Teletype Corporation
Skokie, Illinois, U. S. A.

Specification 5939S
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INSTRUCTIONS FOR INSTALLING A MODIFICATION KIT (162490, 194034, 163317, 194339) TO PROVIDE MULTIPLE WIRE OUTPUT FACILITIES ON THE MODEL 28 TRANSMITTER-DISTRIBUTOR LXD4 AND UP, LEXD OR LXDB3: KIT 310070 FOR MULTIPLE WIRE OUTPUT ON MODEL 35 LXD

The chart below pertains to Bell System only

TELETYPE UNIT	TELETYPE CODE	BELL SYSTEM REFERENCE	BELL CODE
Transmitter Distributor Base	LXDB3	Transmitter Distributor Mounting and Cover Assembly	28H
Transmitter Distributor	LXD4 LXD803 LXD804	Transmitter Distributor Unit	28H 35A 35B

1. GENERAL

a. The 162490 (for LXD4 and up, Serial Nos. 7515 and up and LEXD) or the 194034 (for LXD600 and up except for LXD800, 801, 803, 804, 807 and 809) modification kit when installed on a Model 28 Transmitter-Distributor, respectively, provides simultaneous (parallel) five, six or eight-wire output. In addition, 5-level units with Serial Nos. 7514 and below require the latest 156649 front plate, Serial Nos. 5400 and below require the lastest 156836 cam shaft with a cam lobe that operates the sensing bail. This cam lobe is located 1. 529 inches from the end of the clutch drum side of the cam shaft.

b. The 163317 (five-wire parallel output) or 194339 (six or eight wire parallel output) modification kit, when installed, is to provide multiple wire output facilities on the Model 28 Transmitter-Distributor Base LXDB3. The base, when so equipped, may be used in conjunction with a Model 28 Transmitter-Distributor Unit LXD4 and up equipped with the 162490 or 194034 modification kit for multiple wire output. A provision has been made on connector mounting plate to accept a resistor (not included in the modification kit) when dc power is used for the transmitter-distributor clutch magnet circuit.

c. The 162490 modification kit may be installed on an LXD1 or LXD3 provided the unit is modified with the 162462 modification kit (Specification 5894S) to convert an LXD1 or LXD3 to an LXD4. The 163317 modification kit may be installed on an LXDB1 Base provided the base is modified with the 162463 modification kit (Specification 5894S) to convert an LXDB1 to an LXDB3.

d. The 310070 kit providing eight wire parallel output on Model 35 LXD is the same as kit 194034 except for the addition of the 199480 cam follower, 199482 camshaft, and Wiring Diagrams.

e. The 162490, 310070 or 194034 modification kit consists of:

			162490	310070	194034
2	2191	Lockwasher	X	X	X
2	3598	Nut	X	X	X
1	3708WD	Diagram, Wiring	X		
1	5841WD	Diagram, Wiring			X
6	8896	Shim	X	X	X
1	78557	Spring	X	X	X
1	80945	Spring	X	X	X
5	110743	Lockwasher	X	X	X
2	119647	Ring, Retaining	X	X	X
1	119652	Ring, Retaining	X	X	X
5	125011	Washer, Flat	X	X	X
1	130683	Lockwasher	X	X	X
5	151398	Spring	X		
8	151398	Spring		X	X
1	151880	Nut	X	X	X
2	152893	Screw	X	X	X
2	153799	Screw	X	X	X
14	155754	Sleeve, Insulating	X		
20	155754	Sleeve, Insulating		X	X
1	156677	Insulator	X	X	X
1	162493	Bail Assembly	X	X	X
1	162498	Screw, Eccentric	X	X	X
1	162499	Nut, Shoulder	X	X	X
5	162500	Arm, Sensing	X		
8	162500	Arm, Sensing		X	X
1	162501	Post, Spring	X	X	X
1	162502	Post, Stop	X		
1	162503	Shaft, Spring	X	X	X
1	172899	Post, Guide	X		
1	174010	Plate Assembly	X	X	X
1	172899	Post, Guide		X	X
1	172900	Post, Stop		X	X
1	177048	Latch	X	X	X
1	194340	Cable Assembly w/Contacts	X		
1	194341	Cable Assembly w/Contacts		X	X
1	199480	Follower, Cam		X	
1	199482	Camshaft		X	
1	7138WD	Diagram, Wiring		X	X

f. The 163317 or 194339 modification kit consists of:

			5 LEVEL 163317	GROUP LEVEL 194339
1	2669	Lockwasher	X	X
1	3598	Nut	X	X
1	3729WD	Diagram, Wiring	X	
1	5904WD	Diagram, Wiring		X
1	7002	Washer, Flat	X	X
1	121245	Clamp, Cable	X	
1	121246	Clamp, Cable		X
1	151723	Screw	X	X
1	153539	Screw	X	X
2	153819	Lockwasher	X	X
14	155754	Sleeve, Insulating	X	
20	155754	Sleeve, Insulating		X
2	158807	Screw	X	X
1	161239	Plug, Connector	X	X
1	163318	Plate, Connector	X	X
1	163319	Cable Assembly	X	
1	194372	Cable Assembly w/Connector		X

g. For part numbers referred to and for parts ordering information see Teletype Model 28 Transmitter Distributor Parts Bulletin 1161B.

2. INSTALLATION

NOTE

Reference made to "left" or "right," "front" or "rear," apply to the unit in its normal operating position on a self-contained base as viewed from the operator's position in "front" of the unit.

a. 162490 or 194034 modification kit (Figure 2) see note below.

(1) Remove the transmitter distributor unit from its base and retain the mounting screws.

(2) Disassemble the unit in accordance with standard practice or instructions in Bulletin 235B. Do not disassemble the front plate assembly. Remove and discard the 160621 bracket and the 152458, 160622 and 160623 insulated shields. Do NOT discard the 151630 screw, 2191 lockwasher and 7002 flat washer. Remove and discard the 156590 latch. Do NOT discard the 7603 spring.

(3) Assemble from the modification kit the 119652 ring retainer on the 172899 guide post adjacent to the hexagon portion of the post. Place the 162493 bail assembly on the 172899 guide post.

NOTE

With kit 194034 examine the 178143 camshaft on the LXD. If there is no set pulse cam on the camshaft, install the kit. If there is a set pulse cam on the camshaft, the 310070 kit must be used in place of 194034. The set pulse cam is a multilobed cam located nearest to the clutch.

(4) Install the 162503 spring shaft on the 162493 bail assembly using the two 119647 retaining rings.

(5) Install five, six or eight 162500 sensing arms on the guide post. The position of the sensing arms on the post should be checked when installed so that they will align with their associated transfer levers.

(6) Install five, six or eight 151398 springs to the spring shaft and 162500 sensing arms. Take care not to deform the spring loops or otherwise weaken the springs.

(7) Position the assembled parts on the front plate and secure the guide post with a 2191 lockwasher and 3598 nut.

(8) Secure the 162502 or 172900 stop post on the front plate with a 2191 lockwasher and 3598 nut.

Note: Prior to installation of the contact assemblies, check the applicable adjustments in accordance with Paragraph 3. Make the preliminary adjustments shown in Figure 5.

(9) Solder the 194340 or 194341 cable assembly to the connector plug on the unit as per 3708WD or 5841WD. For units with 50 Pin Connectors refer to 7138WD for wiring instructions. The connector plug terminals should be covered with the 155754 Insulating Sleeves.

(10) Install the auxiliary contact assembly portion of the 194340 or 194341 cable assembly on the front plate with two 125011 flat washers, 110743 lockwashers and 152893 screws. Do NOT tighten the 152893 screws until Step 11 has been completed.

(11) Install the code reading contact assembly portion of the 194340 or 194341 cable assembly on the front plate using two 125011 flat washers, 110743 lockwashers and 153799 screws.

(12) Place the 78557 spring on the 162492 or 172899 guide post against the 162493 bail assembly.

NOTE

Reinstall the center plate assembly.

(13) Install the 174010 plate assembly on the 162492 or 172899 guide post using a 130683 lockwasher and 162499 shoulder nut.

(14) Connect the 174010 plate assembly to the 162493 bail assembly using the 162498 eccentric screw, 8896 shims, 125011 flat washer, 110743 lockwasher, and 151880 nut. (See Sensing Arm-Transfer Lever Alignment adjustment for shim placement.)

(15) Remove the left 151692 retaining screw that secures the 156638 transfer lever guide to the front plate. In its place, install the 162501 spring post with the retained 2191 lockwasher.

(16) Place the 80945 spring on the 162501 spring post and 174010 plate assembly.

(17) Install the 177048 latch (replaces discarded 156590) and the 7603 spring.

(18) Complete the reassembly of the LXD unit. Check the Code Reading Contact Sensing Arm Spring Tension before installing the signal generator assembly.

(19) Replace the discarded bracket and shields with the 156677 insulator and secure it with the hardware previously removed.

b. 310070 kit

(1) Disassemble the unit in accordance with standard practices in Bulletin 235B, Section 3.

(2) On the mainshaft replace the 178143 camshaft with the 199482 camshaft.

(3) In the center plate assembly replace the 192594 cam follower with the 199480 cam follower. If no cam follower is present on unit discard the 199480 cam follower.

(4) Detailed instructions for installing the other parts of the kit are in Paragraph 2.a. of this specification.

c. 163317 or 194339 modification kit (Figure 1)

NOTE

The transmitter-distributor unit should be removed, if present, before starting to modify the base.

(1) Remove and retain the three 112626 nuts and lockwashers that secure the 156751 base plate to the remainder of the base. Remove the base plate.

(2) Replace the present 151632 screw that secures the two cable clamps to the 156754 plate with a 153539 screw after first removing and retaining the 2191 lockwasher. See Figure 1.

(3) Remove and retain the 121575 screw and 2669 lockwasher that secures the right side of the 156754 plate to the 156752 bar. Install the 163318 connector plate as shown in Figure 1 using the 151723 screw and 2669 lockwasher furnished to secure the 163318 connector plate and 156754 plate to the 156752 bar and the retained 121575 screw and 2669 lockwasher to secure the 163318 connector plate to the 156754 plate.

(4) Secure the connector receptacle of the 163319 or 194372 cable assembly to the 163318 connector plate using the 158807 screws and 153819 lockwashers. The terminal marked "1" should be positioned to the front.

(5) Route the cable to the left of and under the base. Secure the cable to the 156754 plate with the 121245 or 121246 cable clamp using the 153539 screw installed and the 2191 lockwasher retained in Paragraph 2. b. (2), the 7002 washer and the 3598 nut furnished (see Figure 1). Then, route the cable forward between the left angle bar and vibration mount.

(6) Remove the connector receptacle that is mounted on the front of the base. Place 155754 insulating sleeves on the leads of the 163319 or 194372 cable and solder the leads to the terminals of the receptacle in accordance with Wiring Diagram 3729WD or 5904WD furnished with the modification kit. Slip the insulating sleeves over the soldered connections.

(7) Reinstall the base plate removed in Paragraph 2. c. (1) and reinstall the transmitter-distributor unit.

(8) A 161239 connector plug (mates with connector receptacle on 163319 cable assembly) for the associated cabling entering the transmitter-distributor base is included in the modification kit.

3. ADJUSTMENTS AND LUBRICATION (For 162490 or 194034 Modification Kit)

a. For adjustment and lubrication procedure refer to standardized information, for other than Bell System see Teletype Bulletin 235B.

b. Make the adjustments shown on the attached figures.

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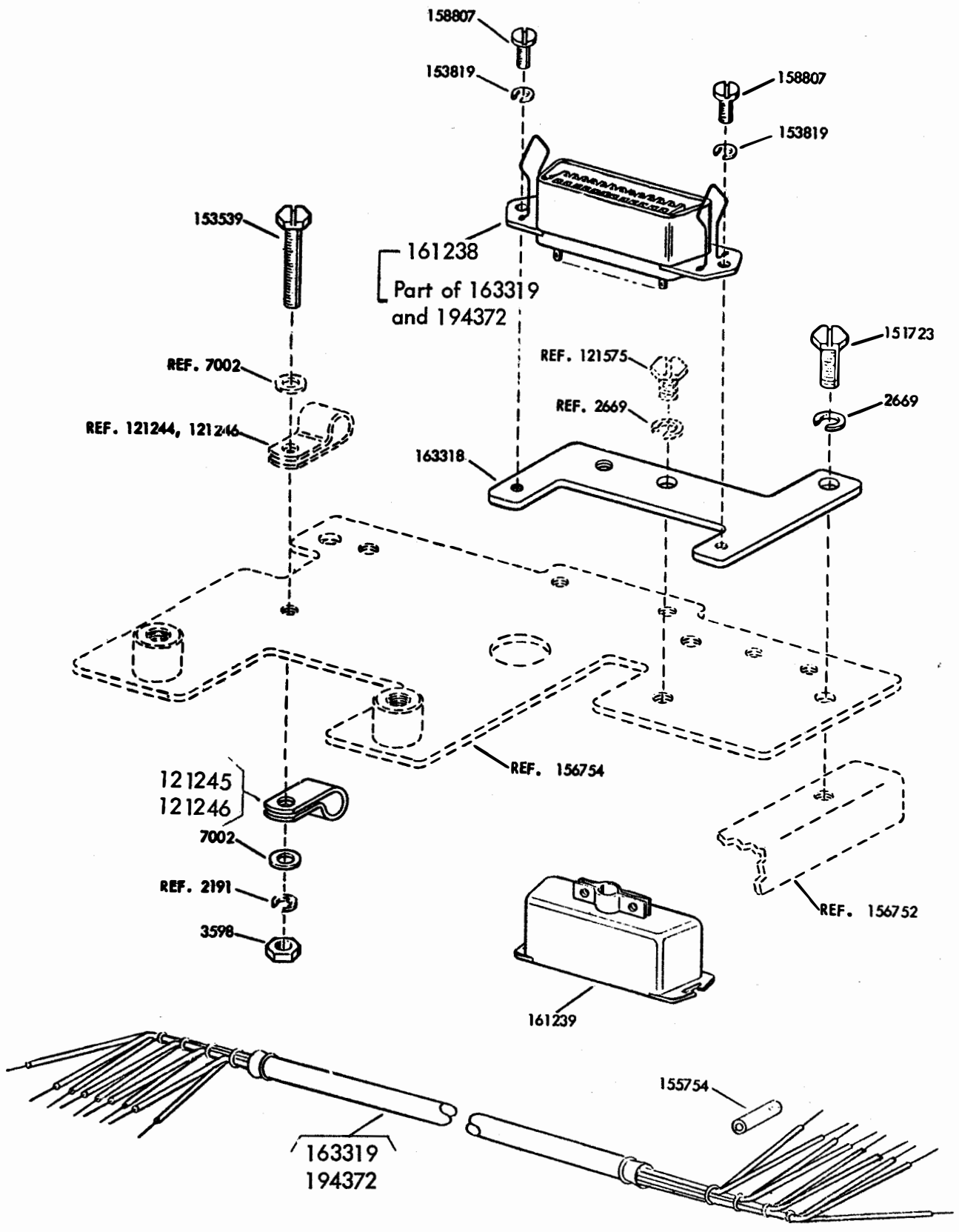


FIGURE 1. MODIFICATION KITS TO PROVIDE MULTIPLE WIRE OUTPUT FOR BASE (LXDB)

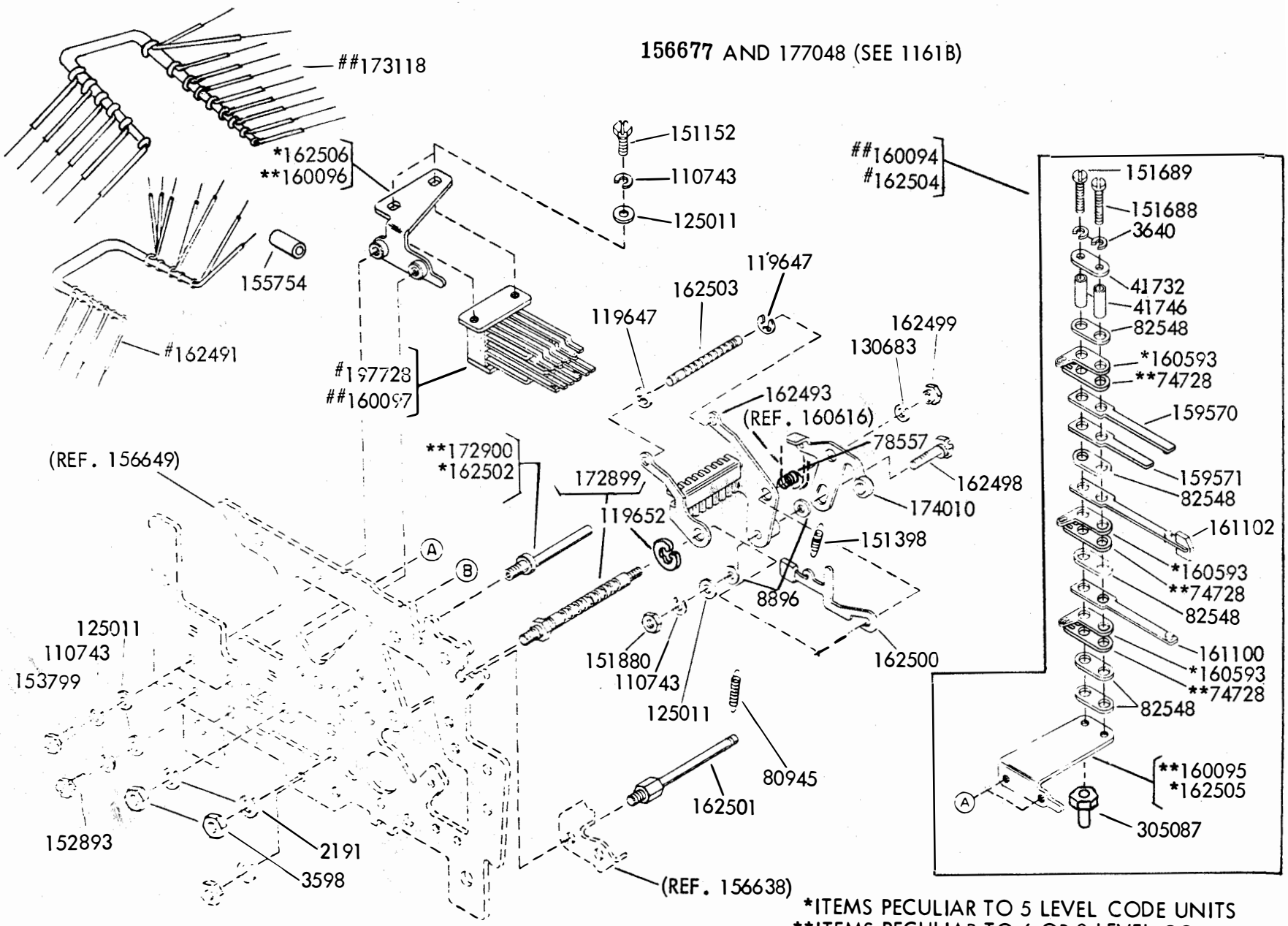
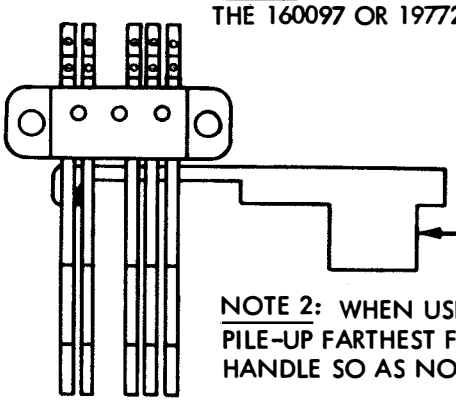


FIGURE 2. MODIFICATION KITS TO PROVIDE MULTIPLE WIRE OUTPUT FOR THE TRANSMITTER DISTRIBUTORS.

CODE READING AND TIMING CONTACTS

NOTE 1: IT IS RECOMMENDED THAT THE FOLLOWING ADJUSTMENTS BE MADE WITH THE 160097 OR 197728 CODE READING CONTACT ASSEMBLY REMOVED FROM THE UNIT.



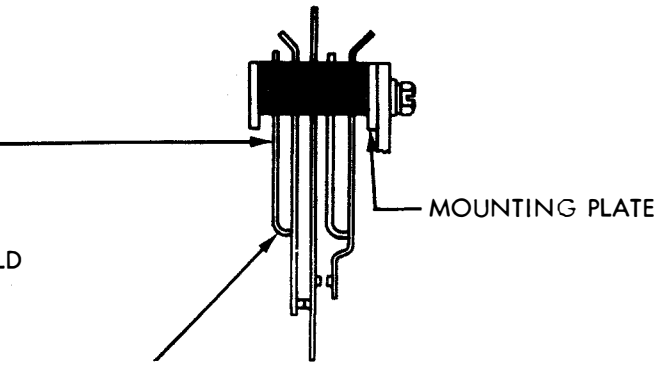
NOTE 2: WHEN USING THE CONTACT SPRING BENDER, START WITH THE CONTACT PILE-UP FARTHEST FROM THE HANDLE OF THE TOOL AND WORK TOWARD THE HANDLE SO AS NOT TO DISTURB ADJUSTMENTS ALREADY MADE.

(LEFT SIDE VIEW)

NORMALLY CLOSED CONTACT BACKSTOPS

REQUIREMENT
AS GAUGED BY EYE, FIVE OR EIGHT NORMALLY CLOSED CONTACT SPRINGS SHOULD ALIGN WITH EACH OTHER AND BE PARALLEL WITH MOUNTING PLATE.

TO ADJUST
BEND NORMALLY CLOSED CONTACT BACKSTOPS.



NORMALLY CLOSED CONTACT SPRINGS

REQUIREMENT
WITH SWINGER CONTACT SPRING HELD AWAY:
MIN 2 OZ --- MAX 6 OZ
TO MOVE EACH SPRING AWAY FROM BACKSTOP.

TO ADJUST
BEND NORMALLY CLOSED CONTACT SPRINGS.

NOTE: TO INCREASE TENSION OF NORMALLY CLOSED CONTACT SPRING, IT MAY BE NECESSARY TO BEND BACKSTOP AWAY FROM SPRING, BEND SPRING AND THEN RE-BEND BACKSTOP TO MEET REQUIREMENT OF NORMALLY CLOSED CONTACT BACKSTOPS ADJUSTMENT (ABOVE).

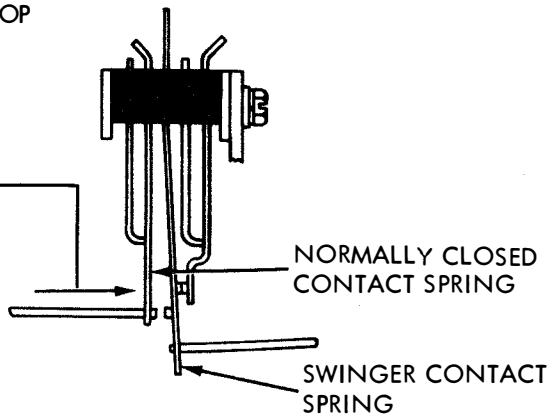
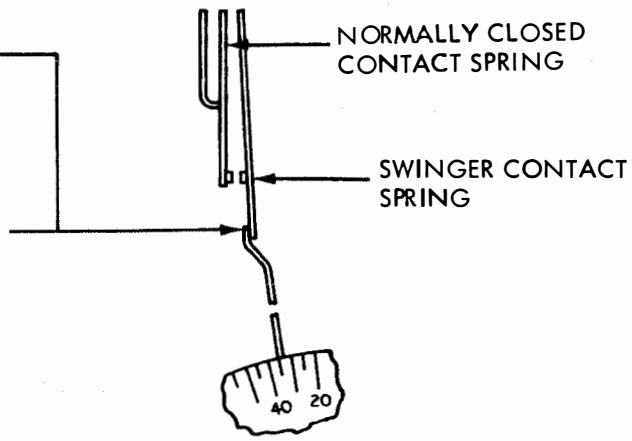


FIGURE 3. CODE READING CONTACTS

(A) SWINGER CONTACT SPRINGS

REQUIREMENT
MIN 30 GRAMS --- MAX 40 GRAMS
TO OPEN NORMALLY CLOSED CONTACTS.

TO ADJUST
BEND SWINGER CONTACT SPRINGS.



(B) NORMALLY OPEN CONTACT GAP

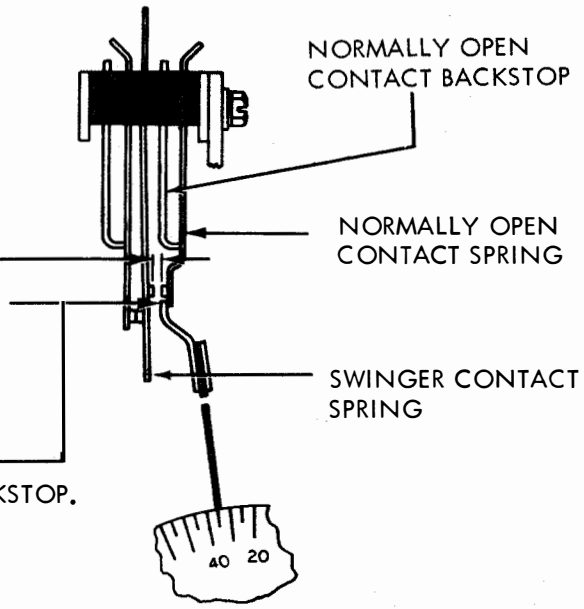
REQUIREMENT
GAP BETWEEN CONTACTS (CONTACT THAT IS NORMALLY OPEN WHEN REMOVED FROM UNIT)
MIN 0.010 INCH---MAX 0.015 INCH

TO ADJUST
BEND NORMALLY OPEN CONTACT BACKSTOPS.

(C) NORMALLY OPEN CONTACT SPRINGS

REQUIREMENT
MIN 30 GRAMS---MAX 40 GRAMS
TO MOVE EACH CONTACT SPRING AWAY FROM BACKSTOP.

TO ADJUST
BEND NORMALLY OPEN CONTACT SPRINGS.



NOTE: TO INCREASE TENSION OF SPRING, IT MAY BE NECESSARY TO BEND BACKSTOP AWAY FROM SPRING, BEND SPRING, AND THEN RE-BEND BACKSTOP TO MEET REQUIREMENT OF NORMALLY OPEN CONTACT GAP ADJUSTMENT ABOVE.

FIGURE 4. CODE READING CONTACTS

AUXILIARY CONTACT ASSEMBLY (PRELIMINARY)

NOTE: MAKE THE FOLLOWING ADJUSTMENTS BEFORE INSTALLATION OF THE CONTACT ASSEMBLY.

REQUIREMENT

(1) 4 TO 5 OUNCES TO OPEN NORMALLY CLOSED CONTACT.

(2) NORMALLY OPEN CONTACT GAP 0.015 TO 0.020 INCHES.

(3) 5-1/2 TO 6 OUNCES TO MOVE NORMALLY OPEN CONTACT SPRING FROM ITS STIFFENER.

TO ADJUST

(1) BEND SWINGER CONTACT SPRING TO MEET REQUIREMENT.

(2) BEND NORMALLY OPEN CONTACT STIFFENER TO MEET REQUIREMENT.

(3) BEND NORMALLY OPEN CONTACT SPRING TO MEET REQUIREMENT.

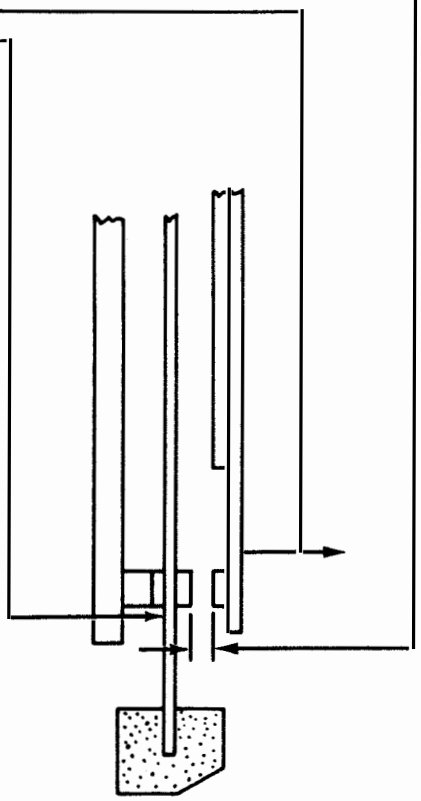


FIGURE 5. AUXILIARY CONTACT ASSEMBLY (PRELIMINARY)

2.13 SPLIT BAIL–CODE READING CONTACTS

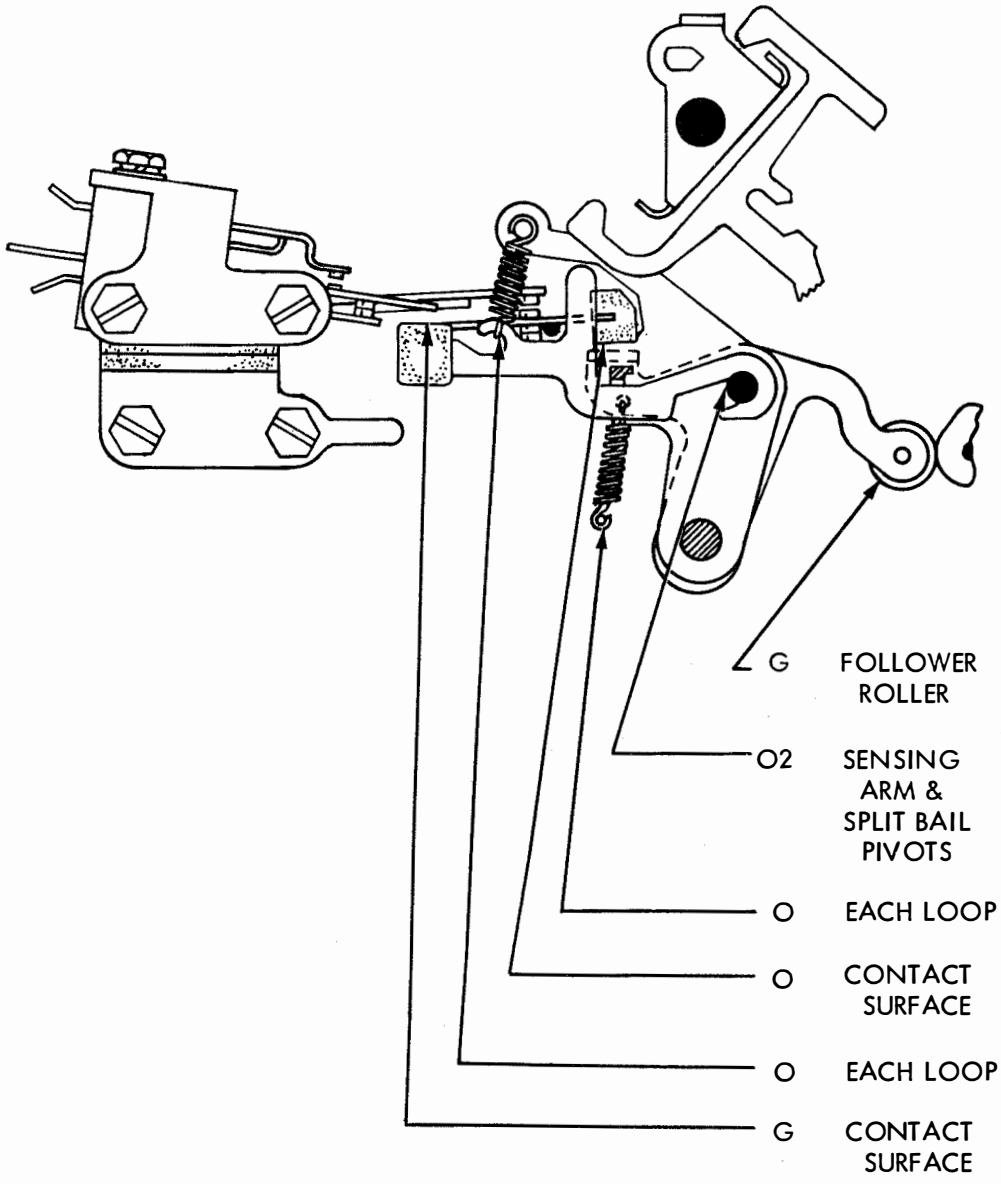


FIGURE 6. LUBRICATION

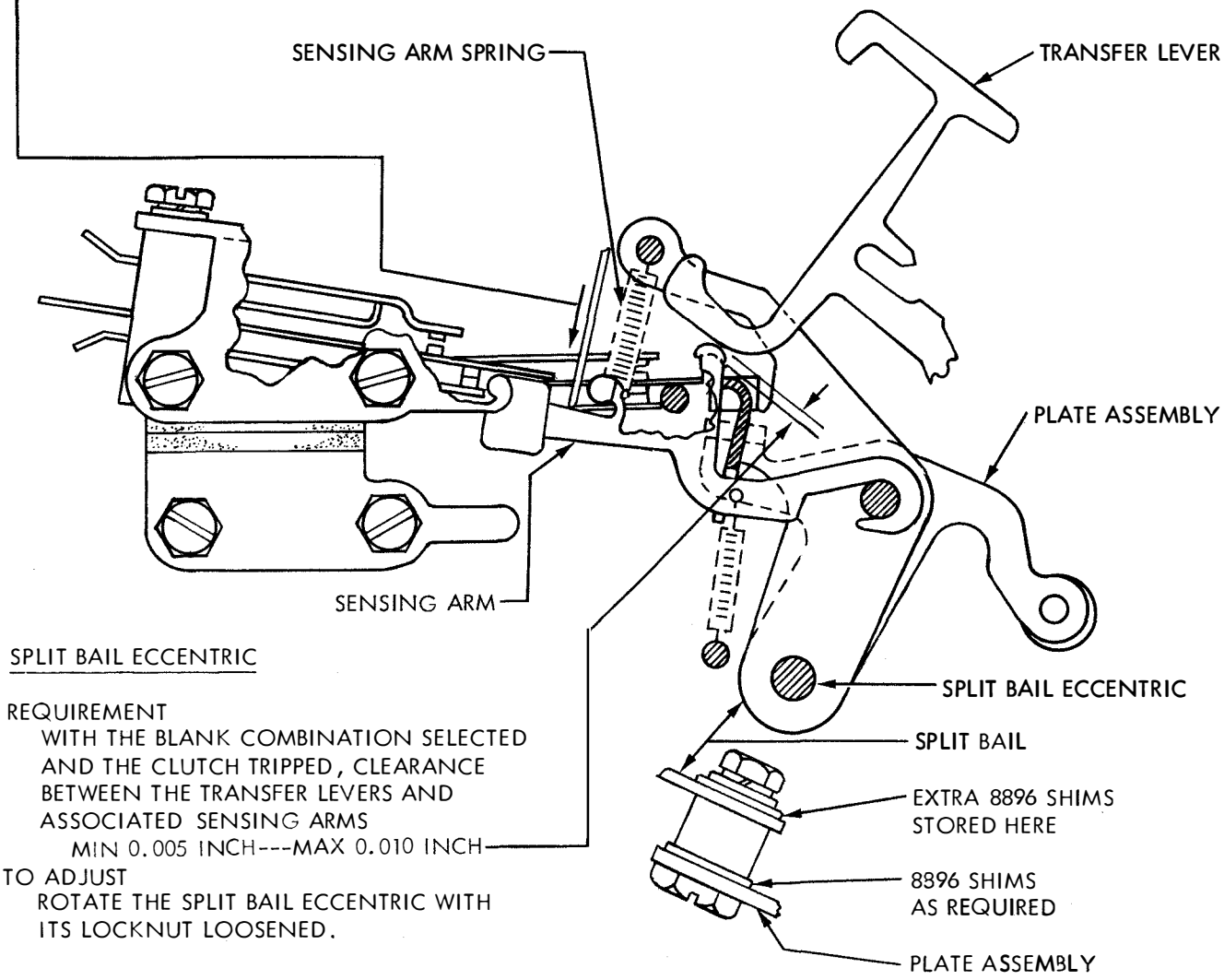
SENSING ARM-TRANSFER LEVER ALIGNMENT

REQUIREMENT
WITH THE BLANK COMBINATION SELECTED AND CLUTCH TRIPPED, THE SENSING ARMS MUST HAVE A MINIMUM OF 2/3 ENGAGEMENT WITH THEIR RESPECTIVE TRANSFER LEVERS.

TO ADJUST
ADD 8896 SHIMS AS REQUIRED BETWEEN THE PLATE ASSEMBLY AND SPLIT BAIL SPACER. STORE REMAINING SHIMS UNDER FLAT WASHER AT END OF SPLIT BAIL ECCENTRIC SCREW.

SENSING ARM SPRING

REQUIREMENT
WITH CLUTCH DISENGAGED
MIN 2-1/2 OZ --- MAX 3-1/2 OZ
TO START SENSING ARM MOVING.

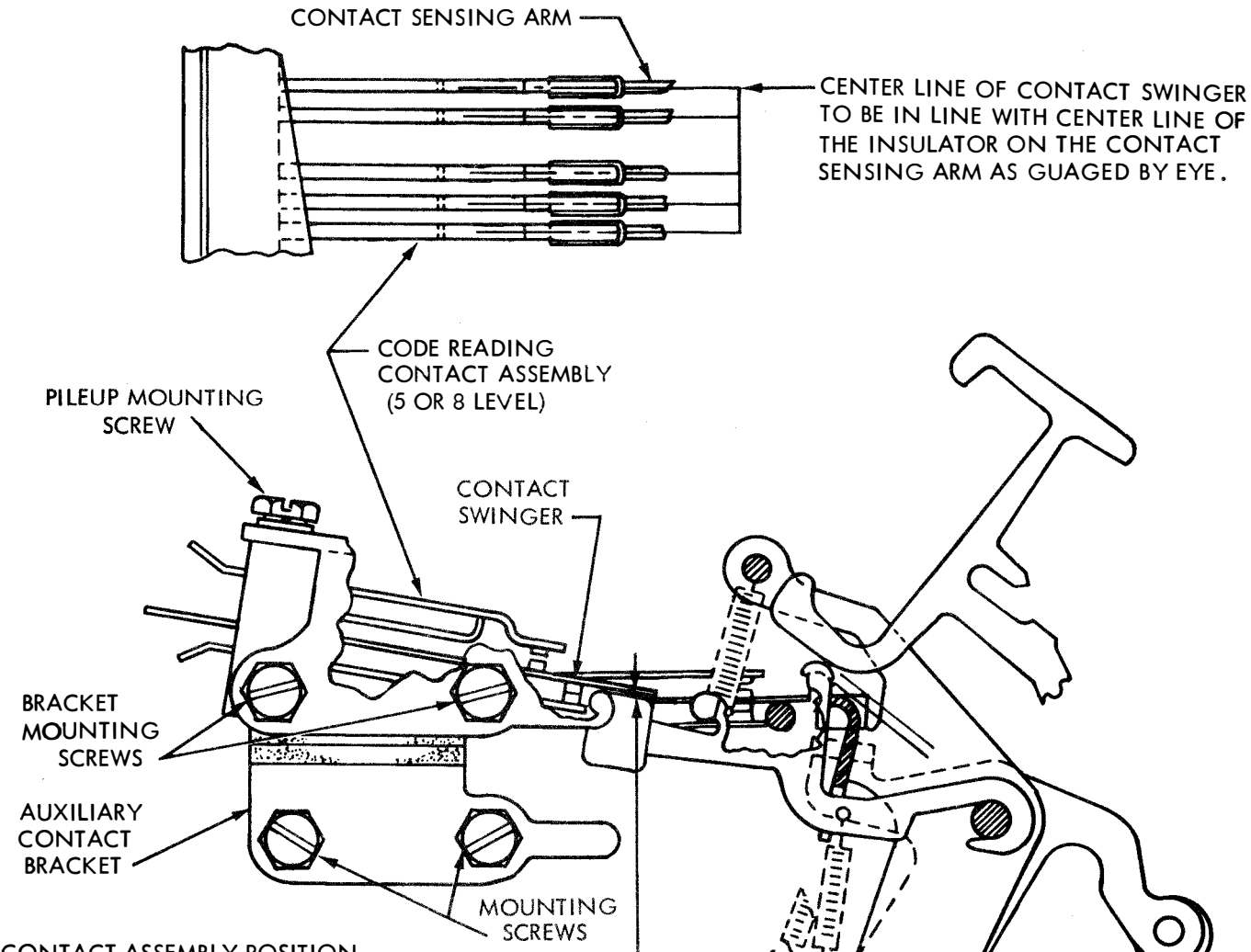


SPLIT BAIL ECCENTRIC

REQUIREMENT
WITH THE BLANK COMBINATION SELECTED AND THE CLUTCH TRIPPED, CLEARANCE BETWEEN THE TRANSFER LEVERS AND ASSOCIATED SENSING ARMS
MIN 0.005 INCH---MAX 0.010 INCH

TO ADJUST
ROTATE THE SPLIT BAIL ECCENTRIC WITH ITS LOCKNUT LOOSENED.

FIGURE 7. CODE READING CONTACTS



CONTACT ASSEMBLY POSITION

REQUIREMENT

BLANK CONBINATION SELECTED, THE UPSTOP POST OUT OF THE WAY, AND SENSING ARMS IN THEIR UPPERMOST POSITION, CLEARANCE BETWEEN CONTACT SWINGERS AND INSULATOR ON CONTACT SENSING ARMS

MIN 0.015---MAX 0.025 INCH

TO ADJUST

POSITION THE CONTACT BRACKET WITH ITS MOUNTING SCREWS LOOSENED.

AUXILIARY CONTACT OPERATING BAIL SPRING

REQUIREMENT

CLUTCH DISENGAGED AND UNIT INVERTED

MIN 5 OZ --- MAX 7 OZ

TO PULL SPRING TO ITS INSTALLED LENGTH.

NOTE: FOR OPTIMUM PERFORMANCE, AFTER CONTACT POINT WEAR, REPLACE THE COMPLETE CONTACT ASSEMBLY WITH BRACKET.

CONTACT ASSEMBLY ALIGNMENT

REQUIREMENT

THE SWINGER OF EACH CONTACT PILEUP SHOULD ALIGN CENTRALLY ON THE CONTACT SENSING ARM

TO ADJUST

POSITION CONTACT ASSEMBLY WITH PILEUP MOUNTING SCREWS LOOSENED.

FIGURE 8. CODE READING CONTACTS

CONTACT SENSING ARM UPSTOP

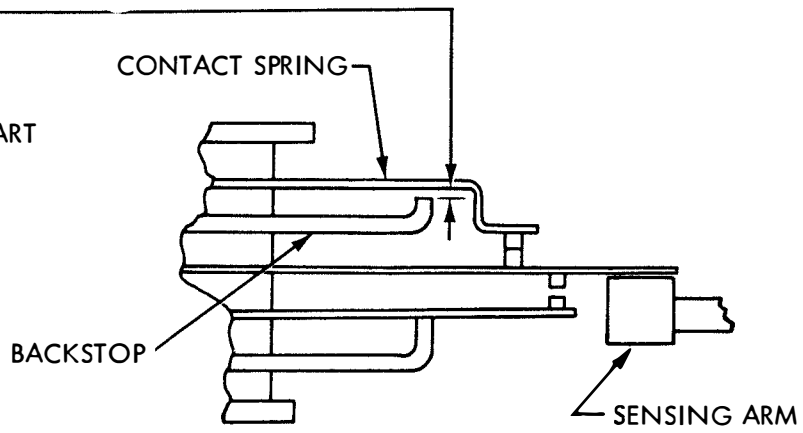
REQUIREMENT

WITH LETTERS SELECTED, CLUTCH ENGAGED AND MAIN SHAFT ROTATED UNTIL SENSING ARMS ARE AT THEIR UPPERMOST POSITION, CLEARANCE BETWEEN CODE READING CONTACT SPRING AND ITS ASSOCIATED BACKSTOP SHOULD BE

MIN SOME --- MAX 0.008 INCH

TO ADJUST

ROTATE ECCENTRIC UPSTOP POST WITH ITS LOCKING NUT LOOSENED. KEEP HIGH PART OF ECCENTRIC TOWARD LEFT.



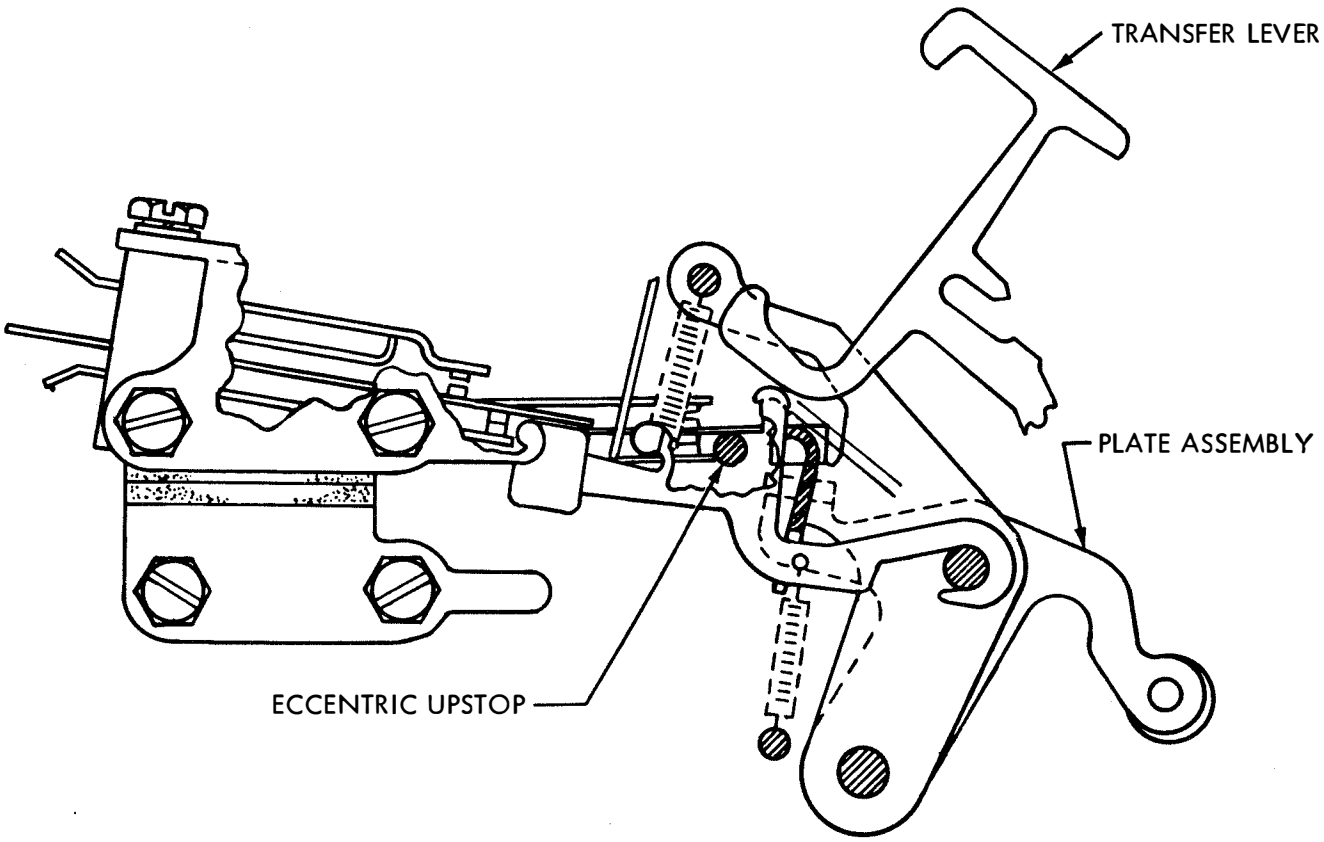


FIGURE 9. CONTACT SENSING ARM UPSTOP

AUXILIARY CONTACT ASSEMBLY POSITION (FINAL)

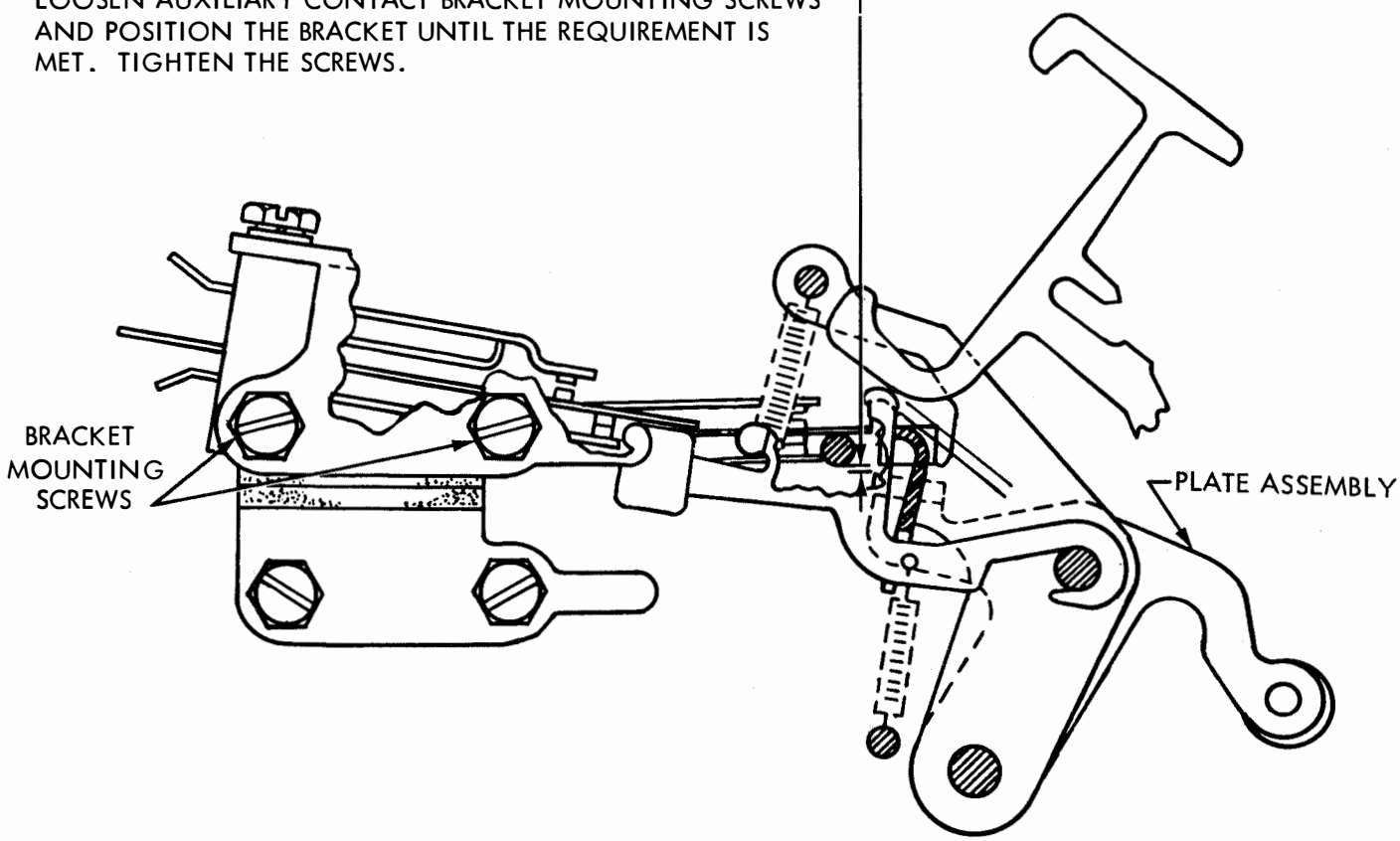
NOTE: THE FOLLOWING ADJUSTMENT SHOULD BE MADE WITH THE AUXILIARY CONTACT ASSEMBLY MOUNTED IN THE UNIT.

REQUIREMENT (PRELIMINARY)

WITH CLUTCH DISENGAGED AND LATCHED, THERE SHOULD BE MIN .040 INCH --- MAX .050 INCH CLEARANCE BETWEEN THE INSULATOR ON THE SWINGER AND THE OPERATING SURFACE ON THE PLATE ASSEMBLY.

TO ADJUST

LOOSEN AUXILIARY CONTACT BRACKET MOUNTING SCREWS AND POSITION THE BRACKET UNTIL THE REQUIREMENT IS MET. TIGHTEN THE SCREWS.



AUXILIARY CONTACT ALIGNMENT

REQUIREMENT

WHEN SWINGER IS CONTACTED BY OPERATING BAIL, THE INSULATOR PAD ON THE SWINGER SHOULD BE CENTRALLY LOCATED ON THE OPERATING PLATE ASSEMBLY, AND MATING CONTACT POINTS SHOULD BE ALIGNED.

TO ADJUST

LOOSEN CONTACT MOUNTING SCREWS AND POSITION CONTACT SPRINGS TO MEET REQUIREMENT. TIGHTEN THE SCREWS.

FIGURE 10. CODE READING CONTACTS

CONTACT SWINGER - SENSING ARM CLEARANCE

NOTE 1: WHEN STROBING THE CODE READING CONTACTS USE A DXD SCALE WHOSE UNIT CODE CORRESPONDS TO THAT OF THE UNIT BEING CHECKED. SEE OPERATING REQUIREMENTS TABLE. THE SIGNAL GENERATOR ON THE TRANSMITTER-DISTRIBUTOR SHOULD BE SYNCHRONIZED WITH THE DXD SO THAT THE END OF THE STOP PULSE IMAGE IS IN LINE WITH THE END OF THE STOP PULSE ON THE DXD SCALE WHEN TRANSMISSION IS CONTINUOUS. NORMAL SIGNAL LINE CURRENT OF 60 MA + 10 PER CENT, OR 20 MA + 10 PER CENT SHOULD BE USED TO STROBE THE CONTACTS. CURRENT APPLIED TO THESE CONTACTS IS DC.

REQUIREMENT

(1) THE CONTACTS SHOULD OPEN AND CLOSE WITHIN THE RANGE SPECIFIED ON THE OPERATING REQUIREMENTS TABLE.

(2) BREAKS IN THE PULSES SHALL BE CONFINED TO THE FIRST AND LAST 10 DIVISIONS OF THE TRACE.

TO ADJUST

LOOSEN CONTACT BRACKET MOUNTING SCREWS AND POSITION BRACKET TO MEET REQUIREMENTS.

CODE READING CONTACT OPERATING REQUIREMENTS TABLE

LEVELS	UNIT CODE	BEGINNING PULSE			END OF PULSE			MAX. PULSE LENGTH OSC. (DIV.)
		SCALE SEGMENT	SCALE DIVISION	TOLERANCE (DIV.)	SCALE SEGMENT	SCALE DIVISION	TOLERANCE (DIV.)	
5	7.00	PULSE 1	25	± 20	PULSE 5	15	± 20	3
5	7.42	PULSE 1	30	± 20	PULSE 5	40	± 20	3
6	8.50	PULSE 0	45	±25	PULSE 5	5	± 25	4
8	11.00	PULSE 1	95	± 30	PULSE 8	5	± 30	5

NOTE 2: AFTER THE ADJUSTMENT HAS BEEN MADE, CHECK CLEARANCE BETWEEN THE CONTACT SWINGER AND THE INSULATOR ON THE CONTACT SENSING ARM WHEN A BLANK COMBINATION HAS BEEN SELECTED AND THE MAIN SHAFT HAS BEEN ROTATED TO PLACE THE SENSING ARMS IN THEIR MAXIMUM UPWARD TRAVEL. THERE SHOULD BE SOME CLEARANCE.

NOTE 3: EACH CODE READING SPACING PULSE SHALL HAVE A FULL SCALE TRACE WITH NO BREAKS WHEN BLANK IS SELECTED.

FIGURE 11. CODE READING CONTACTS FINAL (STROBING)

CONTACT SWINGER - OPERATING BAIL CLEARANCE

NOTE: WHEN STROBING THE AUXILIARY CONTACTS, USE A DXD SCALE WHOSE UNIT CODE CORRESPONDS TO THAT OF THE UNIT BEING CHECKED. (SEE OPERATING REQUIREMENTS TABLE.) THE SIGNAL GENERATOR ON THE TRANSMITTER-DISTRIBUTOR SHOULD BE SYNCHRONIZED WITH THE DXD SO THAT THE END OF THE STOP PULSE IMAGE IS IN LINE WITH THE END OF THE STOP PULSE ON THE DXD SCALE WHEN TRANSMISSION IS CONTINUOUS. NORMAL SIGNAL LINE CURRENT OF 60 MA ± 10% OR 20 MA ± 10% SHOULD BE USED TO STROBE THE CONTACTS. CURRENT APPLIED TO THESE CONTACTS IS DC.

REQUIREMENT

THE CONTACTS SHOULD OPEN AND CLOSE WITHIN THE RANGE SPECIFIED ON THE OPERATING REQUIREMENTS TABLE.

TO ADJUST

LOOSEN THE CONTACT BRACKET MOUNTING SCREWS AND POSITION THE CONTACTS TO MEET REQUIREMENTS.

AUXILIARY CONTACT OPERATING REQUIREMENTS TABLE

LEVELS	UNIT CODE	START OF PULSE			END OF PULSE		
		SCALE SEGMENT	SCALE DIVISION	TOLERANCE (DIV.)	SCALE SEGMENT	SCALE DIVISION	TOLERANCE (DIV.)
5	7.00	PULSE 1	65	± 15	PULSE 4	65	± 15
5	7.42	PULSE 1	75	± 15	PULSE 4	90	± 15
6	8.50	PULSE 1	0	± 20	PULSE 4	60	± 20
8	11.00	PULSE 2	60	± 25	PULSE 7	30	± 25

FIGURE 12. AUXILIARY CONTACTS FINAL (STROBING)