

INSTRUCTIONS FOR INSTALLING AND ADJUSTING THE
MODEL 28 REPERFORATOR TRANSMITTER SET

1. GENERAL

a. The reperforator transmitter set is basically a mechanical relay or storing device for printing telegraph signal intelligence. The set provides for the fully automatic perforation, storage, and retransmission of an entire message on tape, including the last character received. Basically, the set consists of a typing or non-typing reperforator, a pivoted tape transmitter distributor, and associated tape supply reel, tape storage bin, and tape winder.

b. The reperforator transmitter set is made up of two basic sections; the base mounted reperforator transmitter and the tape handling stand. The base provides mounting facilities, motor driven power, and circuit terminations for the reperforator and transmitter units, and a power take-off for the tape winder in the tape handling stand. The tape handling stand provides a 3000-ft. capacity tape supply reel, a removable storage bin for temporary storage of perforated tape accumulated between the reperforator and transmitter units, and a tape winder for transmitted tape.

2. COMPONENTS

a. The reperforator transmitter set consists of the following individual units:

Model 28 Transmitter Distributor - pivoted head.
Model 28 Typing Reperforator, or
Model 28 Non-Typing Reperforator
Model 28 Reperforator Transmitter Base
Model 28 Motor Unit
Model 28 Tape Handling Stand

b. The following charts pertain to the conversion of Teletype codes to Bell System codes.

REPERFORATOR TRANSMITTER SET			
Name (Bell System)	Bell System Code		
	28A	28B	28C
Reperforator Transmitter Unit	28A	28B	28C
Reperforator Transmitter Stand	28A	28A	28A

REPERFORATOR TRANSMITTER UNIT						
Unit Name (Teletype)	Teletype Code	Bell Code	Teletype Code	Bell Code	Tel type Code	Bell Code
Pivoted Transmitter Distributor	LAXD2	28A	LAXD2	28B	LAXD1	28C
Typing Reperforator	LPR3RAA		-		-	
Non-Typing Reperforator	-		LRPE2		LRPE2	
Reperforator Transmitter Base	LRXB1		LRXB2		LRXB3	
Motor Unit	LMU11		LMU11		LMU11	

REPERFORATOR TRANSMITTER STAND		
Unit Name (Teletype)	Teletype Code	Bell Code
Tape Handling Stand	LTHS200	28A

b. For information regarding the individual units, refer to the applicable bulletins as outlined in the following chart:

UNIT	BULLETINS		
	#Adjustments And Lubrication	#Description	Parts
Pivoted Transmitter Distributor - LAXD	252B	251B	1170B
Typing Reperforator - LPR	247B	246B	1167B
Non-Typing Reperforator - LRPE	256B	255B	1172B
Reperforator Transmitter Base - LRXB Tape Handling Stand - LTHS Motor Unit - LMU11	248B	-	1168B

#Bell System refer to standardized information.

3. INSTALLATION

a. Assembly of Components (See Figure 1)

(1) The reperforator transmitter unit, which is the complete set less the tape handling stand, is preassembled and packed in a cardboard carton. The LTHS200 tape handling stand is also packed in an individual carton. After unpacking the units, remove the oil shields on the base by loosening the two tape

winder drive bracket mounting screws and sliding the oil shields out sideways. Install the motor pinion and replace the oil shields.

(2) Lower the reperfocator transmitter unit onto the tape handling stand, utilizing the four base legs as guides within the angular vertical members of the tape handling stand frame, and locating the base casting on the two locating studs mounted on the tape handling stand frame.

(3) Tighten the three captive base mounting screws.

(4) Unhook the tape supply arm and tape winder drive belt from the bracket and install the belt over the tape winder drive pulley located on the base.

(5) Plug the tape alarm and power factor plugs (on the reperfocator and base cables respectively) into their associated connectors on the tape handling stand frame. On units with motorized tape bins, plug the tape bin motor cable plug into the connector mounted on the tape bin.

b. Tape Routing

(1) For the routing of the tape, refer to Figure 2.

(2) To thread the tape onto the tape winder reel, fold the end of the tape and insert it chad side up into the slot in the right hand reel core. Assemble the two halves of the reel by aligning the guide pin with the guide hole. Lock the reel by means of the locking plate in the right half of the reel.

4. ADJUSTMENTS

a. General

(1) To rotate the shafting by hand, turn the motor fan counter-clockwise as viewed from the fan end of the motor.

(2) When rotating the shafting by hand, the reperfocator and transmitter clutches do not fully disengage upon reaching the stop position. In order to relieve the drag on the clutches and permit the shafting to rotate freely, apply pressure on the lug of each clutch disk to cause it to engage its latch lever. This procedure should be followed prior to applying power to the unit.

b. Transmitter Distributor

(1) Vertical Alignment of Pivoted Sensing Head and Punch (See Figure 3).

With the pivoted sensing head against the punch block, the sensing head top plate should be flush to .010" below the bottom surface of the tape slot in the punch block. To adjust, position the height adjusting screw, on the sensing end of the unit, with its lock nut and mounting screw loosened.

(2) Transmitter Driving and Distributor Shaft Driven Gear Mesh (See Figure 4).

There should be some backlash, not more than .003 inch, between the distributor shaft driven gear on the transmitter and the transmitter driving gear on the base. To adjust, position the two height adjusting screws, on the distributor end of the unit, with their lock nuts and mounting screws loosened. Turn the two screws evenly, thus maintaining parallelism between the base and the

transmitter distributor casting. Recheck Paragraph 4.b.(1), Vertical Alignment of Pivoted Sensing Head and Punch.

(3) Horizontal Alignment of Pivoted Sensing Head and Punch (See Figure 5).

The transmitter distributor should be positioned so that one tape lid extension is centered on the respective area between the punch pin slots. The remaining extensions should be fully within their respective areas. To adjust, loosen transmitter distributor and horizontal positioning eccentric mounting screws. Shift the unit to meet the requirement and tighten the unit mounting screws. Position the eccentric against the rear plate of the transmitter distributor and tighten its mounting screw.

NOTE

It may be necessary to position the reperfocator unit if the requirement can not be met by the adjustment of the transmitter distributor. If necessary, position the reperfocator in the same manner as the transmitter distributor was positioned.

(4) Last Character Contact Switch (See Figure 6)

NOTE: Remove contact switch cover to check this adjustment.

*With tape inserted in the punch unit and the pivoted sensing head, and the pivoted sensing head positioned one character away from the punch block, there should be .010 to .015 inch clearance between the tape deflector ear and the insulator on the long contact spring of the last character contact switch. With the pivoted sensing head against the punch block, there should be a gap of at least .005 inch between the contacts. To adjust, position the contact bracket with the bracket mounting screws loosened.

c. Reperfocator Transmitter Base

(1) Tape Guide Bracket (See Figure 7)

With the reperfocator operating under power and drawing tape from the supply reel, the tape should squarely enter the center of the tape chute (tape twisted a quarter - turn clockwise as it enters the chute). To adjust, position the rear tape guide bracket with its mounting screws loosened.

(2) Rear Tape Guide Roller (See Figure 8)

With the reperfocator operating under power and drawing tape from the supply reel, the tape should ride approximately centered on the tape rollers. To adjust, loosen roller bracket lock nut and position bracket while tape is in motion. Recheck 4.c.(1), Tape Guide Bracket.

(3) Oil Shield (See Figure 9)

The oil shield should be approximately centered between the motor pinion and the tape winder drive belt and pulley. To adjust, loosen the shield mounting screws and position the shield.

d. Tape Handling Stand

(1) Tape Guard (See Figure 10)

There should be a clearance of 1/8 to 1/4 inch between the tape guard and the tape chute as gauged by eye. To adjust, position the tape guard with its mounting screws loosened.

e. Code Hole - Sensing Pin Alignment - Final Check (See Figure 11)

(1) All adjustments outlined in Paragraphs 4.b. and 4.c. should be completed and the requirements met. With a loop of LETTERS tape (perforated under power by the reperforator) between the reperforator and the transmitter distributor, and with the pivoted sensing head resting against the backstop, manually trip the sensing shaft clutch and rotate the shaft until the sensing pins are in their uppermost position. Under these conditions the following requirements should be met.

(a) The sensing pins should be approximately centered laterally on the code holes.

(b) The sensing pins should be centered within or toward the trailing edge of the code holes, but no closer than .008 inch from the trailing edge. Check five places.

(c) As the code holes are opened by the sensing pins, there should be some clearance between the sides of the chad and the tape lid extensions. Check ten places.

*(2) If requirement (a) is not met, refine the punch "Feed Hole Lateral Alignment" as prescribed in Bulletin 247B or 256B.

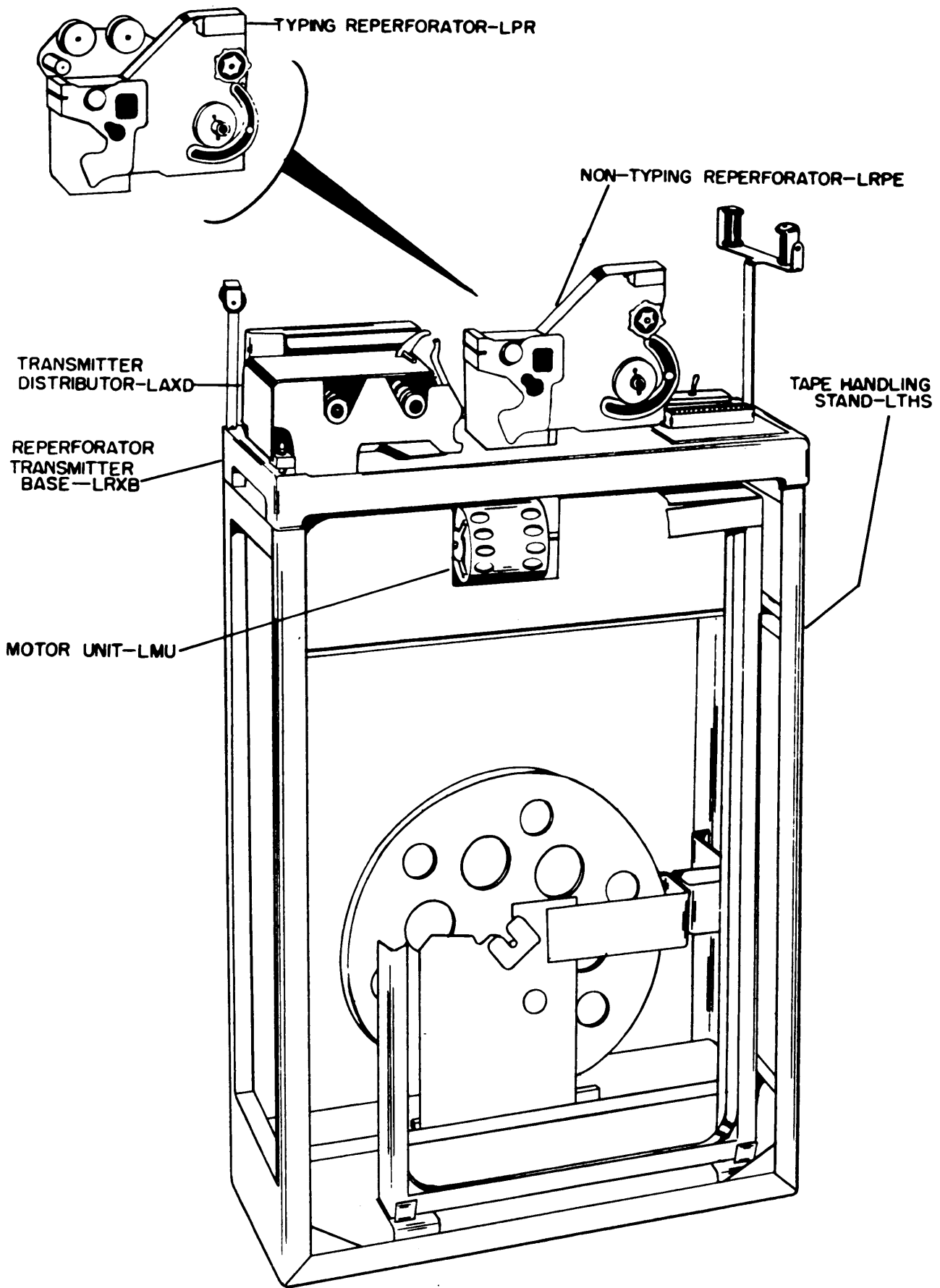
*(3) If requirement (b) is not met, first check the tape for compliance with the 156011 Tape Gauge and, if necessary, refine the "Detent" adjustment as prescribed in Bulletin 247B or 256B. If requirement still is not met, position the pivoted sensing head top plate in the required direction in line with the tape, with its mounting screws loosened. Recheck 4.b. (4), Last Character Contact Switch.

(4) If requirement (c) is not met, position the pivoted sensing head top plate laterally with its mounting screws loosened. Recheck requirement (b).

NOTE

Adjustments for requirements (b) and (c) on the transmitter distributor may be made simultaneously, if so desired.

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TYPICAL ASSEMBLY OF REPERFORATOR TRANSMITTER SET COMPONENTS
FIGURE 1

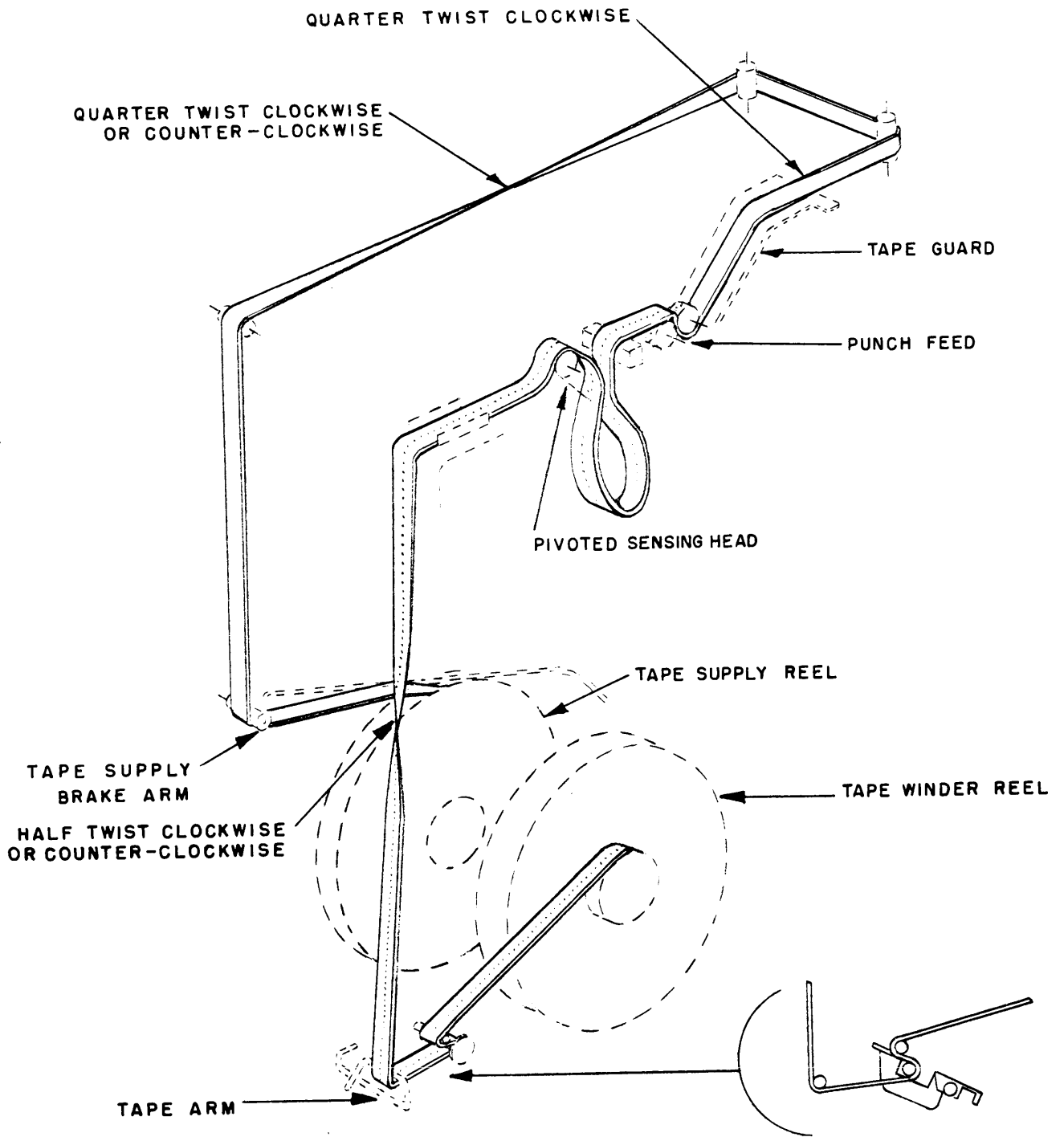


FIGURE 2

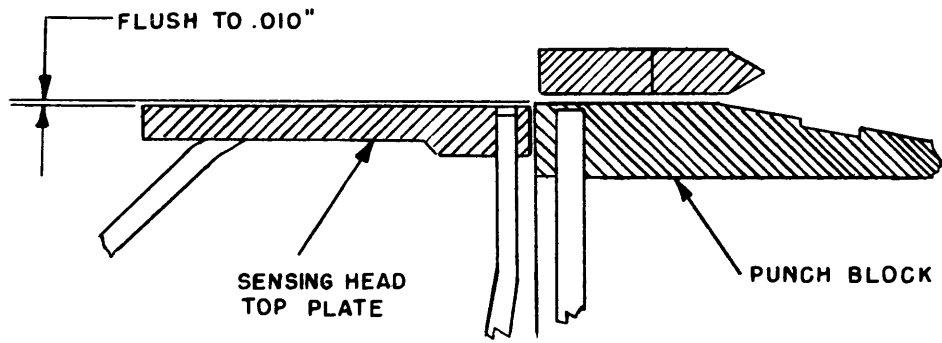


FIGURE 3

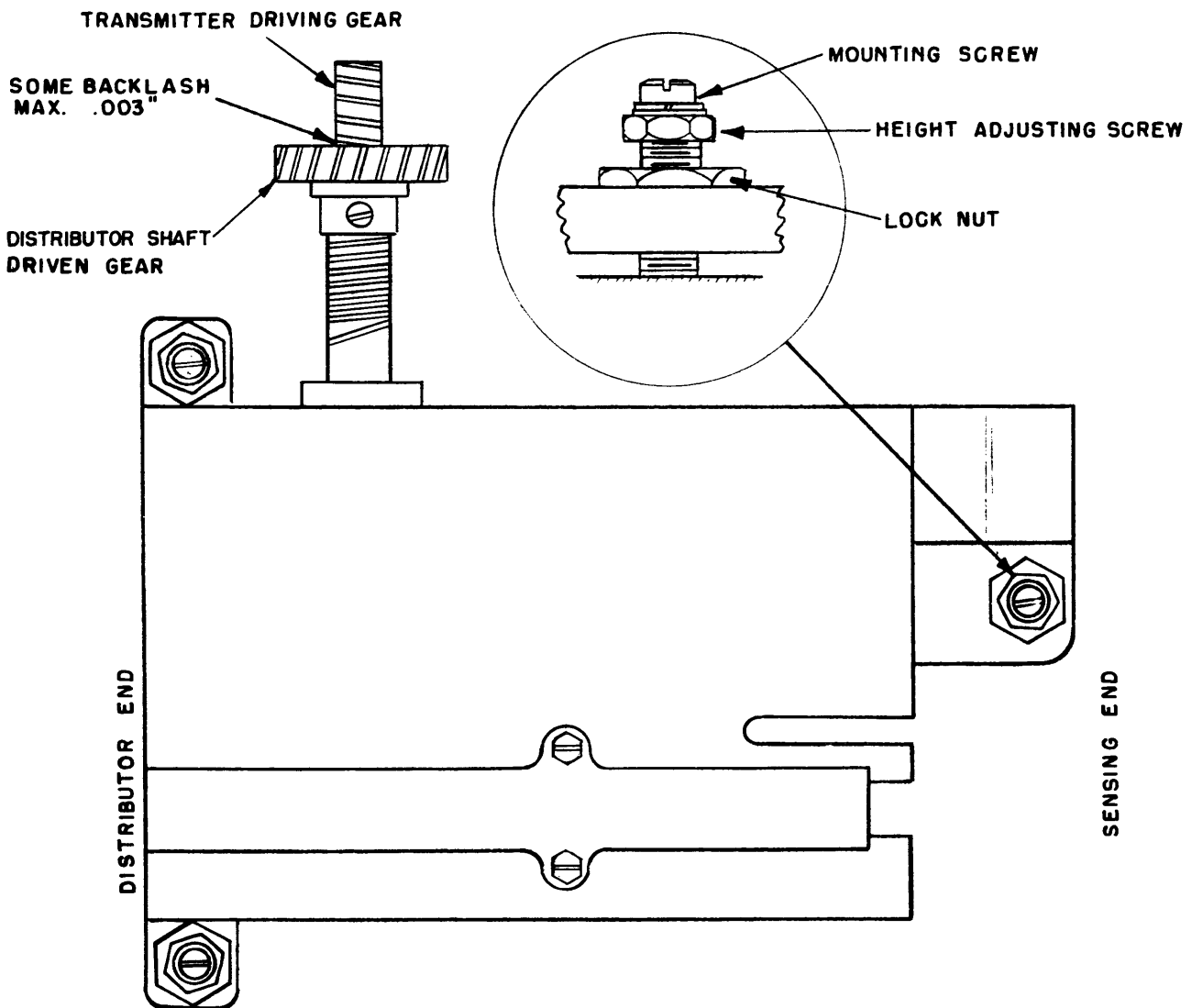


FIGURE 4

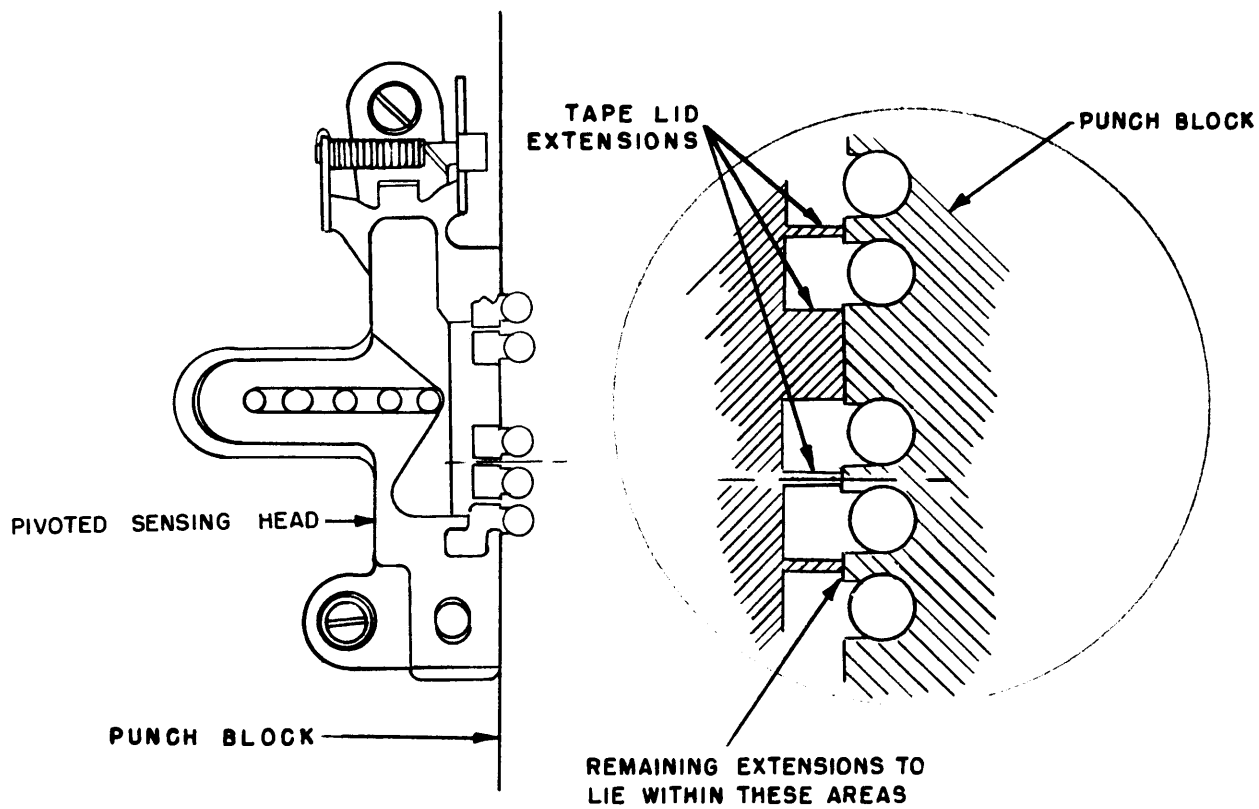


FIGURE 5

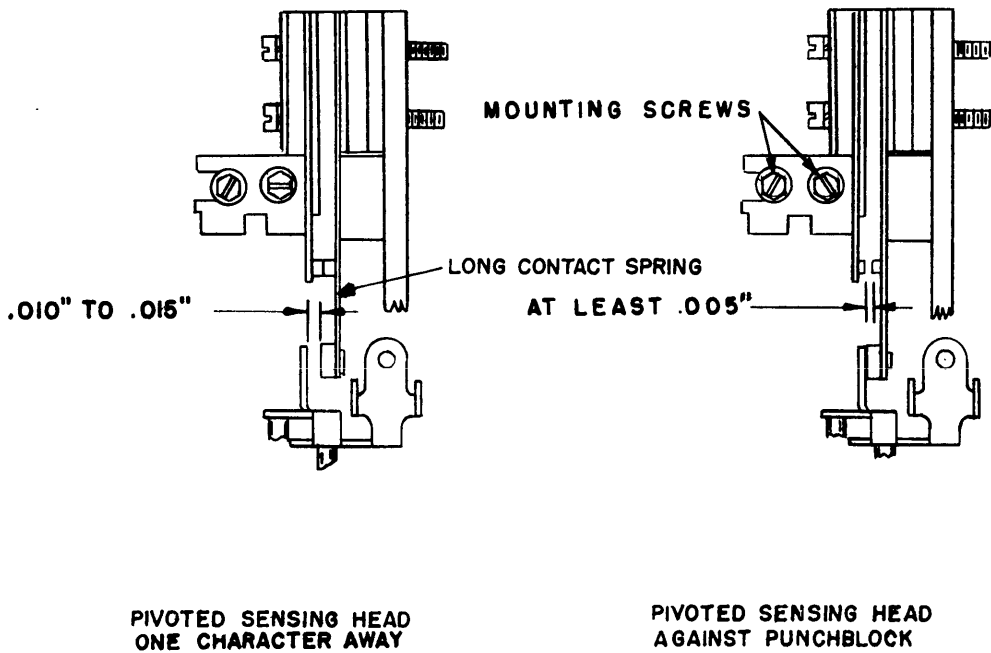


FIGURE 6

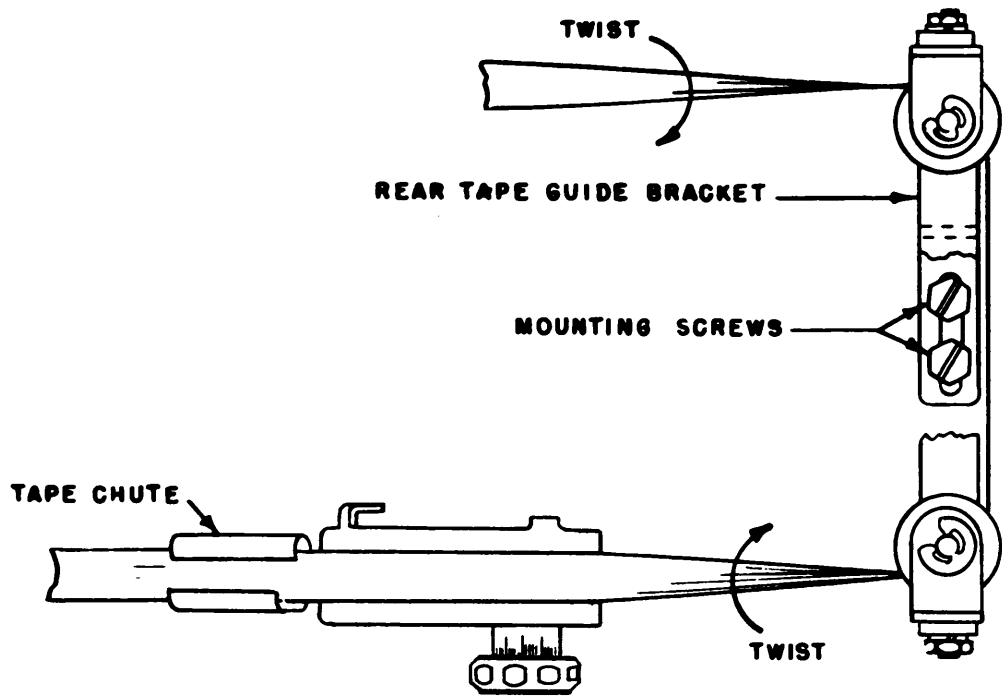


FIGURE 7

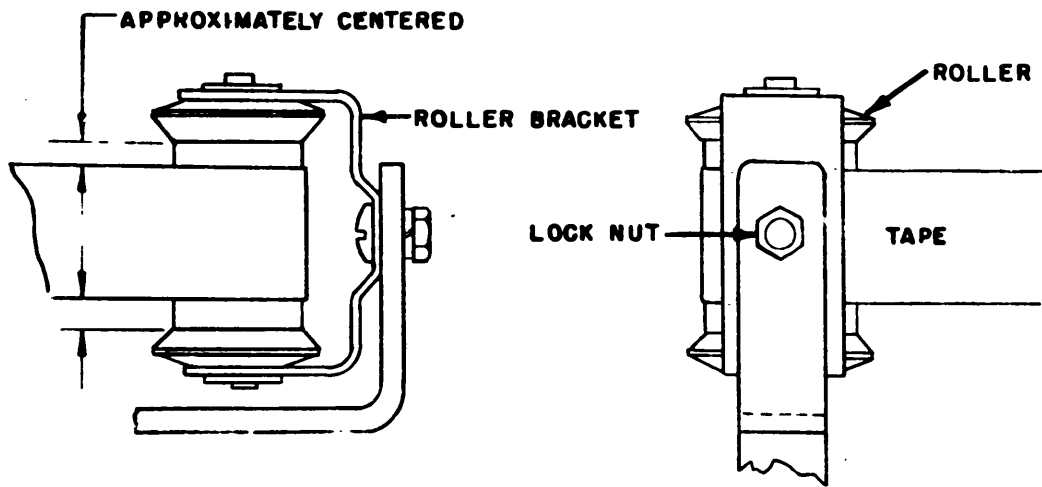


FIGURE 8

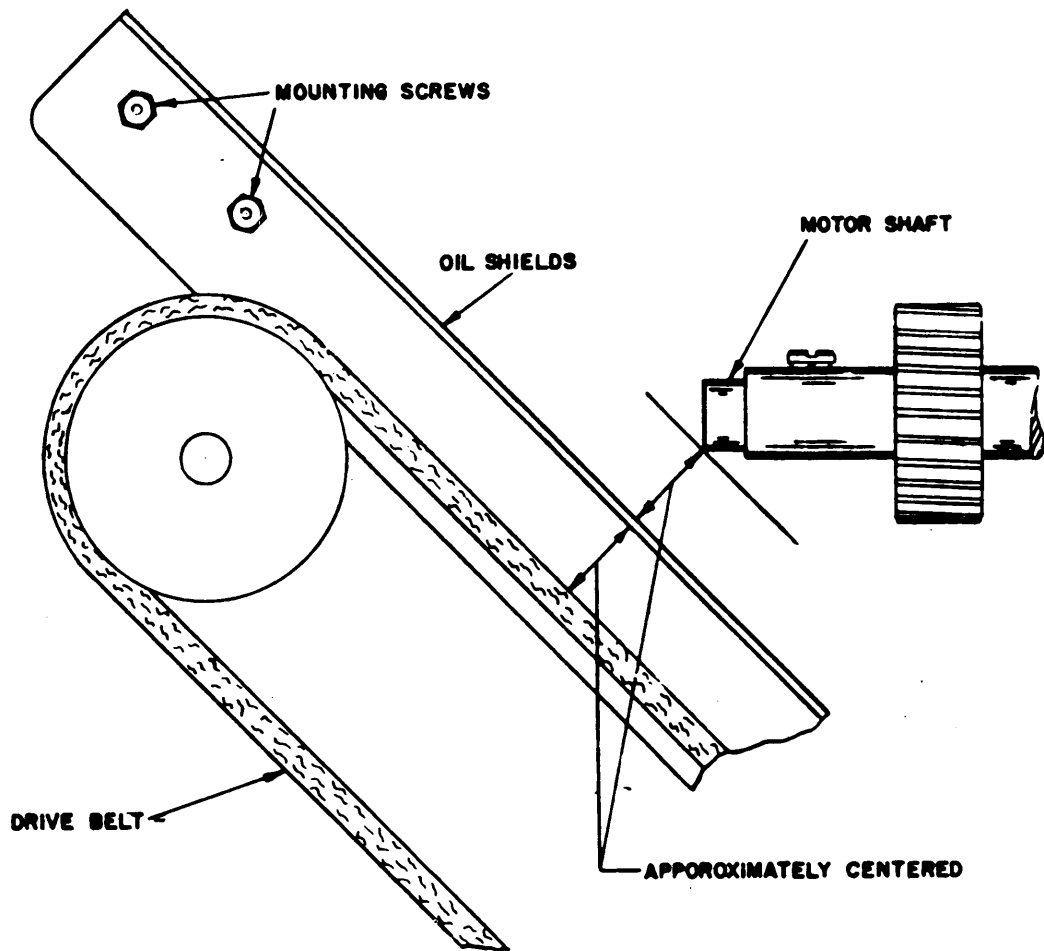


FIGURE 9

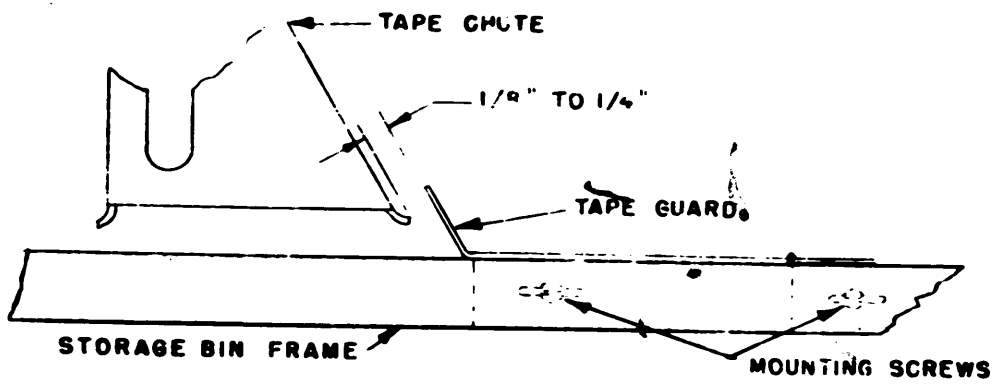


FIGURE 10

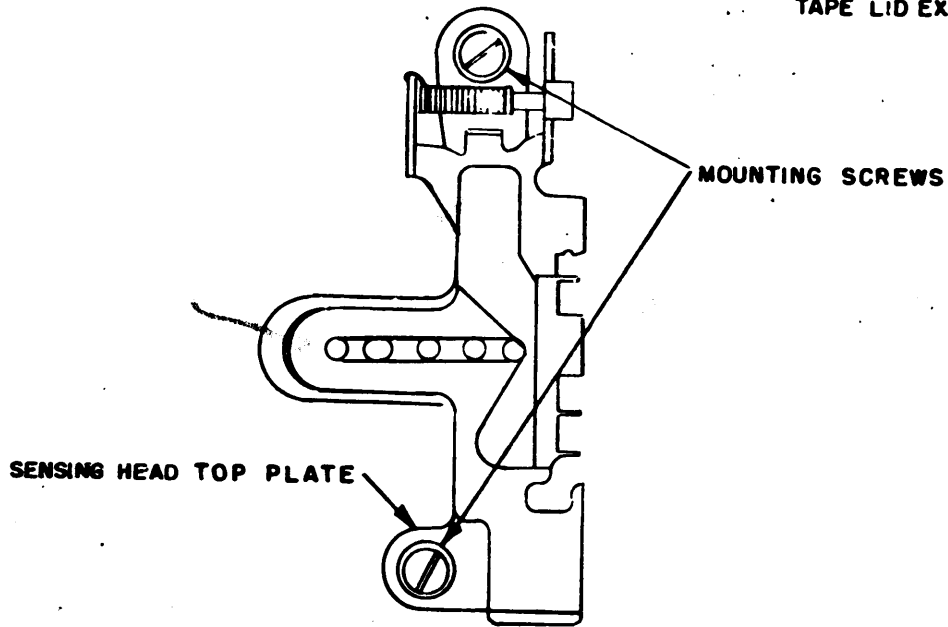
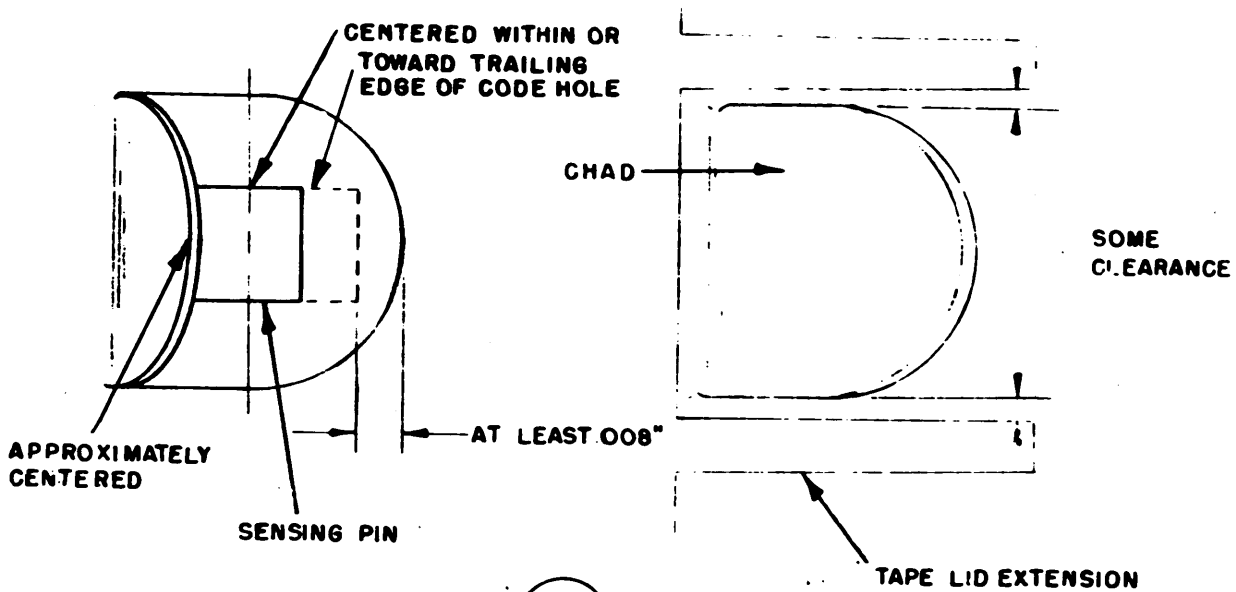


FIGURE 11