

**500B-TYPE DATA SERVICE UNIT
MAINTENANCE
DIGITAL DATA SYSTEM**

1. GENERAL

1.01 This section contains information concerning the maintenance of the 500B-type data service unit (DSU). 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 DSU.

1.02 Whenever this section is reissued, the reason(s) for reissue will be given in this paragraph.

Maintenance Policy

1.03 When a trouble condition has been isolated to an individual DSU by use of the DSU loop-back test and, if necessary, by the maintenance procedures given in Section 314-410-310, the defective DSU must immediately be replaced with a DSU in proper operating condition.



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

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

1.05 If the dispatch of a TELCO employee to the DSU location becomes necessary, the employee should take along a replacement DSU 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, a data test set (DTS [914C DTS for subrate service, 912A wideband

TABLE A

OPERATIONAL DSUs IN MAINTENANCE TERRITORY	RECOMMENDED SPARE DSUs
1-9	2
10-35	3
36-55	4
56-100	5
Over 100	Max. 5% of operational DSUs

data test set WDTS for 56-kb/s service or 921A DTS for all speeds]) should be available for complete testing of the DDS channel.

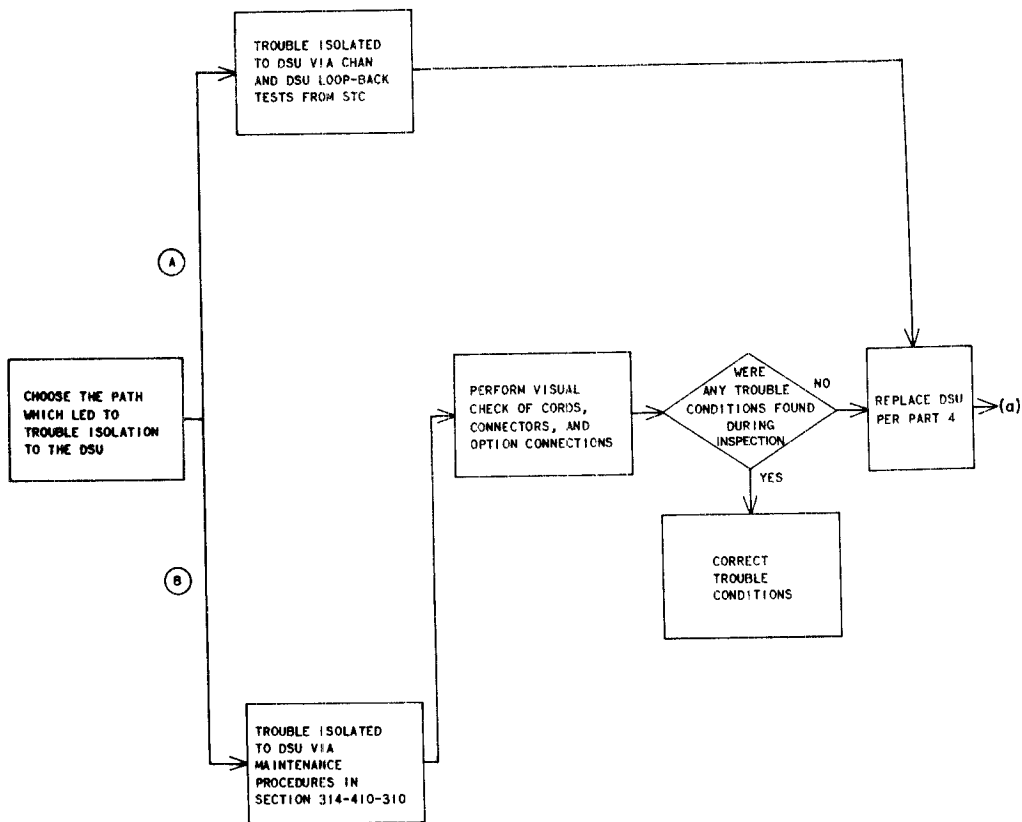
2. MAINTENANCE AIDS

2.01 The following maintenance aids are provided for the performance of maintenance procedures included in this section.

NUMBER	TITLE
SD-7C325-01 CD-7C325-01	Data Systems—Digital Data System Station—500B-Type Data Service Unit
PUB 41450	Technical Reference—Digital Data System—Data Service Unit—Interface Specifications

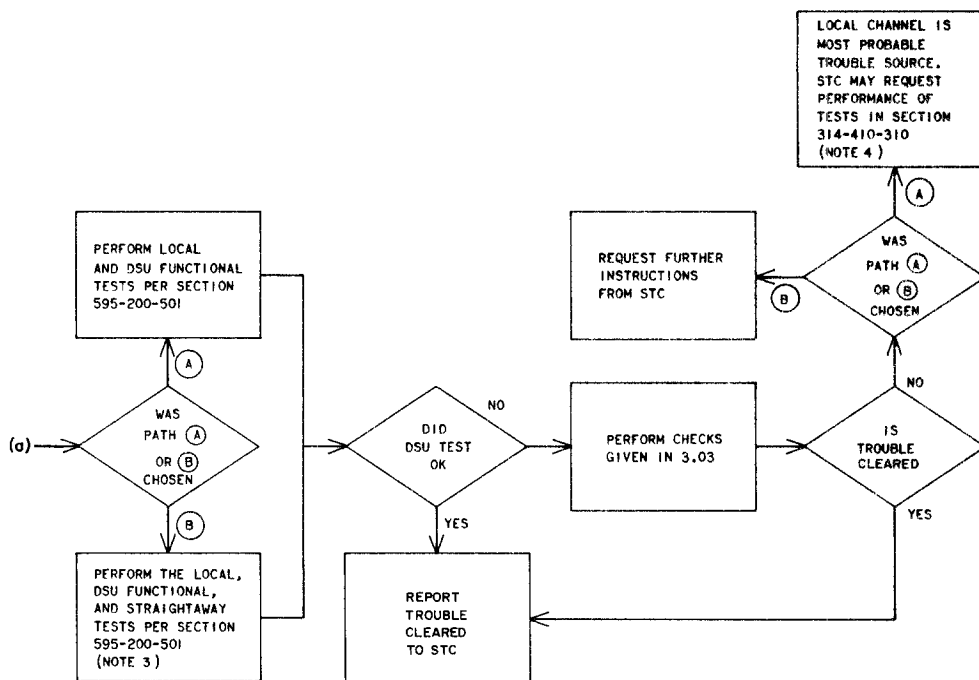
NOTICE

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- NOTES:
1. THIS FLOWCHART IS FOR USE WHEN EITHER (A) PERFORMANCE OF THE DSU LOOP-BACK TEST PROVES UNSUCCESSFUL AND PERFORMANCE OF THE CHAN LOOP-BACK TEST PROVES SUCCESSFUL, OR (B) WHEN PERFORMANCE OF THE OCU LOOP-BACK TEST AND LOCAL CHANNEL TESTS PROVES SUCCESSFUL BUT PERFORMANCE OF THE CHAN LOOP-BACK TEST PROVES UNSUCCESSFUL.
 2. TROUBLE ANALYSIS PROCEDURE FOR THE LOCAL CHANNEL CAN BE FOUND IN SECTION 314-410-310.

Fig. 1 — Trouble-Clearing Procedure for 500B-Type DSU (Sheet 1 of 2)



3. THE STRAIGHTAWAY TEST IS INTENDED TO VERIFY RELIABLE ERROR PERFORMANCE OF THE COMPLETE LOCAL SERVICE CONNECTION. THE PERFORMANCE OF THE TEST FOLLOWING MAINTENANCE REPLACEMENT OF THE DSU IS RECOMMENDED, PARTICULARLY WHEN THE MAINTENANCE ACTION IS IN RESPONSE TO AN INTERMITTENT OR HIGH ERROR RATE TROUBLE REPORT.
4. THIS STEPS ASSUMES THE REPLACEMENT DSU IS IN PROPER OPERATING CONDITION.

Fig. 1 — Trouble-Clearing Procedure for 500B-Type DSU (Sheet 2 of 2)

SECTION	TITLE
314-410-310	Digital Data System—Private Line Local Channel—Trouble Analysis
314-410-510	Local Loop—Test and Requirements, Digital Data System
314-901-300	Serving Test Center—Private Line Circuit—Maintenance Procedures, Digital Data System
314-901-500	Serving Test Center—Private Line Circuit—Test Procedures, Digital Data System
595-200-101	500B-Type Data Service Unit—Description and Operation, Digital Data System
595-200-201	500B-Type Data Service Unit—Installation and Connections, Digital Data System
595-200-501	500B-Type Data Service Unit—Test Procedures, Digital Data System.

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

- (a) Test equipment for subrate service
 - 914C Data Test Set (J79914C-L1) or 921A Data Test Set (J79921AL2)
- (b) Test equipment for 56-kb/s service
 - 912A Wideband Data Test Set (J79912A-L1/47) or 921A Data Test Set (J79921AL2).

2.03 The test procedures referred to in this section are contained in Section 595-200-501 and are listed as follows:

- Local Test
- DSU Functional Test
- Straightaway 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 DSU. Verify that the PWR light-emitting diode (LED) is illuminated and that the switch on the faceplate is in the center position. Check also for other possible causes of trouble, such as cable and connector defects. If this initial check does not reveal a trouble condition, the DSU is immediately assumed to be defective and must be replaced as described in Part 4 of this Section.

3.02 The installation procedures given in Section 595-200-201 should be followed to install the replacement DSU and the test procedures given in Section 595-200-501 should be performed (in the sequence given) to facilitate testing of the replacement DSU.

3.03 If trouble persists after the replacement DSU is installed and tested, perform the following:

- (a) Check that options installed in the DSU agree with the options specified on the service order.
- (b) Confirm that the business machine has been tested and checks satisfactorily.
- (c) Check for 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 performed when replacing a defective DSU.

4.02 Replace the defective DSU as follows:

- (1) Disconnect the ac power cord.
- (2) Disconnect the customer interface cord.
- (3) Disconnect the M6BA cord.
- (4) Install the replacement DSU per Section 595-200-201.
- (5) Test the replacement DSU per Section 595-200-501.