

407CR MULTIPLE DATA STATION MAINTENANCE

1. GENERAL

1.01 This section describes the maintenance procedures to be followed when troubleshooting the 407CR multiple data station. The "R" in the data set code is used to designate that the data set is registered with the FCC. Pre-registration data sets do not have "R" in the data set code.

1.02 When this section is reissued, the reason for reissue will be presented in this paragraph.

1.03 Data set (DS) 407CR-type, the 57-type data mountings, and the test unit require no routine maintenance after installation tests have been made.



The filter at the bottom of the KS-20018-L20 cabinet should be visually inspected at the time of each maintenance visit, or every 6 months, whichever comes first. Experience at a particular location may indicate more frequent inspection. Replace filter when found dirty. (See paragraph 3.06.)

1.04 Care should be exercised when handling and transporting the data sets, data mountings, and data units. If possible, use the original cartons to store, transport, or ship these units.

1.05 If maintenance spares are stocked, verify that they are checked and ready for immediate installation. When replacing a data set, ensure that the proper telephone company (telco) options are installed in the replacement data set. Customer options should also be selected to correspond to those in the data set being replaced.

1.06 There are twenty-three telco options on DS 407CR-type. Fourteen of these options are implemented by means of Cambion shorting plugs which fit into numbered jacks; seven are implemented

by back-plane wiring, and two are implemented by a strap on the 229A power unit. Telco options for DS 407CR-type are listed in Section 594-801-102.

1.07 Customer options are provided by two 10-segment switches (total 20) on the front of the data set, providing a total of 40 customer options. These options are listed in Section 594-801-102.

1.08 Descriptions of telco and customer options are given in Section 594-801-202.

2. MAINTENANCE PROCEDURES

2.01 Since there is no routine maintenance required for the 407CR-type multiple data station except for filter inspection, maintenance of the data station is limited to detection and replacement of defective apparatus and replacement of dirty filters. Apparatus suspected of trouble should be tested as described in Section 594-801-502.

2.02 A KS-20538-L1 volt-ohm-milliammeter, or equivalent, is needed to perform some of the troubleshooting procedures which follow.

3. REMOVAL AND REPLACEMENT PROCEDURES

Data Set 407CR

3.01 Removal

(1) Gain access to data set by removing front cover from data station and hinged front cover from data mounting.

(2) Remove the data set.

3.02 Replacement

(1) Verify that proper telco options are installed in replacing data set.

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- (2) Place replacing data set in proper position and firmly push it into the nest.
- (3) Select customer options to correspond to those in the data set being replaced.
- (4) Perform installation test per Section 594-801-502.
- (5) Replace hinged front cover on data mounting.
- (6) Install front cover of data station.

229A Power Unit

3.03 Removal and Replacement



Removal of the 229A power unit will require a customer release on the working data circuits associated with the power unit to be removed. Exercise care when positioning this unit for mounting; it weighs 14 kg (30 pounds).

- (1) Gain access to power unit as in paragraph 3.01(1).
- (2) Disconnect interconnecting cables from the power unit.
- (3) Remove 51A-type data unit by removing two screws in top of data unit and carefully pull forward to gain access to power unit mounting screws.
- (4) Remove the two screws from the front and one screw from the side of the power unit at the rear.
- (5) Remove the power unit from the shelf of the 57-type data mounting.
- (6) Make sure that the same grounding option (R or S) is applied on replacing power unit as that on the unit being replaced.
- (7) Install replacement 229A power unit by placing the unit in position and securing with the three screws removed in (4) above.
- (8) Return 51A-type data unit to original position and secure in place, using two screws removed in step (3).

- (9) Connect interconnecting cables as required.
- (10) Perform power unit test per Section 594-801-502.
- (11) Replace door on data mounting.
- (12) Install front cover on data station cabinet.

57-Type Data Mounting

3.04 Removal



Removal of the 57-type data mounting will require a customer release on the working data circuits associated with the 57-type data mounting to be removed.

- (1) Gain access to the 57-type data mounting.
- (2) Remove the 229A power unit as described in paragraph 3.03.
- (3) Tag and remove all customer-provided interface cables from the data sets mounted in the 57-type data mounting to be replaced.
- (4) Remove all the data sets from the 57-type data mounting.
- (5) Tag and remove the KS-16689-L3 plugs from J9 through J12.
- (6) Tag and remove wires from TB1.
- (7) Remove 57-type data mounting from the cabinet, using the Hold-E-Zee screw-holding screwdriver or equivalent screw-holding screwdriver with 10-inch blade.

3.05 Replacement

- (1) Mount the new 57-type data mounting in the cabinet and insert screws using the Hold-E-Zee screw-holding screwdriver. **Be sure to replace the data mounting with the proper mounting. The 57AR-type must be replaced with a 57AR-type; the 57BR-type must be replaced with a 57BR-type.**
- (2) Replace the 229A power unit as described in paragraph 3.03.

- (3) Reconnect wires to TB1 in accordance with tags.
- (4) Plug the KS-16689-L3 plugs into J9 through J12 in accordance with tags.
- (5) Insert data sets in the slots of 57-type data mounting, seating them firmly.
- (6) Perform installation test per Section 594-801-502.
- (7) Plug the customer-provided interface cables into the data sets in accordance with tags.
- (8) Install hinged front cover on data mounting.
- (9) Install front cover on data station cabinet.

3.06 Filter Removal and Replacement

- (1) Remove two thumb nuts from front of blower grille. Remove and inspect filter (Fig. 1).

- (2) If filter is dirty, discard and replace with a new filter. Replacement filters are available from McLean Company as their part number S-1032-21.

- (3) Install filter and replace front grille.

4. TROUBLESHOOTING PROCEDURES

4.01 Troubleshooting the 407CR-type multiple data station should be in accordance with the flowchart shown in Fig. 2. The flowchart is a recommended procedure to follow when investigating system trouble. The information blocks in the flowchart are numbered to provide easy reference. The diamond represents a decision to be made, while the circles provide a means of referring to another numbered information block in the flowchart.

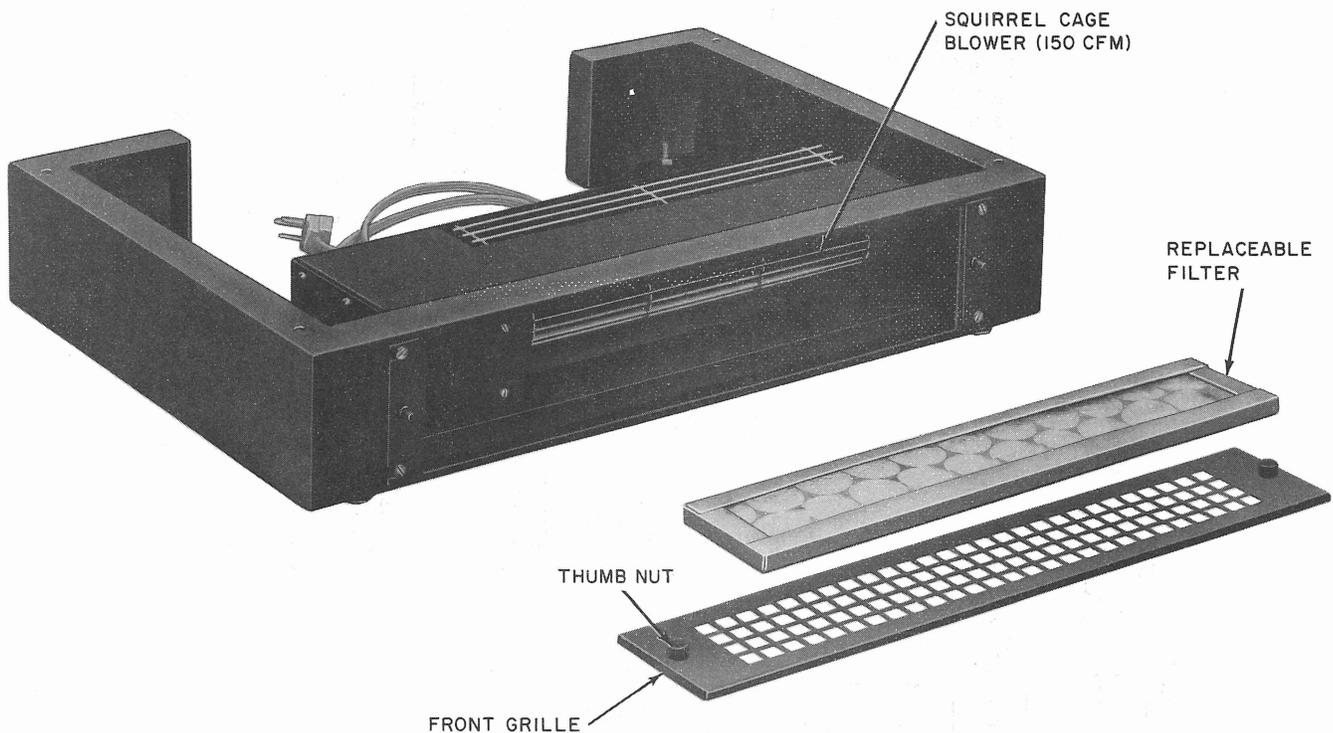


Fig. 1—Lower Skirt Assembly Removed and Partially Disassembled Showing Replaceable Filter

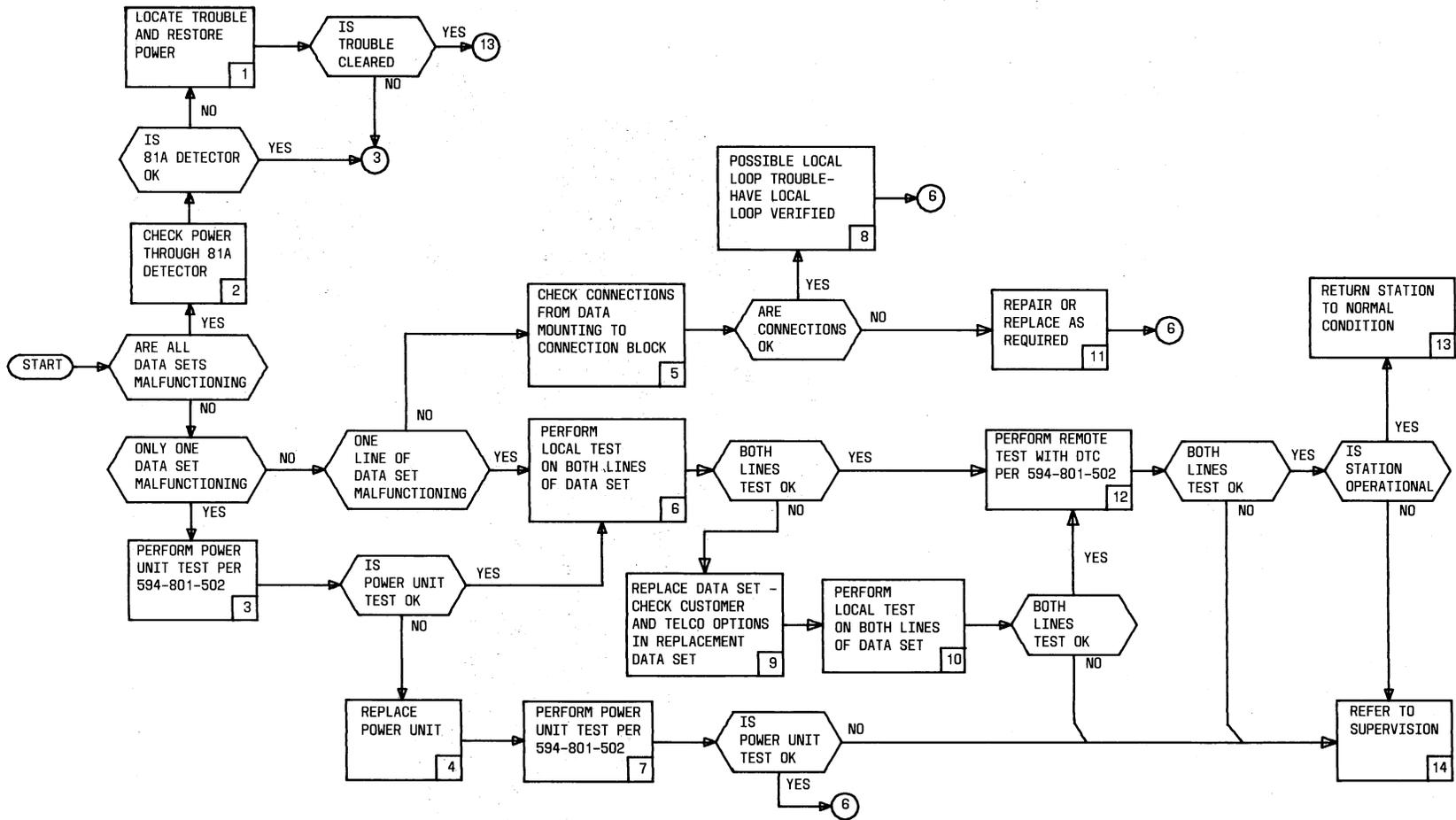


Fig. 2—Troubleshooting Flowchart for 407CR Multiple Data Station