see TI ES S 5207

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P.O. ENGINEERING DEPT.
ENGINEERING INSTRUCTIONS

TESTS & INSPECTIONS
ROUTINE
S 5207

COIN-BOX INSTALLATIONS WITH PREPAYMENT MECHANISMS (AUTOMATIC SYSTEM)

Functional Tests

[Maintenance Routine Instruction (M.R.I.) No. S 207]

[NOTE:- As this Instruction has been completely revised, individual items have not been "starred"]

1. Scope of Instruction. This Instruction details tests to prove that the coin-box mechanism and telephone apparatus are in a satisfactory condition.

2. Application of functional tests. These tests should be applied after the cleaning and overhauling of the telephone, coin-box mechanism and wiring [see S 5202 (M.R.I. No. S 202)]. If the tests reveal a fault, the appropriate test(s) should be re-applied after remedial action has been taken, in order to prove that the defect(s) have been removed. The tests should also be applied after the installation of a circuit has been completed and before it is handed over for service. (For installation purposes, the word "faultsman" should be read as "fitter" in the tables which follow.) Adjustments which may prove necessary as a result of the tests should be made in accordance with TELES., Call Offices, D 5001.

TABLE 1. TESTS TO BE APPLIED WHEN TESTING FACILITIES WITH A TEST DESK ARE AVAILABLE

Purpose of test	Operations by officer at C.C.B.	Operations by officer at test desk	Conditions if equipment is free of faults
1. Check of sixpenny and shilling gong signals (see Note)	Swing out mechanism	-	-
	Insert sixpenny piece	-	Coin strikes gong once
	Insert shilling	-	Coin strikes gong twice
	Press button "A"	-	Coins released from mechanism
	Return mechanism	-	-

TABLE 1. *(contd.)*

Purpose of test	Operations by officer at C.C.B.	Operations by officer at test desk	Conditions if equipment is free of faults
2. Check of balance arm	Hold the latch arm clear and, using a "Gauge, Tension, No. 1", apply a pressure of 19 gm. to the flattened part of the balance arm, where it passes through the front-plate	-	Balance arm does not move
	Hold the latch arm clear and apply a pressure of 21 gm. in a similar manner	-	Balance arm moves
	Remove the handset and listen for dial tone. Dial 8	-	Dial tone remains
3. Operation of pulse-control cam on dial	Dial "0"	-	Operator answers
	Ask operator for test desk. Ask testing officer for co-operation, and replace handset	Establish testing connexion to C.C.B. line	-
4. Insulation resistance	Co-operate with testing officer	Test insulation of circuit. (See L 5106 for permissible insulation limits)	-
5. Transmission	Co-operate with testing officer	Verify, by speaking, that transmission and reception are satisfactory	-

TABLE 1 *(contd.)*

Purpose of test	Operations by officer at C.C.B.	Operations by officer at test desk	Conditions if equipment is free of faults
6. Ringing of magneto bell	Co-operate with testing officer (See TELEPHONES, Stations, A 5905, for bell adjustments)	Connect ringing supply to line	Bell rings satisfactorily
7. "Penny" gong signals (see Note)	Lift receiver, and insert four tokens	Listen for "penny" gong signals	Exchange testing officer hears four "penny" gong signals
8. Removal of s/c. from pulsing contacts. Check of pulses and dial speed	Dial digits under direction of testing officer	Check the dial speed and digits received on "Tester No. 43"	Dial speed 9-11 p.p.s. and correct digits registered on "Tester No. 43"
9. Refund of tokens and 7-sec. clear	Press button "B"	Test for disconnexion of loop for approx. 7 seconds	Tokens refunded. Line disconnected for approx. 7 seconds
10. Fraud-preventive devices	Operate coin-slot crank-arm and speak into telephone transmitter, receiver and refund chute	Listen on line	Exchange testing officer does not hear faultsman
11. Removal of s/c. from telephone transmitter by depression of button "A"	Press button "A", and speak to testing officer	Speak to faultsman	Speaking conditions re-established
12. "Emergency Call" facilities (if provided)	Lift handset and dial "999"	Check the receipt of digits on "Tester No. 43"	Exchange testing officer receives "999" on "Tester No. 43"

NOTE:- The coin-gong transmitter, the "penny" chute and the "penny" gong are proved by test 7. The "shilling" and "sixpenny" chutes and gong-signals are tested with the mechanism withdrawn to avoid the risk of coins being deposited in the cash box.

TABLE 2. TESTS TO BE APPLIED WHEN TESTING FACILITIES WITH A TEST DESK ARE NOT AVAILABLE

Purpose of test	Operations by officer at C.C.B.	Conditions if equipment is free of faults
1. Check of sixpenny and shilling gong-signals (see Note 1)	Swing out mechanism	–
	Insert sixpenny piece	Coin strikes gong once
	Insert shilling	Coin strikes gong twice
	Press button "A"	Coins released from mechanism
	Return mechanism	–
2. Check of balance arm	Hold the latch arm clear and, using a "Gauge, Tension, No.1", apply a pressure of 19 gm. to the flattened part of the balance arm where it passes through the front-plate	Balance arm does not move
	Hold the latch arm clear and apply a pressure of 21 gm. in a similar manner	Balance arm moves
	Remove the handset and listen for dial tone. Dial 8	Dial tone remains
3. Insulation resistance (see Note 2)	–	–
4. Functioning of dial	A rough dial-speed test should be made by comparison with a spare dial (see TELEPHONES, Auto., B 5002). The dial should be changed if it is obviously outside the range of 9–11 p.p.s. or is suspected of being faulty as a result of wrong numbers being obtained in the subsequent tests	–

TABLE 2 *(contd.)*

Purpose of test	Operations by officer at C.C.B.	Conditions if equipment is free of faults
5. Operation of pulse-control cam on dial	Lift handset, listen for dial tone (if system provides dial tone) then dial "0" or "01" as applicable	Operator answers, and receives coin-box tone (if system provides). In U.A.X.s Nos. 5 and 6 areas, "Relay No. 281A" operates and holds
6. Transmission	Verify, by speaking to operator, that the transmission and reception are satisfactory	–
7. Fraud-preventive devices	Ask operator to verify non-receipt of speech until button "A" is depressed in subsequent tests	
	Operate coin-slot crank-arm, by hand, and speak into telephone transmitter, receiver and refund chute	Operator unable to hear faultsman
8. Removal of s/c. from telephone transmitter by depression of button "A"	Press button "A"	The s/c. is removed from telephone transmitter. Operator hears faultsman
	Ask operator to verify "penny" gong signals, and 7-sec. clear after button "B" depressed	–
9. "Penny" gong signals (see Note 1)	Insert four tokens	Operator hears four "penny" gong signals
10. (i) Refund of tokens, and 7-sec. clear	Press button "B" and speak to operator. Confirm that tests were satisfactory	Tokens refunded and operator receives clearing signal for approx. 7 seconds
(ii) U.A.X. areas where manual hold facilities are not provided. Refund of tokens and release of established connexion	Press button "B"	Tokens refunded; established connexion is released
	Re-dial "0" or "01" and confirm that tests were satisfactory	–

TABLE 2 *(contd.)*

Purpose of test	Operations by officer at C.C.B.	Conditions if equipment is free of faults
11. Ringing of magneto bell (See Note 3)	Ask operator to make a call to C.C.B. line and replace receiver. (See TELEPHONES, Stations, A 5905 for bell adjustments)	Bell rings satisfactorily
12. Removal of s/c. from pulsing contacts	Insert four tokens and dial the exchange number of the coin-box installation	Busy tone received
	Depress button "B" and then replace receiver	Tokens refunded
13. "Emergency Call" facilities (if provided)	Remove handset; listen for dial tone, if provided, and dial "9", without inserting tokens. (If dial tone is not provided, dial "9", without inserting tokens, and observe "Relay No. 281A)	Dial tone ceases (Relay operates and locks)

NOTE 1. The coin-gong transmitter, the "penny" chute and the "penny" gong are proved by test 9. The "shilling" and "sixpenny" chutes and gong-signals are tested with the mechanism withdrawn to avoid coins being deposited in the cash box.

NOTE 2. An insulation test should be made before the visit to the call-office (see L 5106 for permissible insulation limits).

NOTE 3. Test the bell by dialling the ring-back circuit, if provided.

References:- L 5106, S 5202
(Tp 2/4) TELES., Automatic, B 5002
" Call Offices, D 5001
" Stations, A 5905

END