28 TRANSMITTER DISTRIBUTOR BASES

(SINGLE MOUNTING AND MULTIPLE MOUNTING)

ADJUSTMENTS

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1. GENERAL

1.01 This section covers the requirements and adjusting procedures for the 28 transmitter distributor bases, both single mounting and multiple mounting. Three types of single mounting bases and two types of multiple mounting bases are covered.

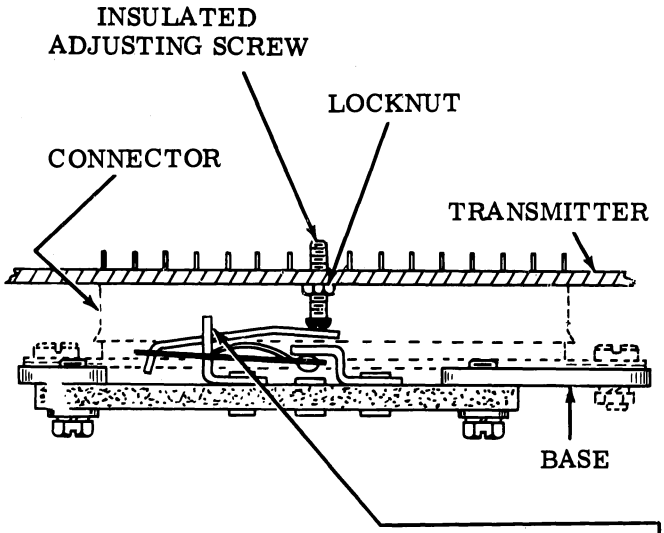
1.02 Before attempting to adjust a base, disconnect the electric power.

1.03 The adjustments of the five different types of bases are treated separately in this publication for clarity.

Prepared for American Telephone and Telegraph Company by Teletype Corporation

2. ADJUSTMENTS

2.01 Single Contact Single Mounting Bases



TRANSMITTER DISTRIBUTOR GEAR

Requirement
There should be a barely perceptible amount of backlash between the intermediate driving gear and the transmitter distributor gear.

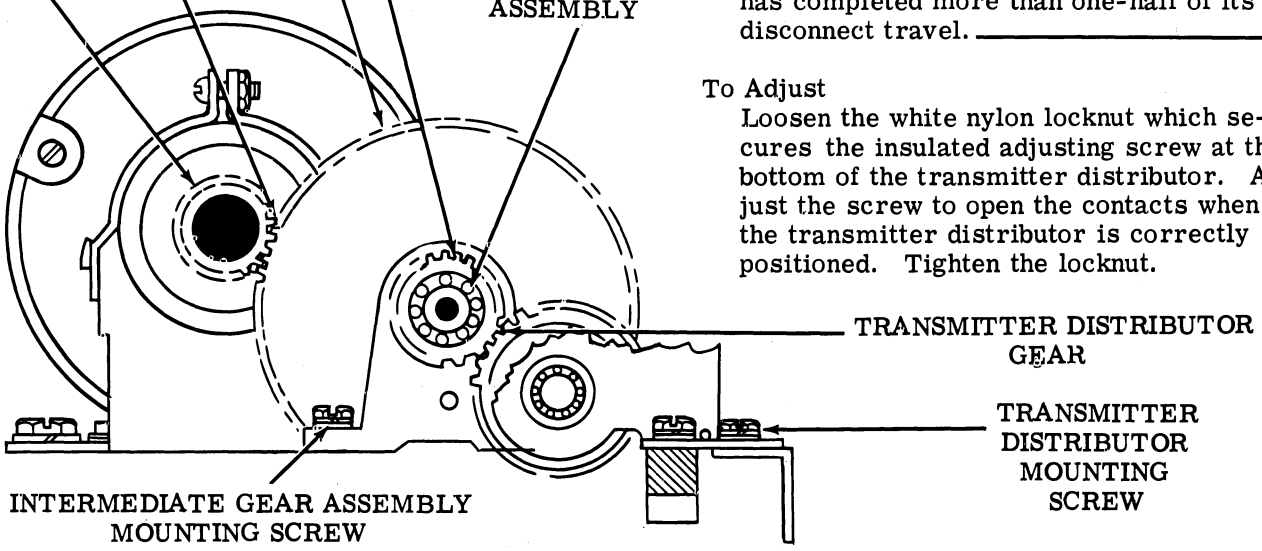
To Adjust
Position the transmitter distributor with its three mounting screws loosened.

INTERMEDIATE SHAFT ASSEMBLY

Requirement (Regular Size Base)
There should be a perceptible amount of backlash between the motor pinion and the intermediate driven gear.

Requirement (Miniature Base)
The clearance between the motor pinion and the intermediate driven gear should be Min 0.015 inch---Max 0.020 inch at the point where backlash is least.

To Adjust
Position the intermediate gear assembly with its mounting screws loosened.



LINE SHUNT SWITCH
(All Single Contact Bases)

Requirement
The line shunt switch should open when a transmitter distributor is placed in position on the base. The contacts should close before the transmitter distributor connector has completed more than one-half of its disconnect travel.

To Adjust
Loosen the white nylon locknut which secures the insulated adjusting screw at the bottom of the transmitter distributor. Adjust the screw to open the contacts when the transmitter distributor is correctly positioned. Tighten the locknut.

2.02 Single Contact Multiple Mounting Bases (Common Speed)

BELT TENSION

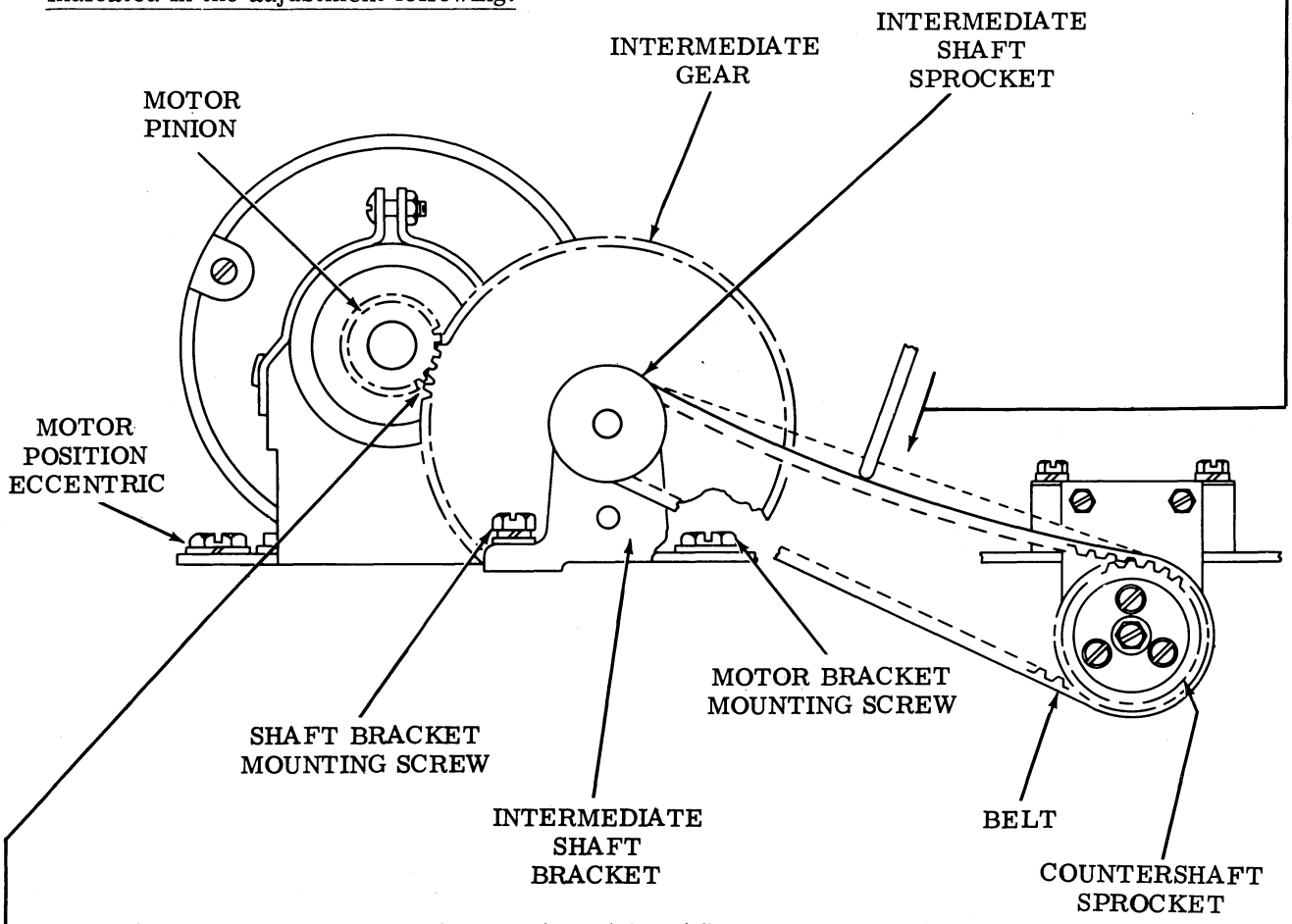
Requirement

Place a spring scale perpendicular to the belt about midway between the two sprockets, and push down. A force of 5 ounces should deflect the belt approximately 1/4-inch from a straightedge placed across the top of the two sprockets.

To Adjust

Loosen the two screws which secure the intermediate shaft bracket. Position the intermediate shaft bracket to meet the requirement.

Note: It may be necessary to move the motor to the rear to permit adjustment of the intermediate shaft bracket. If so, loosen the four motor mounting screws and the eccentric locking screw at the rear motor mount. It will be necessary to reposition the motor as indicated in the adjustment following.



MOTOR PINION - INTERMEDIATE GEAR BACKLASH

Requirement

There should be only a perceptible amount of backlash between the motor pinion and the intermediate gear at their closest point.

To Adjust

Loosen the four motor mounting bracket screws and eccentric locking screw at the rear motor mounting bracket.

2.03 Single Contact Multiple Mounting Bases (Common Speed) (continued)

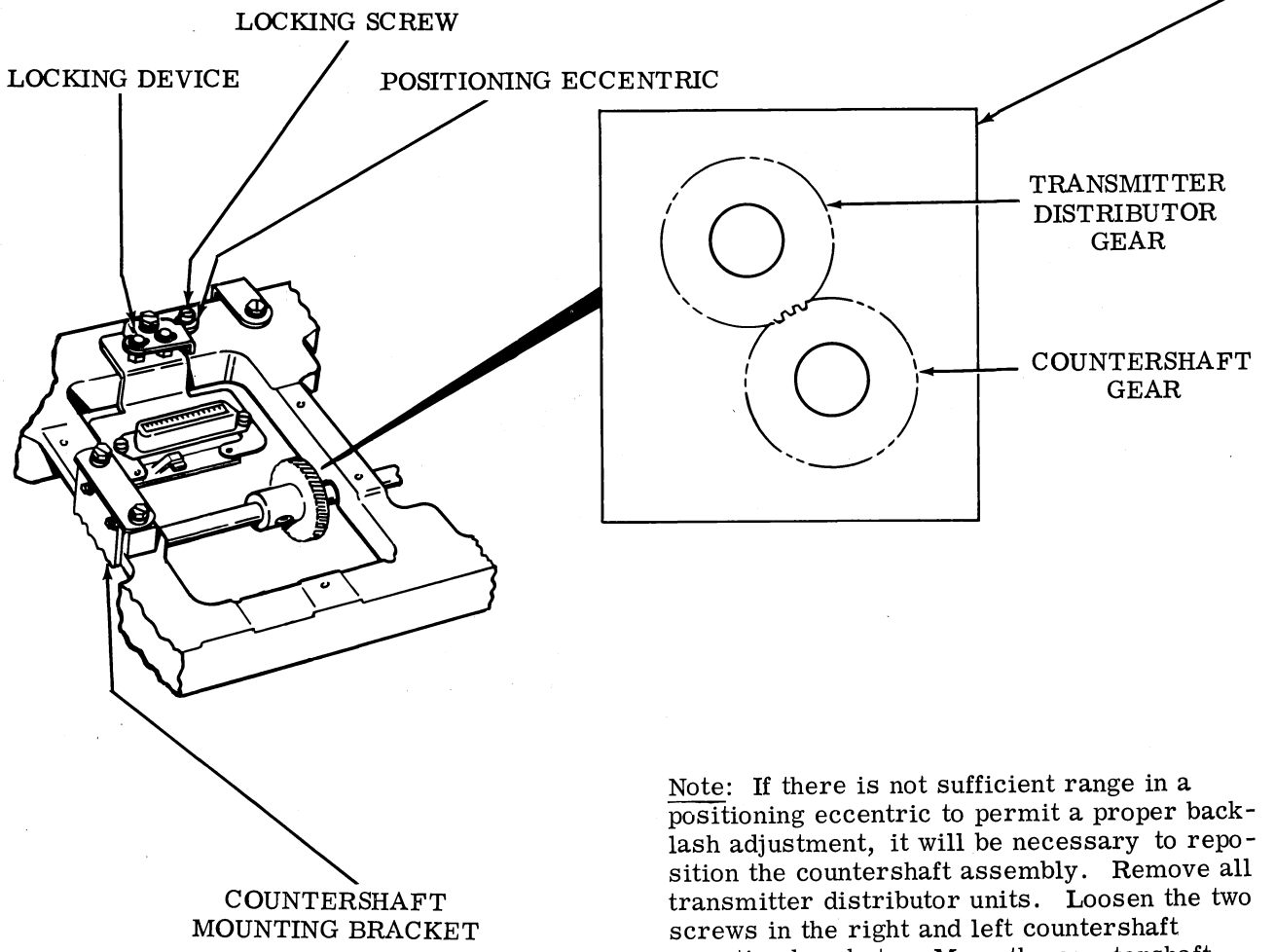
TRANSMITTER DISTRIBUTOR POSITIONING

Requirement

There should be a barely perceptible backlash between the transmitter distributor gear and the countershaft gear at the point of minimum clearance.

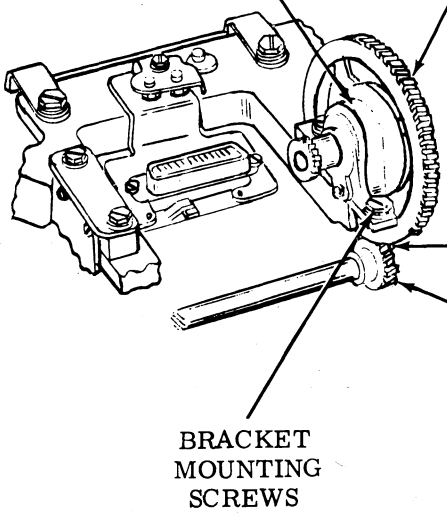
To Adjust

Loosen the positioning eccentric locking screw and position the locking device to the left. Place the transmitter or transmitter distributor successively in each of the three mounting positions and adjust in the following manner. Engage the connector on the transmitter distributor with its mating connector on the base, and mesh the transmitter distributor gear with the countershaft gear. Hold the transmitter distributor against its positioning eccentric and adjust the eccentric to meet the requirement. Tighten the eccentric locking screw.



Note: If there is not sufficient range in a positioning eccentric to permit a proper backlash adjustment, it will be necessary to reposition the countershaft assembly. Remove all transmitter distributor units. Loosen the two screws in the right and left countershaft mounting brackets. Move the countershaft assembly forward or to the rear as required, and keep the bracket assemblies parallel so as not to bind or place a strain on the countershaft. Tighten the bracket mounting screws. All prior adjustments will have to be repeated.

2.04 Single Contact Multiple Mounting Bases (Variable Speed)



INTERMEDIATE GEAR - COUNTERSHAFT GEAR BACKLASH

Requirement

There should be only a perceptible amount of backlash between the intermediate gear and its associated countershaft gear at the point of minimum clearance.

To Adjust

Loosen the two screws holding the intermediate shaft bracket and position the bracket to meet the requirement. Tighten the bracket mounting screws.

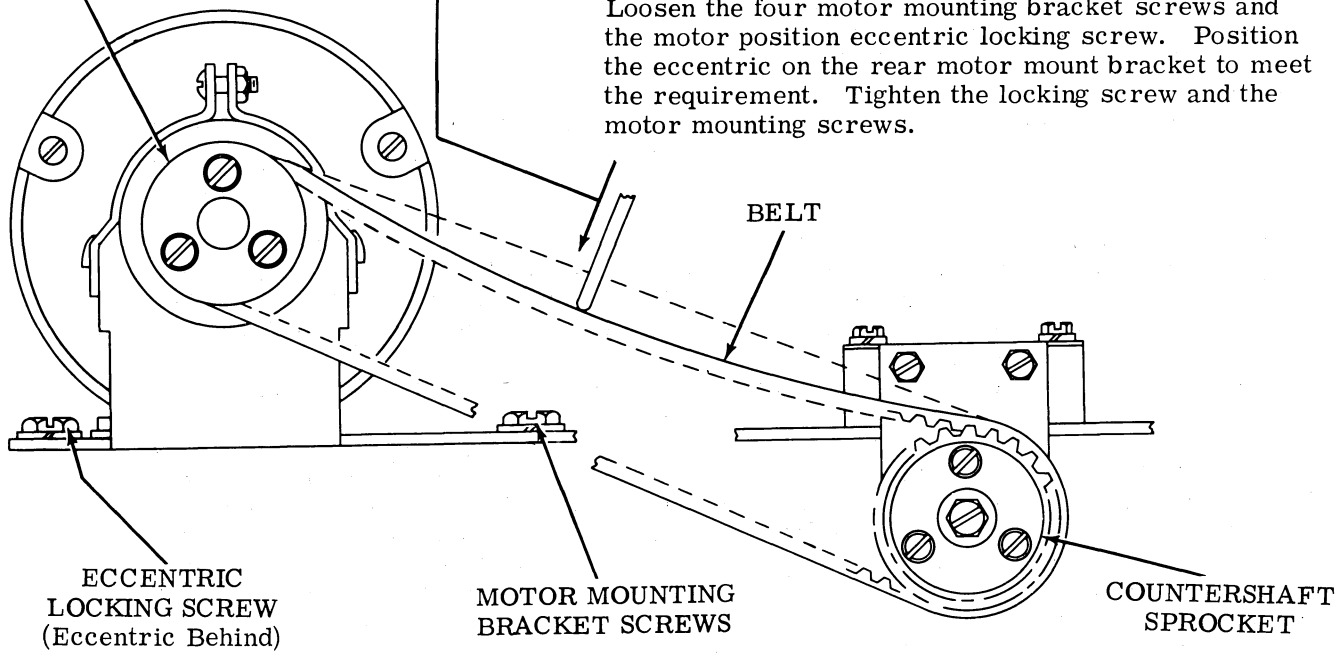
BELT TENSION

Requirement

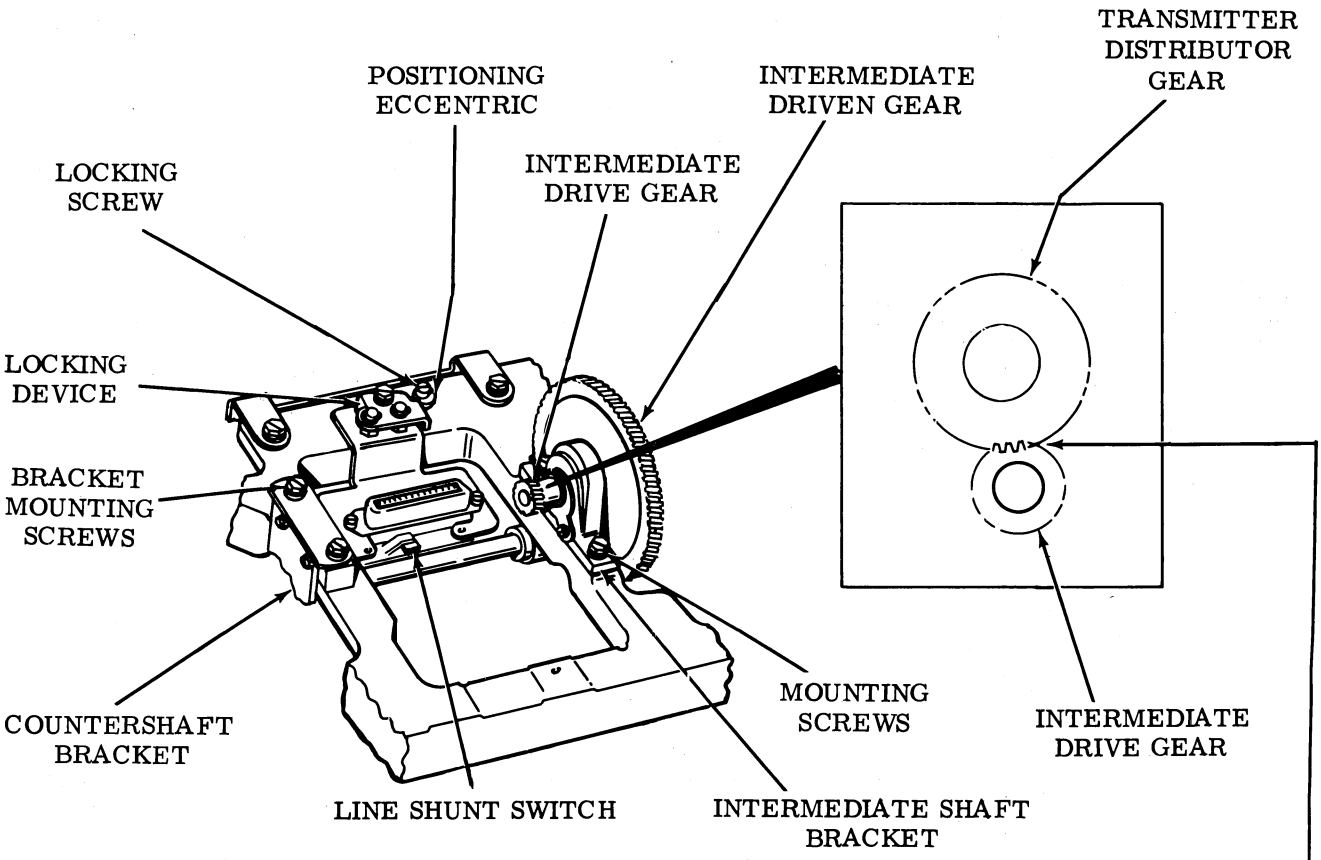
Place a spring scale perpendicular to the belt about midway between the two sprockets, and push down with a force of 5 ounces. The belt should deflect approximately 3/8-inch from a straightedge placed across the top of the two sprockets.

To Adjust

Loosen the four motor mounting bracket screws and the motor position eccentric locking screw. Position the eccentric on the rear motor mount bracket to meet the requirement. Tighten the locking screw and the motor mounting screws.



2.05 Single Contact Multiple Mounting Bases (Variable Speed) (continued)



TRANSMITTER DISTRIBUTOR POSITIONING

Requirement

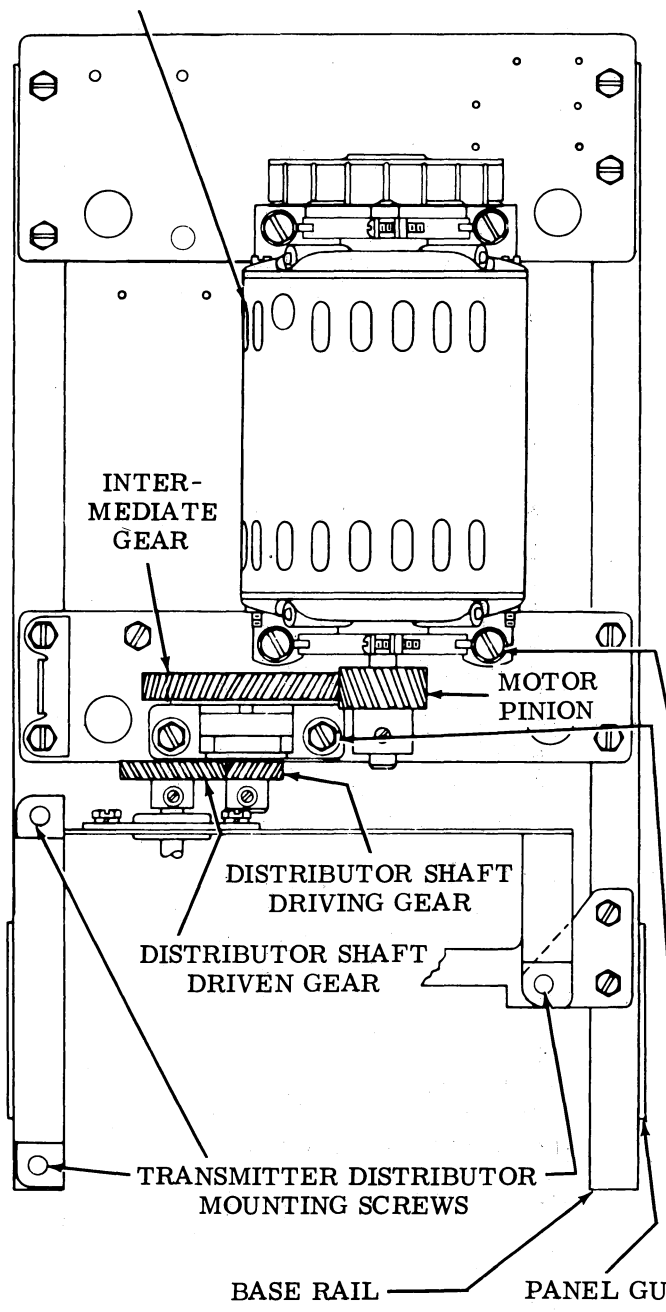
There should be a barely perceptible backlash between the transmitter distributor gear and its associated intermediate gear at the point of minimum clearance.

To Adjust

Loosen the positioning eccentric locking screw and position the locking device to the left. Place the transmitter or transmitter distributor successively in each of the three mounting positions and adjust in the following manner. Engage the connector on the transmitter distributor with its mating connector on the base, and mesh the transmitter distributor gear with the intermediate gear. Hold the transmitter distributor against its positioning eccentric and adjust the eccentric to meet the requirement. Tighten the eccentric locking screw.

Note: If there is not sufficient range in a positioning eccentric to permit a proper backlash adjustment, it will be necessary to reposition the countershaft assembly. Remove all transmitter distributor units. Loosen the two screws in the right and left intermediate shaft brackets, and the two screws in each countershaft bracket. Move the countershaft assembly forward or to the rear as required, keeping the bracket assemblies parallel so as not to bind or place a strain on the countershaft. Tighten the countershaft bracket mounting screws. The adjustments preceding will now have to be performed.

2.06 Multicontact Single Mounting Bases



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

INTERMEDIATE GEAR ASSEMBLY

Note: Remove gear guard.

(1) Requirement
At least 0.010 inch clearance between distributor shaft driving gear, and intermediate gear bracket bearing clamp.

To Adjust
Position driving gear with its mounting screw loosened.

(2) Requirement
Some clearance between distributor shaft driven gear and intermediate gear bracket bearing clamp.

(3) Requirement
Min some---Max 0.003 inch
Clearance between distributor shaft driving and driven gears at point where backlash is minimum.

(4) Requirement
Intermediate gear housing parallel to base.

To Adjust
Position intermediate gear bracket with its mounting screws loosened.

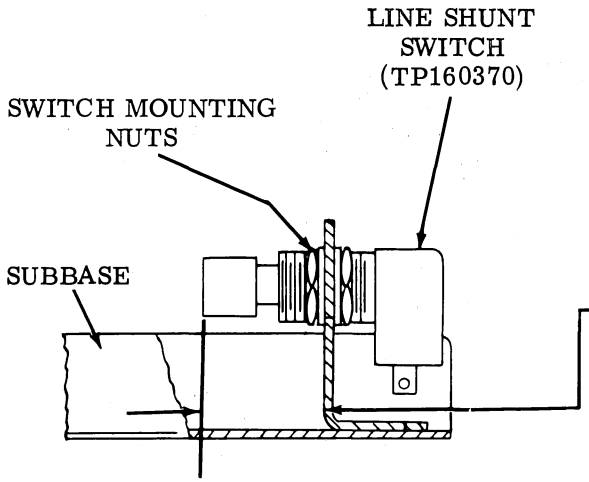
MOTOR PINION

(1) Requirement
Min some---Max 0.003 inch
Backlash between motor pinion gear and intermediate gear.

(2) Requirement
Motor parallel to base.

To Adjust
Position motor with its mounting screws loosened. Tighten mounting screws. Rotate shaft and recheck requirements.

2.07 Multicontact Single Mounting Bases (continued)



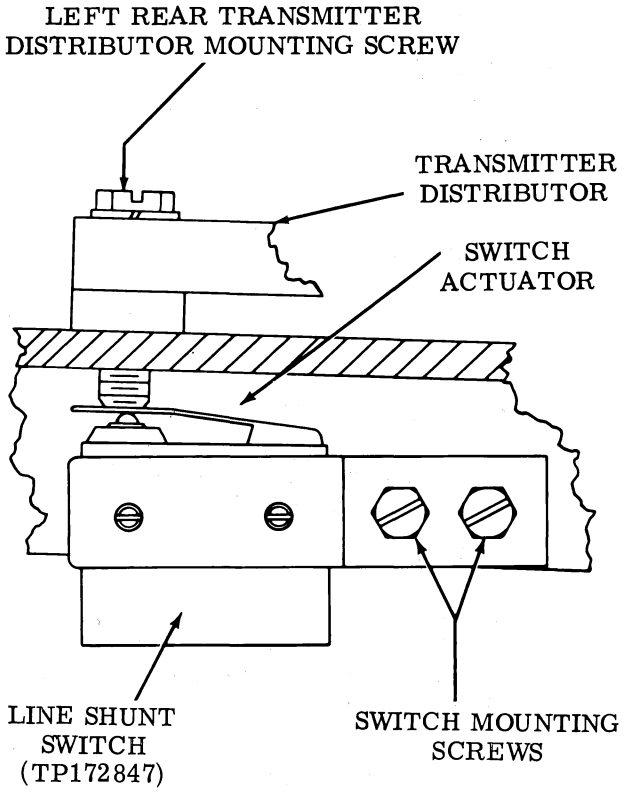
LINE SHUNT SWITCH (TP160370)

To Check
Remove unit from subbase.

(1) Requirement
Line shunt switch contacts should be closed.

(2) Requirement
Clearance between engaging surface of switch plunger and its mounting bracket
Min 49/64 inch---Max 51/64 inch

To Adjust
Position switch with its mounting nuts loosened.



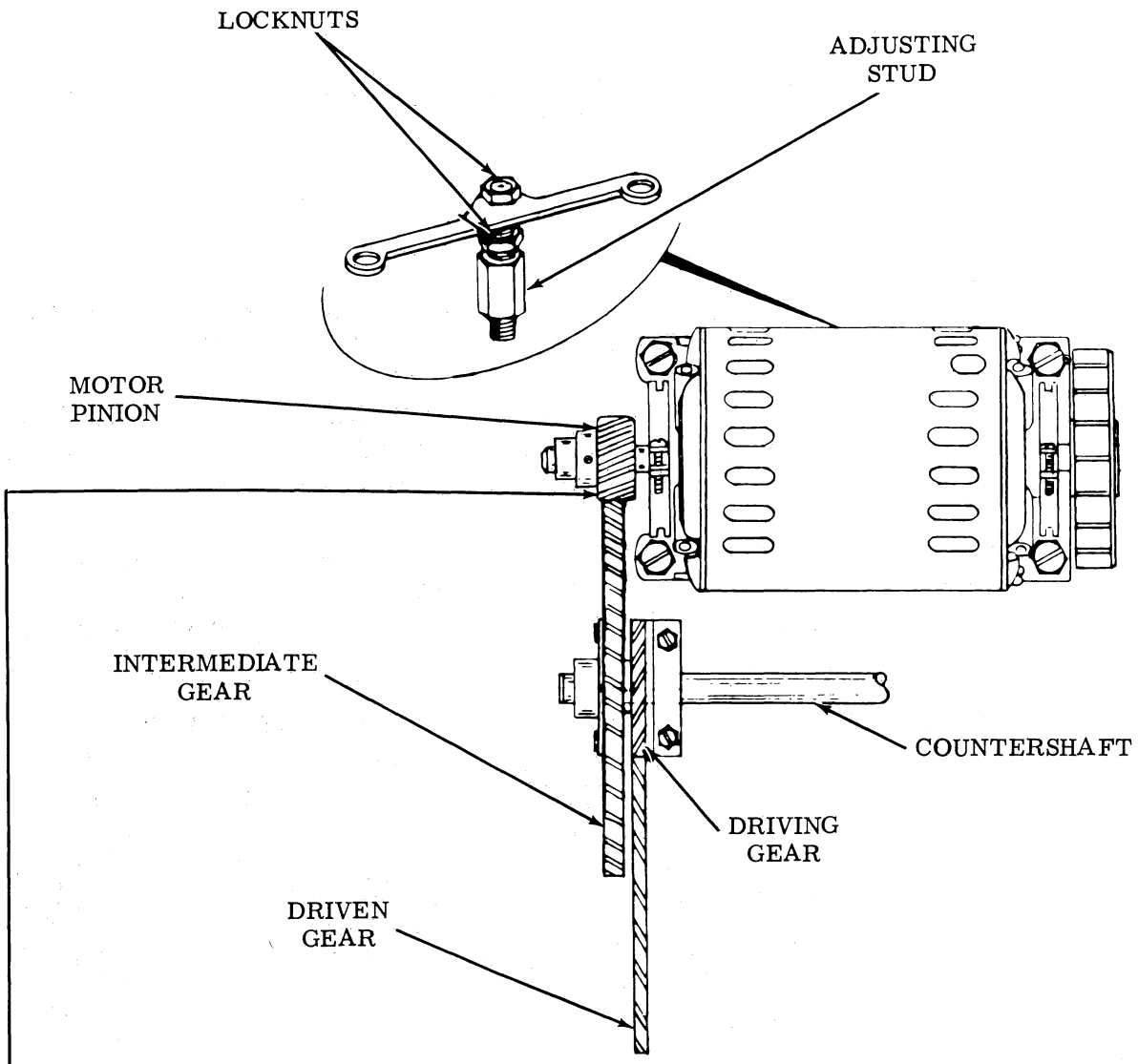
LINE SHUNT SWITCH

(1) Requirement
Line shunt switch contacts open when transmitter distributor left rear mounting screw is tightened.

(2) Requirement
Line shunt switch contacts closed when left rear mounting screw is loosened.

To Adjust
Back off left rear mounting screw 1/2 turn. Position switch actuator (switch mounting screws friction tight) against the transmitter mounting screw until the contacts just close (switch actuator should be approximately horizontal). Tighten switch mounting screws. Check requirements and refine adjustment if necessary.

2.08 Multicontact Multiple Mounting Bases (Common Speed)



MOTOR PINION

Requirement

Pinion and intermediate gear should have a barely perceptible amount of backlash at point of minimum clearance (check for one revolution of intermediate gear).

To Adjust

With its locknuts loosened, position the adjusting stud up or down.

2.09 Multicontact Multiple Mounting Bases (Common Speed) (continued)

COUNTERSHAFT

Requirement

Barely perceptible amount of backlash between countershaft driving gear and its associated transmitter distributor driven gear at point of least clearance.

(1) To Adjust

With locating plate mounting screws friction tight, position plate at center of its adjustment range.

(2) To Adjust

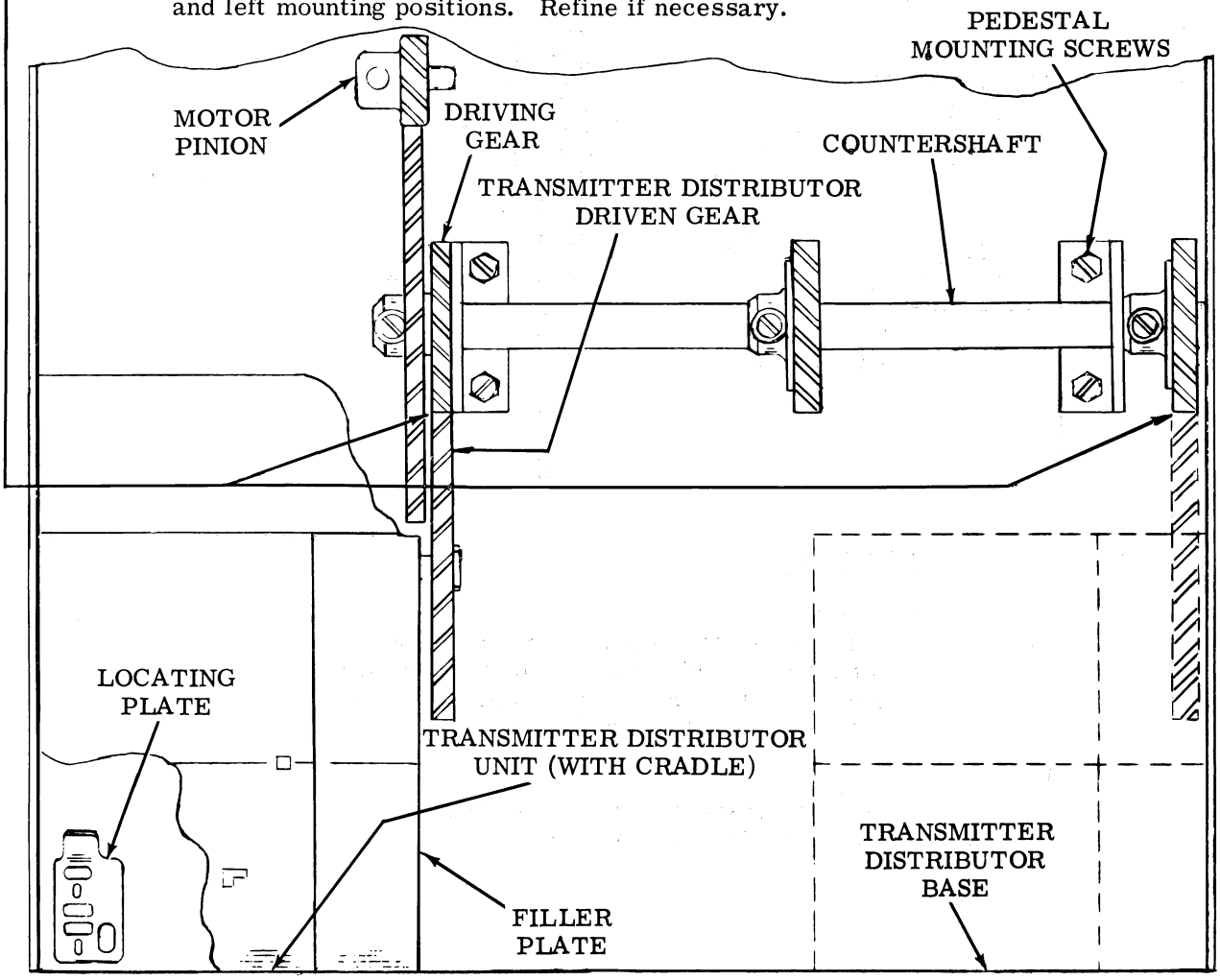
Insert transmitter distributor unit (with cradle) into left mounting position on base. Position locating plate to meet requirement. Tighten plate mounting screws.

(3) To Adjust

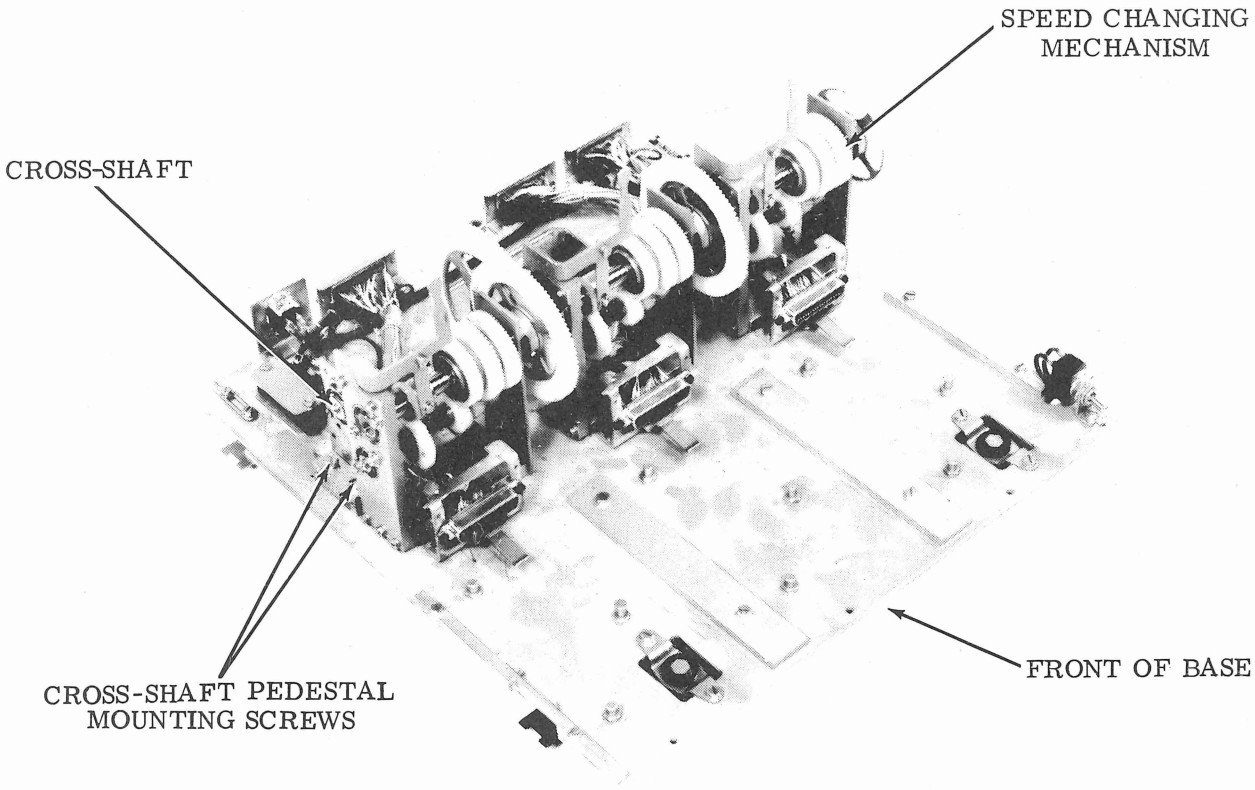
Remove transmitter distributor from left position, and place it in right mounting position. Loosen mounting screws on countershaft pedestals and position right end of countershaft to meet requirement.

(4) To Adjust

Tighten all mounting screws, check for binds, and recheck requirements in right and left mounting positions. Refine if necessary.



2.10 Multicontact Multiple Mounting Bases (Variable Speed)



CROSS-SHAFT POSITION

Requirement

The cross-shaft assembly should be parallel with the front edge of the base plate

Within 0.015 inch

To Adjust

Position the cross-shaft assembly with its pedestal mounting screws loosened. Refine, if necessary, to avoid binds in the shaft. Tighten the pedestal mounting screws.

2.11 Multicontact Multiple Mounting Bases (Variable Speed) (continued)

SPEED CHANGE GEAR

(1) Requirement

The backlash between each driven gear on the speed changing mechanism and each corresponding driving gear on the cross-shaft should be

Min 0.004 inch---Max 0.008 inch

and the two shafts should be parallel as gauged by eye.

To Adjust

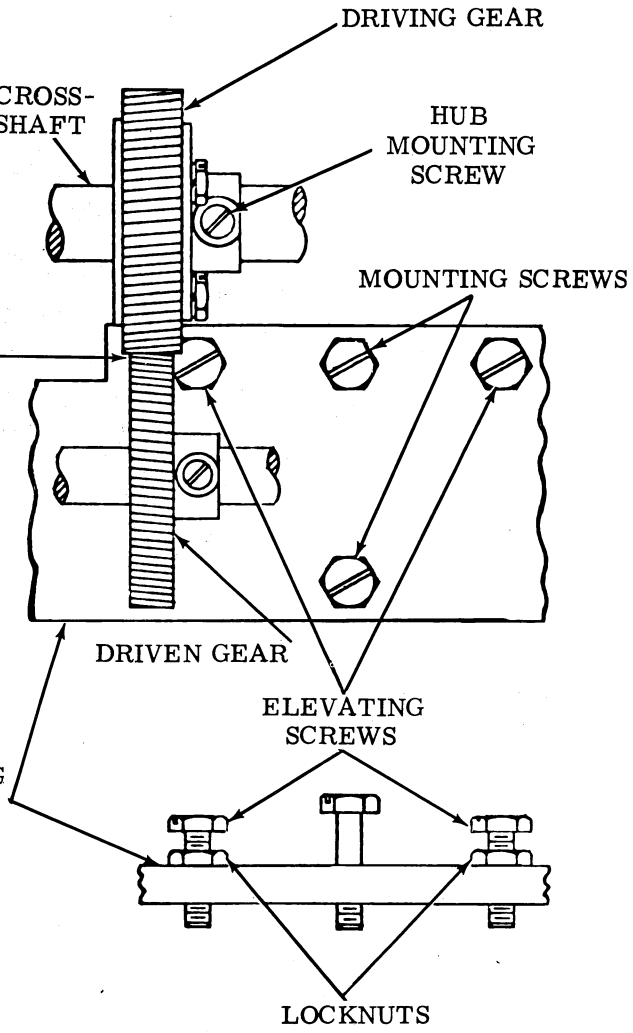
Position each speed changing mechanism with its mounting screws and the locknuts on the elevating screws loosened.

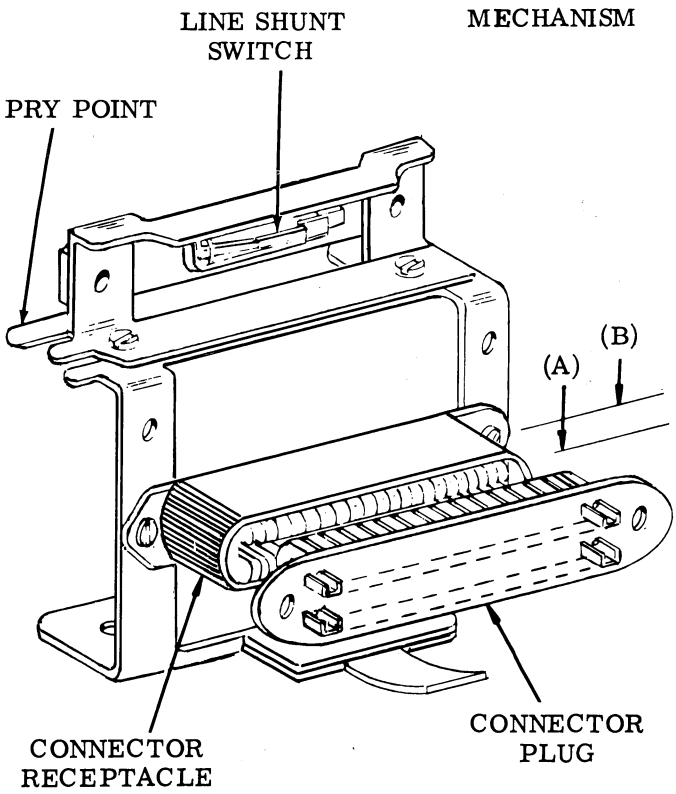
(2) Requirement

The gears on the speed change mechanism should mate over their entire width with the gears on the cross-shaft.

To Adjust

Position the gear on the cross-shaft with its hub mounting screw loosened.





LINE SHUNT SWITCH

To Check

Place a transmitter distributor in one of the mounting positions. Note the point (A) at which the connector plug starts to engage the connector receptacle, and the point (B) where the plug fully engages the receptacle.

Requirement

Line shunt switch should actuate (contacts close) before unit is withdrawn one-half the distance between points (A) and (B).

To Adjust

With switch bracket mounting screws friction tight, position switch by means of its pry point. Check all line shunt switches.

2.12 Covers

(B) FILLER PLATES

Requirement

Top surface of filler plate should align with upper surface of both top plate and tape guide-plate. Common edges should bear against each other.

(1) To Check

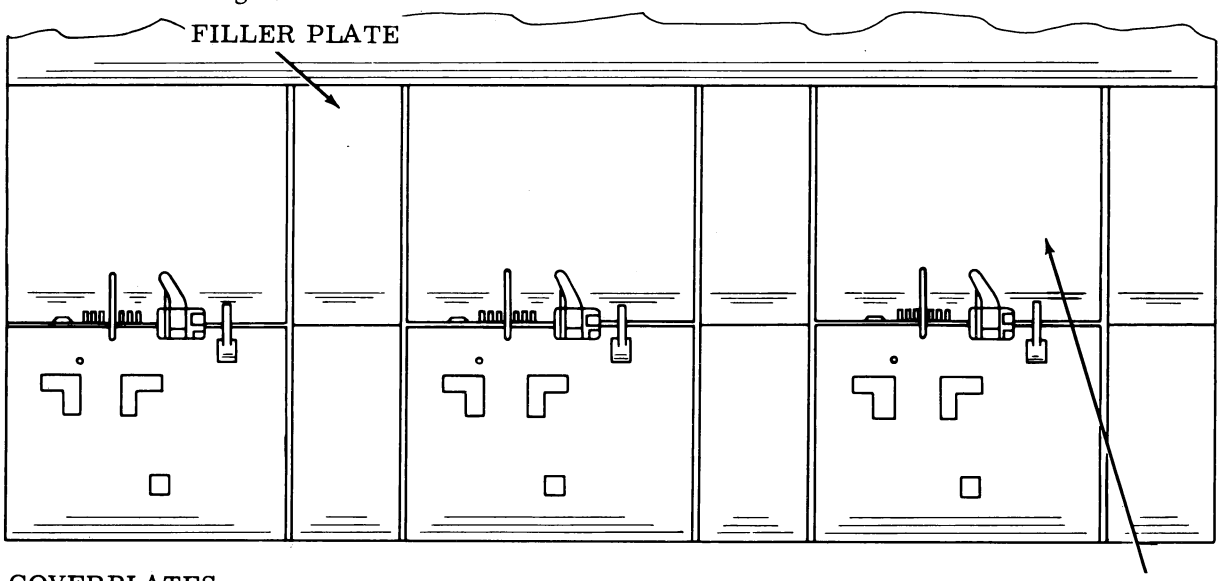
Lay a straightedge across top plates and filler plates, 1/4-inch from coverplate. Gap between each plate and straightedge, 1/8-inch on each side of edge between top and filler plates (5 edges) should be flush to 0.010 inch.

(2) To Check

Lay a straightedge across tape guideplates and filler plates, 1/8-inch from lower edge of tape guideplates. Gap between straightedge and each tape guideplate 1/8-inch on each side of edge between tape guide and filler plates (5 edges) should be flush to 0.010 inch.

To Adjust

Position filler plate and its brackets with the bracket mounting screws and plate mounting nuts friction tight.



(A) COVERPLATES

(1) Requirement

With three transmitter distributor units in position on the base, the coverplates should align horizontally, and the mating edge of each coverplate and top plate should be flush.

To Adjust

Position coverplate with its detenting nuts loosened.

(2) Requirement

Edge of coverplate opposite driving gear should align with edge of top plate.

To Adjust

Position coverplate with the corner plate detent mounting nuts and spring plate mounting nuts friction tight.

Note: When less than three transmitter distributor units are used on the base, the unused compartment contains a dummy unit. Position the top plate and cover in a manner similar to adjustment procedure (A).