJUST TAPE-LID PIN BY MEANS OF ITS PRY POINT.



2.39 Tight-tape Switch Assembly (Units Not Equipped With START-STOP Lever)

(A) TIGHT-TAPE SWITCH BRACKETREQUIREMENT

- (1) PRELIMINARY: WITH TIGHT-TAPE SLIDEARM ADJUSTED TO THE CENTER OF ITS ADJUSTMENT RANGE, CLEARANCE BETWEEN TIP END OF TIGHT-TAPE SLIDEARM AND BAKELITE PORTION OF CONTACT SWINGER
MIN. 0.006 INCH -- MAX. 0.015 INCH.
 - (2) FINAL: AFTER ADJUSTMENT OF TIGHT-TAPE SLIDEARM WITHIN ITS REQUIREMENTS OF MIN. 0.045 INCH - MAX. 0.075 INCH, CLEARANCE BETWEEN TIP END OF TIGHT-TAPE SLIDEARM AND BAKELITE PORTION OF CONTACT SWINGER
MIN. 0.006 INCH.
 - (3) TIGHT-TAPE SLIDEARM SHALL ENGAGE BAKELITE PORTION OF SWINGER BY FULL THICKNESS OF ARM.
- TO ADJUST - WITH SWITCH BRACKET MOUNTING SCREWS LOOSENED, POSITION THE BRACKET.



(B) TIGHT-TAPE LEVER SWITCH SEE STANDARD ADJUSTMENT.

(C) TIGHT-TAPE SLIDEARM SEE STANDARD ADJUSTMENT.

(D) TIGHT-TAPE BAIL YIELD SPRING SEE STANDARD ADJUSTMENT.

NOTE: STANDARD ADJUSTMENT IS FOUND IN PARAGRAPH, TIGHT-TAPE START-STOP MECHANISM (FOR UNITS EQUIPPED WITH TIGHT-TAPE START-STOP LEVER).

2.40 Modification Kit to Permit Use of 11/16-inch and 7/8-inch Tape Interchangeably

Tape Guide

RIGHT AND LEFT GUIDE ADJUSTMENT

REQUIREMENT

WITH THE TP156743 GUIDE INSERTED BETWEEN THE RIGHT TAPE GUIDE AND THE LEFT TAPE GUIDE, THE GAUGE MAY TOUCH EITHER GUIDE BUT SHALL NOT BIND. CLEARANCE SHALL NOT EXCEED 0.003 INCH.

TO ADJUST

POSITION EACH TAPE GUIDE WITH THE TAPE-GUIDE MOUNTING NUTS FRICTION TIGHT.

