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* ENGINEERING SPECIFICATION FOR THE
MODEL 28 TRANSMITTER DISTRIBUTOR (LBXD800
AND MODEL 35 TRANSMITTER DISTRIBUTOR (LBXD801)

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AND MODEL 35 TRANSMITTER DISTRIBUTOR (LBXD801)

SECTION I

GENERAL DESCRIPTION AND ENGINEERING REQUIREMENTS

1. GENERAL DESCRIPTION

- a. The Model 28 Transmitter Distributor LBXD800 is an eight level unit designed primarily for mounting on the LBXB800 Base.
- b. The general description as given in Specification 6889S shall apply to the LBXD800 except where incompatible with this specification.
- **c. The Model 35 Transmitter Distributor LBXD801 is identical to the LBXD800 with the following exceptions:
- | | <u>LBXD800</u> | <u>LBXD801</u> |
|--------------|----------------|----------------|
| Guide, Left | 156811 | 198148 |
| Plate W/Stud | 144944 | 198149 |
| Plate W/Stud | 158521 | 198150 |
| Plate W/Stud | 158513 | 198199 |
- **d. General Description and Specifications applying to the LBXD800 shall also apply to the LBXD801.

2. ENGINEERING REQUIREMENTS

- a. The engineering requirements as given in Specification 6425S shall apply to the LBXD800 except where incompatible with this specification.
- b. The LBXD800 shall be designed to mount on the LBXB800 Transmitter Distributor Base.
- c. The LBXD800 shall read and distribute eight level code.
- d. The distributor cam sleeve assembly shall generate eight code pulses and a start pulse, all of equal length, and a stop pulse two times the length of a code or start pulse (11 unit code).
- e. The distributor cam sleeve assembly shall have one auxiliary cam. A contact operated by this cam shall close at 20° of the distributor cycle and open at 340°, and shall remain open when the distributor is stopped. This contact shall in all cases be closed during the start pulse and all eight code pulses.
- f. The positions of the clutch reset cam, stop cam and five code level cams on the distributor cam sleeve assembly shall be identical to those of the equivalent cams on the five level distributor cam sleeve assembly.
- g. The wiring of the LBXD800 shall terminate in a 36 pin connector. The unit shall be physically and electrically interchangeable with the LBXD7 Transmitter Distributor, except that the LBXD7 senses and distributes five code levels.

- h. The tape guides shall be adjustable for reading five level tape. The tape out pin shall be compatible with five level or eight level tape.
- i. The reader portion of the LBXD800 shall utilize transfer type sensing contacts.
- j. The LBXD800 shall incorporate the design of the LBXD8 as far as possible.
- k. The operating sequences of the LBXD800 shall be read-feed and sense-distribute.
- l. The sensing and distributor clutch trip magnets shall have spark suppressors.

SECTION II

DETAILED DESCRIPTION AND THEORY OF OPERATION

1. DETAILED DESCRIPTION

- a. The detailed description as given in Section II of Specification 6425S applies to the LBXD800 except where incompatible with this specification.
- b. The LBXD800 has a 3/32 inch diameter tape-out pin.
- c. The reader portion of the LBXD800 has transfer type leaf spring sensing contacts in the upper part of the storing block assembly. Associated with these are sensing pins and auxiliary levers arranged as follows in order from the rear of the unit.
 - (1) Auxiliary A
 - (2) Auxiliary B (Distributor Clutch Trip)
 - (3) Sensing Pin "0"
 - (4) Sensing Pin "1"
 - (5) Sensing Pin "2"
 - (6) Sensing Pin "3"
 - (7) Sensing Pin "4"
 - (8) Sensing Pin "5"
 - (9) Sensing Pin "6"
 - (10) Sensing Pin "7"
- d. The distributor block assembly has eight code level contacts, a stop-start contact, and one auxiliary contact. These are, in order from the rear of the unit, 0, 1, 2, 3, 4 and 5 code level contacts, stop-start contact, 6 and 7 code level contacts, and auxiliary contact.

2. THEORY OF OPERATION

- a. The theory of operation as given in Specification 6425S applies to the LBXD800 except where incompatible with this specification.

- b. The distributor clutch is tripped by means of a contact operated by a cam on the sensing shaft (Sense - Distribute sequence).
- c. The feed wheel operates after the tape has been sensed by the sensing pins (Read - Feed sequence).

SECTION III

ADJUSTMENTS, SPECIAL REQUIREMENTS AND LUBRICATION

1. ADJUSTMENTS

- a. The adjustments as given in Section III of Specification 6889S shall apply to the LBXD800 except where incompatible with this specification.
- b. The LBXD800 does not have a lower contact assembly (reading contacts).

2. SPECIAL REQUIREMENTS

- *a. The special requirements as given in Specification 6889S apply to the LBXD800 except where incompatible with this specification.

**b. Tape Lid Spring Tension

- (1) With the release button held fully depressed, it shall require 1/8 to 1 oz. to just move the open end of the tape lid against the tape guide plate.
- (2) To Measure: With the tape guide plate held in a horizontal position and the release button fully depressed, apply the push end of an 8 oz. scale at the top of the tape lid to the immediate left of the tape-out hole and push vertically downward.

3. LUBRICATION

- a. The lubrication as given in Specification 6889S applies to the LBXD800.

SECTION IV

MANUFACTURING INFORMATION

1. GENERAL

- a. The manufacturing information as given in Specification 6889S shall apply to the LBXD800 except where incompatible with this specification.

2. CONTACT STROBING

a. Distributor Contacts

NOTE: A 7.42 unit code DXD disc shall be used while checking all contacts.

- (1) Using a standard DXD at corresponding speed, place a piece of tape perforated with "blank" in the sensing head of the LBXD. Operate the distributor shaft clutch magnet.
- (2) Adjust the stop contact adjusting screw so that the length of the stop pulse is 135 DXD scale divisions (7.42 unit code).
- (3) Remove the "blank" tape and select the 0, 2, 4 and 6 code and align the end of the stop pulse image with the 142 mark on the stop segment of the DXD scale.
- (4) Adjust the 0, 2, 4 and 6 distributor contact adjusting screws so that the image lengths are 67.5 DXD scale divisions in total length within $\pm 3\%$ on each end of the image. The same procedure is used when the 1, 3, 5 and 7 code is selected and adjusted.
- (5) The Transition Points are as follows:

<u>DXD Segment</u>	<u>Transition Points</u>
Stop	7 in stop to 142 in stop
0	67 in start to 35 in #1
1	35 in #1 to 2 in #2
2	2 in #2 to 70 in #2
3	70 in #2 to 37 in #3
4	37 in #3 to 5 in #4
5	5 in #4 to 72 in #4
6	72 in #4 to 40 in #5
7	40 in #5 to 7 in Stop

NOTE: In order to determine the end of the number 7 pulse image, it is necessary to hold the stop contact open.

b. Distributor Auxiliary Contact

- (1) Align the end of the stop pulse image with the 142 mark on the stop segment of the DXD scale and adjust the auxiliary contact.
 - (a) The distributor auxiliary contact should:
Close - 110 ± 5 Div. in Stop Pulse
Open - 31 ± 8 Div. in Stop Pulse
- (2) Transmitter Contacts 1 through 5 - See Specification 6425S, Section III.
- (3) Sensing Auxiliary Contacts (60 to 100 WPM) - See Specification 6889S, Section III.

- c. Final Operating Requirements - See Specification 6889S - Section III.

SECTION V

INSTALLATION AND SERVICING INSTRUCTIONS

1. INSTALLATION

a. General

- (1) The Model 28 Transmitter Distributor Set with LEXD800 consists of the following coded items.
 - (a) LBXB800 Transmitter Distributor Base
 - (b) LEXD800 Transmitter Distributor
 - (c) LMU3, LMU4 or LMU6 Motor Unit
 - (d) LBXC201 Cover
 - (e) Set of gears No. 156658 (60 WPM), 156728 (75 WPM) or 156659 (100 WPM)

b. Mounting and assembly into set

- (1) The instructions for LEXD mounting and set assembly are given in Specification 60199S, Section V.

**c. The VSL306 Two Shaft Transmitter Distributor Set (Model 35) uses the LEXD801. The VCL306 consists of the following coded items:

- (1) LBXB802 Transmitter-Distributor Base, Model 35 (includes cover and motor).
- (2) LEXD801 Transmitter Distributor, Model 35 (2-Shaft, 1 Cycle)
- (3) Gear Set, 100 wpm.

**d. Mounting and assembly into set

- (1) The instructions for LEXD801 mounting are given in Specification 60,709S, Section V.

2. SERVICING

- a. The servicing instructions are given in Specification 6889S, Section V.