FALSELY OPERATED NUMBER GROUP CONNECTOR MCB OR MCC RELAY
NO. 1 CROSSBAR OFFICES

1. GENERAL

1.01 This section covers methods to be followed in connection with troubles due to a falsely operated MCB or MCC relay in the number group connector.

1.02 This section is revised to include information relative to the MCC relay.

2. INDICATIONS OF TROUBLE CONDITION

2.01 Terminating trouble indicator displays.

3. REACTIONS DUE TO TROUBLE

3.01 During busy-hour periods, this trouble causes a backup of terminating traffic.

4. IMMEDIATE PROCEDURE TO FOLLOW

4.01 Analyze trouble indicator records. Note that one terminating marker is associated with several number group connectors, and that other markers indicate the same number group connector. The marker having its MCB or MCC relay falsely operated will not fail on the number group in which the trouble exists.

4.02 Make this marker busy

5. ANALYSIS OF TROUBLE

5.01 An MCB relay falsely operated on a number group connector will cause interference between the terminating marker connected to the circuit in trouble and the marker having the MCB relay falsely operated. However, the marker having its MCB relay falsely operated will not fail when used with the circuit involved. An MCC relay falsely operated on a number group connector will have a similar reaction.

5.02 When XS and XF trouble indications appear, it can be assumed that an MCB relay is falsely operated. No XS trouble indications will appear if an MCC relay is falsely operated, since the XS leads are not wired through these relays. However, when only XF indications appear, it must be assumed that either the MCB or MCC relay is operated as the indicator may be busy at the time a marker attempts to display an XS trouble indication for a falsely operated MCB relay.

6. SUGGESTED PROCEDURE FOR LOCATING AND CLEARING TROUBLE

6.01 Remove the covers of the MCB and MCC relays on the number group connector involved and check for a falsely operated relay.

7. TROUBLE CONDITIONS CAUSING REACTIONS MAY BE LISTED BELOW

7.01 Grounded winding of MCB relay in number group connector.

7.02 Grounded winding of MCC relay in number group connector.
## Terminating Trouble Indicator Record
### Crossbar Offices

| No. | TI | CT | ST | CR | DR | DL | OF | CH | SN | TN | H | W | Y | U | F | E2 | SQ | OS | MG | NS | HP | L | F | JF | IC | AL | ALT | LSF | LLG | LOG | HF | RF | TE | TF | CB | CS | IT | LI | JP | JE | PS | MAS | TOL | CR | BC | BY | SP | TC |
|-----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1   | ✓  | 2  | 0  | 1  | 0  | 0  | 3  | 3  | 2  | 6  | 0  | 2  | 3  | 2  | 6  | ✓  | 1,2  | C  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 1,2  | C  | ✓  | ✓  | ✓  | ✓  | 0  | 0  | 4  | 4  | 0  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| 2   | ✓  | 1  | 0  | 2  | 1  | 3  | 3  | 2  | 6  | 0  | 2  | 3  | 2  | 6  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | 0  | 0  | 4  | 4  | 0  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| 3   | ✓  | 1  | 0  | 2  | 2  | 4  | 6  | 3  | 6  | 2  | 3  | 1  | 2  | 16 | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| 4   | ✓  | 1  | 0  | 2  | 2  | 4  | 6  | 3  | 6  | 2  | 3  | 1  | 2  | 16 | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| 5   | ✓  | 1  | 0  | 2  | 2  | 4  | 6  | 3  | 6  | 2  | 3  | 1  | 2  | 16 | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| 6   | ✓  | 0  | 0  | 3  | 4  | 8  | 6  | 3  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| 7   | ✓  | 0  | 0  | 3  | 4  | 8  | 6  | 3  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| 8   | ✓  | 0  | 2  | 3  | 5  | 4  | 8  | 0  | 0  | 4  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |

### Analysis of Indication
Multiplicity of LSF lamp displays indicates a falsely operated relay. Since marker 0 fails on all other number group connectors except No. 2 and other markers only fail on this number group connector, a relay of marker 0, on number group connector No. 8 must be operated falsely.

### Immediate Procedure to Follow
Make marker 0 busy.

### Procedure to Locate and Clear Trouble
Inspect for relay operated falsely in number group connector 2.