METHOD OF TRACING RELEASE ALARM SIGNALS STEP-BY-STEP AND COMMUNITY DIAL OFFICES

1. **GENERAL:**

1.1 This section outlines the procedure to be followed in tracing release alarm signals in step-by-step and community dial offices.

1.2 Release alarm signals should be given immediate attention.

2. **APPARATUS:**

2.1 Hand Test Set equipped with No. 240-A Plug.

3. **METHOD:**

(a) **Line and Trunk Finders, Selectors and Connectors:**

3.1 Upon the appearance of a green aisle pilot lamp accompanied by a single stroke audible alarm, go to the frame involved and ascertain whether the alarm is due to a blown fuse or a release alarm. If a blown fuse, as indicated by the red shelf lamp, proceed in accordance with instructions for tracing fuse alarms. If the green shelf lamp is lighted, proceed in accordance with the following paragraphs.

3.2 Inspect all operated switches in the supervisory group for a visual condition responsible for the release alarm. This will usually be indicated by wipers caught between levels or wipers in the eleventh rotary position and caught on the bank.

3.3 In the event that the trouble is not detected by a visual inspection, monitor on all operated switches with the hand test set with the C button in the normal position. Remove the cover of the first switch where no conversation, ringing induction, or busy tone is heard and inspect the release magnet. Repeat this operation until all operated switches have been inspected or the switch with the operated release magnet is found.

3.4 In the event that the trouble is not in an operated switch, inspect all normal switches by momentarily raising each shaft by hand until a switch is detected where the sound of the release magnet operating is not heard. When such a condition is detected, remove the switch cover and inspect the position of the release magnet. If the release magnet is operated, the indication is that this switch is responsible for the alarm.

3.5 When an operated switch is responsible for the release alarm, restore it to normal by hand. This should retire the release alarm. Make the switch busy by inserting a No. 375-A tool between the make-busy springs of the test jack in the case of selectors and connectors, or in the case of line finders insert a No. 258-A plug into the combination test and make-busy jack.

3.6 When a switch in a normal position is responsible for the release alarm, check the off-normal springs and in the event that the trouble is due to faulty adjustment at this point, make the switch busy and make a temporary adjustment or insulate the springs to retire the alarm. Leave the switch busy in order that proper adjustments can be made before the switch is again placed in service. In the event that the nature of the trouble is such that the release alarm cannot be retired, remove the switch from the shelf.

3.7 If the switch responsible for the alarm is a first selector in a line switch office, busy the selector by inserting a No. 375-A tool in springs 3 and 4 of the test jack and then go to the line switchboard on which the trunk to the first selector appears and rotate the master switch in order to be sure that any line switches standing in front of the busy trunk may be moved to a position in front of a trunk that is idle. See that there are no line switches connected to the busy trunk.

3.8 When the switch responsible for the release alarm is an incoming selector, call the associated distant office and request that the trunk be made busy.

(b) **Primary Line Switches:**

3.9 Upon the appearance of the alarm, go to the board as indicated by the aisle and board supervisory lamps and inspect the master switch locking arm. If not engaged in the segment the indication is that circuit or solenoid trouble exists, or that a plunger tip is caught in the bank.

3.10 If the master switch locking arm is engaged in the segment, momentarily operate the open main relay. If this operation retires the alarm, the usual indication is that a pull down coil is energized. This condition is usually caused by a

sticky A relay. The coil responsible for the alarm can usually be found by it being warm to the touch or by a visual inspection.

3.11 If the alarm is not retired when the open main relay is momentarily operated and the master switch locking arm is engaged in the segment, the indication is that the tip conductor of a primary line switch is crossed with battery. The line switch responsible for the alarm can usually be located by opening the tip B.C.O. spring of each relay in turn of the master switch group until the switch responsible for the trouble is located (indicated by the alarm being retired).

Note: The tip B.C.O. springs may be rapidly opened by using the index finger of each hand to open the springs of the right and corresponding left switch at the same time, exerting pressure on the armature directly behind the stud in an outward direction.

3.12 After the alarm is retired, monitor with the hand test set, with the C button normal, on all plunged primary line switches, to ascertain if any switches have been operated on a called party line, due to the A relay having been accidentally operated manually while opening the B.C.O. springs. This will usually result in a lock-up condition and will be generally indicated by dial tone and conversation being heard simultaneously.

(c) **Secondary Line Switches and Out Trunk Switches:**

3.13 Proceed as described in paragraphs 3.9 and 3.10.

4. **REPORTS:**

4.1 Record the location of the switch responsible for the release alarm as well as the appearance of the trouble.