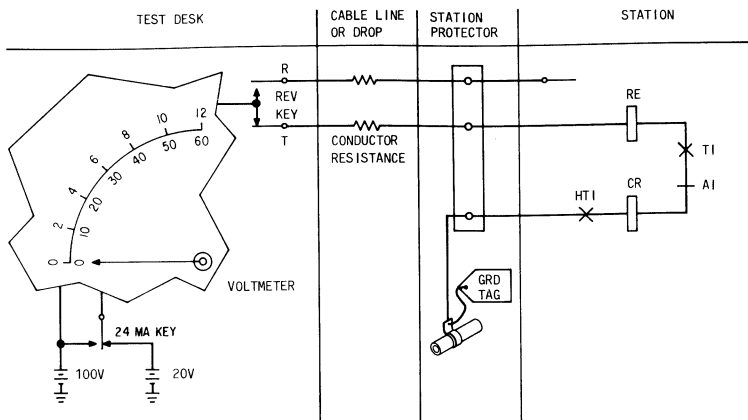


MISCELLANEOUS TESTS

1. GENERAL

1.01 Miscellaneous tests include the following.

- (1) Coin Ground Closure Test, Fig. 1.
- (2) Coin Ground Removal Relay Test, Fig. 2.
- (3) Silicon Controlled Rectifier Test, Fig. 3.



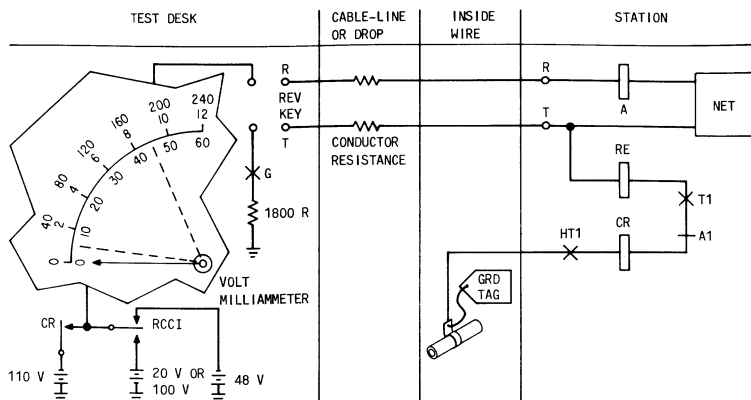
TO DETERMINE THAT A DEPOSITED COINS OPERATE A COIN GROUND CONTACT ON THE COIN RELAY, PROCEED AS FOLLOWS:

1. CONNECT TO THE LINE TO BE TESTED. LINE SHOULD TEST CLEAR OF CROSSES AND FEMF.
2. SIGNAL STATION, OPERATE T AND RCCI KEYS AND REQUEST DEPOSIT OF INITIAL RATE OR GREATER. LISTEN FOR COIN TONES TO ASSURE TOTALIZER IS HOMED.
3. AFTER DEPOSIT OF COIN, RESTORE ALL KEYS AND OPERATE REV KEY.
4. VOLTMETER SHOULD DEFLECT TO NEARLY FULL SCALE, INDICATING OPERATION OF COIN HOPPER TRIGGER BY DEPOSITED COIN.
5. OPERATE 24 MA KEY. METER SHOULD DEFLECT BETWEEN 7.0 AND 9.5 VOLTS ON THE 0-24 VOLT SCALE.
6. RESTORE REV KEY AND OPERATE CR KEY TO REFUND COINS.
7. RELEASE ALL TEST CONNECTIONS AND RESTORE ALL KEYS TO NORMAL.

BSP REFERENCES:

- 662-400-500
- 662-410-500

Fig. 1—Coin Ground Closure Test (DTF)



THE GROUND REMOVAL RELAY IS USED TO REMOVE THE COIN GROUND DURING A CONVERSATION TO REDUCE LINE NOISE. THIS TEST SHOULD BE MADE IN CONNECTION WITH ALL TROUBLE REPORTS INVOLVING "HUM", NOISE AND TRANSMISSION DIFFICULTIES. TO PERFORM THIS TEST, PROCEED AS FOLLOWS:

1. MAKE CONNECTION TO THE LINE TO BE TESTED.
2. SIGNAL STATION AND OPERATE T AND RCCI KEYS.
3. WHEN STATION ANSWERS RELAY A (GROUND REMOVAL) SHOULD OPERATE THROUGH ROH. CONTACT A1 BREAKS AND OPENS COIN GROUND CIRCUIT.
4. REQUEST ATTENDANT OR CRAFTSMAN TO WAIT A FEW SECONDS AND THEN DEPOSIT 10¢, KEEPING RECEIVER OFF HOOK.
5. DURING THE PAUSE, OPERATE CR AND G KEYS APPLYING REFUND CURRENT TO THE TIP AND 1800 OHM GROUND TO THE RING.
6. RELAY A SHOULD EITHER REMAIN OPERATED OR RELEASE AND REOPERATE, KEEPING THE COIN GROUND PATH OPEN.
7. MILLIAMMETER SHOULD READ 20 MA OR BETTER.
8. WHEN COIN DEPOSITED, GROUND IS CONNECTED TO THE COIN RELAY. MILLIAMMETER READING SHOULD NOT CHANGE PROVING THAT THE GROUND REMOVAL RELAY IS OPERATED AND CONTACT A1 IS OPEN.
9. RESTORE CR AND G KEYS AND OPERATED REV KEY. RELAY A SHOULD NOW RELEASE AND CLOSE CONTACT A1, COMPLETING COIN GROUND PATH.
10. MILLIAMMETER SHOULD NOW READ THE COIN GROUND ON THE TIP SIDE.
11. RESTORE REV KEY AND OPERATE CR KEY TO RETURN COIN. RESTORE ALL OTHER KEYS TO NORMAL.

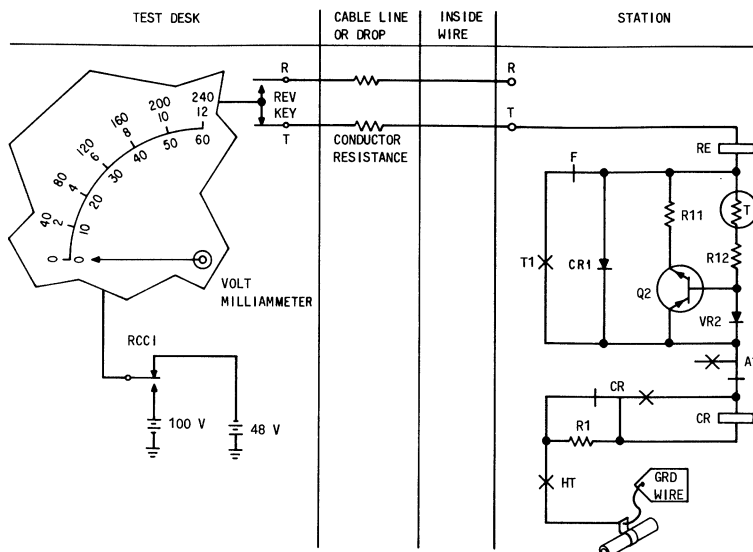
IF RELAY A FAILS TO OPERATE AS DESCRIBED IN STEP 8, FOLLOWING WILL TAKE PLACE:

- (A) MILLIAMMETER CURRENT WILL INCREASE MOMENTARILY TO 45 MA OR BETTER WHEN THE COIN IS DEPOSITED.
- (B) WITH COIN GROUND PATH NOW CLOSED, THE COIN RELAY SHOULD OPERATE AND RETURN THE COIN, SINCE THE CR AND G KEYS ARE OPERATED.
- (C) WHEN THE COIN RELAY RESTORES, COIN GROUND IS REMOVED AND THE MILLIAMMETER READING SHOULD RETURN TO ABOUT 20 MA.
- (D) IF IN (B) ABOVE, THE LOOP IS NEAR MAXIMUM LENGTH, THE COIN RELAY MAY NOT OPERATE, SINCE IT IS PARALLEL WITH THE STATION TRANSMITTER CIRCUIT.
- (E) IF THE COIN RELAY FAILS IN (D) ABOVE, ADVISE ATTENDANT OR CRAFTSMAN TO HANG UP RECEIVER SO THAT COINS MAY BE RETURNED IN A NORMAL MANNER.

BSP REFERENCES:

- 662-400-500
- 662-410-500

Fig. 2—Coin Ground Removal Relay Test (DTF)—Not Applicable to Loops Equipped With 8A Range Extender



THE SILICON CONTROLLED RECTIFIER IS USED TO PROVIDE A PATH FOR THE COIN RETURN SIGNAL FOR A SINGLE 5¢ DEPOSIT LESS THAN INITIAL RATE. THIS TEST SHOULD BE MADE IN CONNECTION WITH ALL TROUBLE REPORTS OF CAN'T REFUND SINGLE NICKEL DEPOSIT LESS THAN INITIAL RATE. TO TEST THIS CIRCUIT OPERATION, PROCEED AS FOLLOWS:

1. CONNECT TO THE LINE TO BE TESTED.
2. WITH CONNECTION ESTABLISHED, SIGNAL ATTENDANT OR CRAFTSPERSON AT STATION AND OPERATE T AND RCC1 KEYS.
3. REQUEST A 5¢ DEPOSIT AND THE RECEIVER LEFT OFF HOOK.
4. RESTORE ALL KEYS AND OPERATE REV KEY - METER READS THE COIN GROUND ON THE TIP.
5. THIS INDICATES EITHER DIODE CR1 OF VR2 IS CONDUCTING WITH POSITIVE TEST BATTERY.
6. RESTORE REV KEY AND OPERATE CR KEY TO RETURN COIN.
7. FAILURE TO RETURN COIN INDICATES A DEFECTIVE SCR OR ONE OF ITS PARALLEL COMPONENTS.
8. RELEASE ALL TEST CONNECTIONS AND RESTORE ALL KEYS TO NORMAL.

BSP REFERENCES:
 • 662-400-500
 • 662-410-500

Fig. 3—Silicon Controlled Rectifier Test (DTF)