

DIGITAL DATA SYSTEM 550A-TYPE CHANNEL SERVICE UNIT MAINTENANCE

1. GENERAL

1.01 This section contains information concerning maintenance of the 550A-type channel service unit (CSU). Use of this section will coordinate the efforts of the telephone company (telco) employee with the efforts of the serving test center (STC) to locate and correct trouble involving the CSU.

1.02 This section is reissued to include information for multiple mounting and additional options.

1.03 Routine maintenance is not required for a 550A-type CSU.

Maintenance Policy

1.04 When a trouble condition has been isolated to an individual CSU by use of the CHAN loop-back test and local channel trouble analysis, the defective CSU must immediately be replaced with a CSU in proper operating condition.



No repair of the CSU should be attempted at the customer location.

1.05 If the dispatch of a telco employee to the CSU location becomes necessary, the employee should take along a replacement CSU which is equipped with options specified on the circuit layout record card and of the same list code currently installed at that location. In addition, the test equipment listed in Part 2 of this section should be available for complete testing of the digital data system (DDS) channel. A defective CSU should be returned to the distributing house for repair.

1.06 Table A lists the recommended number of CSUs for *each* service rate to be stocked as maintenance spares.

TABLE A

CSU MAINTENANCE SPARES

OPERATIONAL CSUs IN MAINTENANCE TERRITORY	RECOMMENDED SPARE CSUs
1-9	2
10-35	3
36-55	4
56-100	5
OVER 100	MAX. 5% of operational CSUs

2. MAINTENANCE AIDS

2.01 The maintenance aids provided in this part facilitate the performance of maintenance procedures included in this section.

NUMBER

TITLE

SD- & CD-1D234-01 Data Systems—Digital Data System—550A-Type Channel Service Unit

SECTION

TITLE

314-410-310 Digital Data System—Private Line Local Channel—Trouble Analysis

314-410-510 Digital Data System—Private Line Local Channel—Test and Requirements

595-100-100 Digital Data System—550A-Type Channel Service Unit—Description

595-100-200 Digital Data System—550A-Type Channel Service Unit—Installation and Connections

SECTION 595-100-300

SECTION	TITLE
595-100-500	Digital Data System—550A-Type Channel Service Unit—Test Procedures

2.02 The following equipment is required to perform the maintenance tests indicated in this section:

- KS-16979-L1 volt-ohm-milliammeter (VOM), or equivalent
- CINCH DAMA-15-P 15-pin plug, or equivalent

2.03 The test procedures referred to in this section are contained in Section 595-100-500 and are listed as follows:

- CSU Functional Test
- CHAN Loop-Back Error Performance Test.

3. MAINTENANCE ACTIVITIES

3.01 When investigating a trouble report, proceed as indicated in Fig. 1 and the following text. Upon arrival at the customer location, the telco employee should make a quick visual inspection of the CSU. Verify that the PWR indication is illuminated (visible through the CSU cover) and observe other possible sources of trouble, such as cable and connector defects. If this initial check does not reveal a trouble condition, the CSU is immediately assumed to be defective and must be replaced as described in Part 4 of this Bell System Practice (BSP).



Obtain customer permission before disconnecting the customer interface cable to replace the CSU.

3.02 The installation procedures given in Section 595-100-200 should be followed to install the replacement CSU while the test procedures given in Section 595-100-500 should be performed, in the order given, to facilitate testing of the replacement CSU.

3.03 If trouble persists after the replacement CSU is installed and tested:

- (a) Check to see that proper options are installed in the CSU.
- (b) Confirm that the customer-provided equipment (CPE) has been tested and checks satisfactorily.
- (c) Check for power cord and connector defects.
- (d) Check for intermittent trouble in the station wiring.

4. MAINTENANCE PROCEDURES

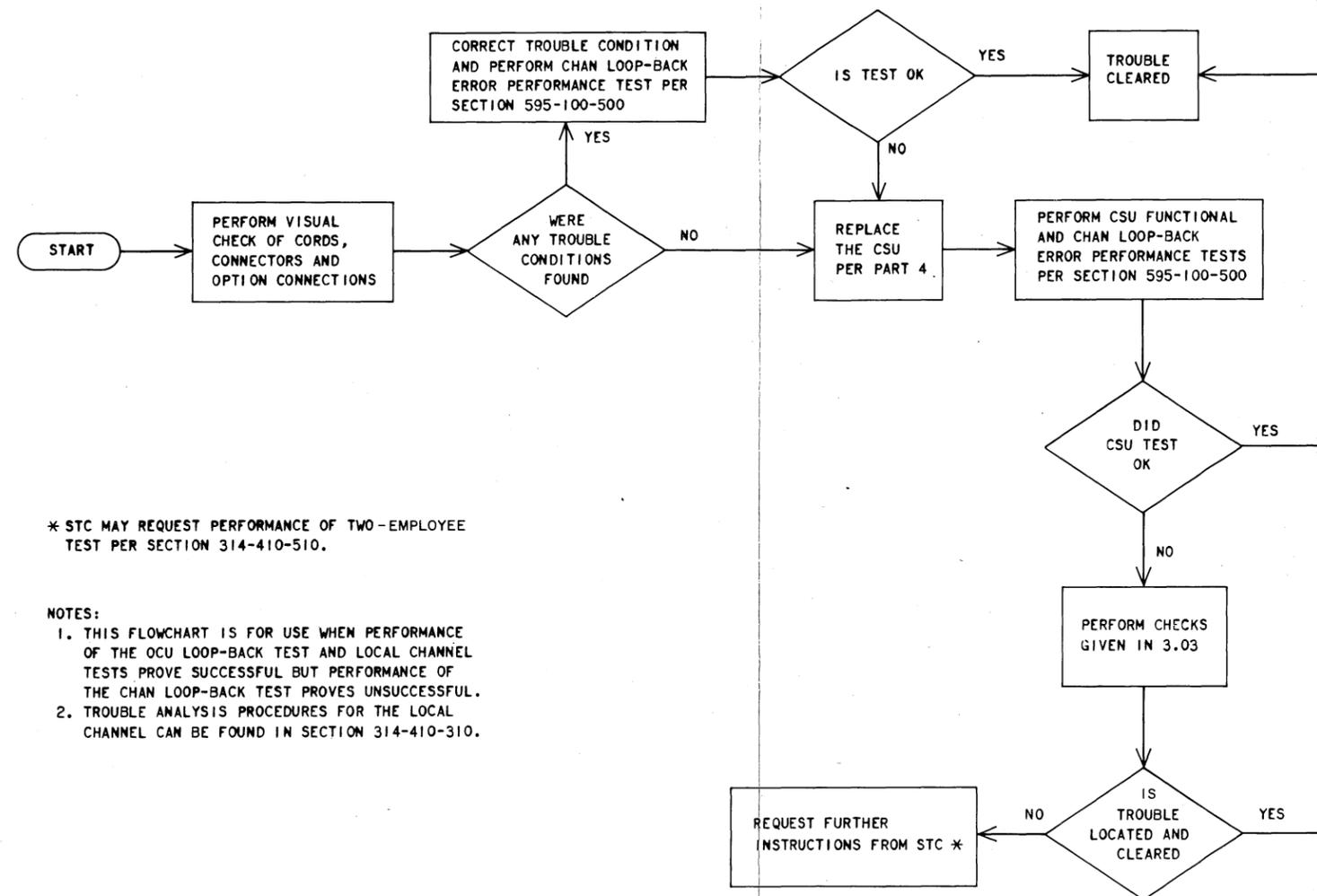
4.01 This part contains the procedure to be followed when replacing a single or multiple mounted defective CSU.

4.02 Replace the defective single CSU as follows:

- (1) Disconnect the ac power cord.
- (2) Disconnect the customer interface cord.
- (3) Remove the CSU cover and disconnect the 4-wire local cable pairs.
- (4) Loosen the two mounting screws and pivot the CSU to enable removal from the mounting surface.
- (5) Install the replacement CSU per Section 595-100-200.
- (6) Test the replacement CSU per Section 595-100-500.

4.03 The following procedure is to be used to replace multiple mounted CSUs. If the 48A data mounting is installed in a KS-20018-L12A cabinet, the cabinet front must be removed by applying outward pressure to release spring clips; then proceed as follows:

- (1) Disconnect the ac power cord from the effected pair of CSUs. (Because of the mounting plate design, CSUs are mounted and powered in pairs.)
- (2) Disconnect the customer interface cord from both CSUs.



* STC MAY REQUEST PERFORMANCE OF TWO-EMPLOYEE TEST PER SECTION 314-410-510.

NOTES:

1. THIS FLOWCHART IS FOR USE WHEN PERFORMANCE OF THE OCU LOOP-BACK TEST AND LOCAL CHANNEL TESTS PROVE SUCCESSFUL BUT PERFORMANCE OF THE CHAN LOOP-BACK TEST PROVES UNSUCCESSFUL.
2. TROUBLE ANALYSIS PROCEDURES FOR THE LOCAL CHANNEL CAN BE FOUND IN SECTION 314-410-310.

Fig. 1—Trouble-Clearing Procedure for 550A-Type CSU

- (3) Disconnect T, R, T1, and R1 connections from frame terminal strips of both CSUs (one at top, one at bottom).
- (4) Loosen locking strip lock screw and move locking strip to right.
- (5) Remove CSU mounting plate (containing two CSUs) from 48A data mounting.
- (6) Remove T, R, T1, and R1 connections from the effected CSU.
- (7) Remove two mounting screws from lower case of CSU.
- (8) Install the replacement CSU per Section 595-100-200.
- (9) Test the replacement CSU per Section 595-100-500.♦