

35 TRANSMITTER-DISTRIBUTOR (MULTICONTRACT)

ADJUSTMENTS

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1. GENERAL

1.01 This section covers the adjustment of the 35 Transmitter-Distributor (Multi-Contact). The contact strobing procedure is also included.

1.02 The adjustments are arranged in a sequence that should be followed if a complete readjustment is undertaken. A complete adjusting procedure should be read before attempting to make the adjustment. After an adjustment is completed, be sure to tighten any nuts or screws that may have been loosened, unless otherwise instructed.

1.03 The adjusting illustrations indicate tolerances, positions of moving parts, spring tensions and the angle at which scales should be applied. The tools required to make adjustments and check spring tensions are not supplied with the equipment, but are listed in the appropriate section. Springs which do not meet the requirements, and for which there are no adjusting procedures, should be discarded and replaced by new springs.

1.04 When rotating the drive shaft gear by hand, the rotation is counterclockwise as viewed from the exposed side of the drive shaft gear.

1.05 When the requirement calls for a 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 rotating either the sensing or distributor shaft by hand, the respective clutch may not fully disengage upon reaching its stop position. To disengage the clutch, rotate the clutch to its stop position, apply a screwdriver to the cam disk stop lug, and move the disk in the normal direction of the shaft rotation until the latch lever seats in its notch in the disk.

1.06 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 sub-base to disconnect the power and to permit it to be inverted.

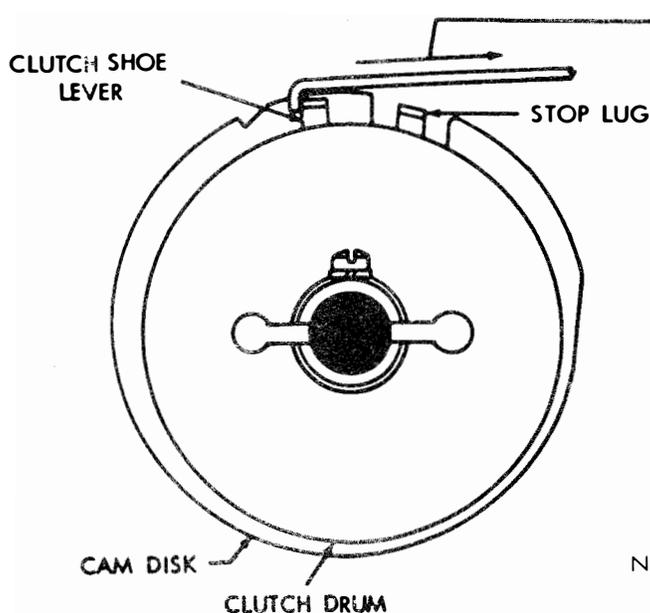
1.07 All electrical contact points should meet squarely. Contacts with the same diameter should not be out of alignment more than 25 per cent of the contact diameter. Check contacts for pitting and corrosion and clean or bur-nish them before making specified adjustment or tolerance measurement. Avoid sharp kinks or bends in the contact springs.

Note: Keep all electrical contacts free of oil and grease.

1.08 References made to left or right, up or down, front or rear, etc. apply to the unit in its normal operating position as viewed from the operator's position in front of the unit.

2. BASIC UNIT

2.01 Clutch Mechanism

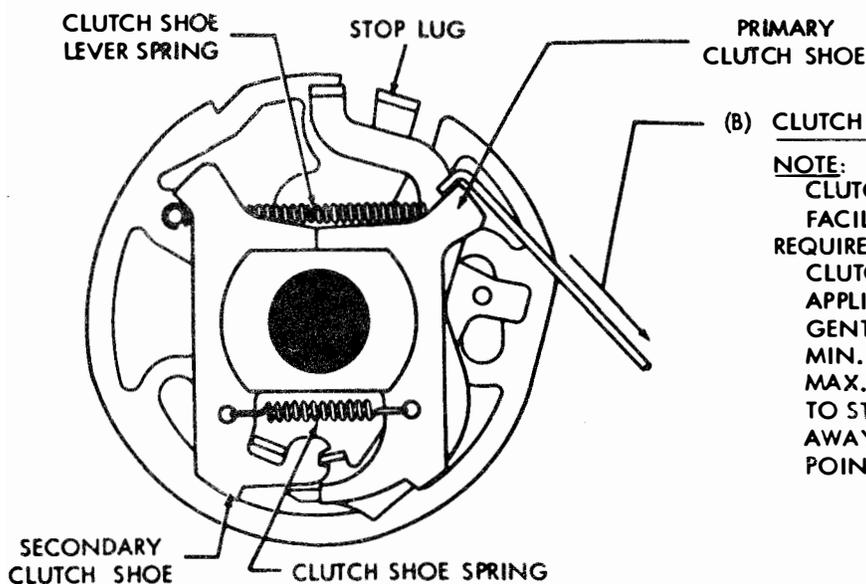


(A) CLUTCH SHOE LEVER SPRING

REQUIREMENT

CLUTCH ENGAGED AND CAM DISK 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.

NOTE: 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. REQUIREMENTS A AND B APPLY TO BOTH THE SENSING CLUTCH AND DISTRIBUTOR CLUTCH.



(B) CLUTCH SHOE SPRING

NOTE: 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.

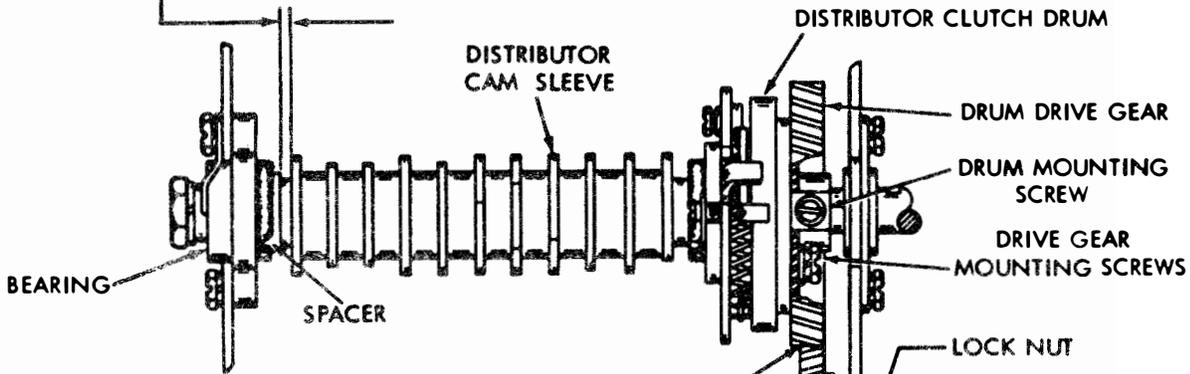
NOTE: THE FOLLOWING REQUIREMENTS APPLY TO BOTH THE DISTRIBUTOR AND SENSING CAM SLEEVES. THESE MECHANISMS SHOULD NOT BE DISTURBED UNLESS THERE IS REASON TO BELIEVE THE REQUIREMENTS ARE NOT MET.

(A) CAM SLEEVE END PLAY

NOTE
MAKE THIS ADJUSTMENT PRIOR TO ASSEMBLING GEAR.

REQUIREMENT
MIN. SOME
MAX. 0.010 INCH
PLAY BETWEEN SLEEVE AND SPACER.

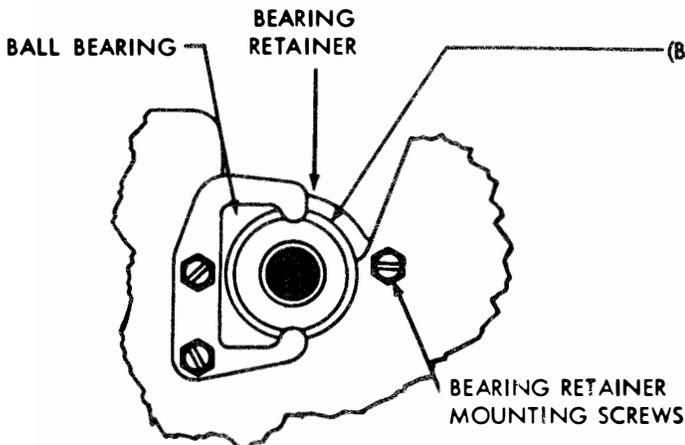
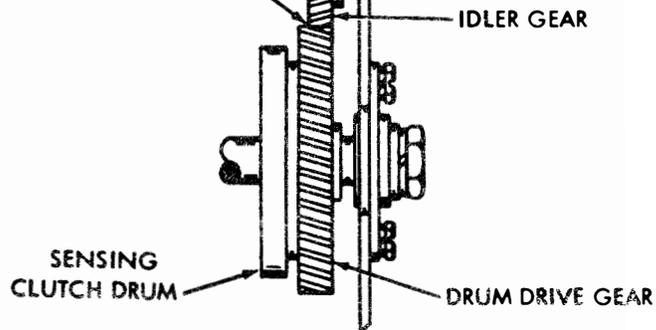
TO ADJUST
REMOVE CLUTCH DRUM DRIVE GEAR AND LOOSEN DRUM MOUNTING SCREW. RELEASE CLUTCH AND POSITION CAM SLEEVE. TIGHTEN CAM SLEEVE MOUNTING SCREW AND REINSTALL DRIVE GEAR.



(C) IDLER GEAR ASSEMBLY

REQUIREMENT
CLEARANCE BETWEEN IDLER GEAR AND SENSING SHAFT GEAR AND BETWEEN IDLER GEAR AND DISTRIBUTOR SHAFT GEAR AT POINT WHERE BACKLASH IS MINIMUM.
MIN. SOME
MAX. 0.003 INCH

TO ADJUST
POSITION IDLER GEAR ASSEMBLY WITH LOCK NUT LOOSENED. RECHECK GEAR PLAY THROUGH ONE REVOLUTION OF GEARS.



(B) CAM SHAFT BEARING RETAINER

REQUIREMENT
WHEN MOUNTING SHAFT ASSEMBLY, BEARING SHALL SEAT PROPERLY. (NO CLEARANCE PERMISSIBLE BETWEEN BEARING AND MOUNTING SURFACE.)

TO ADJUST
ROTATE BEARING RETAINER 180 DEGREES AND POSITION BY PUSHING DOWNWARD FIRMLY.

NOTE: REQUIREMENTS APPLY TO BOTH CLUTCH TRIP MECHANISMS.

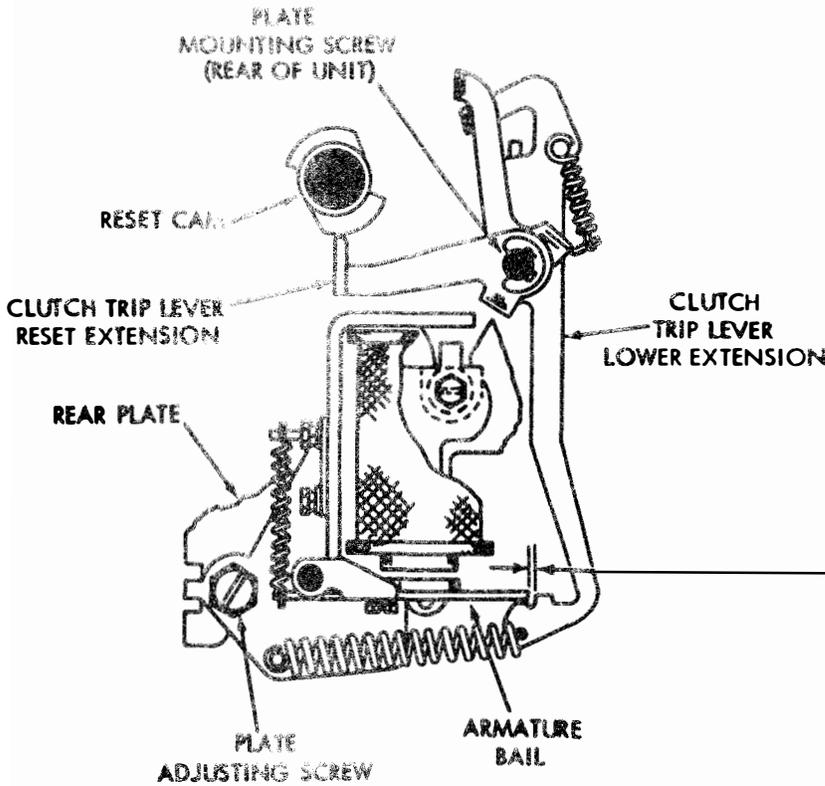
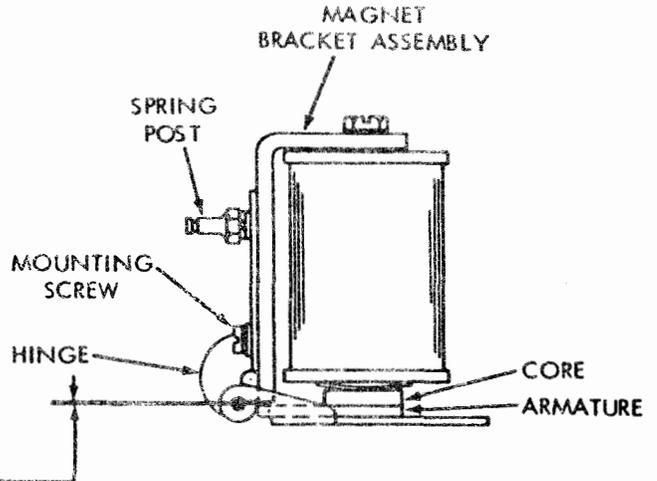
(A) CLUTCH ARMATURE AIR GAP

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

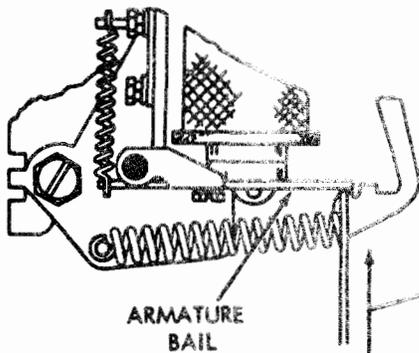
REQUIREMENT

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 TRIP LEVER IN DIRECTION OF CAM.)



(C) ARMATURE BAIL SPRING

REQUIREMENT

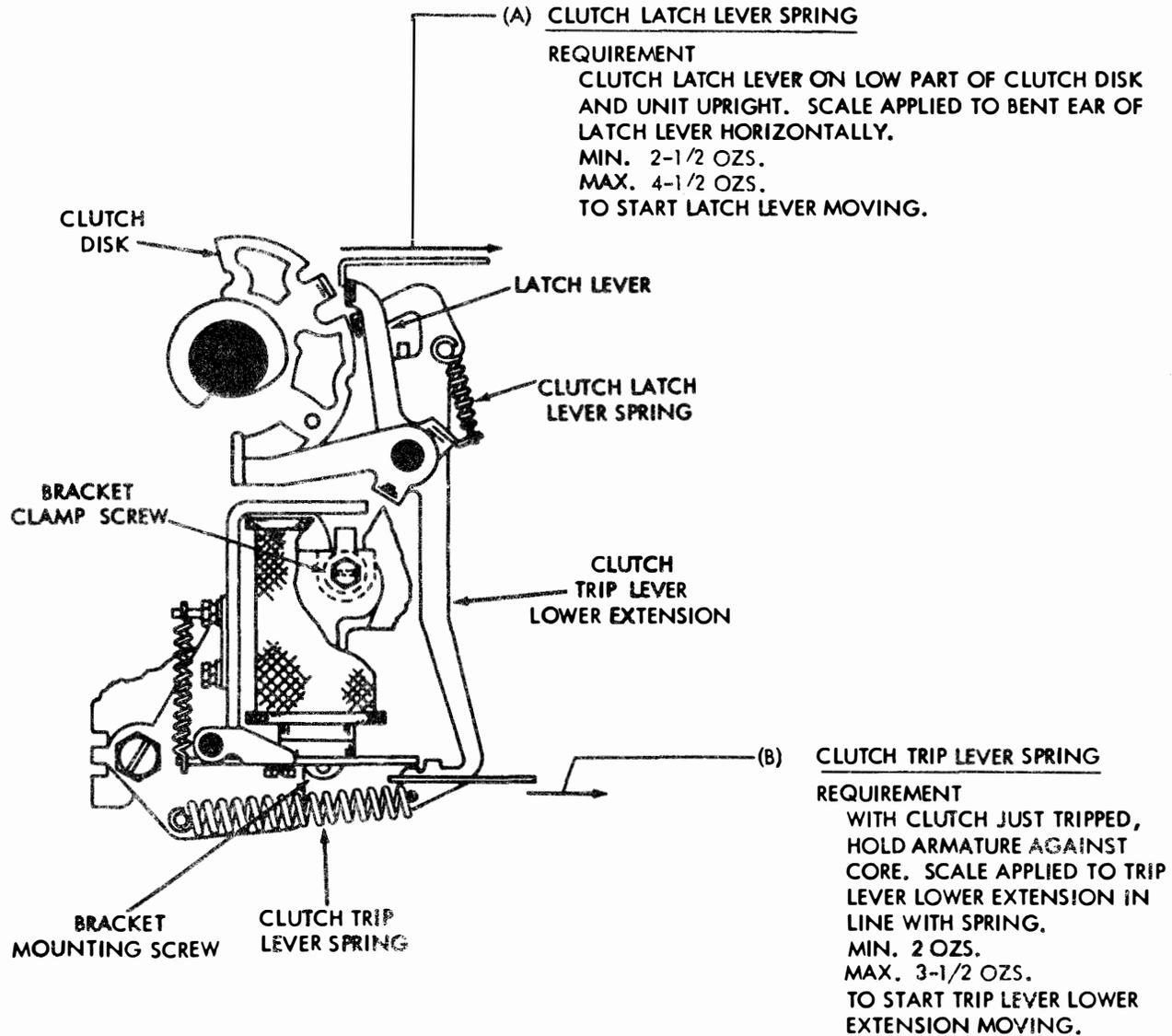
TRIP LEVER RESET EXTENSION ON HIGH PART OF CAM. SCALE APPLIED TO LATCHING END OF ARMATURE BAIL.

MIN. 3 OZS.

MAX. 4-1/2 OZS.

TO START ARMATURE BAIL MOVING.

NOTE: REFER TO REQUIREMENTS IN PAR. 2.03.



(C) MAGNET BRACKET

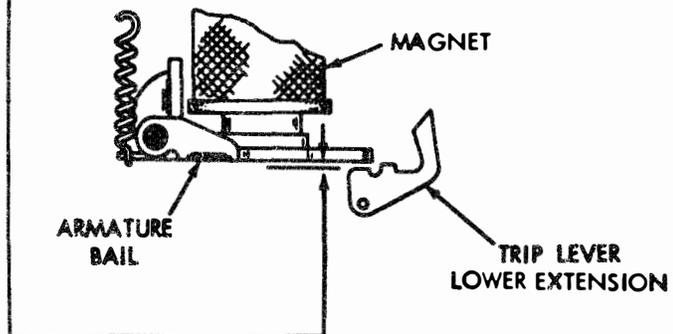
REQUIREMENT

CLEARANCE BETWEEN ARMATURE BAIL AND TOP EDGE OF TRIP LEVER LOWER EXTENSION WITH CLUTCH TRIP LEVER 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 - Continued

NOTE: REQUIREMENTS A AND B APPLY TO BOTH CLUTCHES.

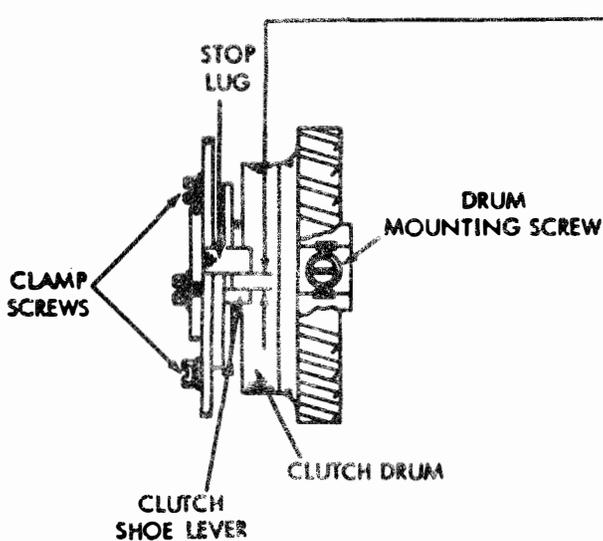
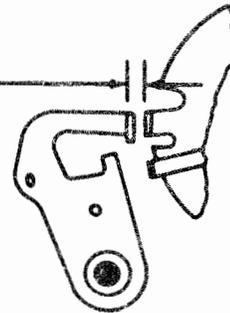
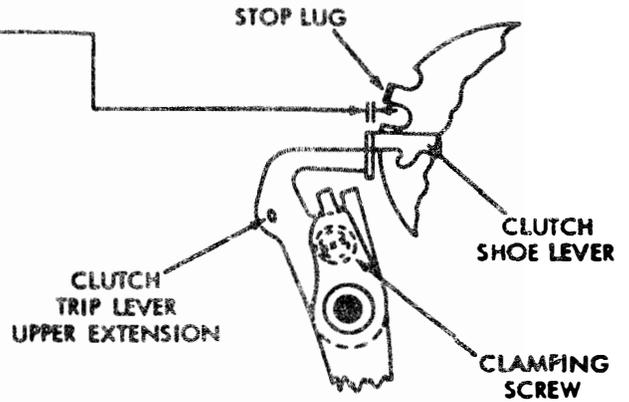
(A) CLUTCH TRIP LEVER UPPER EXTENSION

(1) REQUIREMENT
CLUTCH TRIP LEVER LATCHED
(CLUTCH IN STOP POSITION).
CLUTCH TRIP LEVER UPPER EX-
TENSION SHALL FULLY ENGAGE
CLUTCH SHOE LEVER.

TO ADJUST
POSITION UPPER EXTENSION,
WITH CLUTCH TRIP LEVER CLAMP-
ING SCREW LOOSENED.

(2) REQUIREMENT
WITH ARMATURE IN ATTRACTED
POSITION, THERE SHALL BE SOME
CLEARANCE BETWEEN CLUTCH
TRIP LEVER UPPER EXTENSION AND
STOP LUG WHEN CLUTCH IS RO-
TATED TO MAKE CLEARANCE A
MINIMUM.

TO ADJUST
REFINE REQUIREMENT (1), IF
NECESSARY, SO THAT CLUTCH
TRIP LEVER UPPER EXTENSION IS
UNDER OR OVER FLUSH WITH
STOP LUG BY NOT MORE THAN
0.015 INCH



(B) 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 CLUTCH IS DISENGAGED.

TO ADJUST
ENGAGE A WRENCH OR SCREWDRIVER ON
A SCREW ON THE ADJUSTING DISK. RO-
TATE DISK WITH CLAMP SCREWS LOOSENED
AND CLUTCH DISENGAGED.

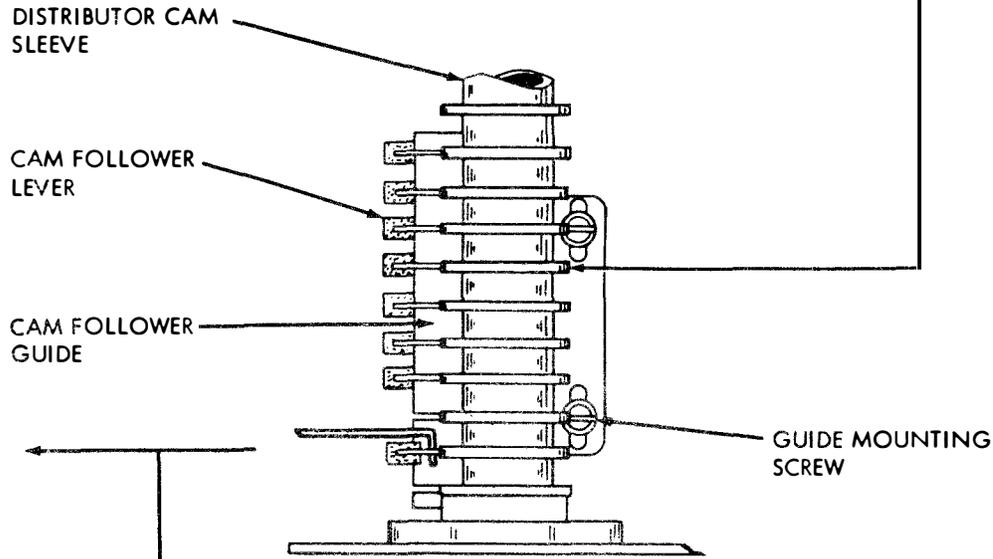
NOTE

AFTER ADJUSTMENT, DISENGAGE CLUTCH,
REMOVE DRUM MOUNTING SCREW AND
ROTATE DRUM IN ITS NORMAL DIRECTION
OF ROTATION TO MAKE CERTAIN THAT IT
DOES NOT DRAG ON SHOE. IF DRUM
DRAGS, REFINÉ ABOVE ADJUSTMENT.

NOTE

REMOVE OIL RESERVOIR AND DISTRIBUTOR BLOCK ASSEMBLY TO FACILITATE ADJUSTMENT.

- (A) CAM FOLLOWER GUIDE
REQUIREMENT
- (1) CENTER CAM FOLLOWER ENGAGES CAM BY FULL THICKNESS OF FOLLOWER WHEN MOVED FROM SIDE TO SIDE IN ITS GUIDE SLOT.
 - (2) IN SIMILAR MANNER, OTHER FOLLOWER SHOULD ENGAGE CAM BY AT LEAST 75% OF FOLLOWER THICKNESS.
 - (3) ALL FOLLOWERS MOVE FREELY IN THEIR GUIDE SLOTS.
- TO ADJUST
POSITION CAM FOLLOWER GUIDE WITH ITS MOUNTING SCREWS LOOSENED.



- (B) CAM FOLLOWER LEVER SPRING
REQUIREMENT
- CAM FOLLOWER LEVER ON HIGH PART OF CAM. SCALE APPLIED JUST BELOW SLIDING SURFACE OF LEVER HORIZONTALLY.
- MIN. 1/2 OZ.
MAX. 1-1/2 OZS.
- TO START EACH LEVER MOVING.

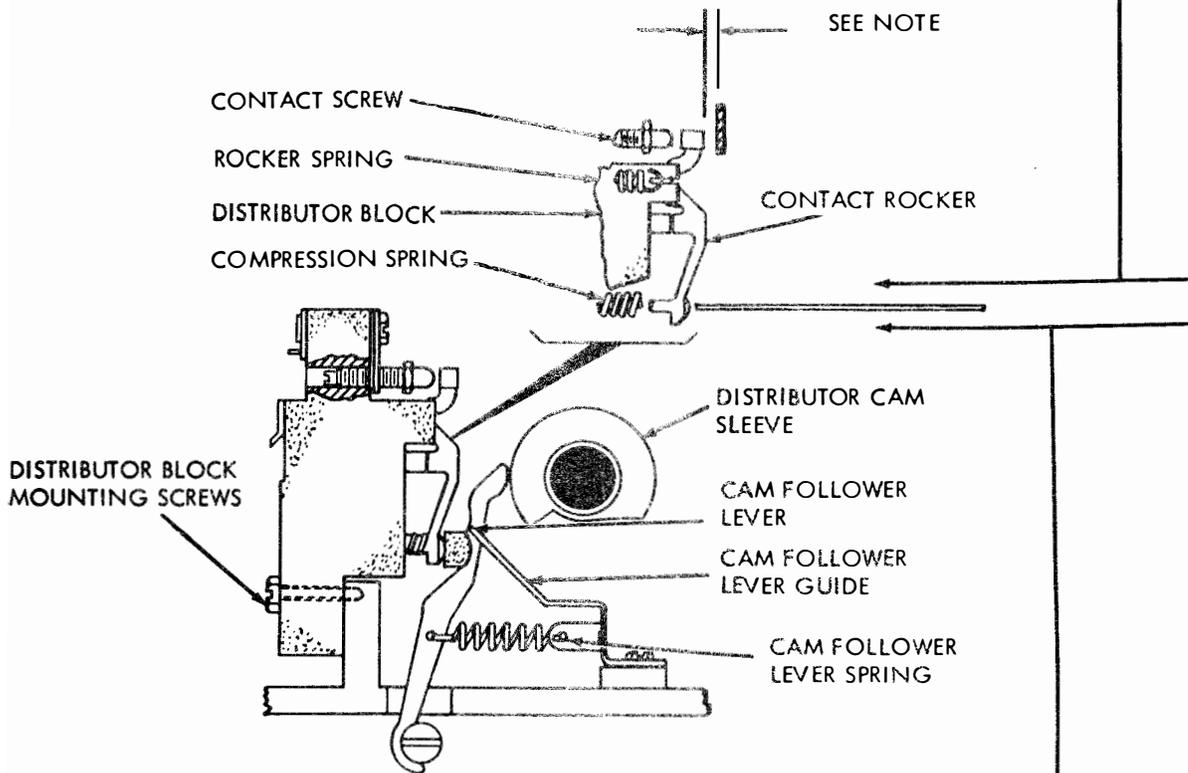
2.07 Distributor Contact Mechanism - Continued

(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.



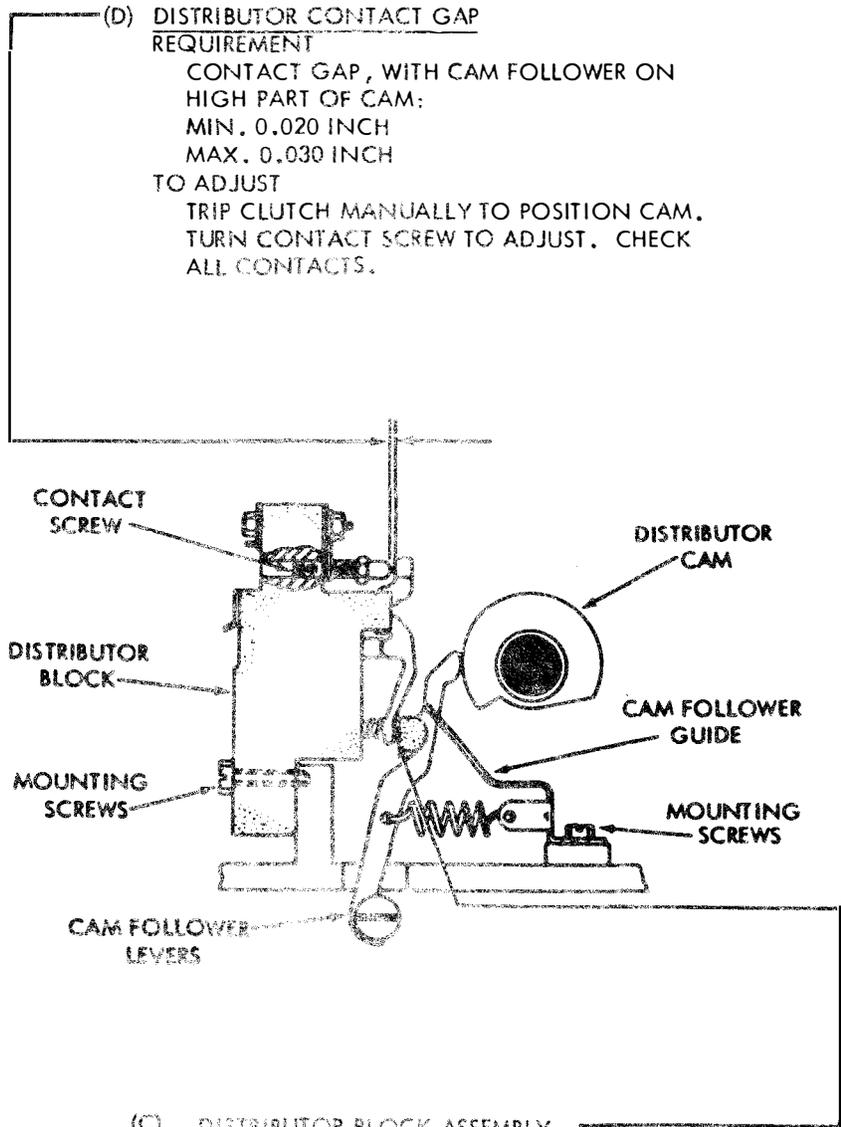
(B) DISTRIBUTOR ROCKER COMPRESSION SPRINGS
REQUIREMENT

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 INCHES BETWEEN ROCKER LEVERS AND OIL GUARD.

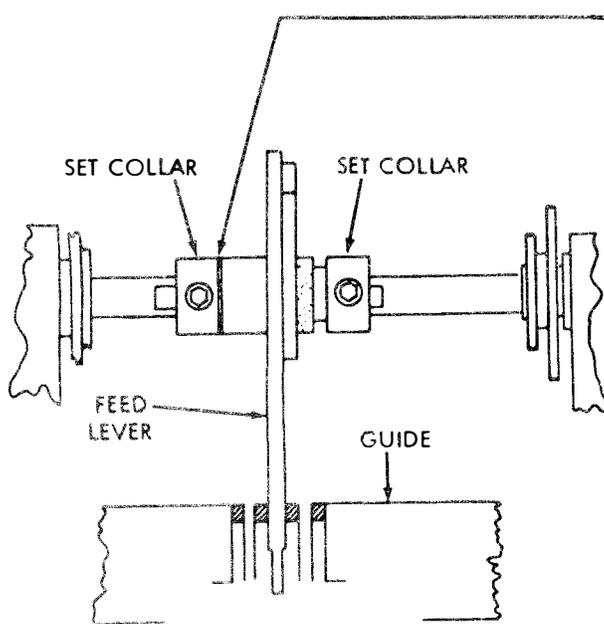
2.08 Distributor Contact Mechanism - Continued



(C) DISTRIBUTOR BLOCK ASSEMBLY
REQUIREMENT
ROCKERS SHOULD FULLY ENGAGE IN-
SULATED PORTIONS OF RESPECTIVE CAM
FOLLOWER LEVERS.
TO ADJUST
POSITION DISTRIBUTOR BLOCK WITH
MOUNTING SCREWS LOOSENED.

NOTE
FOR REFINEMENT OF DISTRIBUTOR CONTACT ADJUSTMENTS, REFER TO PARAGRAPH 3,
DISTRIBUTOR AND TRANSMITTER CONTACT STROBING.

2.09 Feed Lever Mechanism



(A) FEED LEVER SET COLLAR

REQUIREMENT

MIN. SOME

MAX. 0.015 INCH

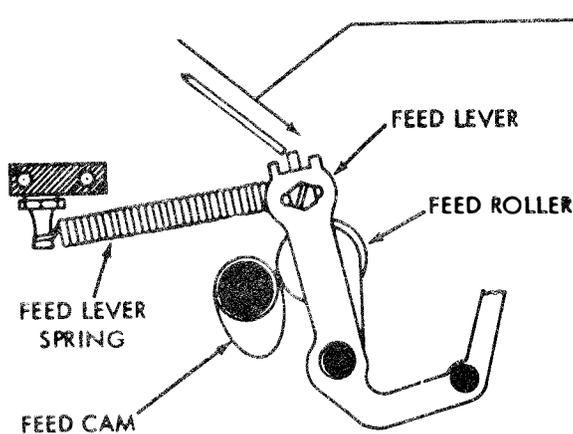
CLEARANCE BETWEEN FEED LEVER AND COLLAR WHEN FEED LEVER IS FREE IN ITS GUIDE SLOT.

TO ADJUST

POSITION FEED LEVER WITH SET COLLAR SCREWS LOOSENED. FEED LEVER SHOULD 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
TO CHECK

ROTATE SENSING SHAFT UNTIL CLUTCH IS IN STOP POSITION.

REQUIREMENT

MIN. 10 OZS.

MAX. 17 OZS.

TO MOVE FEED LEVER AWAY FROM CAM.

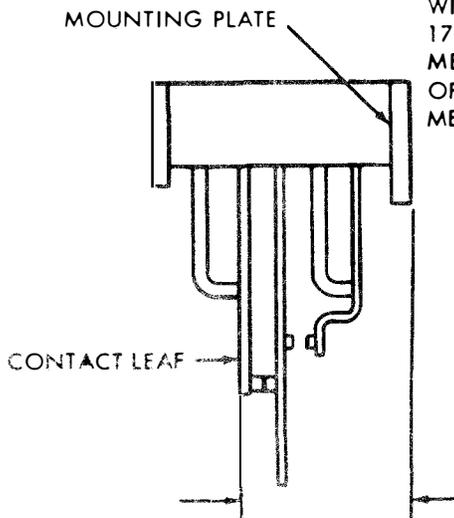
NOTE

THIS ADJUSTMENT IS MADE WITH THE FEED LEVER CAM FOLLOWER ROLLER ON THE LOW PART OF THE SENSING CAM.

STORING SWITCH CONTACT ASSEMBLY (TRANSFER TYPE)

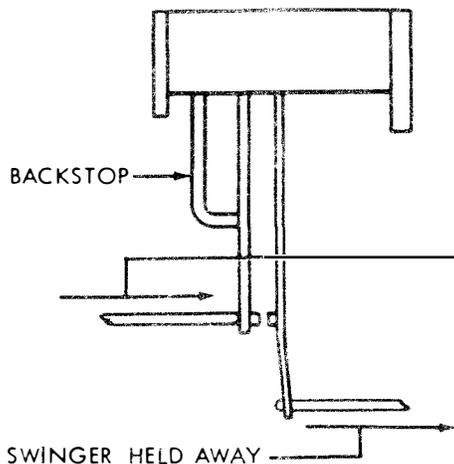
NOTE

FOLLOWING ADJUSTMENTS (PAR. 2.10 AND 2.11) ARE TO BE MADE WITH THE CONTACT ASSEMBLIES REMOVED FROM THE UNIT. USE A 172060 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.



(1) BACKSTOP - NORMALLY CLOSED CONTACT REQUIREMENT

FIVE OR EIGHT NORMALLY CLOSED CONTACT LEAFS PARALLEL TO MOUNTING PLATE AND IN LINE WITH EACH OTHER AS GAUGED BY EYE.
TO ADJUST
BEND BACKSTOP.

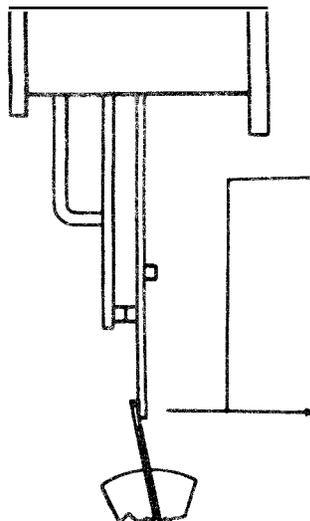


(2) SPRING TENSION - NORMALLY CLOSED CONTACT REQUIREMENT

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

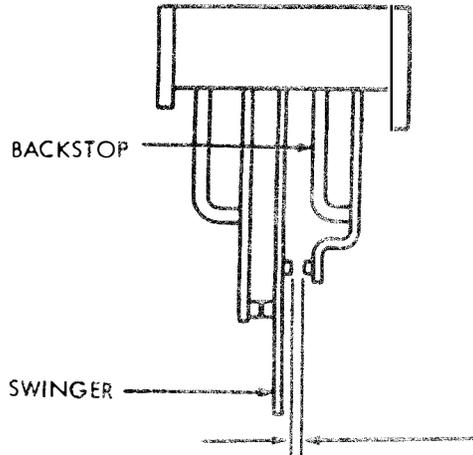
TO INCREASE TENSION OF NORMALLY CLOSED LEAF, IT MAY BE NECESSARY TO BEND BACKSTOP AWAY FROM LEAF, BEND LEAF, AND THEN REMAKE ADJUSTMENT (1).



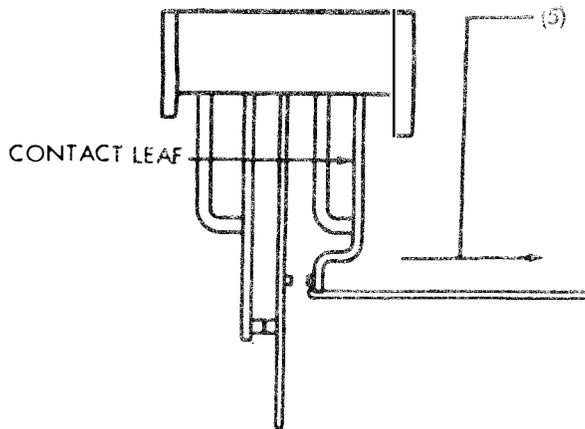
(3) SWINGER SPRING TENSION REQUIREMENT

MIN. 35 GRAMS
MAX. 50 GRAMS
TO OPEN NORMALLY CLOSED CONTACT
TO ADJUST
BEND SWINGER LEAF

2.11 Transfer Type Storing Switch Mechanism - Continued



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



(5) 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 (5).

INSTRUCTIONS FOR REPLACING AND POSITIONING STORING SWITCH ASSEMBLY (TRANSFER TYPE)

PLACE SWITCH ASSEMBLY ON LOWER SURFACE OF MAIN CASTING. EXERCISE CARE IN SEATING SLIDE LEVERS AGAINST PUSHER LEVERS AND LATCH LEVERS IN APPROPRIATE SLOT OF SLIDE LEVER GUIDE.

STORING SWITCH ASSEMBLY

REQUIREMENT

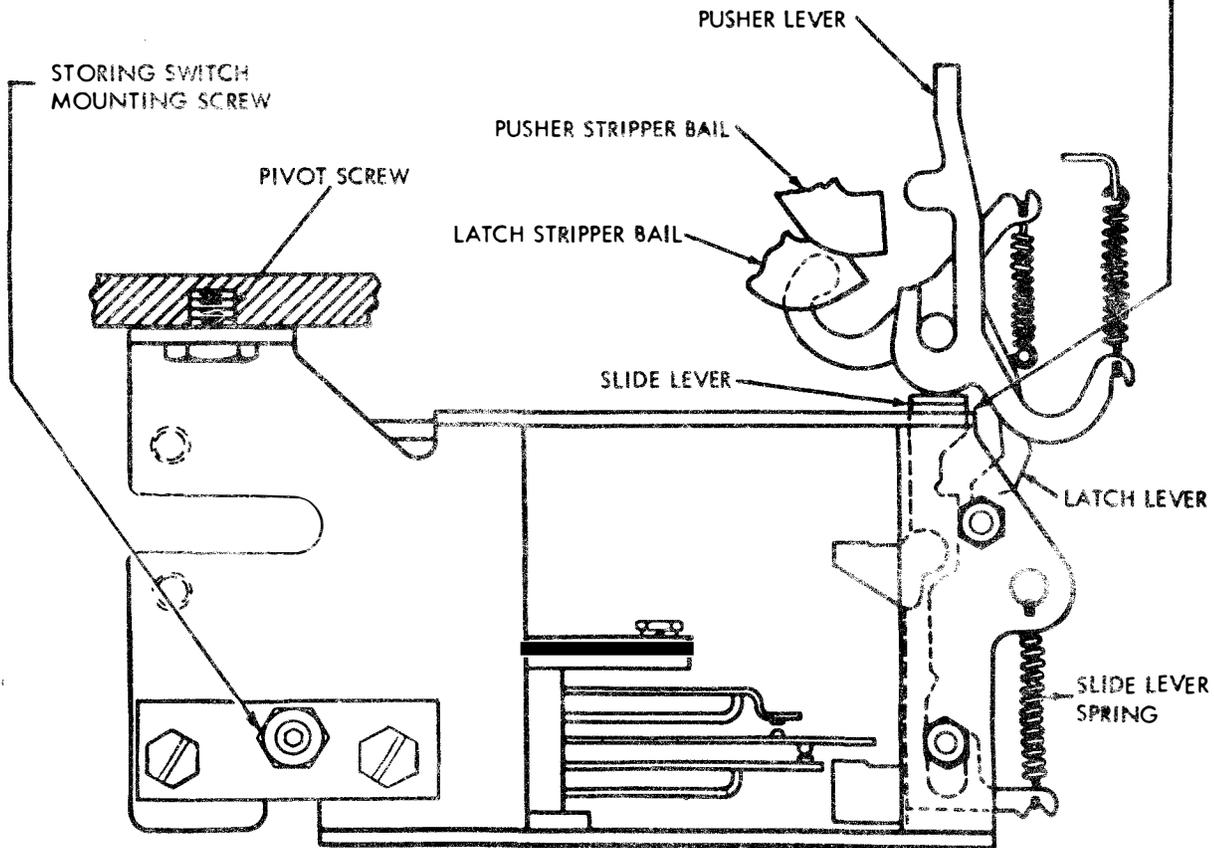
WITH TOP PLATE IN PLACE, SELECT A LETTERS - BLANK - LETTERS COMBINATION AND OBSERVE LATCH AND PUSHER LEVER ACTION. STORING SWITCH SHOULD ALIGN WITH LATCH LEVER SO THAT LATCH LEVERS AND SLIDES FUNCTION WITHOUT BINDING.

TO ADJUST

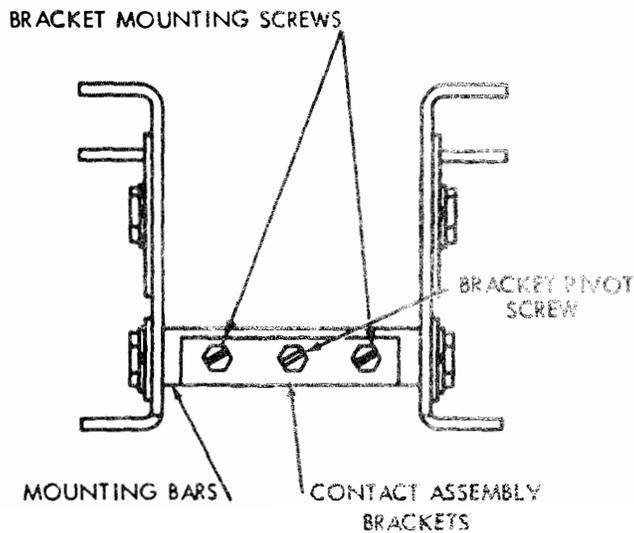
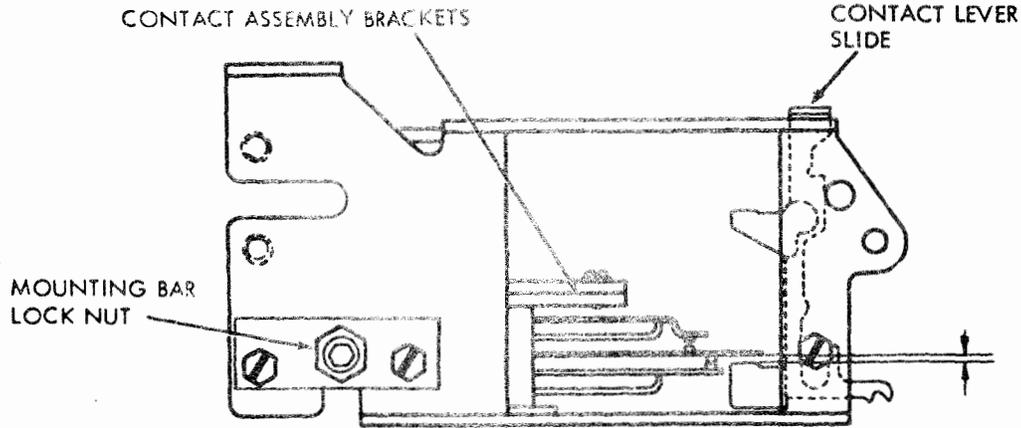
POSITION SWITCH ASSEMBLY WITH ITS MOUNTING SCREWS LOOSENED. RECHECK REQUIREMENT AFTER TIGHTENING SCREWS.

NOTE

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



2.13 Transfer Type Storing Switch Mechanism - Continued



SLIDE LEVER REQUIREMENT

MIN. 0.005 INCH

MAX. 0.020 INCH

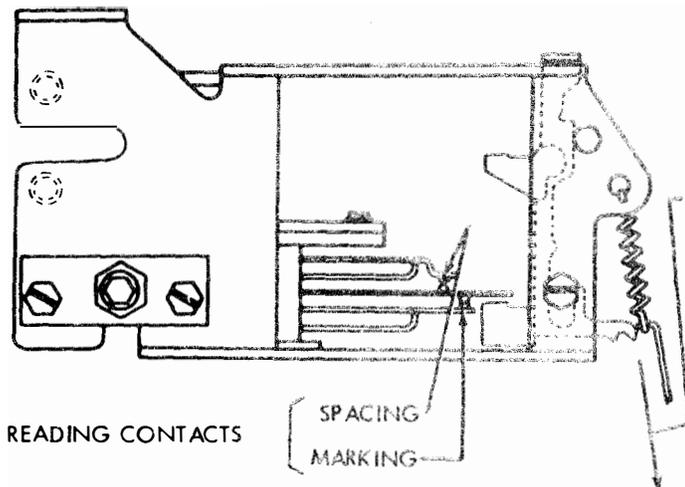
CLEARANCE BETWEEN ALL SENSING SLIDES AND CONTACT SWINGERS.

TO CHECK

STORING SWITCH ASSEMBLY INSTALLED (SEE PAR. 2.12). SENSING SLIDES SELECTED AND LATCHED.

TO ADJUST

LOOSEN MOUNTING BAR LOCK NUTS AND BRACKET MOUNTING SCREWS TO FRICTION TIGHT. INSERT AN ALLEN WRENCH IN END OF CONTACT ASSEMBLY MOUNTING BAR. POSITION CONTACT ASSEMBLY BY ROTATING BAR TO PIVOT CONTACT ASSEMBLY. CHECK AT ALL SWINGERS.



SLIDE LEVER SPRING

TO CHECK

PLACE SLIDE LEVERS 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.

TAPE LID

NOTE

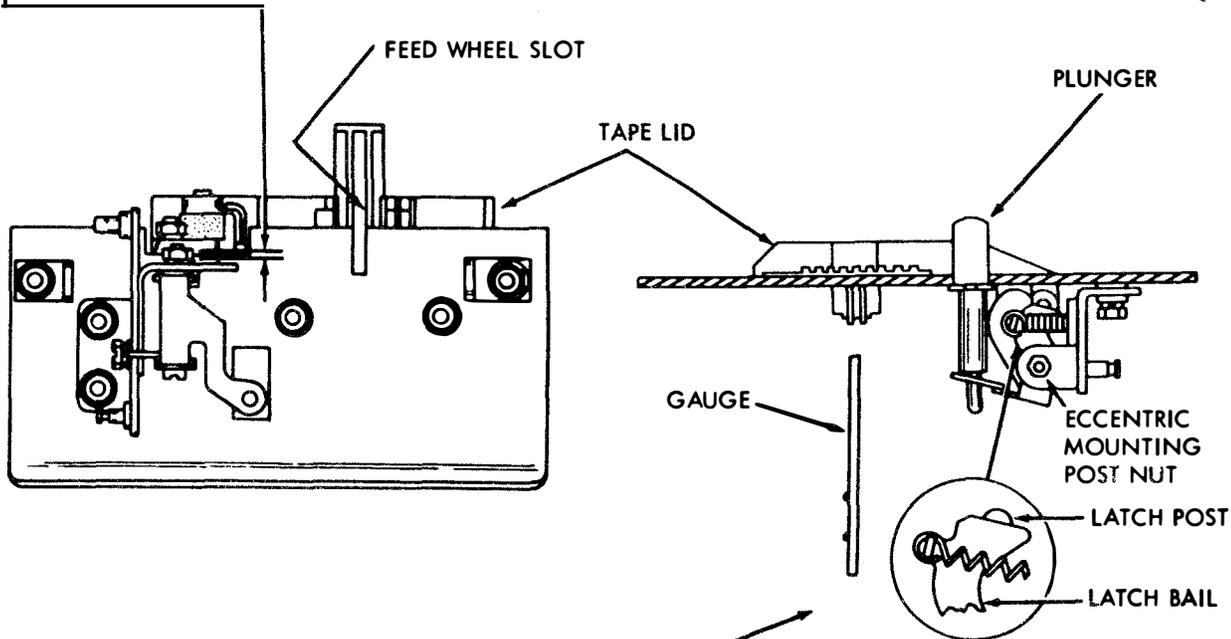
REMOVE TOP AND TAPE GUIDE PLATES. LUBRICATE MATING SURFACES PRIOR TO ADJUSTMENT.

(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 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 - (SEE PAR. 2.15).



(3) REQUIREMENT
 SOME END PLAY 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 END PLAY IN RELEASE BUTTON.

2.15 Tape Lid Mechanism - Continued

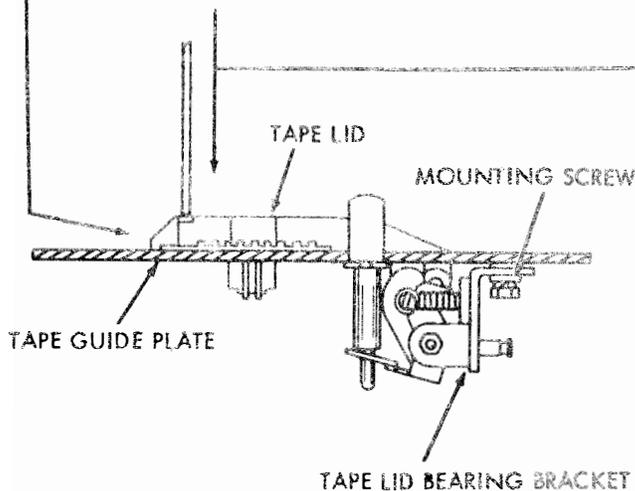
(2) **REQUIREMENT**
 WITH TAPE LID FRONT BEARING SURFACE TOUCHING TAPE GUIDE PLATE, CLEARANCE BETWEEN TAPE LID AND TAPE GUIDE PLATE:
 MIN. 0.010 INCH
 MAX. 0.018 INCH
 MEASURED AT TAPE LID FIN IN LINE WITH REAR TAPE GUIDE. 2ND. FIN FROM REAR

NOTE

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).

(1) AND (3) REQUIREMENTS - (SEE PAR. 2.14).



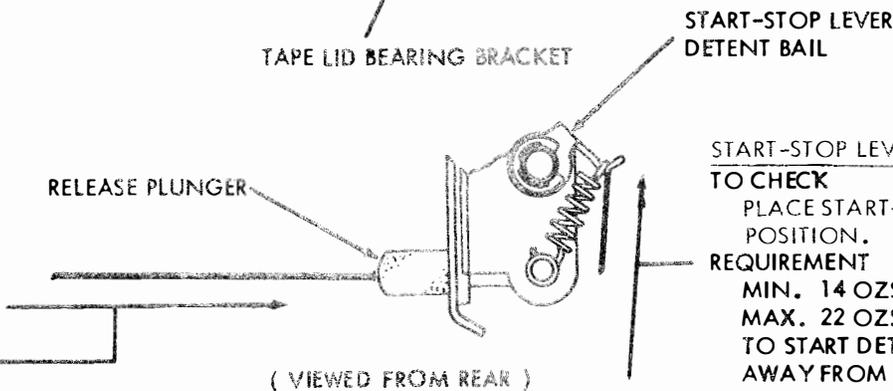
TAPE LID SPRING TO CHECK

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. 1/8 OZ.
 MAX. 1 OZ.

TO MOVE OPEN END OF TAPE LID AGAINST TAPE GUIDE PLATE.



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 CONTROL LEVER DETENT.

TAPE LID RELEASE PLUNGER SPRING TO CHECK

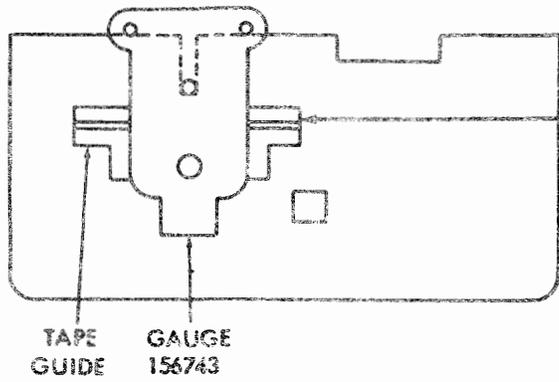
HOLD TAPE GUIDE PLATE SO TOP SURFACE IS HORIZONTAL. OPEN TAPE LID.

REQUIREMENT

MIN. 28 OZS.
 MAX. 48 OZS.

TO START TAPE LID BAIL MOVING.

2.16 Tape Guide Plate



TAPE GUIDE REQUIREMENT

WITH GAUGE PROPERLY POSITIONED:
MIN. SOME
MAX. 0.003 INCH
BETWEEN GAUGE AND TAPE GUIDES

TO ADJUST

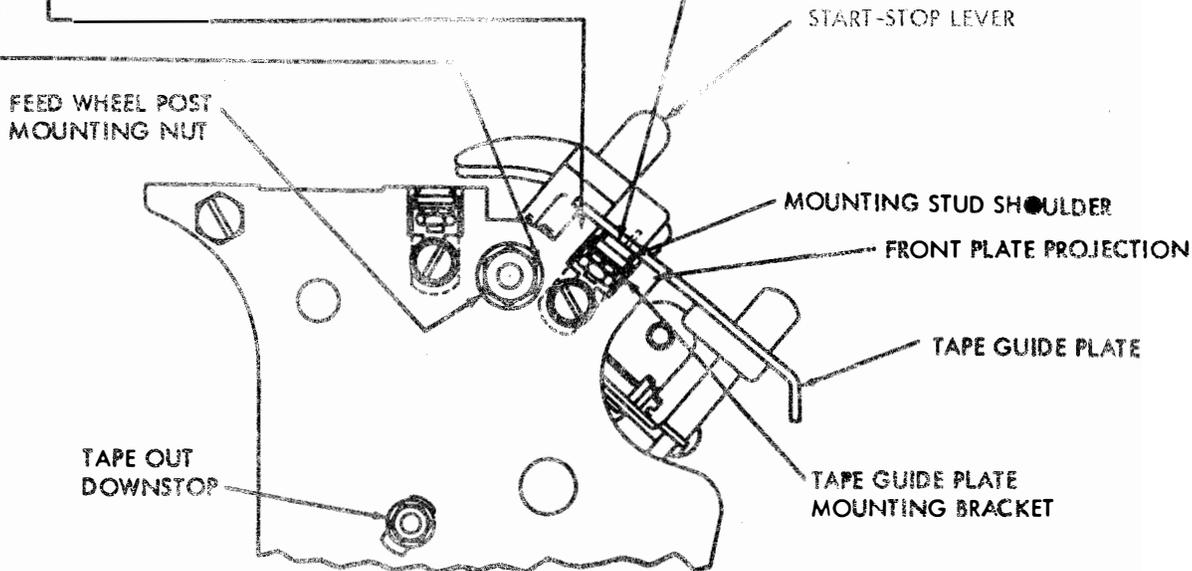
LOOSEN TAPE GUIDE MOUNTING NUTS TO FRICTION TIGHT. PROPERLY POSITION GAUGE ON TAPE GUIDE PLATE. POSITION TAPE GUIDES TO MEET REQUIREMENT.

TAPE GUIDE PLATE

(1) **REQUIREMENT**
SHOULDER OF FEED WHEEL POST SHOULD 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 SHOULD REST FIRMLY AGAINST AT LEAST THREE PROJECTIONS OF THE FRONT AND REAR PLATE.
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 NOTCH OF FRONT AND REAR PLATE, AND PLACE SENSING PINS ADJACENT TO LEFT EDGE OF GUIDE PLATE. PLACE TAPE-OUT PIN INTO ITS HOLE. TIGHTEN EACH BRACKET MOUNTING.

(3) **REQUIREMENT**
OUTER EDGES OF MOUNTING BRACKETS AND OUTER EDGES OF MOUNTING STUD SHOULDERS SHOULD 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 (SEE PAR. 2.17).



2.17 Top Plate Assembly

TOP PLATE

(1) REQUIREMENT

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

TO ADJUST

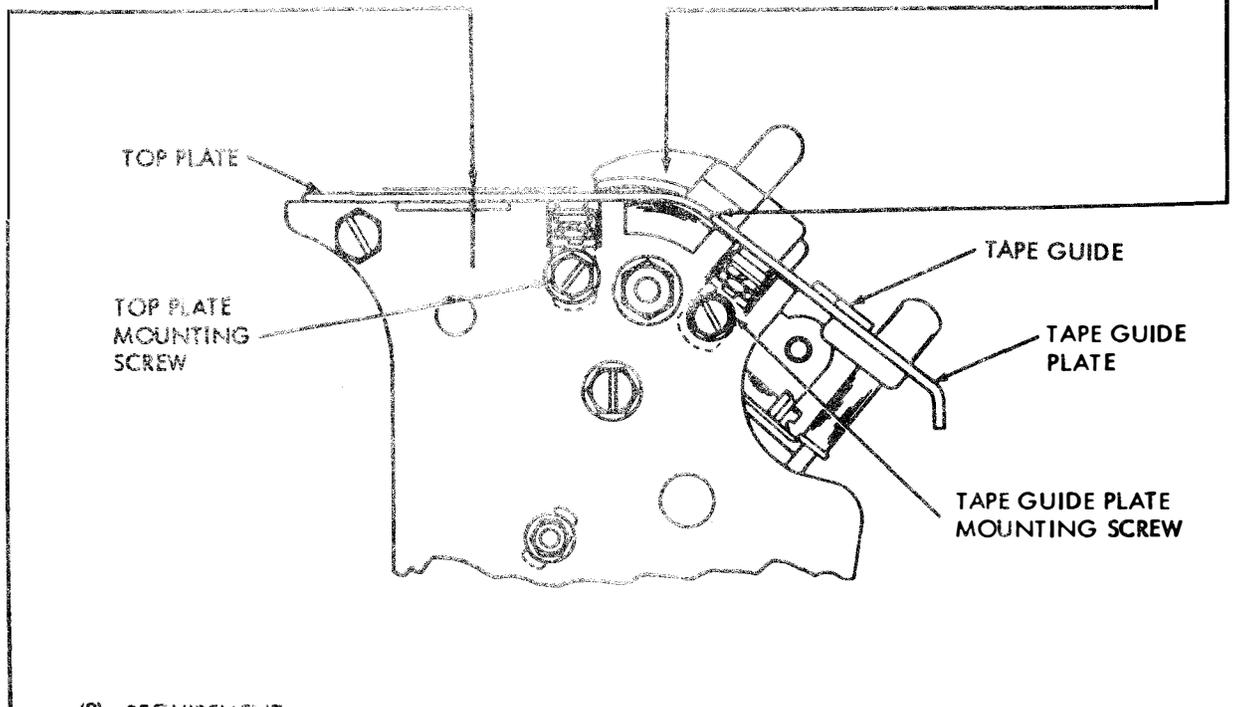
LOOSEN MOUNTING BRACKET NUTS UNTIL BRACKETS ARE FRICTION TIGHT. PRESS TOP PLATE INTO POSITION. TOP PLATE SHOULD REST ON AT LEAST THREE PROJECTIONS OF SIDE PLATES. MAKE SURE THE TIGHT-TAPE ARM EXTENSION IS UNDER THE TOP PLATE.

(2) REQUIREMENT

FEED WHEEL SLOT AND TAPE GUIDE PLATE SLOT SHOULD LINE UP

TO ADJUST

MOVE TOP PLATE TO LINE UP FEED WHEEL SLOT. DO NOT DISTURB REQUIREMENT (2) OF TAPE GUIDE PLATE ADJUSTMENT (SEE PAR. 2.16).



(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 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 (SEE PAR. 2.14).

2.18 Tape-Out Switch Assembly

(2) REQUIREMENT
 MIN. 0.008 INCH
 MAX. 0.015 INCH
 CLEARANCE BETWEEN NORMALLY OPEN CONTACTS.

TO ADJUST
 FORM UPPER CONTACT LEAF WITH A 110445 SPRING BENDER.

NOTE
 WHEN REPLACING SWITCH ASSEMBLY, MAKE SURE CONTACT SWINGER IS OVER TAPE-OUT PIN EXTENSION, AND EXTENSION BAIL SPRING CLIP IS KEPT HORIZONTAL.

TAPE-OUT SWITCH

(REAR VIEW)

(A) TAPE-OUT SWITCH TO CHECK

REMOVE COVER AND TOP PLATE. LOOSEN TAPE-OUT SPRING ADJUSTING BRACKET. POSITION BRACKET SO TAPE-OUT EXTENSION IS NOT TOUCHING SWINGER PAD.

(1) REQUIREMENT

MIN. 8 GRAMS
 MAX. 15 GRAMS
 TO JUST SEPARATE NORMALLY CLOSED CONTACTS (SCALE AT CENTER OF SWINGER PAD).

TO ADJUST
 DISCONNECT TAPE-OUT EXTENSION BAIL. REMOVE SWITCH ASSEMBLY (SEE PAR. 2.29). FORM CONTACT SWINGER WITH A 110445 SPRING BENDER.

(B) TAPE-OUT PIN

(1) REQUIREMENT

WHEN START-STOP LEVER IS IN FREE WHEEL OR STOP POSITION, TAPE-OUT PIN SHOULD BE FLUSH TO 0.010 INCH BELOW SURFACE OF TAPE GUIDE PLATE.

TO ADJUST
 POSITION TAPE-OUT PIN DOWNSTOP WITH ITS MOUNTING NUT LOOSENED.

(2) REQUIREMENT

WITH CONTROL LEVER IN RUN POSITION:
 MIN. 0.055 INCH
 CLEARANCE BETWEEN TAPE-OUT PIN EXTENSION AND CONTROL LEVER BAIL EXTENSION.

TO ADJUST
 POSITION EXTENSION BAIL WITH ITS MOUNTING SCREW LOOSENED.

TAPE GUIDE PLATE

CONTROL LEVER BAIL EXTENSION

TAPE-OUT PIN

(C) TAPE-OUT SWITCH BRACKET

TO CHECK
 INSERT PIECE OF UN-PERFORATED TAPE UNDER TAPE LID.

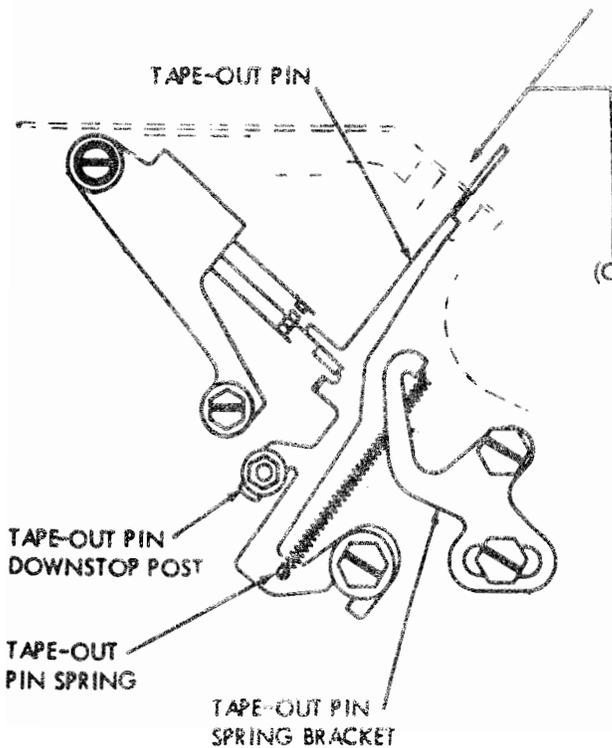
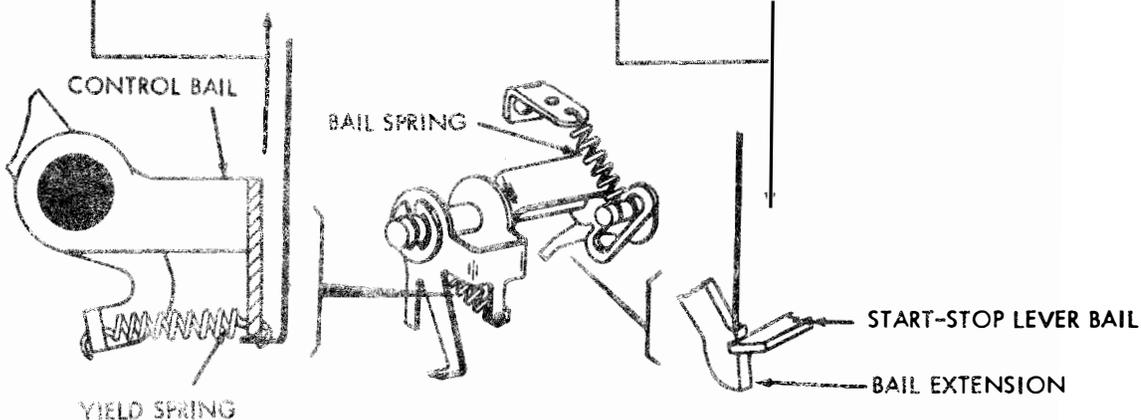
REQUIREMENT
 MIN. 0.006 INCH
 MAX. 0.020 INCH
 CLEARANCE BETWEEN TAPE-OUT PIN EXTENSION AND CONTACT SWINGER PAD.

TO ADJUST
 POSITION SWITCH BRACKET WITH ITS MOUNTING SCREW LOOSENED.

2.19 Tape-Out Switch Assembly - Continued

(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.

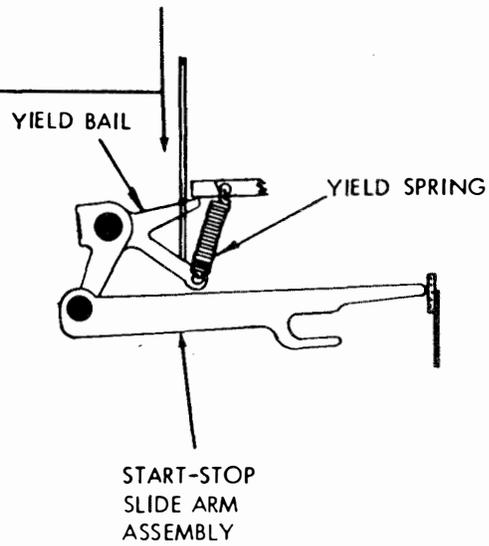


(C) TAPE-OUT PIN SPRING
 TO CHECK
 PLACE START-STOP LEVER IN RUN POSITION.
 REQUIREMENT
 MIN. 38 GRAMS
 MAX. 45 GRAMS
 TO MOVE PIN FLUSH WITH TAPE GUIDE PLATE
 TO ADJUST
 POSITION SPRING BRACKET WITH ITS MOUNTING
 SCREWS LOOSENED. RECHECK REQUIREMENT.

2.20 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.



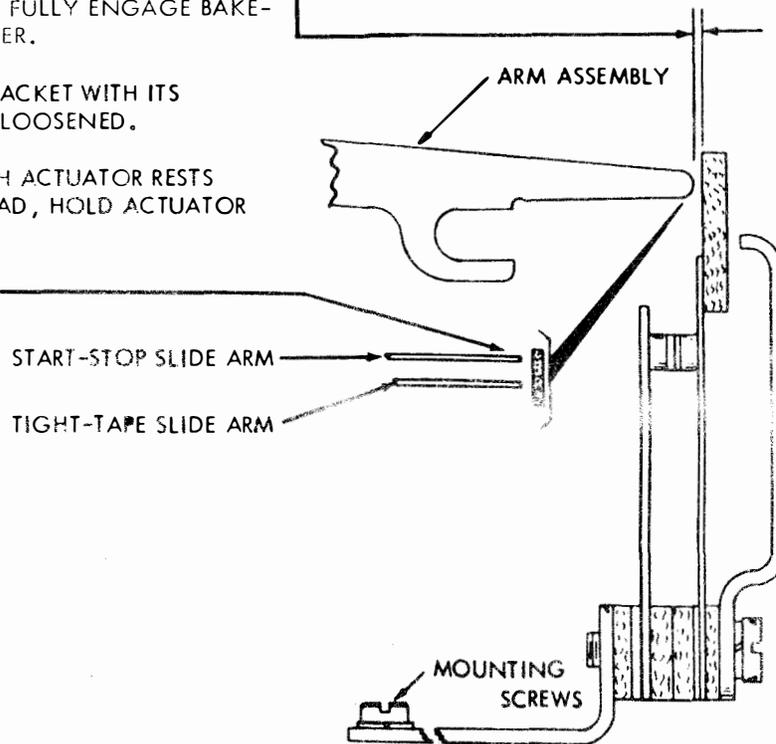
CONTROL LEVER SWITCH BRACKET

(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.

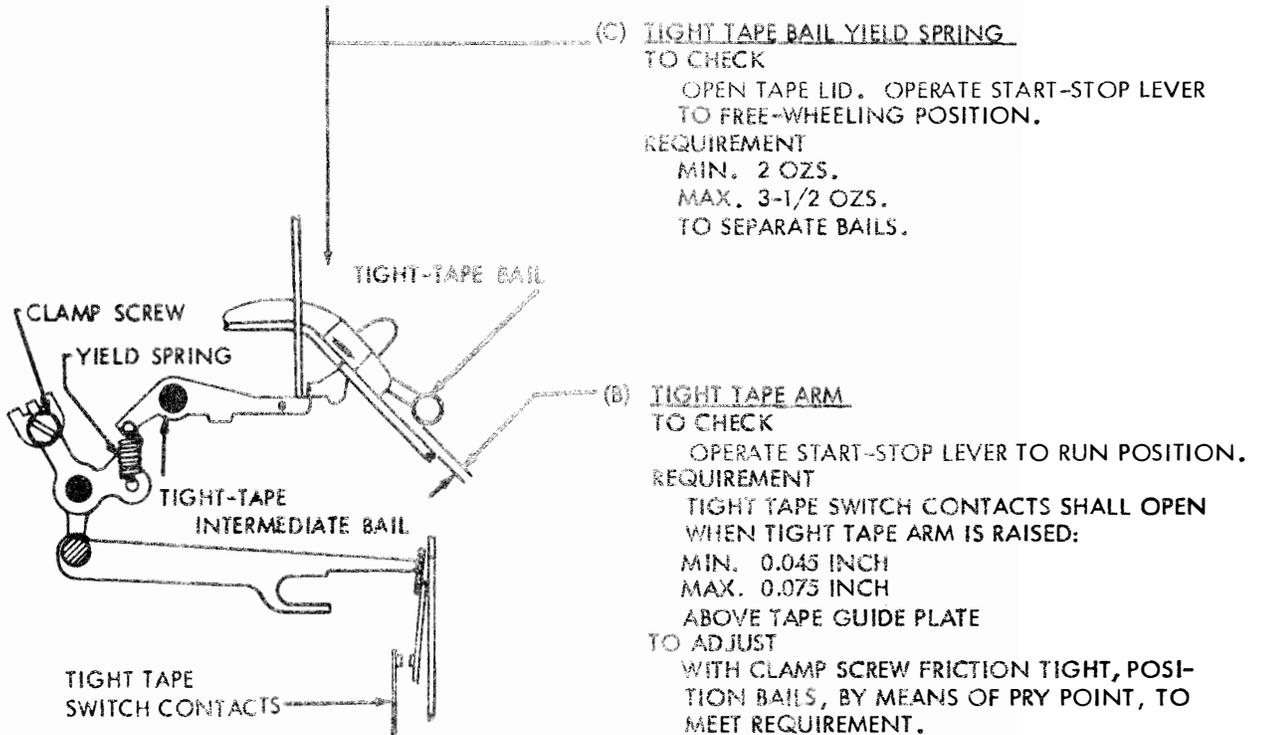
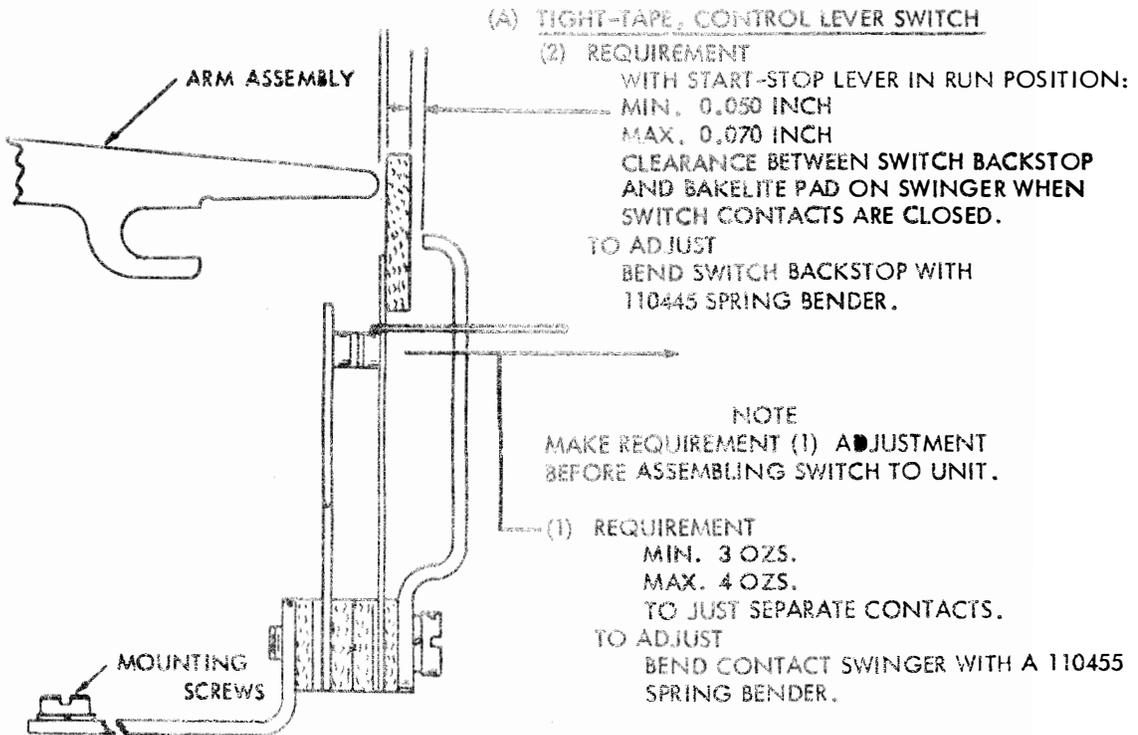
(2) REQUIREMENT
START-STOP LEVER AND TIGHT TAPE SWITCH
ACTUATORS SHOULD FULLY ENGAGE BAKE-
LITE PAD ON SWINGER.

TO ADJUST
POSITION SWITCH BRACKET WITH ITS
MOUNTING SCREWS LOOSENED.

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



2.21 Tight Tape Mechanism



SECTION 574-239-700

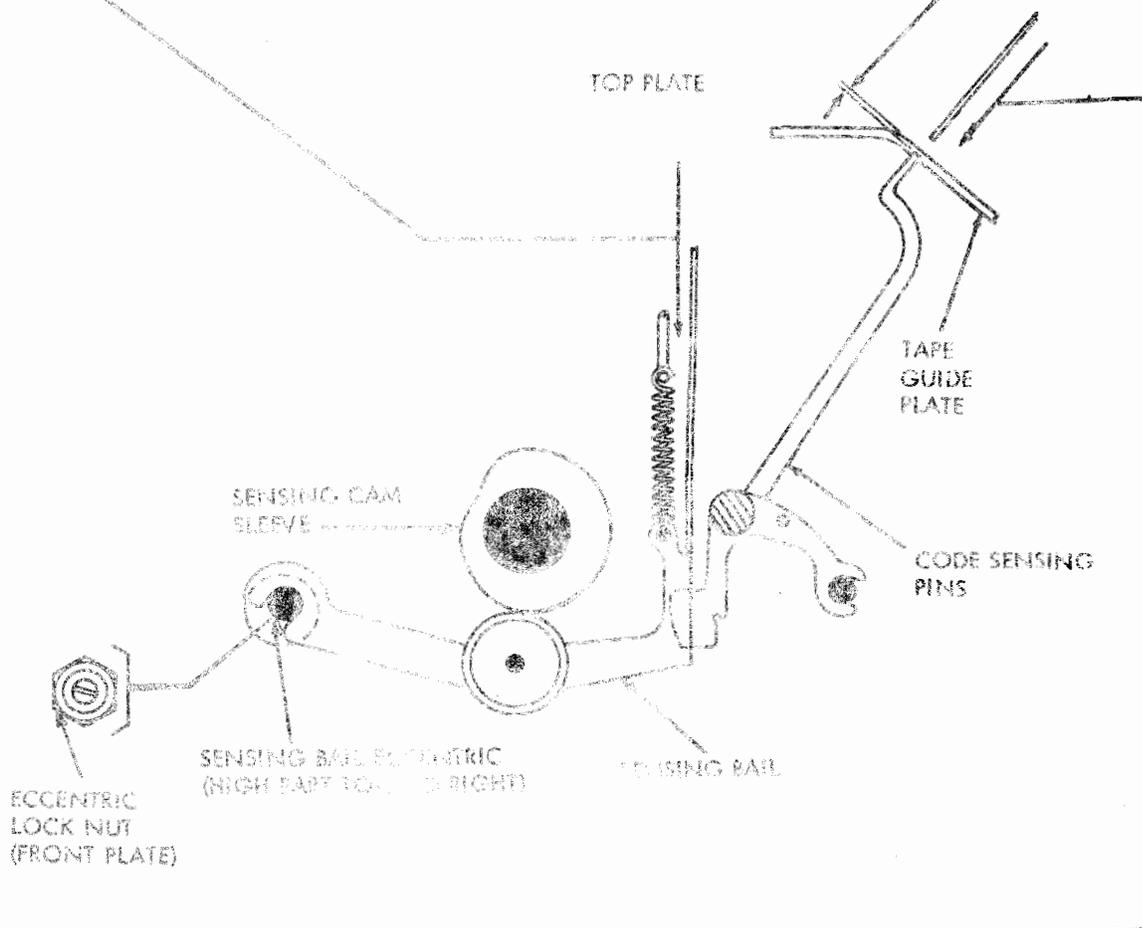
2.22 Sensing Pin Assembly

(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

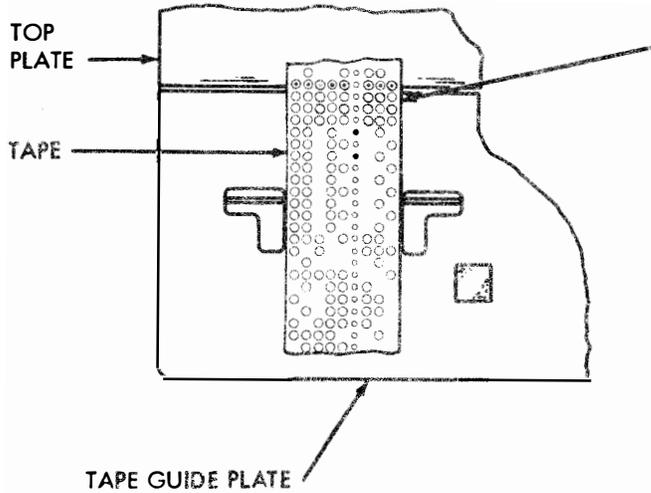
REPLACE TOP PLATE. DISENGAGE SENSING CLUTCH.
REQUIREMENT
WITH SENSING BAIL ECCENTRIC INDENT TOWARD RIGHT, TIP ON HIGHEST SENSING PIN SHALL BE FLUSH TO 0.005 INCH BELOW TOP SURFACE OF TAPE GUIDE PLATE.
TO ADJUST
LOOSEN ECCENTRIC SHAFT LOCK NUT AND POSITION ECCENTRIC. RECHECK REQUIREMENT AFTER LOCK NUT IS TIGHTENED.



(B) SENSING PIN SPRING
TO CHECK

TRIP SENSING CLUTCH AND ROTATE SHAFT UNTIL SENSING PINS ARE IN THEIR UPPERMOST POSITION. HOLD PUSHER LEVERS AWAY MANUALLY.
REQUIREMENT
MIN. 2 OZS.
MAX. 3 OZS.
TO MOVE EACH PIN FLUSH WITH TOP SURFACE OF TAPE GUIDE PLATE.

2.23 Tape Feed Mechanism



(A) FEED WHEEL DETENT

NOTE

PLACE START-STOP LEVER IN STOP POSITION. TO CHECK

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

REQUIREMENT

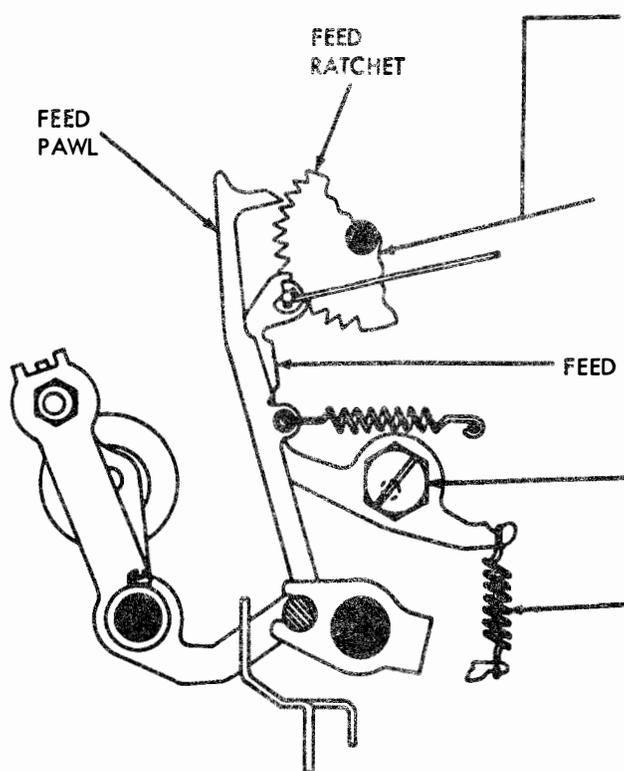
SENSING PINS CENTRALLY LOCATED IN CODE HOLES.

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

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

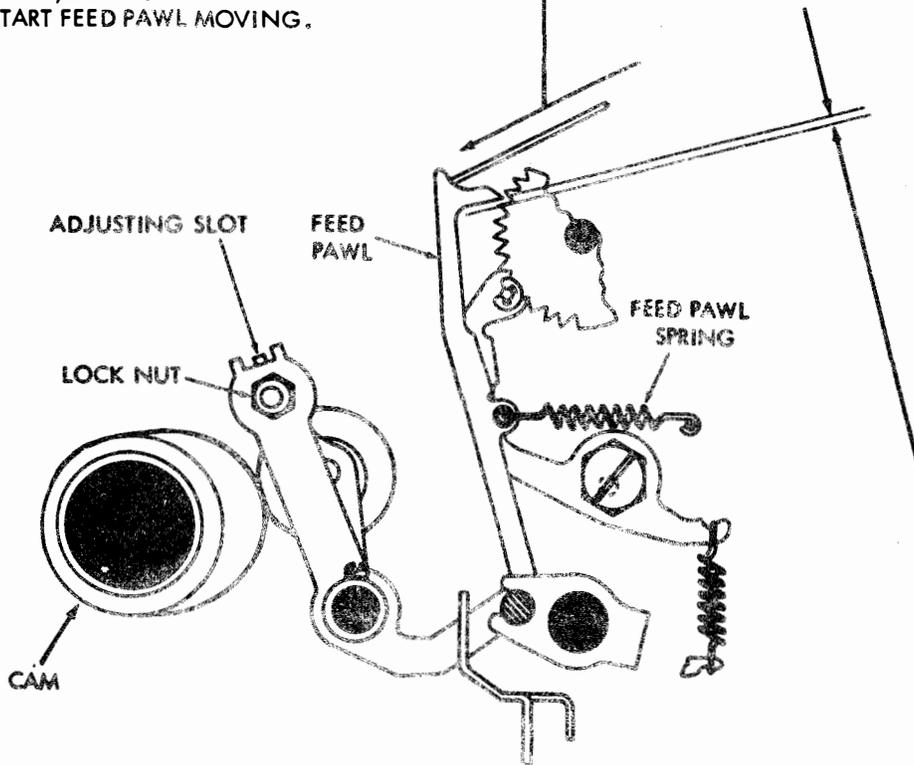
PLACE START-STOP LEVER IN STOP POSITION.
REMOVE TOP PLATE. DISENGAGE CLUTCH.

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 STOP 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

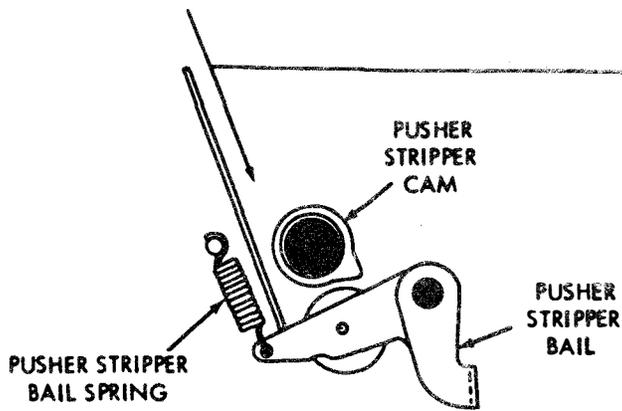
MAX. 0.003 INCH

CLEARANCE BETWEEN FEED PAWL AND RATCHET TOOTH.

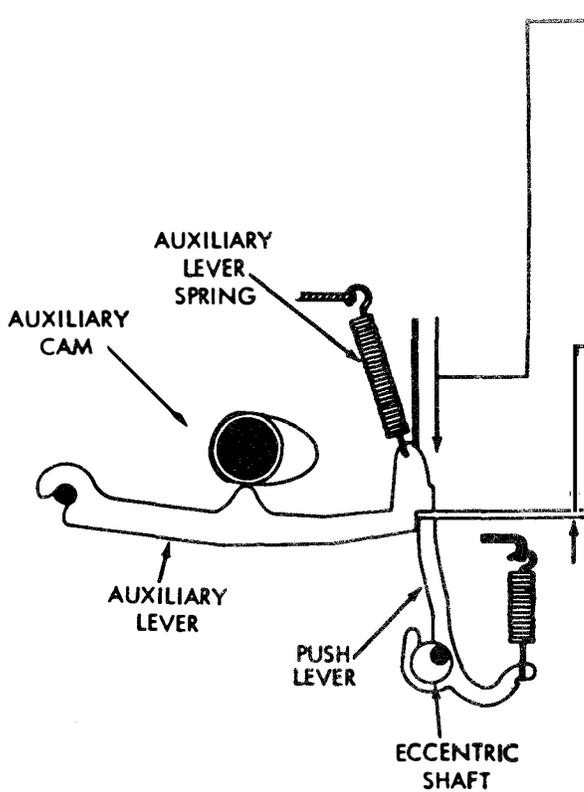
TO ADJUST

POSITION FEED LEVER BY MEANS OF THE ADJUSTING
SLOT WITH ITS LOCK NUT LOOSEMED.

2.25 Sensing Mechanism



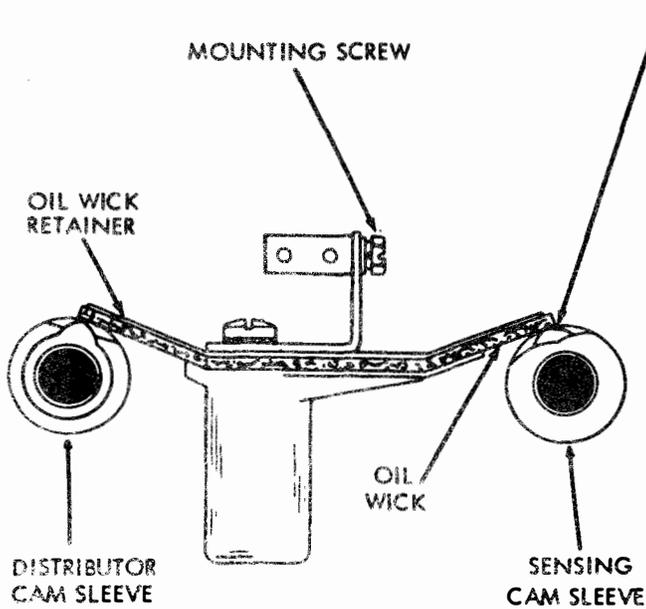
(A) PUSHER STRIPPER BAIL SPRING
 TO CHECK
 SELECT BLANK COMBINATION. TRIP CLUTCH AND ROTATE SHAFT TO STOP POSITION.
 REQUIREMENT
 MIN. 7 OZS.
 MAX. 11 OZS.
 TO START BAIL MOVING AWAY FROM CAM.



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

(B) PUSH LEVER
 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 SHOULD CLEAR THE TIP OF ITS PUSH LEVER BY
 MIN. 0.020 INCH
 MAX. 0.045 INCH
 TO ADJUST
 WITH PUSH LEVER ECCENTRIC SHAFT LOCK NUT (FRONT PLATE) LOOSENED AND HIGH PART OF ECCENTRIC LOCATED TOWARD THE UPPER RIGHT, ROTATE ECCENTRIC TOWARD RIGHT OR LEFT.

2.26 Sensing Mechanism - Continued



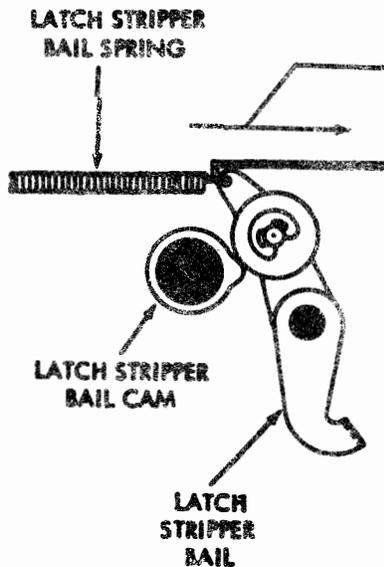
(B) OIL RESERVOIR

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 SHOULD NOT DEFLECT UPWARD MORE THAN 1/32 INCH (GAUGE BY EYE). REFINE ADJUSTMENT BY SLIGHTLY BENDING TEETH ON WICK COMB SPRING.



(A) LATCH STRIPPER BAIL SPRING

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.

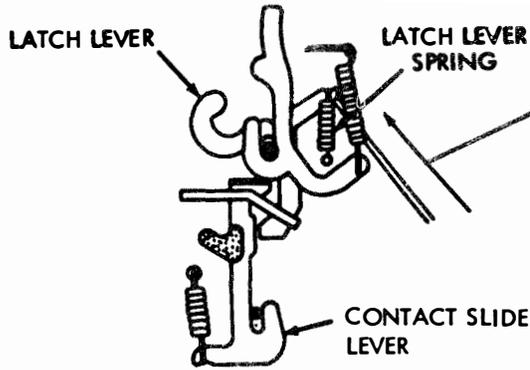
REQUIREMENT

MIN. 2-3/4 OZS.

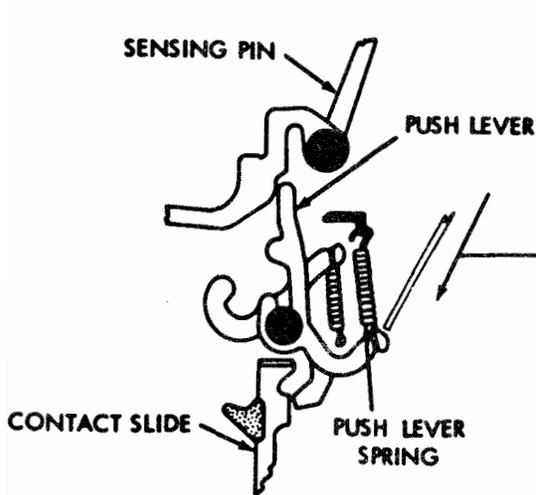
MAX. 6 OZS.

TO START LATCH STRIPPER BAIL MOVING.

2.27 Sensing Mechanism - Continued



(C) LATCH LEVER SPRING TO CHECK
 SELECT BLANK COMBINATION. TRIP SENSING CLUTCH AND ROTATE SHAFT TO STOP POSITION. SLIDE LEVERS SHOULD BE IN UPPERMOST POSITION.
 REQUIREMENT
 MIN. 1 OZ.
 MAX. 3 OZS.
 TO START LATCH LEVER MOVING.
 NOTE
 TAKE CARE NOT TO DAMAGE PUSH LEVER SPRINGS IN CHECKING REQUIREMENT.



(B) PUSH LEVER SPRING TO CHECK
 SELECT "RUBOUT" COMBINATION, AND LATCH SENSING CLUTCH. TRIP CLUTCH AND ROTATE SHAFT UNTIL PUSH LEVERS ARE STRIPPED.
 REQUIREMENT
 MIN. 1/4 OZ.
 MAX. 1-1/2 OZS.
 TO START PUSH LEVER MOVING.
 NOTE
 BE SURE CONTACT SLIDES DO NOT INTERFERE WITH MOVEMENT OF PUSH LEVERS.

2.28 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.

COVER PLATE DETENT SPRING TO CHECK

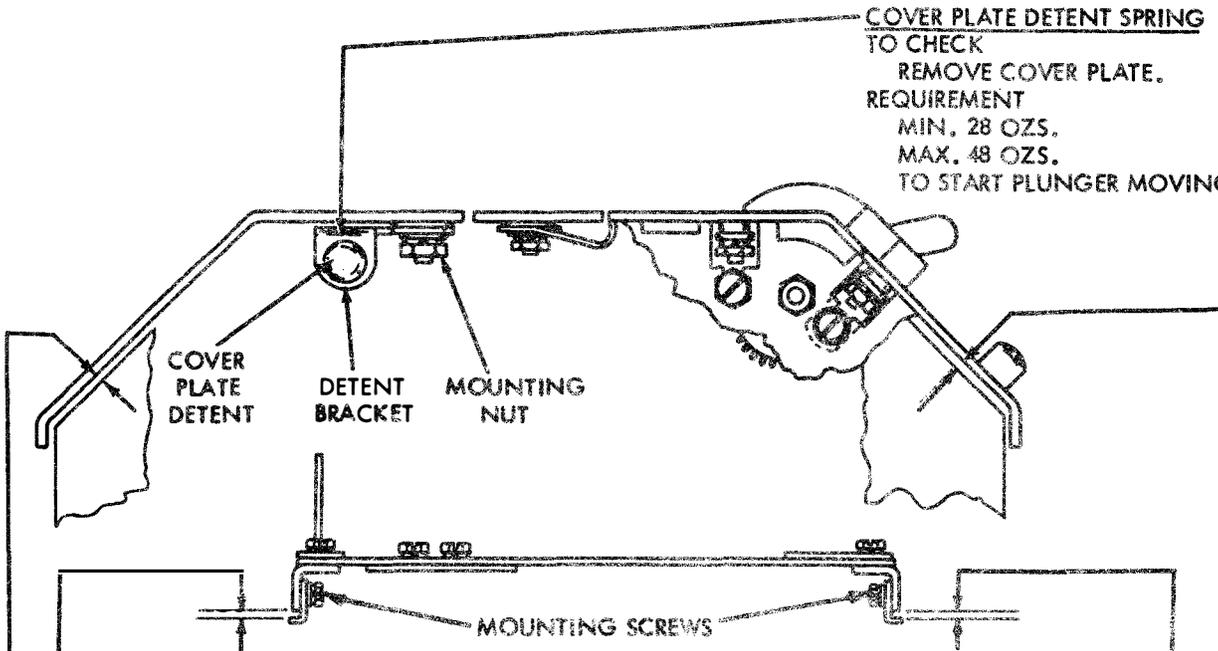
REMOVE COVER PLATE.

REQUIREMENT

MIN. 28 OZS.

MAX. 48 OZS.

TO START PLUNGER MOVING



(B) FRONT PANEL

NOTE

REMOVE COVER PLATE PRIOR TO INSTALLING OR REMOVING FRONT PANEL. PANEL SLIDES SHOULD ENGAGE GUIDES ON BASE SO THAT TOP EDGE OF PANEL PASSES UNDER TAPE GUIDE PLATE.

(1) REQUIREMENT

FRONT PANEL LATCHES SECURELY AT LOWER RIGHT AND LEFT CORNERS, AND PANEL SLIDES FULLY ENGAGE BASE GUIDES.

MIN. 0.085 INCH

MAX. 0.105 INCH

CLEARANCE BETWEEN BOTTOM EDGE OF BASE RAIL AND PANEL GUIDE FLANGE.

TO ADJUST

REMOVE TRANSMITTER FROM BASE. USE SHIMS TO OBTAIN LATERAL POSITION OF PANEL SLIDES, AND POSITION GUIDES VERTICALLY (PLACE UNUSED SHIMS UNDER HEAD OF MOUNTING SCREW). REPLACE TRANSMITTER ON BASE.

(2) REQUIREMENT

MIN. 0.015 INCH

MAX. 0.060 INCH

CLEARANCE BETWEEN PANEL TOP EDGE AND FRONT EDGE OF COVER AND TAPE GUIDE PLATES. THE UPPER PANEL SIDES SHOULD NOT TOUCH THE COVER AND TAPE GUIDE PLATE EAVES.

TO ADJUST

WITH FRONT PANEL IN PLACE, LOOSEN PANEL GUIDE MOUNTING SCREWS AND POSITION THE GUIDE. TO FACILITATE ADJUSTMENT, REMOVE THE FOUR VIBRATION MOUNT NUTS AND SWING SUB-BASE AWAY.

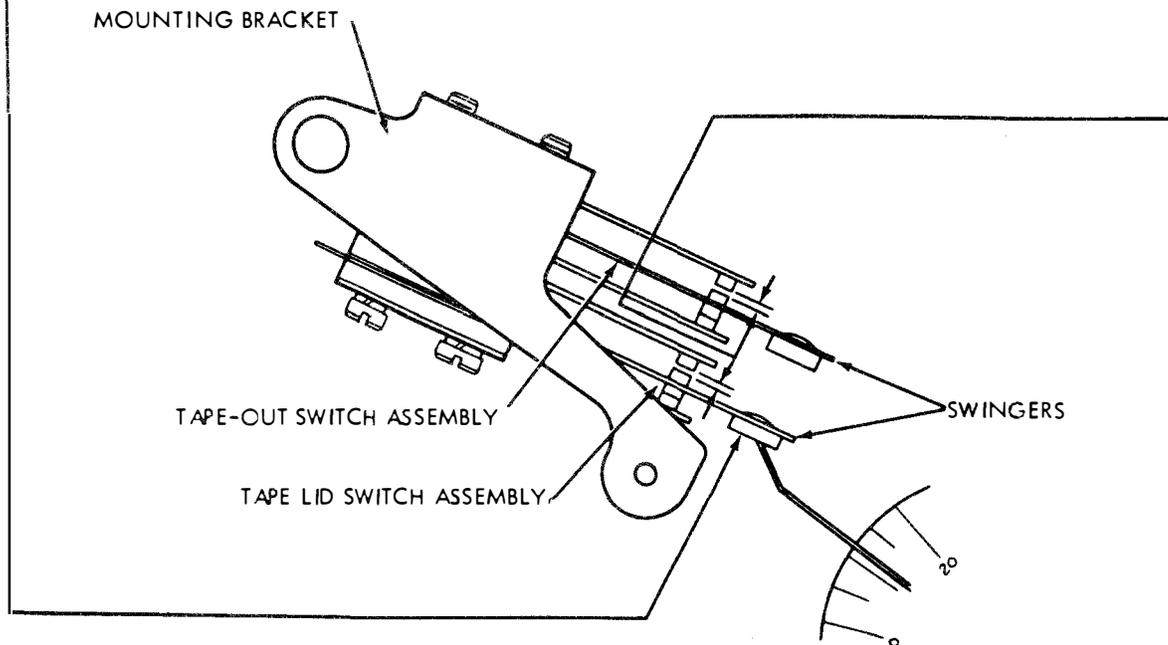
2.29 Tape-Out and Tape Lid Switch Assembly

TAPE-OUT AND TAPE LID SWITCH

NOTE

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 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 110445 SPRING BENDER.



NOTE

TO REMOVE TAPE-OUT AND TAPE LID SWITCH ASSEMBLY

- (1) REMOVE COVER AND TOP PLATES.
- (2) REMOVE 111342 SPRING ATTACHED TO BRACKET ON 158535 GUIDE POST.
- (3) LOOSEN SCREW SECURING GUIDE POST TO REAR PLATE.
- (4) REMOVE SCREW AND LOCK WASHER 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.

2.30 Tape-Out and Tape Lid Pin Mechanism

(B) TAPE-OUT PIN SPRING BRACKET

REQUIREMENT

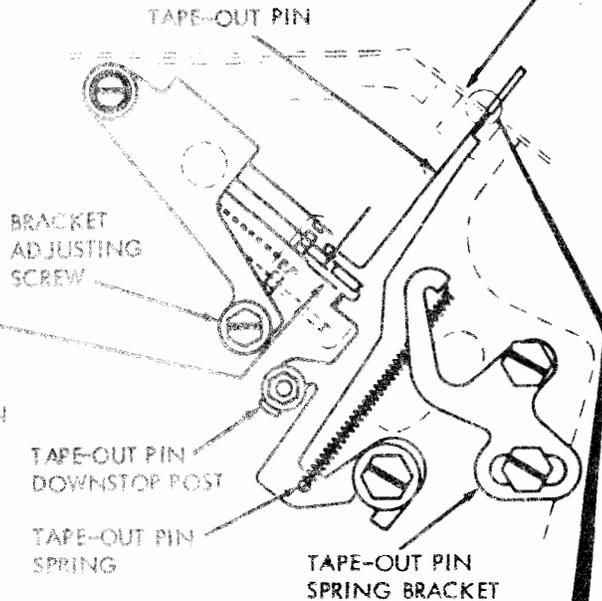
MIN. 38 GRAMS

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 UN-PERFORATED TAPE UNDER TAPE LID. ADJUST SWITCH BRACKET WITH ITS MOUNTING SCREW LOOSENED.

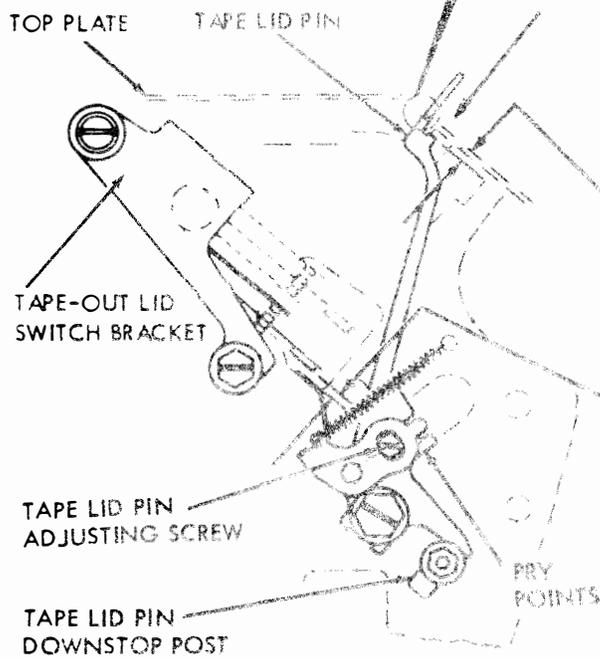
(C) TAPE-OUT AND TAPE LID PIN DOWNSTOP

REQUIREMENT

WHEN DEPRESSED TO THEIR LOWERMOST POSITIONS, TAPE-OUT AND TAPE LID PINS SHOULD 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.

(F) 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.

TAPE LID SWITCH

3. CONTACT STROBING

3.01 Distributor Contacts

Note: Use a 7.42 unit code distortion test disc for checking all contacts.

Distributor Contacts (See Figures 1 and 2)

(a) Stop Contact:

- (1) With a Distortion Test Set (DXD) operating at the same speed as transmitter-distributor, load the unit with "blank" perforated tape.
- (2) Adjust the stop contact adjusting screw so that stop pulse length is 135 scale divisions.

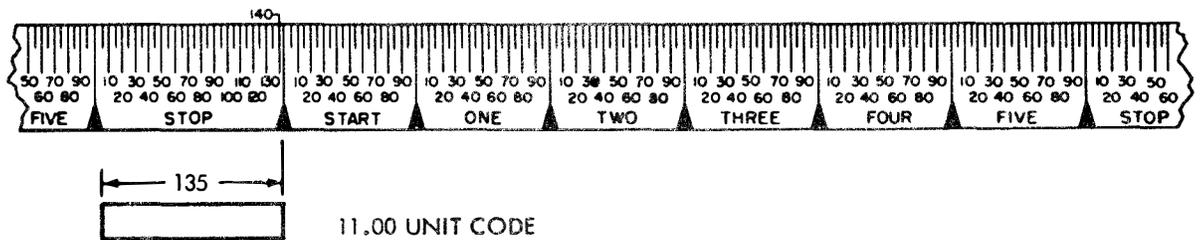


Figure 1

(b) Contacts #0 - #7

- (1) Load the transmitter-distributor with tape punched in levels 1, 3, 5, and 7. Align the end of the stop pulse with the 142 scale division on the stop segment of the test scale.
- (2) Adjust the distributor contact screws so that images are 67.5 scale divisions in total length, within $\pm 3\%$ on each end.
- (3) Repeat the above procedure for levels 2, 4, 6 and 8.

Note: It may be necessary to hold stop contact open to determine length of #8 pulse.

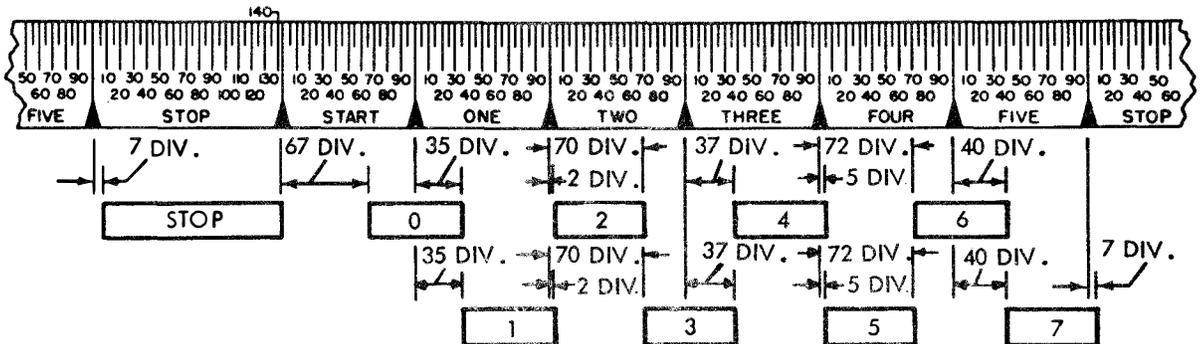


Figure 2

3.02 Distributor Contacts - Continued

EIGHT LEVEL PULSE IMAGE TRANSITION POINTS

ON FIVE LEVEL TEST SET SCALE - 11.00 UNIT CODE

CODE PULSE	END AT SCALE DIVISION	BEGIN AT SCALE DIVISION
STOP	7 IN STOP SEGMENT	142 IN STOP SEGMENT
1	67 IN START SEGMENT	35 IN #1 SEGMENT
2	35 IN #1 SEGMENT	2 IN #2 SEGMENT
3	2 IN #2 SEGMENT	70 IN #2 SEGMENT
4	70 IN #2 SEGMENT	37 IN #3 SEGMENT
5	37 IN #3 SEGMENT </td <td>5 IN #4 SEGMENT</td>	5 IN #4 SEGMENT
6	5 IN #4 SEGMENT	72 IN #4 SEGMENT
7	72 IN #4 SEGMENT	40 IN #5 SEGMENT
8	40 IN #5 SEGMENT	7 IN STOP SEGMENT

Distributor Auxiliary Contact (See Figures 3 and 4)

- (a) Align end of stop pulse image with 142 mark on test scale stop segment. Adjust the auxiliary contact to:

Close at 110, ± 5 divisions in stop segment.
 Open at 31, ± 8 divisions in stop segment.

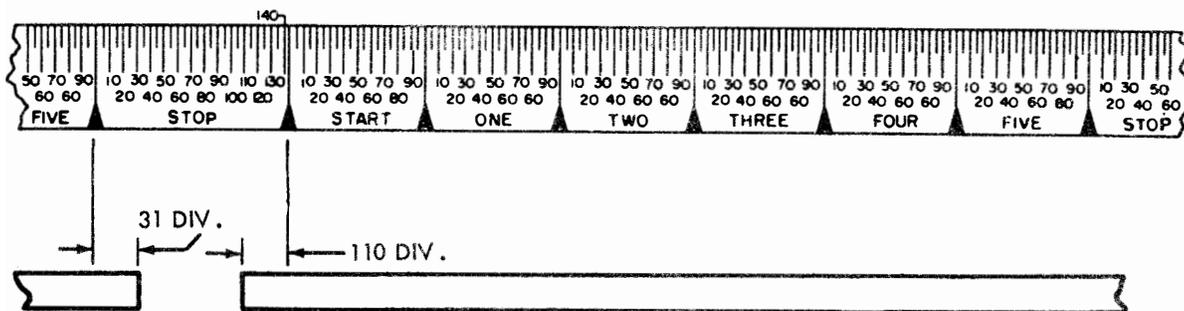


Figure 3

3.03 Distributor Contacts - Continued

- (b) Transmitter Contacts: With unit sensing "letters" tape, end of stop pulse aligned with 142 mark on test scale stop segment, the beginning and end of each contact trace should occur:

Before 80 divisions in start segment.
After 20 divisions in stop segment.

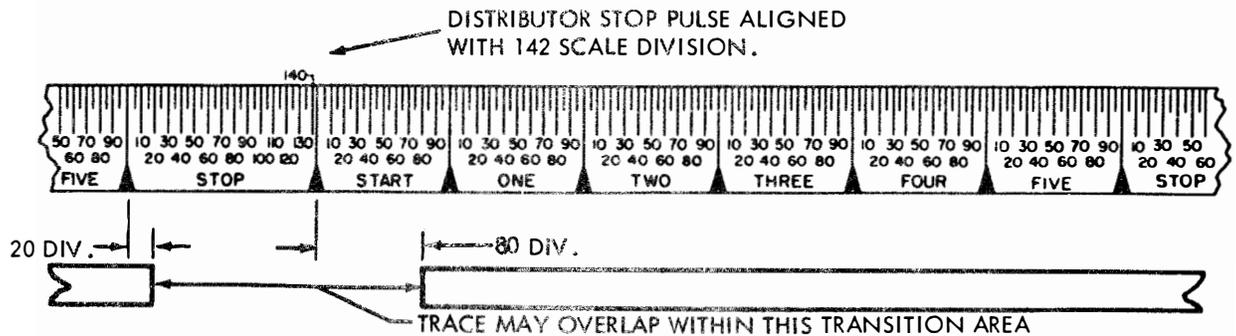


Figure 4

To adjust, position respective contact screw or refine transfer contact adjustments as necessary.

(c) Sensing Auxiliary Contacts (See Figures 5 and 6)

- (1) Both magnets de-energized, distributor and transmitter shaft clutches latched and in the stop position. Turn motor off.
- (2) Hold distributor and transmitter shaft gears against rotation. Energize both clutch trip magnets.
- (3) Release gears and turn motor on.
- (4) Align the end of the distributor stop pulse image with the 142 scale division on the stop segment of the test set scale.

(5) Clutch trip marking contacts should:

Close at 90 ± 10 divisions in start segment.
Open at 64 ± 20 divisions in #2 segment.

(6) Clutch trip spacing contacts should:

Open at 80 ± 10 divisions in start segment.
Close at 74 ± 20 divisions in #2 segment.

(7) Auxiliary marking contacts should:

Close at 80 ± 10 divisions in #2 segment.
Open at 31 ± 20 divisions in stop segment.

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3.04 Distributor Contacts - Continued

(8) Auxiliary spacing contacts should:

Open at 72 ± 10 divisions in #2 segment.
Close at 41 ± 20 divisions in stop segment.

(9) To adjust, refine transfer contact adjustment as necessary.

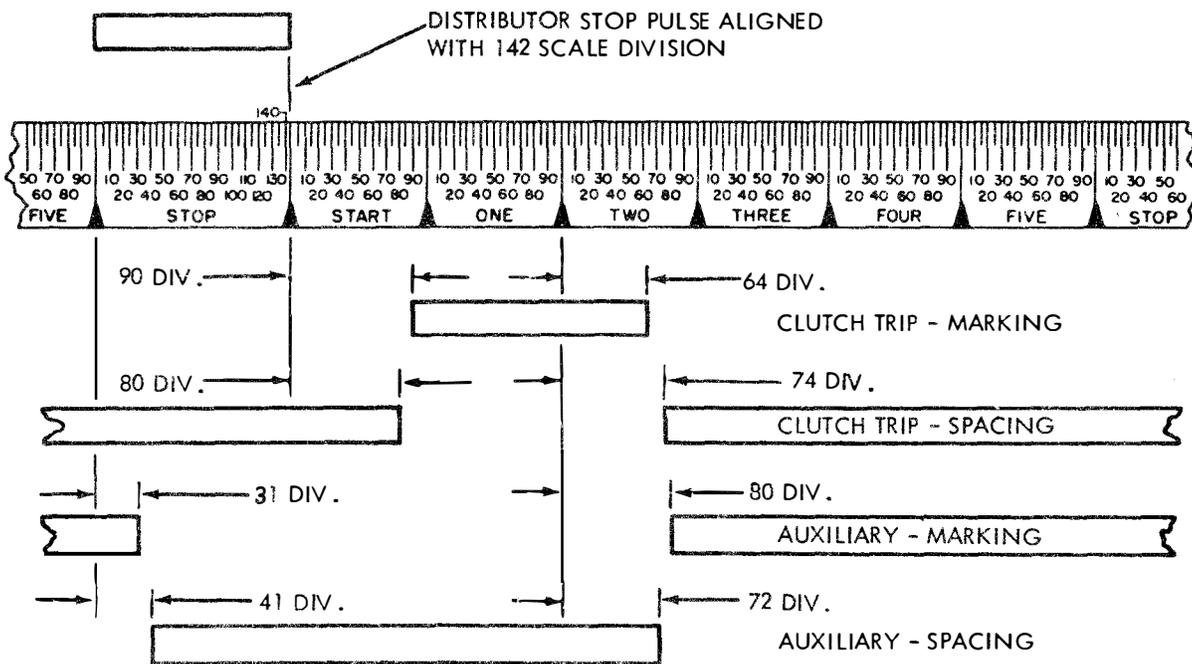


Figure 5

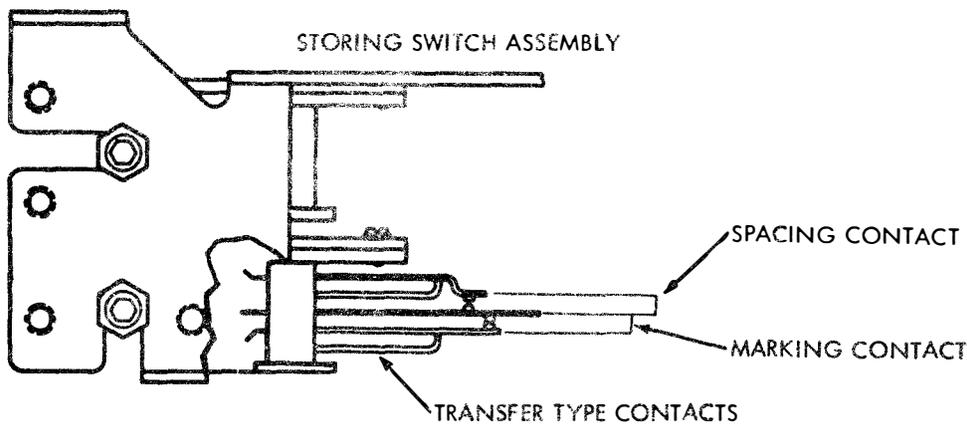


Figure 6

Final Operating Requirements

- (a) There shall be no breaks in the transmitted signal pulses.
- (b) The beginning and end of the transmitted pulses should not deviate more than $\pm 3\%$.
- (c) The tape-out contact should operate from the normally closed position with tape in the unit. With no tape in the unit, the tape-out contact should operate from the open position.