

HIGH SPEED TAPE READER

(DX TYPE)

ADJUSTMENTS

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SECTION 592-804-700

1.02 Parts or assemblies that are removed to facilitate adjustments should not be replaced until all adjustments are completed. If any adjustments are changed, related adjustments should be checked.

1.03 The spring tension values indicated in this section are scale readings which should be obtained when the proper scales are used. Springs that do not meet the requirements specified, and for which no adjusting procedure is given, should be replaced with new springs.

1.04 Before proceeding with any adjustment, read the applicable portion of the adjusting text carefully. After the adjustment is complete, be sure to tighten any screws or nuts which may have been loosened.

1.05 Check all moving parts to make sure they are free from binds before operating the unit under power.

1.06 See appropriate parts section for ordering information. Tool information can be found in Section 570-005-800.

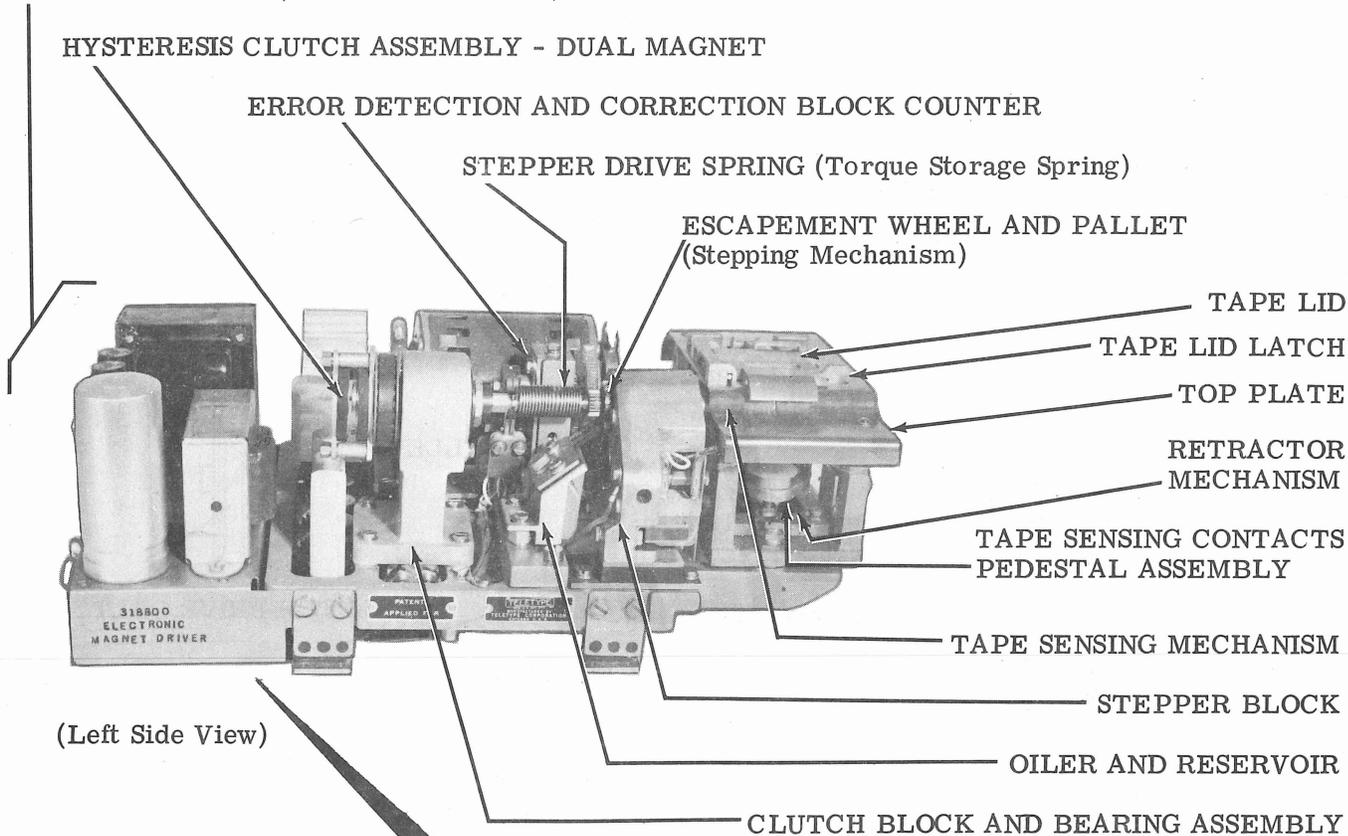
1.07 Special tools and test equipment required to perform the adjustments are as follows:

TP95960	Tape gauge
TP125777	Offset wrench (S type)
TP301486	Pliers
TP301487	Pliers
TP317212	Tape splicer
TP317325	Tape splice 5-level (blue)
TP317326	Tape splice 6-level (red)
TP317327	Tape splice 7-level (lavender)
TP317328	Tape splice 8-level (green)
TP318603	Magnet assembly adjusting tool
TP318652	Shim (0.002 inch)
TP318653	Shim (0.016 inch)
TP318874	Contact and feed wheel height gauge (GO, NO-GO)
TP318875	Contact alignment gauge
TP325991	Tool holder
TP325992	Removal bit (male)
TP325993	Removal bit (female)
TP325994	Insertion bit
	Oscilloscope
	Ohmmeter

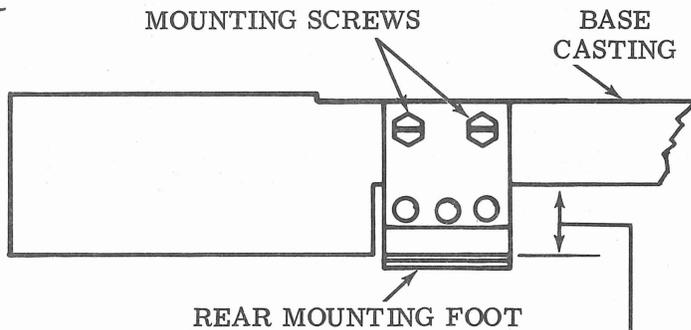
Note: Remove electric power from reader before making adjustments.

2. BASIC UNIT

SELF-CONTAINED (STEPPER MAGNET) DRIVER ASSEMBLY



(Left Side View)



2.01 Electronic Magnet Driver

ELECTRONIC MAGNET DRIVER CHASSIS

Requirement

Magnet driver chassis should align with and lie in a plane parallel (approx) to reader base casting.

To Adjust

With driver chassis mounting screws loosened, position the chassis and retighten screws.

2.02 Clutch Drive Mechanism

(Top View)

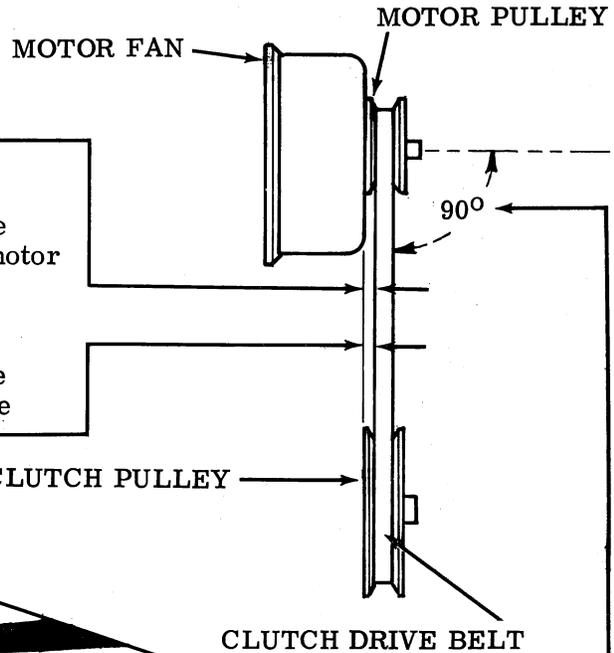
MOTOR PULLEY

(1) Requirement
Motor pulley should align with clutch pulley as gauged by eye.

(2) Requirement
With motor shaft endplay taken up toward the front, clearance between motor pulley and motor endbell should be at least 1/64 inch.

(3) Requirement
With motor shaft endplay taken up toward the front, clearance between motor fan and drive belt should be at least 1/64 inch.

To Adjust
With motor pulley and fan assembly setscrew loosened, position pulley on the shaft. Tighten setscrew and recheck requirements.



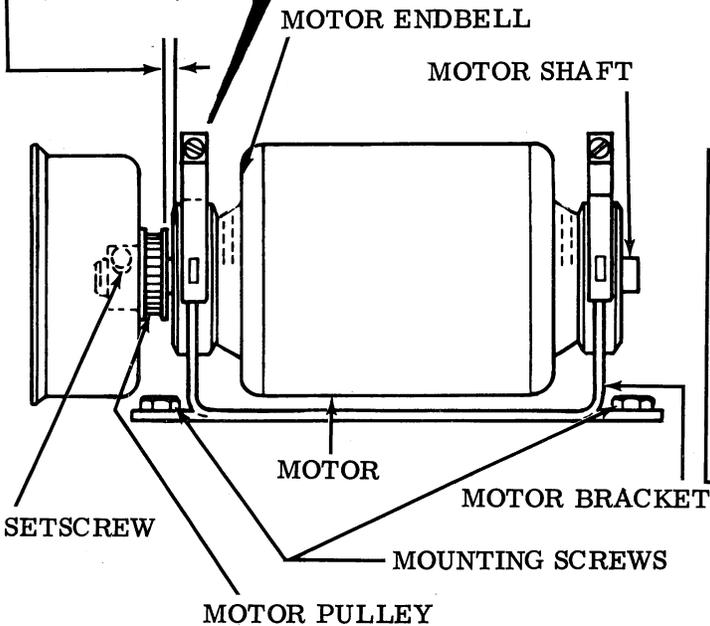
CLUTCH DRIVE BELT

(1) Requirement
With an 8 oz pressure applied to drive belt (midway between clutch and motor pulleys), deflection should be
Min 3/16 inch---Max 1/4 inch

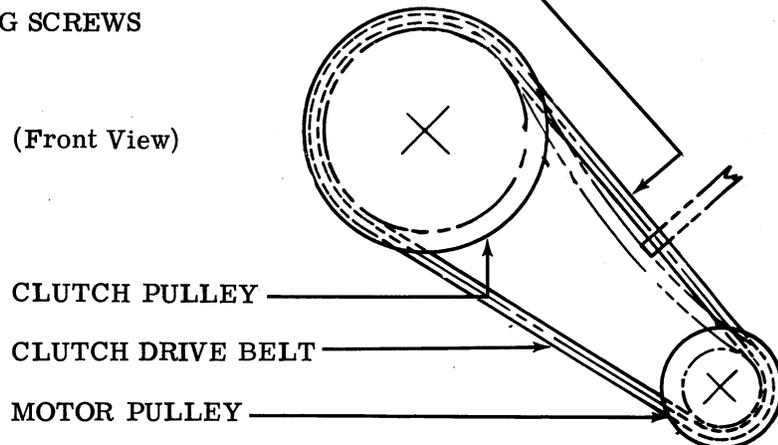
(2) Requirement
Motor shaft should be at right angles (approx) to drive belt.

To Adjust
With its mounting screws friction tight, position the motor bracket. Tighten screws and recheck the above requirements (1) and (2), and the related adjustment MOTOR PULLEY, requirement (3).

(Left View)



(Front View)



2.03 Hysteresis Clutch Assembly

HYSTERESIS CLUTCH TORQUE - DUAL MAGNET

To Check

With stepper drive spring disconnected from clutch follower shaft, place a torquemeter (direct ounce inch reading) or the wrench end of adjusting tool (TP318603) over clutch follower bushing with wrench handle in vertical position (12:00 o'clock).

Requirement

With motor running and spring scale hooked in hole of adjusting tool, pull at right angles to axis of wrench. Torque should be

Min 6-3/4 ounces---Max 7-3/4 ounces
or torquemeter reading of
Min 11 ounce inch---Max 12 ounce inch

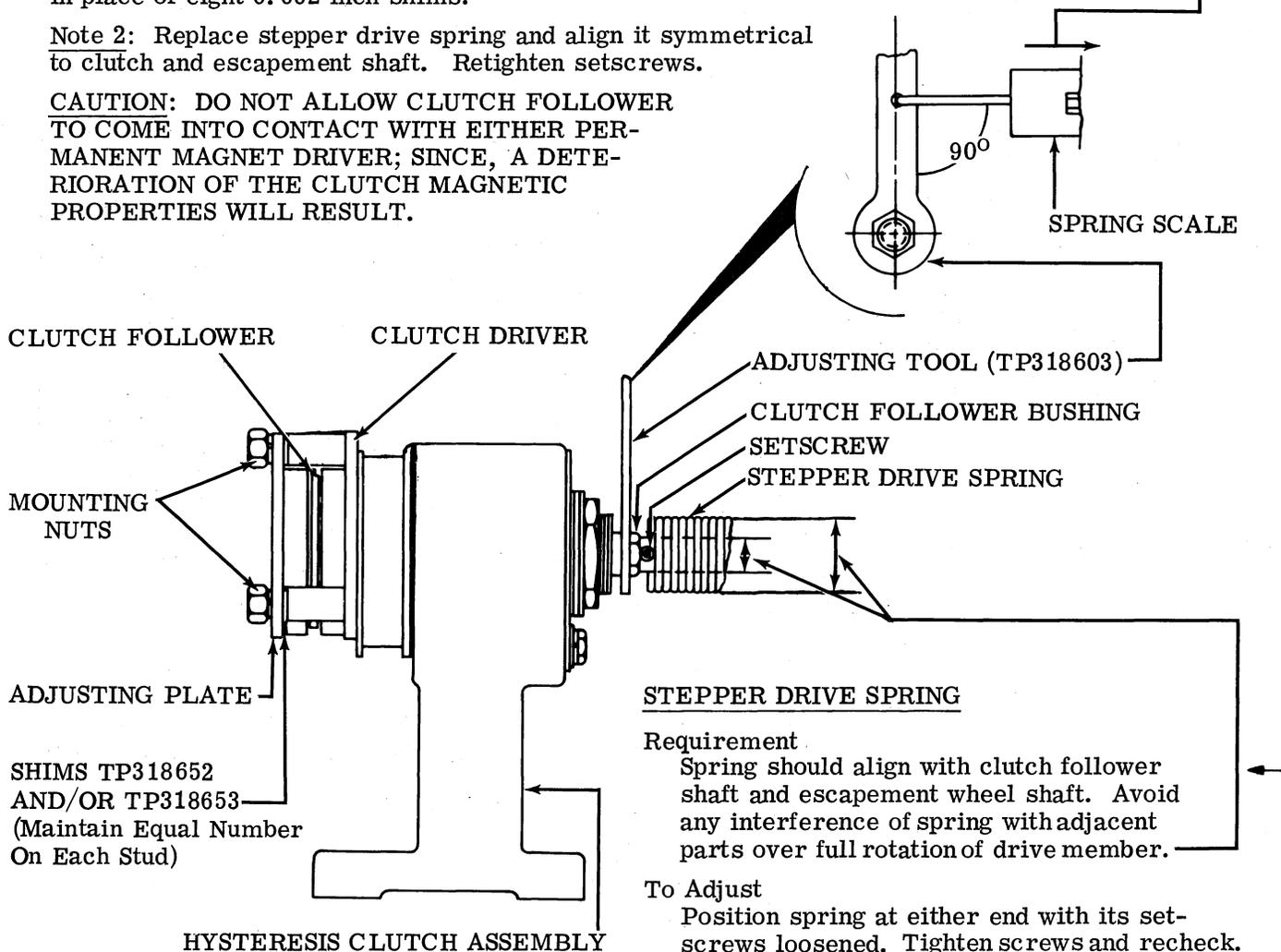
To Adjust (Observe Caution Notice)

Remove nuts (3) that secure clutch adjusting plate and carefully slide plate off its studs (3). Avoid any loss of shims or disturbing the equal count on each stud. Add or remove an equal number of shims on each stud (Note 1). Replace the plate and nuts and recheck torque requirements. Replace stepper drive spring and secure setscrews (Note 2).

Note 1: Use 0.002 inch shims (TP318652) or 0.016 inch shims (TP318653) to space the plate. One 0.002 inch shim added or removed from each post changes clutch torque by approximately 1/4 ounce inch. For convenience, one 0.016 inch shim may be used in place of eight 0.002 inch shims.

Note 2: Replace stepper drive spring and align it symmetrical to clutch and escapement shaft. Retighten setscrews.

CAUTION: DO NOT ALLOW CLUTCH FOLLOWER TO COME INTO CONTACT WITH EITHER PERMANENT MAGNET DRIVER; SINCE, A DEGRADATION OF THE CLUTCH MAGNETIC PROPERTIES WILL RESULT.



2.04 Feed Wheel Stepper Mechanism

ESCAPEMENT WHEEL AND PALLET ALIGNMENT

To Check

With armature held against its right or left core face (attracted position), align a tooth of escapement wheel opposite pallet on other side. Check requirement and repeat procedure with armature against other core face.

(1) Requirement

Clearance between projection of respective pallet and tip of selected tooth on escapement wheel.

Min 0.008 inch---Max 0.012 inch

(2) Requirement

In its attracted position, armature should be flush (Note 1, 2.05) with its respective core face.

(1) To Adjust (Refer to Note 2, 2.05)

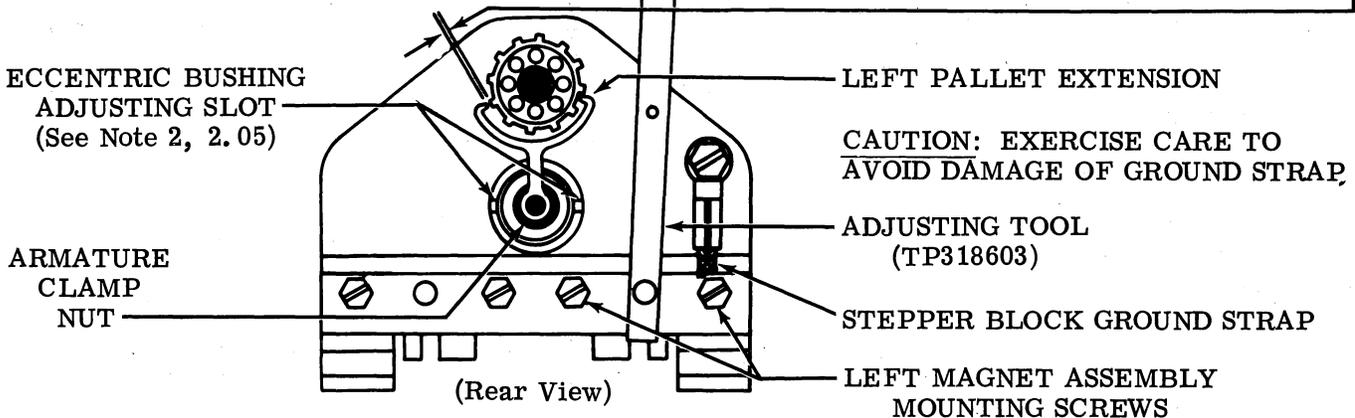
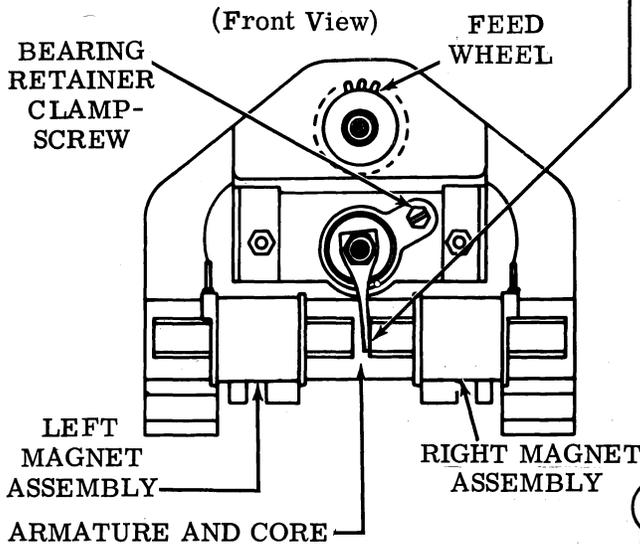
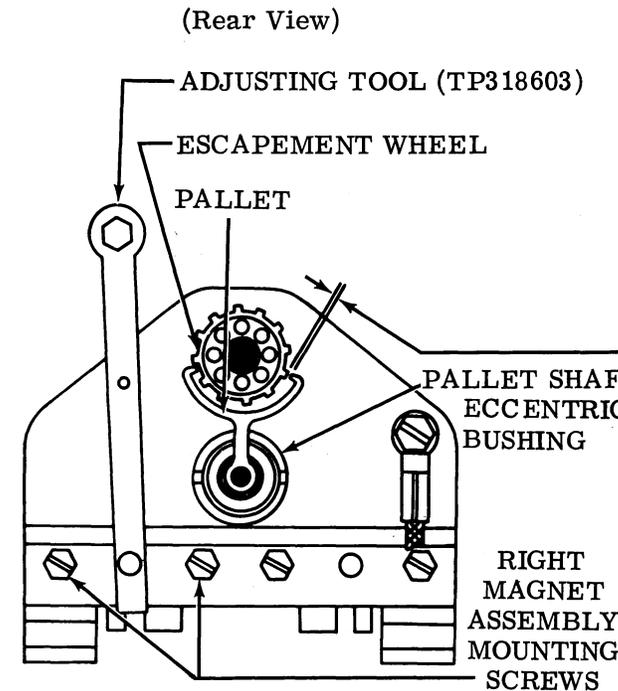
With armature retaining nut loosened, right coil assembly mounting screws loosened, and armature held against right magnet core, position right core assembly (Note 3, 2.05). Tighten coil assembly mounting screws.

(2) To Adjust

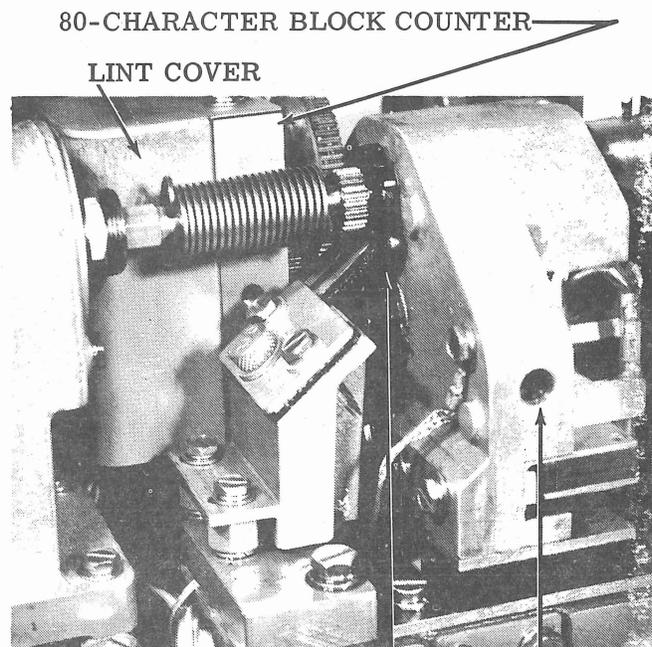
Hold armature against right core, loosen left coil assembly mounting screws, position core face firmly against armature and tighten left coil assembly mounting screws. Now place a 0.015 inch feeler gauge between left pallet extension and tip of tooth. Tighten armature retaining nut, remove gauge and check 0.008 to 0.012 inch clearance (Note 4, 2.05).

(3) To Adjust

With left core assembly mounting screws friction tight and armature held against left core face, position left core assembly (Note 3, 2.05) to obtain clearance of right pallet. Tighten left coil assembly mounting screws and recheck requirements (1) and (2). Refine where necessary and replace 80-character block counter.



2.05 Feed Wheel Stepper Mechanism (continued)



PALLET SHAFT

ECCENTRIC BUSHING
SETSCREWFEED WHEEL TRAVEL (STEP-TO-STEP)**To Check**

With motor energized and reader stepped at 2 to 20 ops, observe stop position of feed wheel pins (extending above lid) as they come to rest. Check pin excursion of successive steps to assure equal increments of feed wheel travel.

Requirement

No perceptible variation in stop position of respective teeth as feed wheel is stepped (10 holes-to-inch).

To Adjust

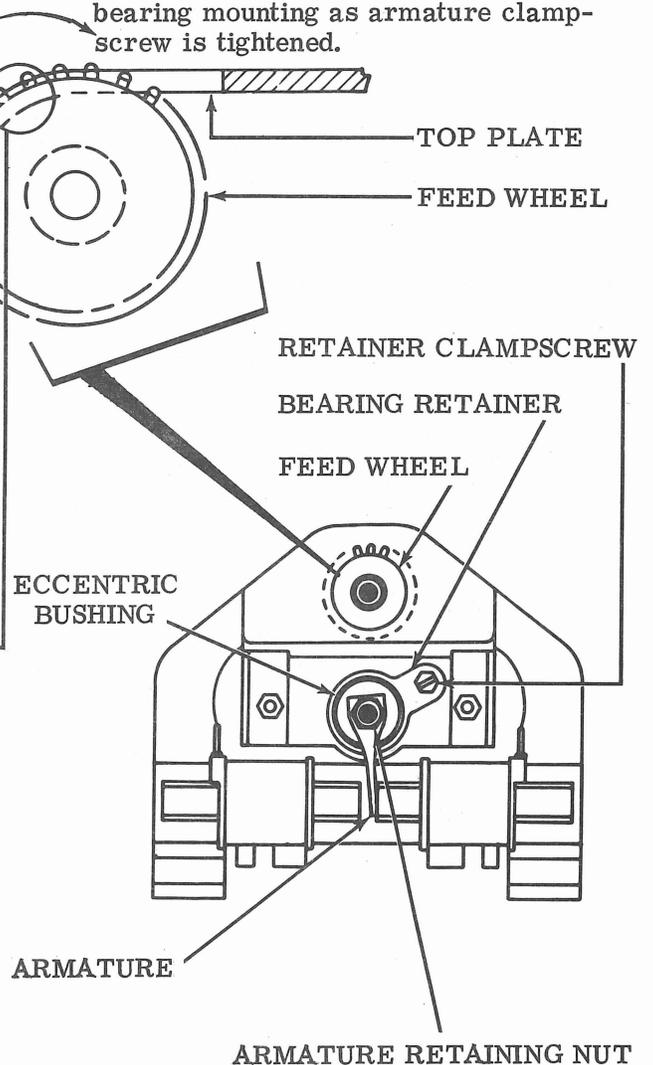
Remove lint cover, loosen front bearing retainer clampscrews and loosen setscrew that secures pallet eccentric bushing. Carefully move eccentric toward right or left to equalize each stop position (Note 1). Tighten all screws and replace lint cover. Recheck 2.04, ESCAPEMENT WHEEL AND PALLET ALIGNMENT adjustment, refine if necessary.

Note 1: Flush condition - armature engaging center portion of magnet core with no more than 0.002 inch gap existing at upper or lower edge of core.

Note 2: On initial adjustment, orient pallet shaft eccentric bushing with its high part directly at the right. Position bushing by its adjusting slot, with front bearing retainer clampscrew and the bushing setscrew loosened. To facilitate adjustment, remove 80-character block counter.

Note 3: Use adjusting tool TP318603 as indicated to position respective magnet assembly.

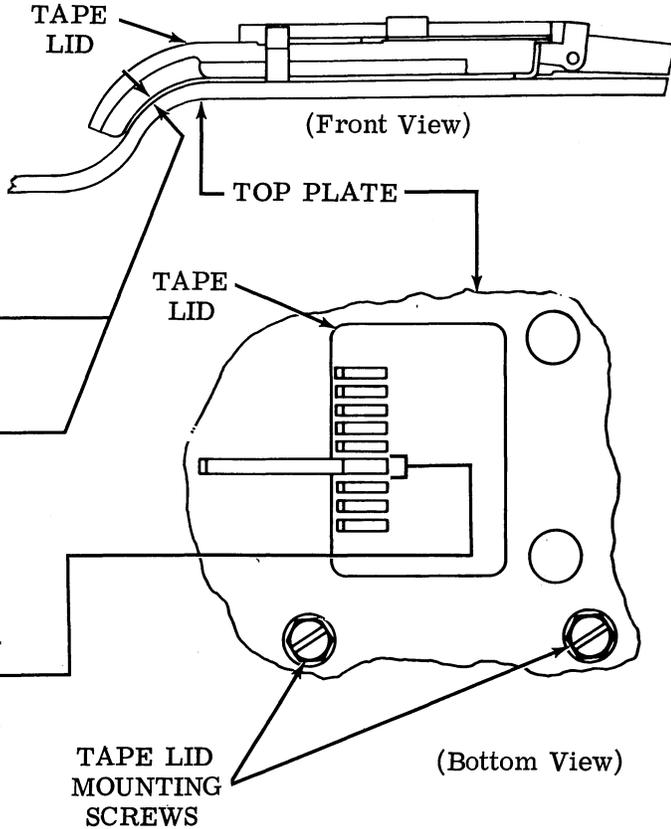
Note 4: Feeler gauge (0.015 inch) provides the margin needed for yield in bearing mounting as armature clampscrew is tightened.



2.06 Tape Sensing Mechanism

Note: Remove top plate assembly to facilitate adjustment of tape lid.

TAPE LID



To Check
Close tape lid.

(1) Requirement

Min---0.008 inch
at any point between tape lid and top plate with all play in tape lid taken up to the right.

Max---0.013 inch
between the curved portion of the tape lid and the top plate with all play in the tape lid taken up to the left.

(2) Requirement

Feed wheel slot (tape lid) should be centrally located with slot in top plate — gauge by eye.

To Adjust

With screws (2) that secure tape lid to top plate friction tight, position the lid. Tighten mounting screws and recheck clearance.

TAPE LID LATCH

(1) Requirement

Tape lid latch should move freely in slot of top plate.

To Adjust

Position latch bracket with its mounting nuts loosened. Tighten nuts and recheck requirement.

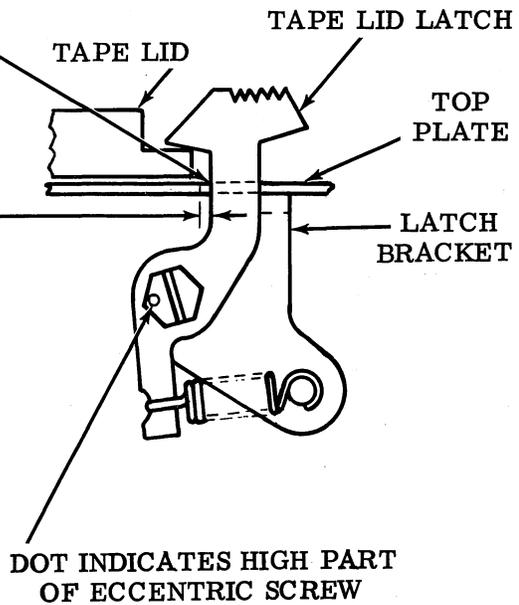
(2) Requirement

With tape lid latched and high part of eccentric toward the rear, clearance between edge of latch and edge of slot in top plate should be

Min 0.010 inch---Max 0.035 inch

To Adjust

With eccentric screw locknut friction tight, position screw and tighten locknut.



2.07 Tape Sensing Mechanism (continued)

Note: This adjustment may be performed by the operator.

Tape	Position of Tape Guides
8 level - 1 inch	2 - 7
7 level - 1 inch	2 - 7
6 level - 7/8 inch	2 - 6
6 level - 7/8 inch Adv. Feed Hole	1 - 5
5 level - 11/16 inch	3 - 4

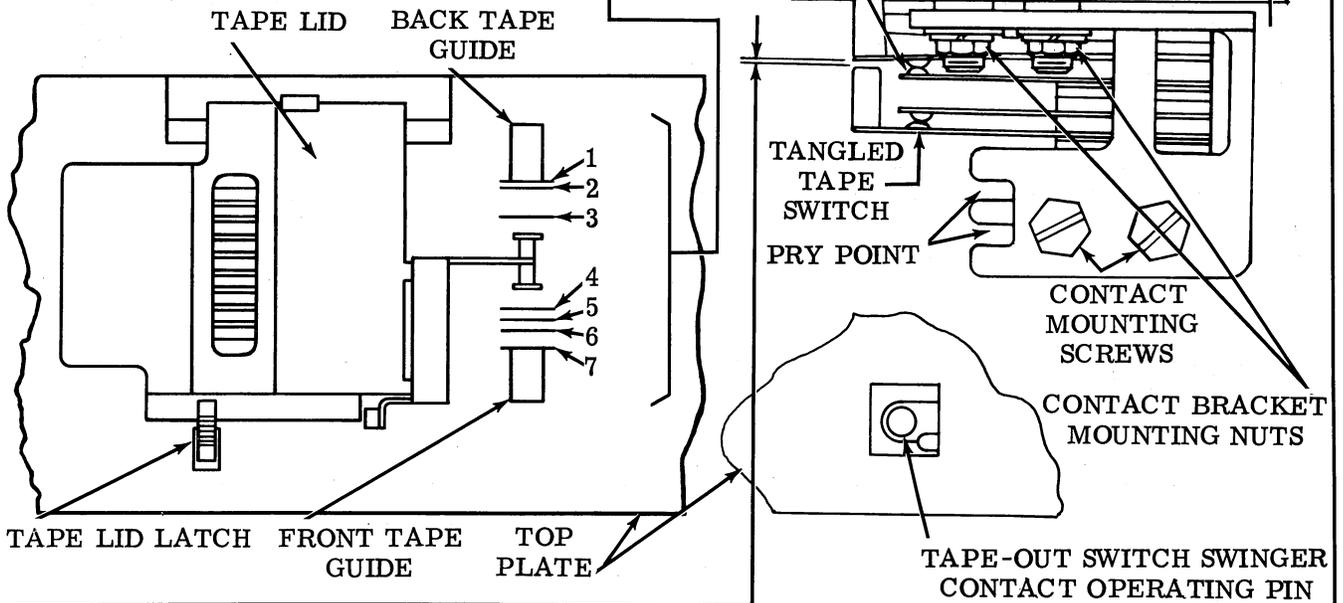
TAPE GUIDE

Requirement

Front and rear tape guide should be located in slot designated by chart for the particular tape to be sensed.

To Adjust

Lift respective guide upward to disengage its latch, then slide guide to scribe line on top plate corresponding to tape in use.



TANGLED TAPE AND TAPE-OUT CONTACT ASSEMBLY

(1) Requirement

Operating button linking tape bail with swinger of tape-out (upper) switch should be centrally located in clearance hole of top plate. Gauge by eye.

To Adjust

With nuts that secure contact assembly bracket to top plate loosened, position the bracket. Tighten the nuts and recheck requirement.

(2) Requirement

Clearance between top surface of operating button of lower swinger (tangled tape switch) and button of upper swinger should be

Min 0.003 inch---Max 0.010 inch

Insert 0.004 inch flat wire gauge between right end of tape bail and top plate (typical tape height).

To Adjust

With contact mounting screws friction tight, position bracket by means of its pry point. Tighten screws and recheck clearance.

2.08 Tape Sensing Mechanism (continued)

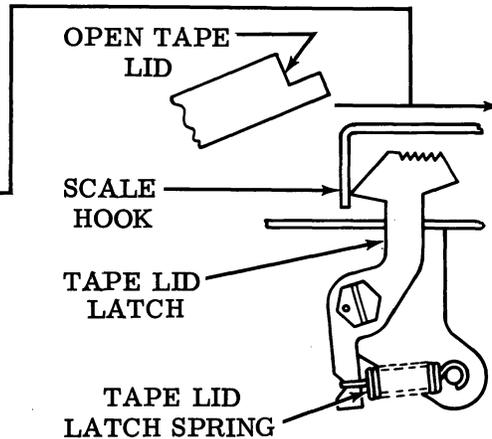
TAPE LID LATCH SPRING

Requirement

With tape lid open, it should require 5 to 7 ounces to start latch moving.

To Check

With the pull end of an 8 ounce scale over the latching corner, pull latch toward front of unit.



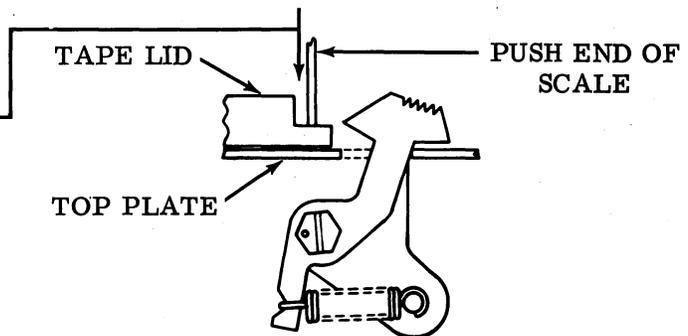
TAPE LID SPRING

Requirement

It should require 11 to 15 ounces of pressure to hold the tape lid down against top plate.

To Check

While holding tape lid latch clear of tape lid, use push end of a 32 ounce scale against tape lid latch slot and apply enough pressure to hold down the tape lid.



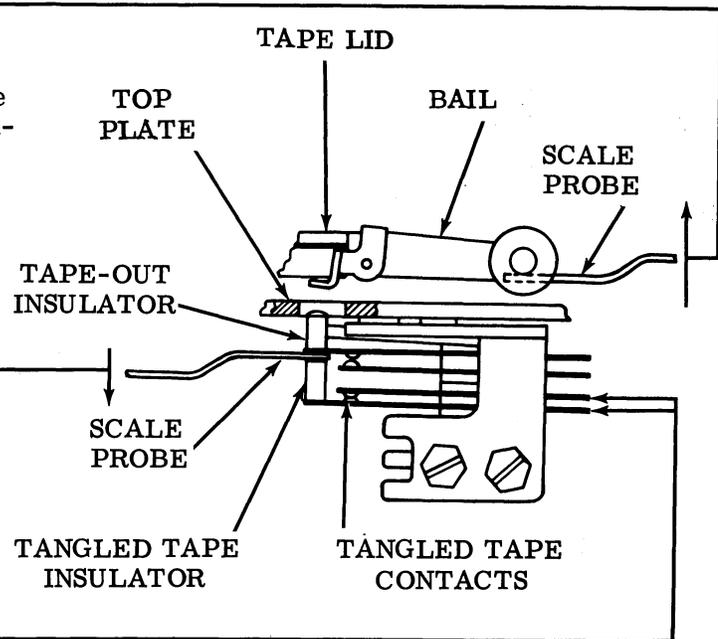
TANGLED-TAPE AND TAPE-OUT BAIL SPRING

Requirement

A pull of 15 to 30 grams is required to start raising the bail.

To Check

Hold unlatched tape lid slightly off top plate so bail does not touch tape-out contact insulator. Insert gram scale under right side of bail and measure tension required to raise the bail.



TANGLED TAPE CONTACT SPRING

Requirement

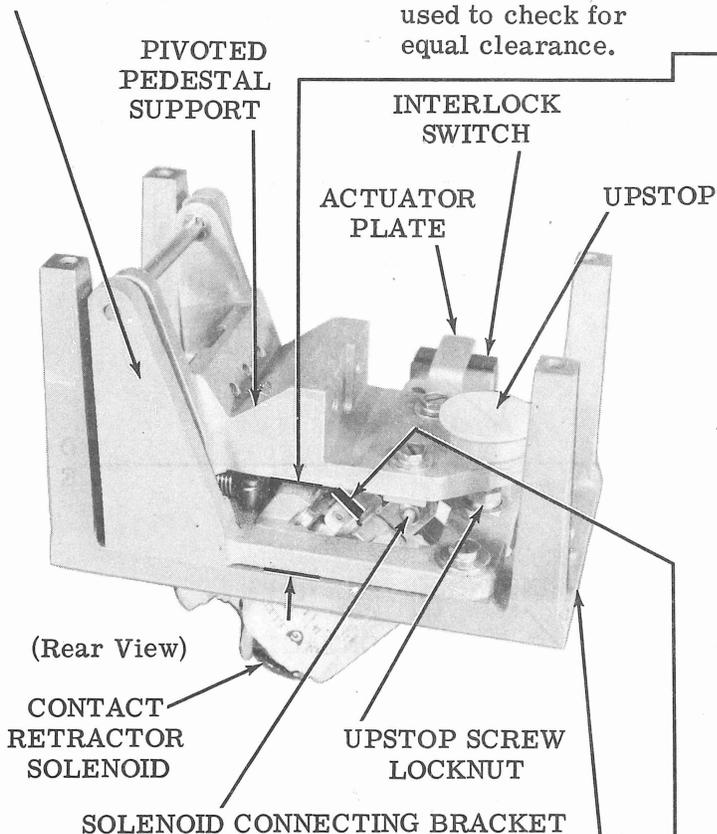
It should require 10 to 20 grams of downward pressure with gram scale inserted over insulator to open contacts.

To Check

With an ohmmeter connected across contacts, push the scale downward noting when the ohmmeter indicates contacts have been opened.

2.09 Code and Verifier Contact Retractor

PEDESTAL SUPPORT FRAME



CODE AND VERIFIER CONTACT PEDESTAL MOUNTING ASSEMBLY

CONTACT RETRACTOR SOLENOID

- (1) Requirement
Solenoid and solenoid connecting bracket should align with plane of plunger travel so that plunger functions without binding. (Check full travel.)
- (2) Requirement
With pivoted pedestal support in its uppermost position, clearance between solenoid pole piece and armature
Min 0.070 inch---Max 0.080 inch

To Adjust
With solenoid connecting bracket and solenoid mounting screws friction tight, align solenoid with its plunger travel and position bracket at right angles to plunger. Tighten bracket mounting screws then move solenoid up or down for (2) Requirement. Tighten screws and recheck for binds.

PIVOTED PEDESTAL SUPPORT

Requirement

With pivoted pedestal support resting at extreme upper limit of its travel, bottom surface of support should be parallel with pedestal support frame - approx 21/32 inch apart.

To Adjust

Loosen upstop screw locknut. Raise or lower the upstop by an allen wrench inserted in hex hole at bottom of screw. Hold screw with the wrench and clamp locknut.

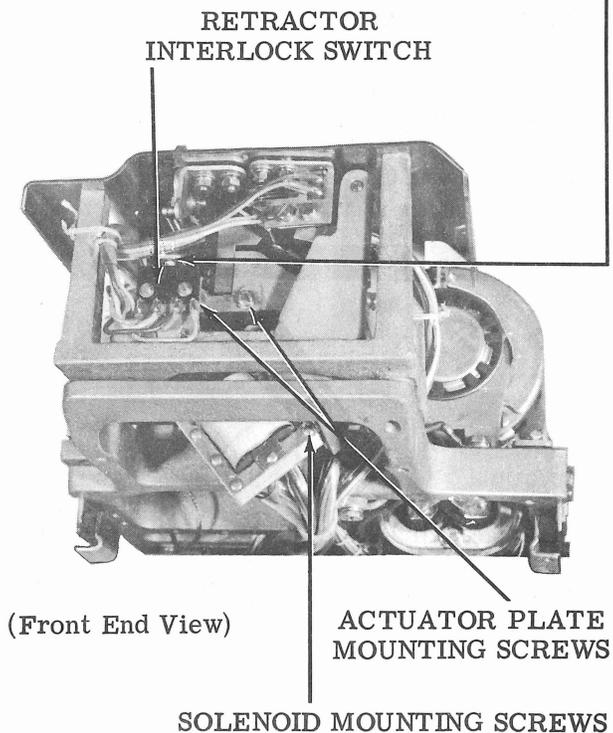
RETRACTOR INTERLOCK SWITCH

Requirement

With pivoted pedestal support in its extreme upper position, clearance between actuator plate and switch button should be barely perceptible.

To Adjust

Position actuator plate with its mounting screw loosened. Retighten screws.



(Front End View)

2.10 Code and Verifier Contact Retractor (continued)

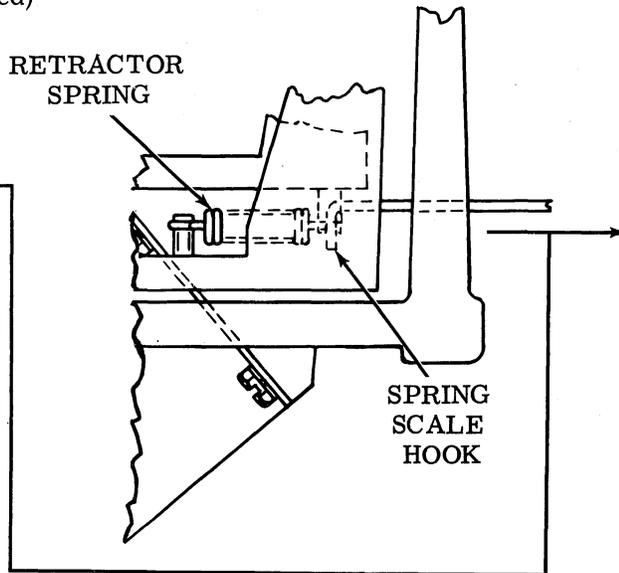
RETRACTOR SPRING

Requirement

Using a 4 pound spring scale it should require 1-1/2 to 3-1/2 pounds to pull springs to position length.

To Check

Insert hook of spring scale in unhooked retractor spring loop, pull scale and spring to its position length.



2.11 Contact Mechanism

Note: The following adjustments should be made with top plate assembled to reading head.

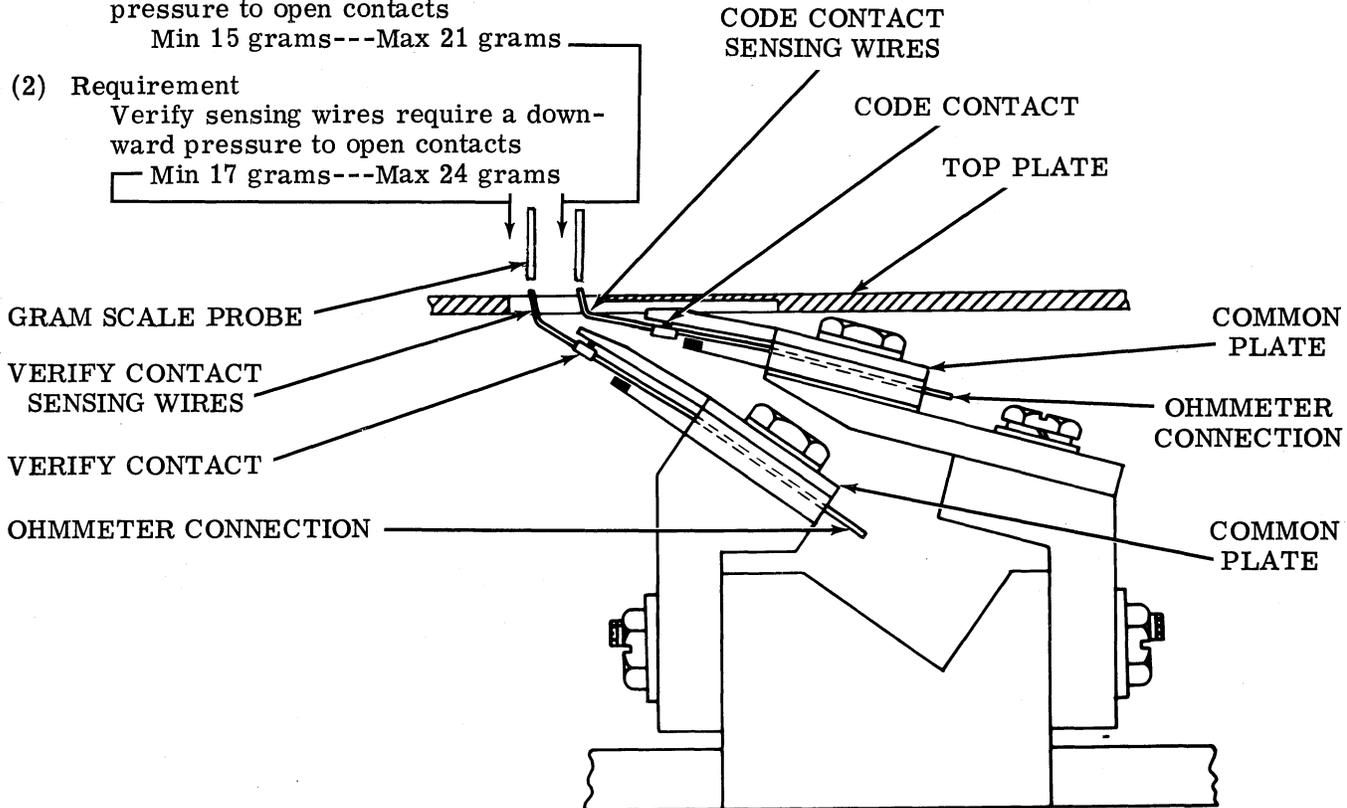
CODE AND VERIFY CONTACT SENSING WIRES

(1) Requirement

With reading head assembled, code sensing wires require a downward pressure to open contacts
Min 15 grams---Max 21 grams

(2) Requirement

Verify sensing wires require a downward pressure to open contacts
Min 17 grams---Max 24 grams



To Adjust

Connect an ohmmeter across individual contacts and common plate of associated contact assembly being checked, push each sensing wire down with probe end of gram scale until ohmmeter indicates contact is open.

2.12 Contact Mechanism (continued)

CODE AND VERIFY CONTACT ASSEMBLIES — PRELIMINARY

Requirement

The tip of each code and verify sensing wire should align front-to-rear and should space 0.100 inch apart, left-to-right, using TP95960 tape gauge. There should be approximately 0.085 inch between code and verify sensing wire tips.

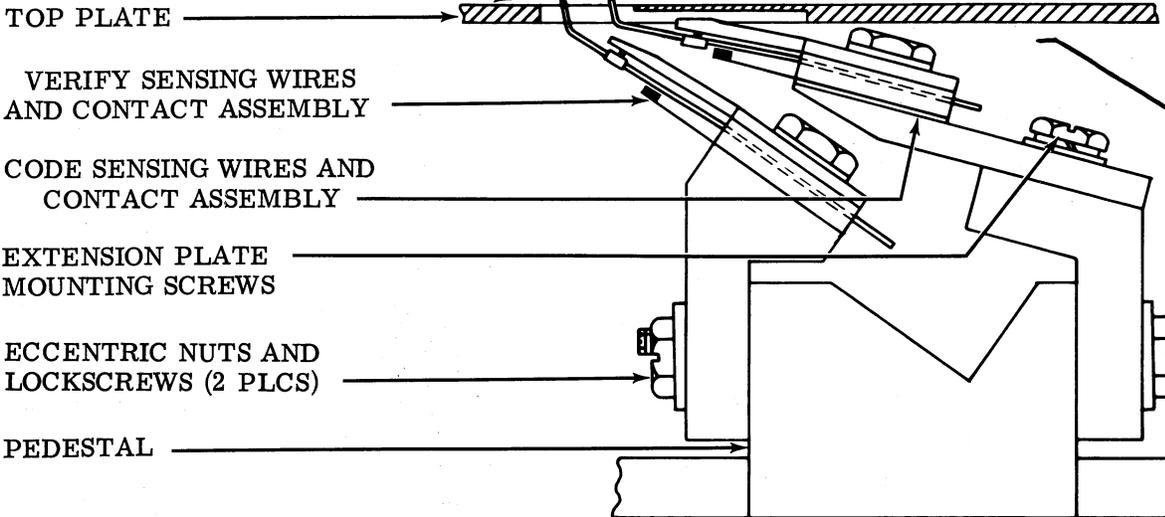
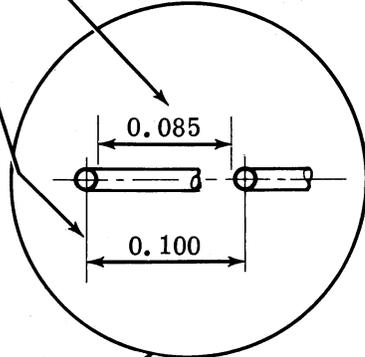
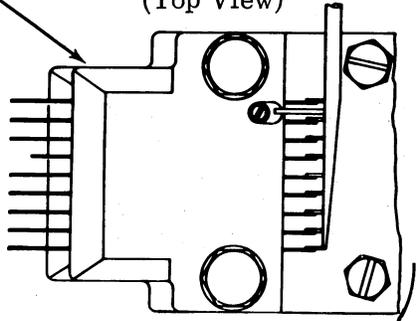
To Adjust

With top plate removed and extension plate mounting screws loosened, align code and verify sensing wires while maintaining wire separation dimension. Code and verify sensing tips should be approximately the same height.

CAUTION: EXERCISE UTMOST CARE IN HANDLING CONTACT ASSEMBLIES TO AVOID DAMAGE OR MISALIGNMENT OF PINS.

CODE AND VERIFY CONTACT ASSEMBLY

(Top View)

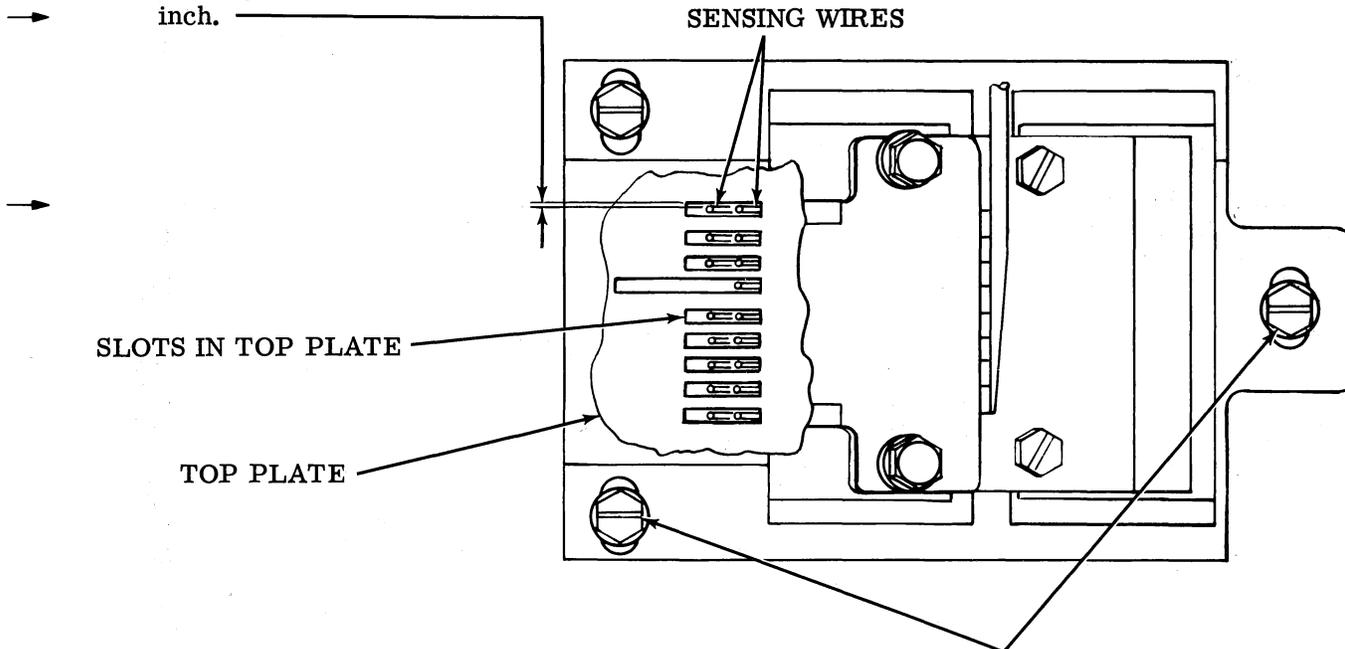


2.13 Contact Mechanism (continued)

CONTACT SENSING WIRES TO TOP PLATE AND TAPE LID

(1) Requirement

To keep the sensing wires from electrically shoring out, center sensing wires in the top plate and tape lid slot. Clearance between top plate slot and sensing wires should be at least 0.010 inch.

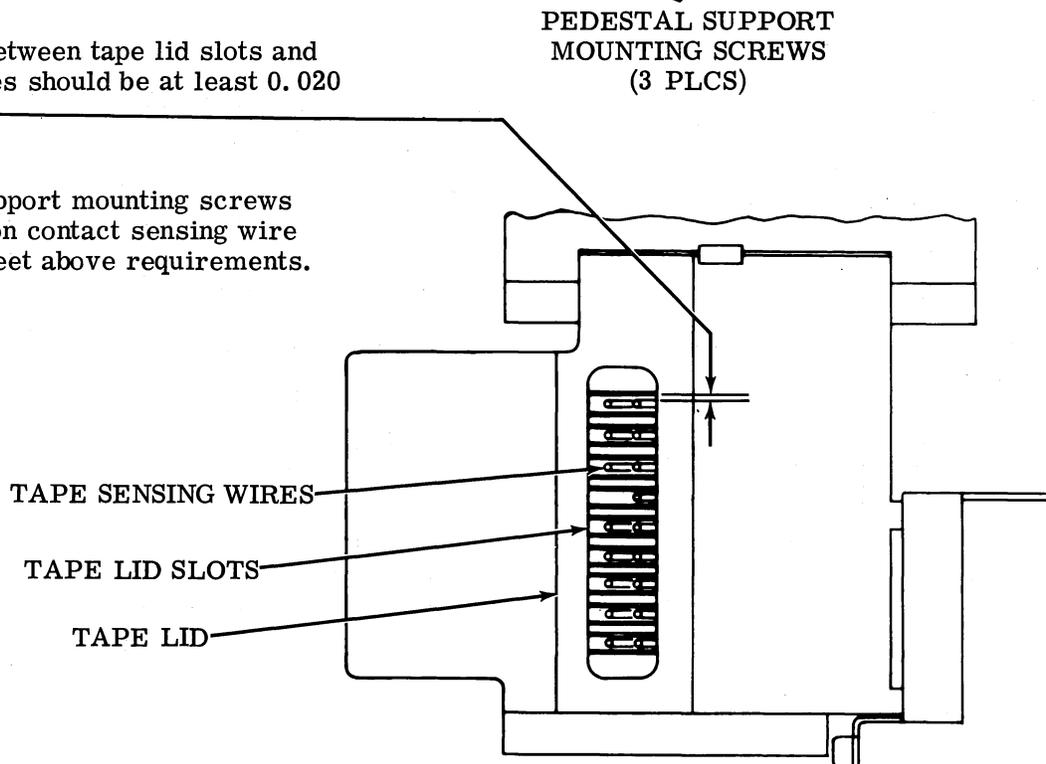


(2) Requirement

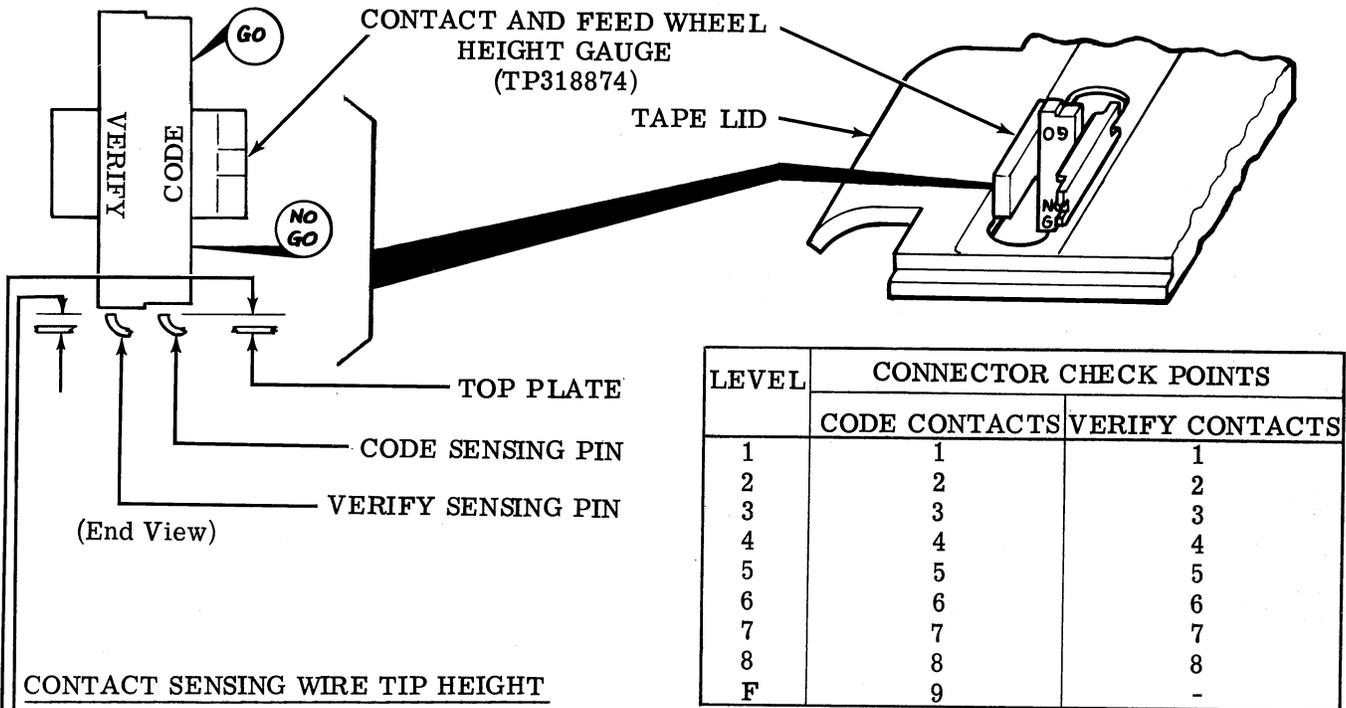
Clearance between tape lid slots and sensing wires should be at least 0.020 inch.

To Adjust

With pedestal support mounting screws loosened, position contact sensing wire assemblies to meet above requirements. Tighten screws.



2.14 Contact Mechanism (continued)



CONTACT SENSING WIRE TIP HEIGHT

Note: Before using height gauge be sure frame ground is separated from contacts and any external wiring to reader is not connecting the two.

To Check

With tape lid closed, insert GO side of sensing wire height gauge (TP318874) over opening of tape lid. Make certain that gauge is oriented with side marked VERIFY over verify sensing wires and side marked CODE is placed over code sensing wires. Connect an ohmmeter between reader frame and designated connector terminal (shown in above chart) for each level of the respective contact assembly. With gauge held firmly in place, an open circuit condition (high resistance path) should be indicated on ohmmeter for each contact as the second lead is moved from terminal-to-terminal on the connector. Then with gauge held firmly in NO GO position, ohmmeter should indicate continuity (low resistance path) on each level for both (code and verify) contacts.

(1) Requirement

Tip of each tape sensing wire in verify contact assembly should protrude above top plate by approximately 0.025 inch.

(2) Requirement

Tip of each tape sensing wire in code contact assembly should protrude above top plate by approximately 0.028 inch.

To Adjust

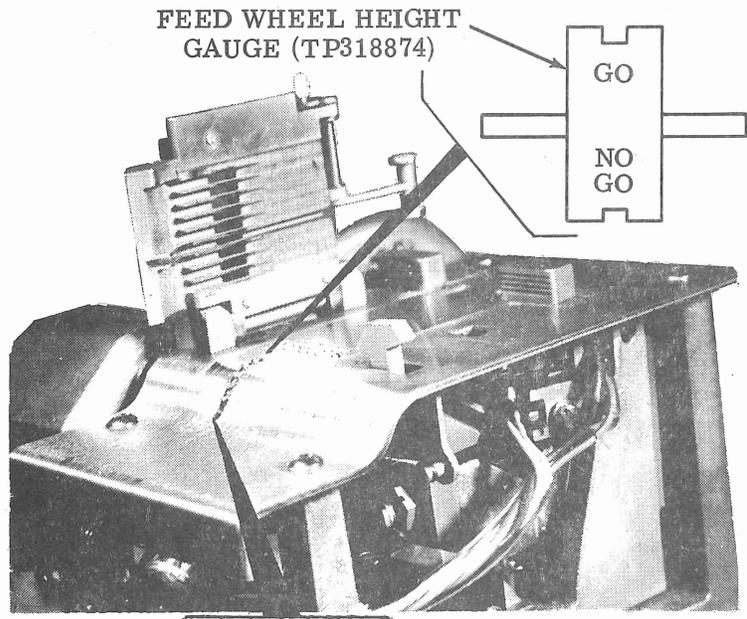
With eccentric nut lock screw loosened (verify or code), position respective eccentric nut.

Note: Turn each eccentric by small and equal increments to raise or lower contacts uniformly.

CAUTION: EXERCISE CARE IN ADJUSTING HEIGHT TO AVOID SENSING WIRE TIP COMING IN CONTACT WITH TOP PLATE AND GIVING AN ERRONEOUS SIGNAL. TIGHTEN SCREWS AND RECHECK REQUIREMENTS ABOVE; ALSO, THE PREVIOUS REQUIREMENT CONTACT SENSING WIRES TO TOP PLATE AND TAPE LID ADJUSTMENT, 2.13.

2.15 Tape Transport to Reading Head

TAPE SENSING AND TRANSPORT MECHANISM ALIGNMENT



(1) Requirement

Bottom surface of (reader frame) adjusting bushing should extend below frame by approximately 0.060 inch.

(2) Requirement

Feed wheel should be centrally located in slot of top plate (front to rear). Check through 360° rotation of feed wheel.

To Adjust

With feed wheel locknuts loosened (note left-hand thread), position sensing mechanism on its base. Locate mounting screws midway in their adjusting range. Then, position feed wheel midway (front to back) in slot of top plate. Tighten locknut (see caution note) and recheck clearance.

CAUTION: EXERCISE CARE AS LOCKNUTS ARE LOOSENED OR TIGHTENED TO AVOID DAMAGE BY JAMMING ESCAPEMENT WHEEL AGAINST PALLET.

(3) Requirement

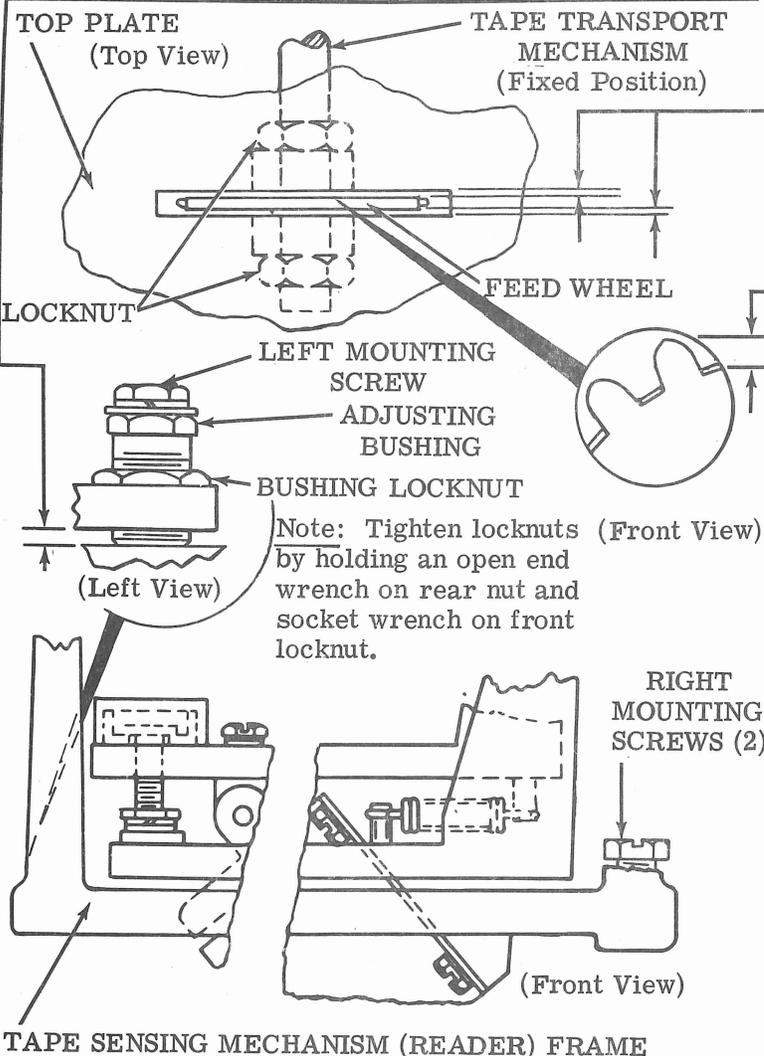
Tips of four feed wheel pins (top center and three at left) should extend above top plate
 Min 0.040 inch --- Max 0.046 inch

To Check

Place GO then NO GO slot of feed wheel height gauge (TP318874) firmly over feed wheel slot in top plate. Move gauge at right angles to plate following contour of area around feed wheel. Measurement to be made with feed wheel in its lowest position with respect to top plate and with escapement wheel against pallet in forward direction or rotation.

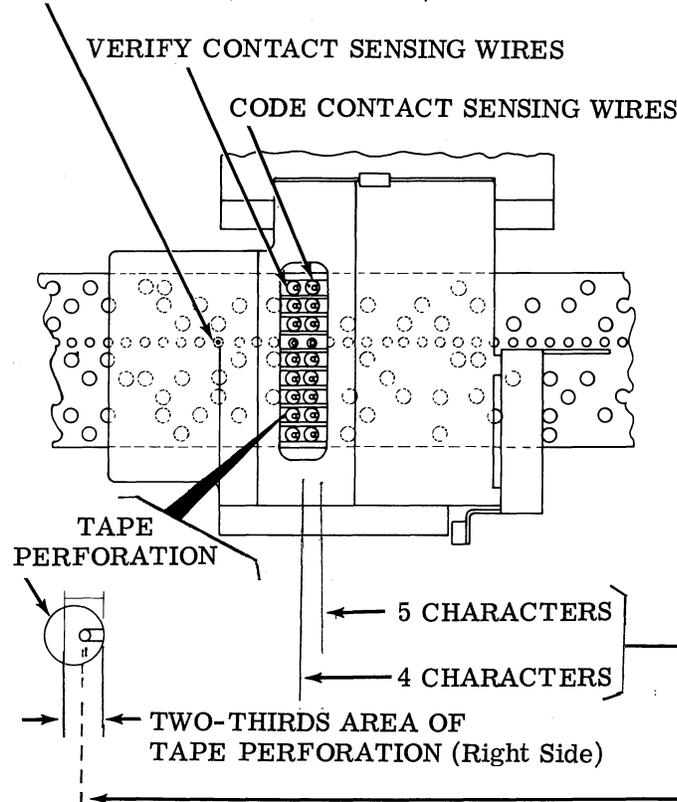
To Adjust

Loosen screws (two at right; one bushing clampscrew at left) that secure tape sensing mechanism to base of unit and, with frame adjusting bushing locknut loosened, slowly turn adjusting bushing upward or downward to obtain pin height. Tighten screws and locknut and recheck requirements.



2.16 Tape Transport to Reading Head (continued)

TOP FEED PIN (FEED WHEEL)



TAPE SENSING WIRES AND FEED WHEEL ALIGNMENT

(1) Requirement

To match the tape sensing wire tips to the tape holes, use a piece of fully perforated tape or a TP318875 contact alignment gauge. The escapement wheel should be held against the pallet in the forward direction. Tips of verify and code sensing wires should be spaced 4 and 5 characters respectively from the top pin on the feed wheel. See Notes 1 and 3.

(2) Requirement

Center the verify and code sensing wire tips in the right two-thirds of the holes in contact alignment gauge or fully perforated tape. See Note 2.

To Adjust

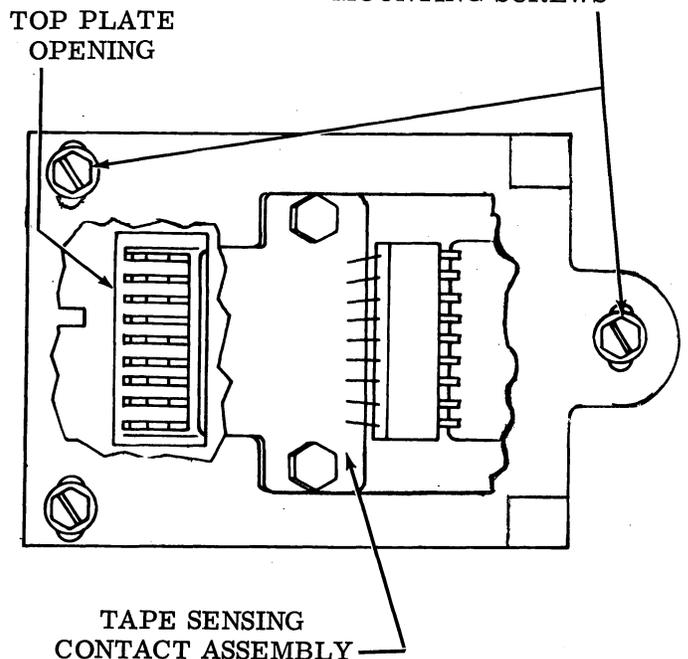
With the three pedestal support mounting screws loosened and adjustment setup as in requirement (1), position pedestal to adjust sensing wire tips. Recheck previous front-to-rear adjustment in CODE AND VERIFY CONTACT ASSEMBLIES, 2.12. Tighten mounting screws.

Note 1: Orient gauge with two small feed holes at left with inner hole over top feed pin (12 o'clock) and second hole over pin directly to left of top pin.

Note 2: Use short length of chadless tape with rub out function. Make sure tape meets tape standards of 10 holes to the inch with proper feed hole and/or code hole alignment.

Note 3: Should 6-level tape with advance feed hole be used, disregard use of gauge (TP318875) substitute a 6-level tape having the required format.

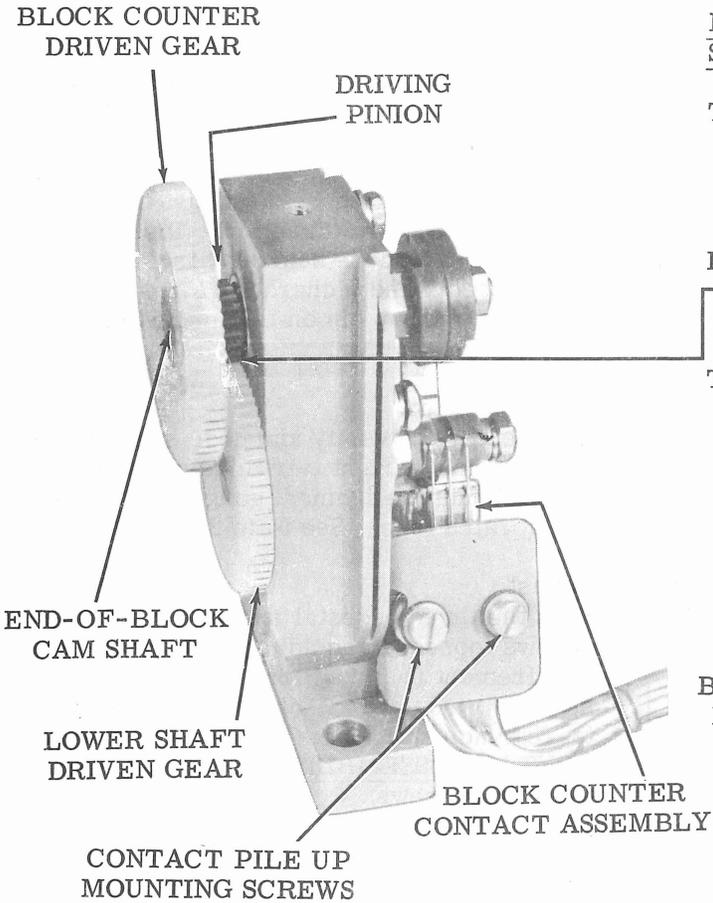
PEDESTAL SUPPORT (3 PLCS)
MOUNTING SCREWS



(Top View)
Rear
↑
Front

2.17 Error Detection and Correction (EDC) Block Counter

Note 1: To facilitate adjustment, remove the block counter contact assembly.



(Front Oblique View)

END-OF-BLOCK CAM AND CONTACT ASSEMBLY

Note 2: Keep high part of eccentric bushing at right (as viewed from front).

BLOCK COUNTER CAM AND CONTACT ASSEMBLY

BLOCK COUNTER CAM SHAFT (With Insert for Hex-Type Wrench)

BLOCK COUNTER AND END-OF-BLOCK SHAFT GEAR PLAY

To Check

Rotate driven gear a full rotation selecting point on periphery having least clearance with pinion.

Requirement

Gear play between driven gear (closest point) and pinion should be barely perceptible.

To Adjust

Loosen eccentric bushing setscrew and bearing retainer mounting screw on lower shaft assembly. With screwdriver placed in adjusting slot of eccentric, gently move bushing toward right or left (keep high part of eccentric toward right - as viewed from front). Tighten screws.

BEARING RETAINER MOUNTING SCREW

ECCENTRIC BUSHING ADJUSTING SLOT

SETSCREW (Eccentric Bushing Clampscrew)

END-OF-BLOCK CONTACT MOUNTING SCREWS

2.18 Error Detection and Correction (EDC) Block Counter (continued)

BLOCK COUNTER CONTACT

Requirement

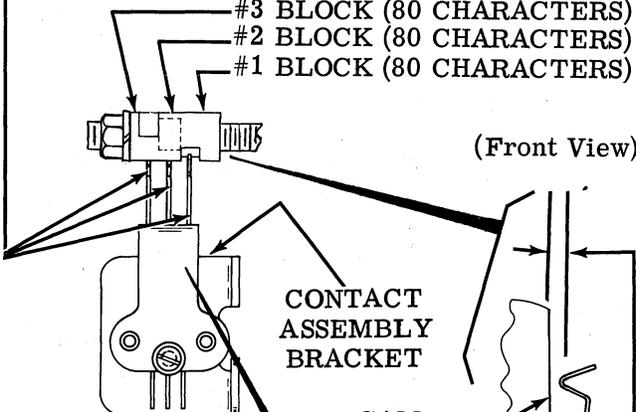
Formed end of each contact sensing wire should be positioned on its respective cam. ←

To Adjust

With contact pile up mounting screws friction tight, position respective sensing wire.

CONTACT CAMS

- #3 BLOCK (80 CHARACTERS)
- #2 BLOCK (80 CHARACTERS)
- #1 BLOCK (80 CHARACTERS)



(Front View)

BLOCK COUNTER CONTACT BRACKET

(1) Requirement

Clearance between formed end of respective contact sensing wire and flat surface of its cam (orient cam for maximum gap)

Min 0.005 inch---Max 0.015 inch

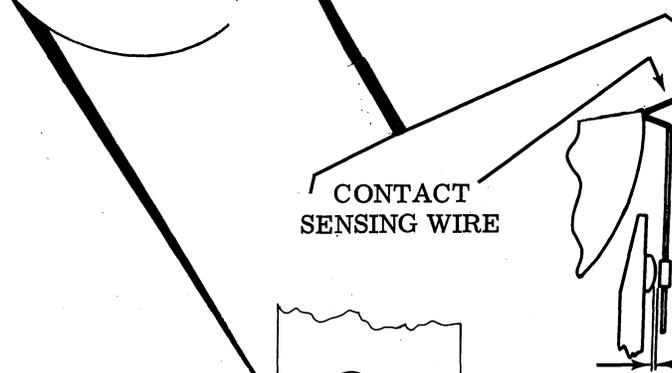
(2) Requirement

With formed end of respective contact sensing wire engaging high part of its cam, clearance between electrical contacts should be at least 0.005 inch.

To Adjust

With screws (2) that secure contact assembly bracket friction tight, position the bracket. Tighten screws and recheck requirements.

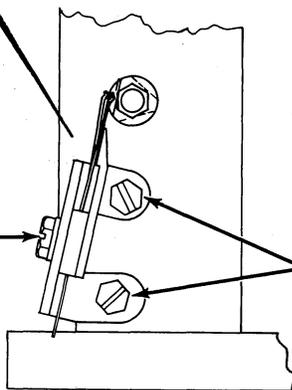
(Left Side View)



(Front View)

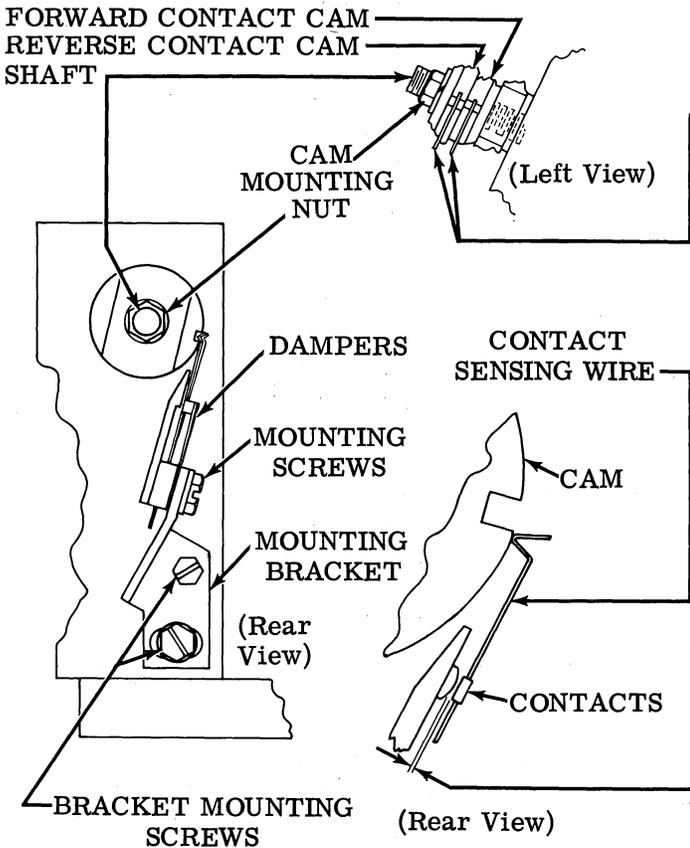
CONTACT PILE UP MOUNTING SCREWS

CONTACT ASSEMBLY BRACKET MOUNTING SCREWS



(Rear View)

2. 19 Error Detection and Correction (EDC) Block Counter (continued)



END-OF-BLOCK CONTACT SENSING WIRES

Requirement
 Contact sensing wire tips should be centrally located on its respective cam.

To Adjust
 With contact pile up mounting screws finger tight, position contacts to meet above requirements, and keep dampers centered under each contact wire. Tighten screws and recheck requirement.

END-OF-BLOCK CONTACTS AND BRACKET

Requirement
 To position end-of-block contacts for proper contact opening, turn cams so contact sensing wire tips are on the high part of its cam, adjacent to its slot. Each contact should open

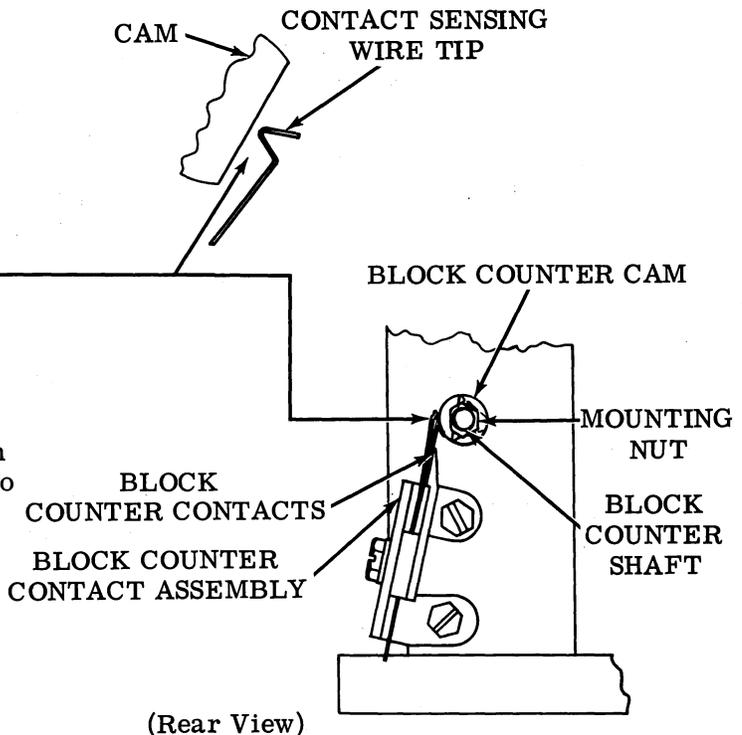
Min 0.002 inch---Max 0.004 inch

To Adjust
 With bracket mounting screws friction tight, position bracket until requirement is met. Tighten mounting screws and recheck requirement.

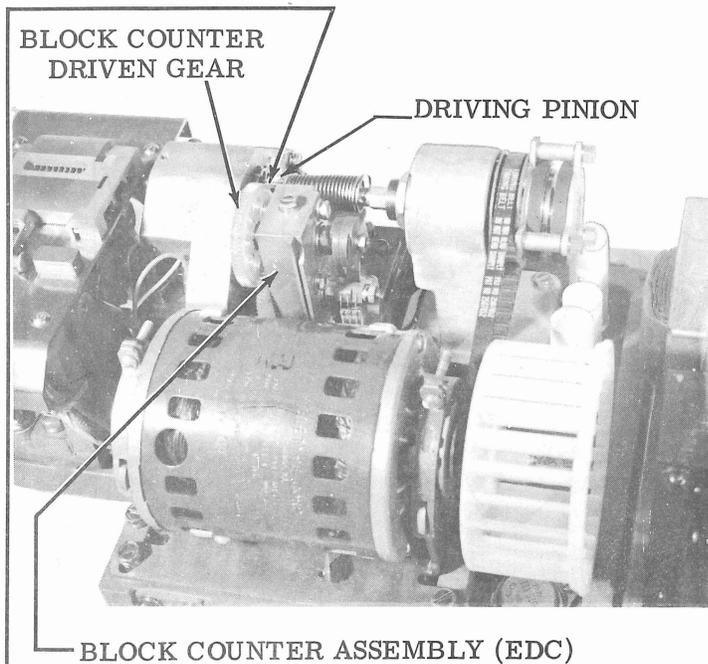
BLOCK COUNTER CONTACT CAM

Requirement
 To phase the block counter contacts to the end-of-block contacts, the forward end-of-block contact sensing wire tip should be in its slot on its respective cam. Any one of the flat surfaces on the block counter cam should be directly adjacent to its contact sensing wire tip.

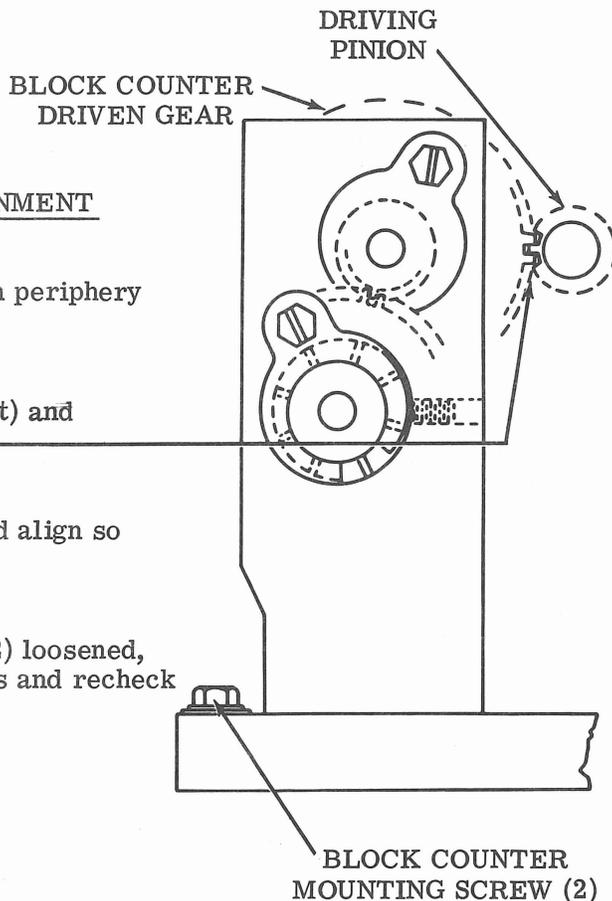
To Adjust
 Position block counter cam to meet above requirement. Loosen mounting nut on block counter shaft finger tight, while holding shaft with an appropriate wrench in the hexagon hole at the end of the shaft. To position cams use a wrench over grooved surface of cam. Tighten cam mounting nut and recheck requirement.



2.20 Error Detection and Correction (EDC) Block Counter (continued)



Note: Replace EDC block counter assembly on unit to make next adjustment. Should the block counter be removed from the reader unit after the following adjustment is made, it will be necessary to repeat the entire EDC block counter adjustment sequence.



BLOCK COUNTER DRIVEN GEAR AND PINION ALIGNMENT

To Check

Rotate driven gear a full turn, selecting point on periphery having least clearance with pinion.

(1) Requirement

Gear play between driven gear (closest point) and pinion should be barely perceptible.

(2) Requirement

Horizontal location of gear and pinion should align so that full width of teeth are engaged.

To Adjust

With block counter assembly mounting screws (2) loosened, position the assembly. Tighten mounting screws and recheck the requirements.

2.21 Error Detection and Correction (EDC) Block Counter (continued)

END-OF-BLOCK CONTACT CAMS

(1) Requirement

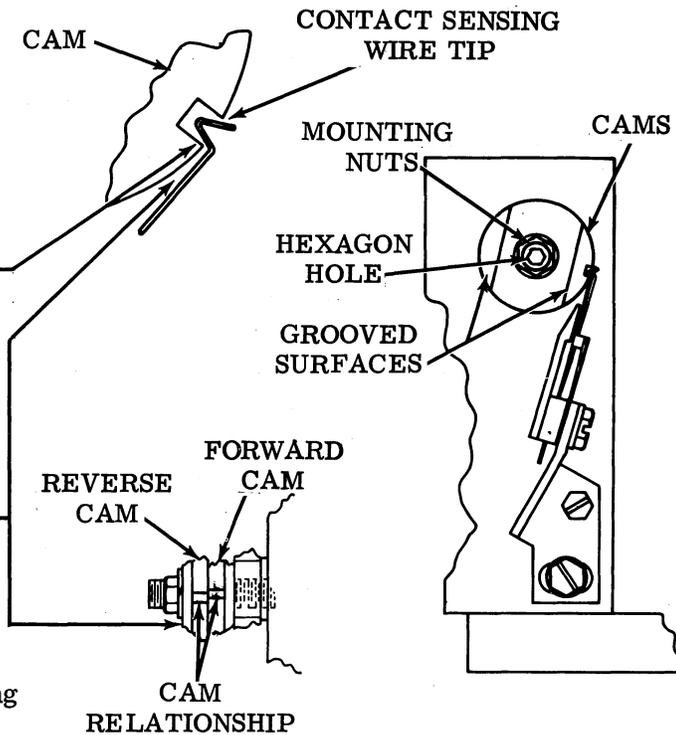
The timing relationship between cams should be properly phased to the stepper mechanism. In the stop position and forward direction, the contact sensing wire tip should be fully into the forward cam slot.

(2) Requirement

In the stop position and reverse direction, the reverse cam should be positioned so that its slot is in relation to the slot on the forward cam. The contact sensing wire tip should fall fully into the slot of its cam.

To Adjust

Each cam should be positioned on the shaft with its mounting nut loosened. The reverse cam must be removed to loosen the mounting unit for the forward cam. To loosen mounting nuts, use an appropriate wrench in the end of shaft hexagon hole to hold shaft in place. Cams are positioned with an open end wrench over their grooved surfaces.



LUBRICATOR

To Check

The lubricator should be adjusted to dispense the correct amount of oil for the escapement mechanism and have clearance from adjacent components.

(1) Requirement

The leather wick should be in full contact with the side of the escapement wheel, but should not be deflected more than 1/32 of an inch as gauged by eye.

(2) Requirement

The leather wick should also clear the upper shaft gear on the EDC block counter by a minimum of 1/16 inch.

To Adjust

With lubricator mounting screws finger tight, position lubricator to meet requirements (1) and (2). Tighten screws and recheck requirements.

