DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

2. TITLE	1. IDENTIFICATION NUMBER
Reliability Test Reports	DI-RELI-80252

3. DESCRIPTION / PURPOSE

3.1 These reports are formal records of the results of the contractor's reliability tests and will be used by the procuring activity to evaluate the degree to which the reliability requirements have been met.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
861017	EC		

7. APPLICATION / INTERRELATIONSHIP

7.1 This DID contains the format and content preparation instructions for Reliability Test Reports required by Tasks 106, 202, 301, and 302 of MIL-STD-781D.

7.2 This DID is applicable to all contracts which require reliability tests. They are used by the procuring activity to evaluate the degree to which the reliability requirements have been met. The reports shall be periodic test summary reports (see 10.4 below) or Final Test Reports (see 10.5 below) as reflected in the contract. These reports may be used to report the results of reliability tests or of tests from which reliability evaluation is a by-product.

(Continued on Page 2)

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		N3984

10. PREPARATION INSTRUCTIONS

10.1 Reference documents. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments and revisions, shall be as reflected in the contract.

10.2 General. The Reliability Test Reports shall contain the results of each test or other action taken to demonstrate the level of reliability achieved in the contract end item and its constituent elements required by the contract.

10.3 Content. The format for individual test reports shall be in accordance with 5.0 of MIL-STD-831. The reports shall specifically contain:

a. Test article identification and full description of test specimens utilized, including any deviations from the configurations specified in the applicable test plan.
b. Date and geographical location of test or evaluation.
c. Statement of test/evaluation objectives, including type, unit of measure, and quantitative goals/requirements to be demonstrated.
d. Statistical confidence calculations, if appropriate.
e. Discussion of methods and conditions of the demonstration, including test plan used, environmental levels, test profile, methods of evaluating the data obtained and comparison of the conditions with those anticipated in ultimate deployment and use of the contract item.
f. Results obtained, including specific identification and discussion of objectives demonstrated satisfactorily and those not demonstrated satisfactorily.

(Continued on Page 2)

11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

7. APPLICATION/INTERRELATIONSHIP (Cont'd)

7.3 This DID relates to DI-RELI-80250, Reliability Test Plan; and DI-RELI-80251, Reliability Test Procedures.
7.4 This DID supersedes DI-R-7034.

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10. PREPARATION INSTRUCTIONS (Cont'd)

g. Corrective action anticipated, if applicable.
h. Contractor's conclusion and recommendations based on evaluation of the test/demonstration results.
i. Requirements for and results of retest in cases where a reject decision was reached.

10.4 Summary reports. Periodic Test Summary Reports shall consist of summaries of the progress or status of various reliability tests underway during the reporting period. All periodic summaries shall include the following information:

a. Type and number of units on test and type of test.
b. Total elapsed unit hours of test time during the period covered in the report.
c. Total number of equipment failures for each operational mode specified in the duty cycle.
d. Description of each failure problem area, related failure analysis, and correction action.
e. Test conditions and analysis of any variation from specified conditions.
f. Present reject/accept status.
g. A chart showing a plot of the observed MTBF(θ) from start of test through the report period and the predicted value of MTBF for comparison.
h. A detailed chart depicting the history of every unit by serial number and time meter readings. This history traces all activities from and including Environmental Stress Screening to delivery.
i. Cumulative results of previous and present months testing under present contract.
j. The status and/or disposition of each corrective action.
k. Estimated time and date to completion.

10.4.1 It is intended that the text of these reports be limited to brief, concise statements of significant progress and present status.

10.5 Final report. The Final Reliability Test Report shall include the information required by 10.4, items a. through j., and the results of the completed reliability tests or other action performed or evaluated to demonstrate reliability. The Final Report can be divided into two parts: Part 1, covering Reliability Qualification Testing, and Part 2, covering Production Reliability Acceptance Tests. Test reports shall include a failure summary and analysis and a general reliability analysis. The contents of these reports and analyses shall include discussion of the items described in section 4.3 through 4.8 of MIL-STD-781.

△ Environmental Stress Screening Initiated
◬ Environmental Stress Screening Completed
□ Individual Tests Initiated
⊡ Individual Tests Completed
O_Q Reliability Qualification Tests Initiated
⊙_Q Reliability Qualification Tests Completed
O_S Reliability Sampling Tests Initiated
⊙_S Reliability Sampling Tests Completed
⊕ Nonrelevant Failure
⊗ Relevant Failure

L | A — Lot Accepted

L | R — Lot Rejected

..... Trouble Shooting Time
——— Time under Reliability Testing Surveillance
- - - - Time not under Reliability Testing Surveillance

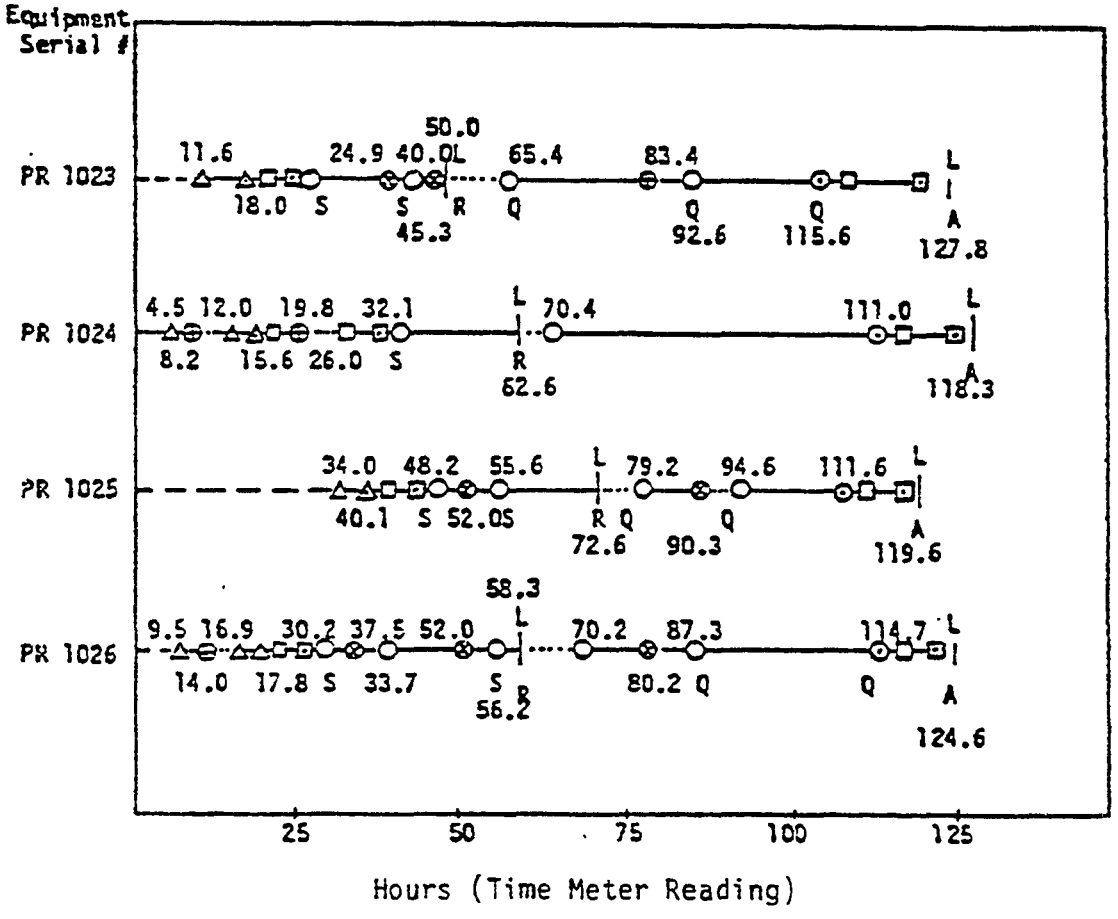

FIGURE 1. Sample history