ALARM CIRCUITS FOR THE 30, 60 OR 120 I.P.M. INTERRUPTER, TRANSFER AND DISTRIBUTING CIRCUIT SD-95078-01

TOLL SYSTEMS

1. GENERAL

1.01 This section describes a method of testing the alarms for the 30, 60 or 120 I.P.M. interrupter, transfer and distributing circuit SD-95078-01.

1.02 The tests covered are:

(A) Interrupter Circuit SD-95078-01, Fig. 11

(B) Interrupter Circuit SD-95078-01, Fig. 1

(C) Distributing Circuit 24-Volt SD-95078-01, Figs. 11 and 3

(D) Distributing Circuit 48-Volt SD-95078-01, Figs. 11 and 4

(E) Distributing Circuit 24-Volt SD-95078-01, Figs. 1 and 3

(F) Distributing Circuit 48-Volt SD-95078-01, Figs. 1 and 4

(G) Transfer Circuit SD-95078-01, Figs. 10 and 11

1.03 When Test (G) is made Test (A) may be omitted.

1.04 Tests on the interrupter supply and alarm circuits shall preferably be made during periods of light traffic so as not to interfere with service.

1.05 The tests shall be made on each interrupter alarm circuit installed.

1.06 A check of the multiple alarm lamps and audible signals shall be made when multiple appearances are provided.

2. APPARATUS

Tests (A), (B), and (G)

2.01 Watch with sweep second hand.

Tests (C), (D), (E), and (F)

2.02 One No. 716E (or No. 528) Receiver attached to a 2WAB Cord equipped with two No. 360 Tools (2W21A Cord), one KS-6278 Tool and one No. 411A Tool.

3. METHOD

(A) Interrupter Circuit SD-95078-01, Fig. 11

3.01 This test checks that the alarm relays will operate when a trouble ground or open circuit condition is placed on the interrupter alarm circuit.

Trouble Ground Condition

3.02 Operate the IA RLS key. The IA RLS (white) lamp should light.

Note: The operation of the IA RLS key prevents the operation of the office alarm circuits and the automatic transfer of the interrupter transfer circuit.

3.03 Operate the GRD TEST key. Check that after a minimum delay of 4.5 seconds the GA (green) lamp lights.

3.04 Release the GRD TEST key. The GA lamp should be extinguished.

Open Circuit Condition

3.05 Operate the OPEN TEST key. Check that after a slight delay the OA (green) lamp lights. (The circuit is designed to provide a minimum delay of .6 second.)

3.06 Release the OPEN TEST key. The OA lamp should be extinguished.

3.07 Release the IA RLS key. Observe that the IA RLS lamp is extinguished.

(B) Interrupter Circuit SD-95078-01, Fig. 1

3.08 This test checks that the alarms will operate when a trouble ground or open circuit condition is placed on the interrupter alarm circuit.

Trouble Ground Condition

3.09 Operate the GRD TEST key. Check that after a minimum delay of 4.5 seconds the INT ALM (red) lamp lights. Check that the annunciator lamps and associated alarms operate. Release the GRD TEST key.

3.10 Momentarily operate the RLS key. The RLS (white) lamp should light during the time the RLS key is operated. The INT ALM lamp should be extinguished and the annunciator and associated alarms retired.

Open Circuit Condition

3.11 Operate the OPEN TEST key. Check that after a slight delay the INT ALM (red) lamp lights. (The circuit is designed to provide a minimum delay of .6 second.) Check that the annunciator lamps and associated alarms operate. Release the OPEN TEST key.

3.12 Proceed as in 3.10.

(C) Distributing Circuit 24-Volt - SD-95078-01, Figs. 11 and 3

3.13 This test checks that when a trouble ground is placed on any interrupter distributing lead a trouble indicating lamp identifying that lead will light and the office major alarm will be operated.

3.14 With one terminal of the test receiver connected to ground, check for battery on the back contact of each spring combination of the C or D relay, during the operated interval of the relay.

3.15 Hold the test receiver ground on one of the contacts mentioned in 3.14. The DT1 trouble indicating lamp associated with the grounded contact should light.

3.16 The DA (green) lamp should light and the office major alarm circuits should operate.

3.17 Remove the test receiver ground from the contact of the C or D relay. The DT1 lamp should be extinguished.

3.18 Momentarily operate the DA RLS key. The DA RLS (white) lamp should light while the DA RLS key is operated. The DA lamp should be extinguished and the office alarm circuits should be retired.

(D) Distributing Circuit 48-Volt - SD-95078-01, Figs. 11 and 4

3.19 This test checks that when a trouble ground is placed on any interrupter distributing lead a trouble indicating lamp identifying that lead will light and the office major alarm will be operated.

3.20 With one terminal of the test receiver connected to ground, check for battery on the front contact of each spring combination of the C or D relay, during the released interval of the relay.

3.21 Hold the test receiver ground on one of the contacts mentioned in 3.20. The DT2 trouble indicating lamp associated with the grounded contact should light.

3.22 The DA (green) lamp should light and the office major alarm circuits should operate.

3.23 Remove the test receiver ground from the contact of the C or D relay. The DT2 lamp should be extinguished.

3.24 Proceed as in 3.18.

(E) Distributing Circuit 24-Volt - SD-95078-01, Figs. 1 and 3

3.25 Proceed as in 3.13, 3.14, and 3.15.

3.26 The DIST ALM (red) lamp should light and the office major alarm circuits should operate.

3.27 Proceed as in 3.17.

3.28 Momentarily operate the RLS key. The RLS (white) lamp should light while the RLS key is operated. The DIST ALM lamp should be extinguished and the office alarm circuits should be retired.

(F) Distributing Circuit 48-Volt - SD-95078-01, Figs. 1 and 4

3.29 Proceed as in 3.19, 3.20 and 3.21.

3.30 The DIST ALM (red) lamp should light and the office major alarm circuit should operate.

3.31 Remove the test receiver ground from the contact of the C or D relay. The DT2 lamp should be extinguished.

3.32 Momentarily operate the RLS key. The RLS (white) lamp should light while the RLS key is operated. The DIST ALM lamp should be extinguished and the office alarm circuits should be retired.

(G) Transfer Circuit SD-95078-01, Figs. 10 and 11

3.33 This test checks that, on a trouble ground or open condition on any of the supplies to the interrupter signal circuits in

service, the transfer circuit will operate and switch the load to the other supply, bring in a minor alarm and, by lamps, indicate the type of trouble and onwhich supply. When both supplies are in trouble a major alarm is operated and lamps indicate the type and supplies in trouble.

Trouble Ground Condition

3.34 Operate the GRD TEST key. Check that after a minimum delay of 4.5 seconds the GA (green) lamp lights and the office minor alarm operates.

3.35 Observe that the interrupter transfer relay T operates or releases to transfer the load. The green lamp A or B should light, indicating which supply was carrying the load at the time of failure.

3.36 Release the GRD TEST key. Momentarily operate the IA RLS key. The GA lamp should be extinguished, and the office minor alarm circuit retired.

Open Circuit Condition

3.37 Operate the OPEN TEST key. Check that after a slight delay the OA (green) lamp lights. (The circuit is designed to provide a minimum delay of .6 second.) Check that the office minor and major alarms operate.

3.38 Operate the MA key. The MA (white) lamp should light and the office major alarm should be released.

3.39 The green lamp A or B of the transfer relay circuit opposite to the lamp that operated in 3.35 should light.

3.40 Release the OPEN TEST key. Momentarily operate the IA RLS key. The OA lamp should be extinguished and the minor alarm released.

3.41 Momentarily operate the TRNS RLSE key. The green lamp A or B should be extinguished. The TRNS RLSE (white) lamp should light during the time the TRNS RLSE key is operated.

3.42 Release the MA key. The MA lamp should be extinguished.

4. REPORTS

4.01 The required record of these tests should be entered on the proper form.