COIN CONTROL SELECTORS
TIMING TESTS
USING RELAY TIMING TEST SET SD-90418-01 (J94713A)
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes a method of applying timing tests to B, C and E relays of coin control selectors. These tests are based on the use of relay timing test set SD-90418-01.

1.02 This section is reissued to incorporate material from the addendum in its proper location. In this process marginal arrows have been omitted.

1.03 The tests covered are:

(A) Release Test of B Relay.

(B) Release Test of C Relay.

(C) Release Test of E Relay.

1.04 The timing requirements given on the circuit requirements table for the particular circuit under test shall be employed.

1.05 Failure of a relay to meet the release test may be due to the presence of some sticky substance between the armature and core, or it may indicate that the relay is out of timing adjustment, in which case it should be readjusted in accordance with timing requirements given on the circuit requirements table.

1.06 If an "out of service" failure is encountered the associated trunk should be held busy in the approved manner until the trouble is cleared.

1.07 The test equipment specified in this section is designed to apply proper marginal tests (simulated critical circuit conditions) when the circuit under test and the test equipment have an applied voltage of 48.5 to 50. In those offices where power plants are normally operated at more than 50 volts, the battery voltage should be reduced and maintained within the required limits while the tests are being made.

2. APPARATUS

All Tests

2.01 Relay Timing Test Set J94713A (SD-90418-01).

2.02 35-Type Test Set.

2.03 One P2J Cord equipped with two No. 310 Plugs (2P9A), used where a battery supply jack is available.

2.04 One W2M Cord equipped with one No. 310 Plug, tip and sleeve connections, two No. 59 Cord Tips (2W12A), and two No. 108 Cord Tips, used where a battery supply jack is not available.

2.05 One P2P Cord equipped with one No. 309 Plug and one No. 310 Plug (2P10A).

2.06 One P3E Cord equipped with two No. 310 Plugs (3P7A).

2.07 One P3C Cord equipped with one No. 310 Plug and one No. 240A Plug (3P2A).

Tests (B) and (C)

2.08 One No. 32A or No. 32C Test Set, for remote control operation when required.

3. PREPARATION

All Tests

3.01 Connect 48-volt battery and ground to one of the BAT-G jacks of the test set. Use the P2J cord if a battery supply jack is provided. If a battery supply jack is not available, use the W2M cord, connecting the No. 59 cord tip of the white (tip) conductor to a spare 48-volt battery fuse or to the equipment side of a battery fuse in service, and the red (sleeve) conductor to ground. In no case should the fuse selected exceed five amperes.

Note: To avoid possible grounding of the battery supply lead, connect the cord to the test set first and, when disconnecting, remove the cord from the test set last.

3.02 Allow the timing test set to operate for at least fifteen minutes (to reach a constant temperature) before making tests.

3.03 Check the 35-type test set, making sure that all of the short-circuiting switches of the telegraph keys are open and the slides are in their extreme right position.

3.04 Connect the remaining BAT-G jack of the relay timing test set to the TEST BATT & GRD jack of the 35-type test set using a P2P cord.

3.05 Connect the 3R jack of the 35-type test set to the V-BR jack of the relay timing test set using a P3E cord.

3.06 Insert the No. 310 plug of the P3C cord into the T & R jack of the 35-type test set.

3.07 Make the associated coin trunk busy at the originating end in the approved manner.

3.08 Remove the heat coils from the trunk at the main frame to clear the selector of the trunk apparatus.

3.09 Insert the No. 240A plug into the test jack of a coin control selector that has been made busy and establish, through key 3 of the 35-type test set, the current flow shown on the circuit requirements table for operation of the selector A relay. Remove the No. 240A plug from the selector test jack.

Note: This current flow value should be checked occasionally as testing progresses to avoid any appreciable change in current.

Test (A) Only

3.10 Operate the B key (or the B dial) of the relay timing test set to the position corresponding to the release requirement for the B relay.

Tests (B) and (C) Only

3.11 Move the No. 310 plug of the P3E cord from the V-BR jack of the relay timing test set to the V-M jack.

3.12 Operate the B dial of the relay timing test set to the position corresponding to the release requirement for either the C or E relay, according to the relay under test.

3.13 For remote control operation, connect the plug of the No. 32A test set to the BR jack of the relay timing test set or, if using the No. 32C test set, connect the plug with the red shell to the BR jack and the plug with the grey shell to the AW jack of the relay timing test set.

4. METHOD

(A) Release Test of B Relay

4.01 Operate the start key of the relay timing test set to its B position.

4.02 Insert the No. 240A plug of the P3C cord into the selector test jack. Observe that the switch steps to the first level and releases without cutting in, at least three times, indicating proper release of the B relay.

4.03 Remove the No. 240A plug from the test jack and proceed as in 4.02 with the next switch to be tested.

4.04 Upon completion of the test, restore the start key to its normal position.

(B) Release Test of C Relay

4.05 Insert the No. 240A plug of the P3C cord into the selector test jack.

4.06 Operate the start key of the relay timing test set to its B position or depress the red button of the remote control set. Observe that the switch steps to the first level and cuts in, indicating proper release of the C relay. The switch may or may not continue to rotate.

4.07 Restore the start key or release the remote control button, and remove the No. 240A plug from the Test jack. Note that the switch releases.

(C) Release Test of E Relay

4.08 Insert the No. 240A plug of the P3C cord into the selector test jack.

4.09 Operate the start key of the relay timing test set to its B position or depress the red button of the remote control set. Observe that the switch steps to the first level, cuts in and stops, indicating proper release of the E relay.

4.10 Restore the start key or release the remote control button, and remove the No. 240A plug from the test jack. Note that the switch releases.

5. REPORTS

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