

DATA ITEM DESCRIPTIONForm Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project(0704-0188), Washington, DC 20503.

1. TITLE Durability and Damage Tolerance Test Results Report		2. IDENTIFICATION NUMBER DI-MISC-81485	
3. DESCRIPTION/PURPOSE 3.1 The report describes the durability and damage tolerance test program including facilities, hardware, procedures, loads and environments, inspections, results, evaluations, and conclusions. 3.2 The report identifies changes and additions necessary to update the durability and damage tolerance analyses. 3.2 The report documents the economic life of the airframe and contractor recommendations for structural inspections or modifications to fleet aircraft as a result of testing.			
4. APPROVAL DATE (YYMMDD) 950731	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) F-ASC/ENFS	6a. DTIC APPLICABLE X	6b. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP 7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract. 7.2 The document interfaces with MISC-81486 Durability Analysis Reports and MISC-81487 Damage Tolerance Analysis Reports. 7.3 This DID supersedes DI-T-30725 and DI-T-30726. <p style="text-align: right;">(Continued on Page 2)</p>			
8. APPROVAL LIMITATION	9a. APPLICABLE FORMS		9b. AMSC NUMBER F7160
10. PREPARATION INSTRUCTIONS 10.1 <u>Format</u> . The contractor's format is acceptable. 10.2 <u>Content</u> . The report describes the contractor's test program for compliance with durability and damage tolerance test reporting requirements of the contract. 10.2.1 The report shall provide photographs and descriptions of the test facilities, test article, equipment, and test setup. Structural deviations of the test article from the operational configuration shall be stated with supporting rationale. 10.2.2 The report shall provide descriptions and sketches of the instrumented locations of the airframe, and the types and quantities of load monitoring devices. Descriptions and sketches shall also be included of the system used to apply and control loads on the test article. The report shall document the procedures used to calibrate the test loads. As part of the report, load peaks monitored during testing shall be stored on magnetic tape in ASCII format and made available to the government upon request. Labeling of the data and of the tapes shall be adequate for government identification of the recorded parameters. 10.2.3 The report shall include a description of the loads spectra applied to the test article. Deviations from the spectra used in the durability analyses shall be stated with rationale. Rationale for load clipping, truncation, elimination or substitution of load cycles shall be provided. 10.2.4 The report shall document the chemical, thermal, and environmental conditions imposed on the test article during all periods of testing. <p style="text-align: right;">(Continued on Page 2)</p>			
11. DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.			

Block 7, APPLICATION/INTERRELATIONSHIP (Continued)

7.4 The address for Defense Technical Information Center (DTIC) submittals is:

Administrator
Defense Technical Information Center
ATTN: DTIC-FDAC
Bldg 5, Cameron Station
Alexandria VA 22304-6145.

Block 10, PREPARATION INSTRUCTIONS (Continued)

10.2.5 The subject report shall describe the criteria used for determining success or failure of structural components in the test article. The report shall provide rationale for repairs, replacements, or modifications of components that cracked, failed, or experienced functional impairment during testing. The report shall state the basis for test termination of the full-scale test article and of individual components.

10.2.6 The report shall list the locations, dimensions, and orientations of flaws artificially induced into the test article and damage incurred in testing that is allowed to remain in the test article during the damage tolerance phase of the test. A table shall be provided of test inspection times (i.e., simulated flight hours, cycles, or pressurizations), detected damage, and changes or repairs made to the test article during testing. The table shall also list the methods used to detect damage at each inspection time. Damage detected in any teardown inspection required by the contract and results of residual strength testing necessary to comply with the contract shall be listed in separate tables.

10.2.7 The report shall document the results of fractographic or metallurgical examinations to determine the initial quality of components found to crack in full-scale durability testing.

10.2.8 The report shall list design changes, repairs or replacements, or in-service inspections recommended by the contractor for operational aircraft as a result of durability and damage tolerance testing and residual strength tests.

10.2.9 The report shall state the economic life of the airframe based on the results of durability testing.

10.2.10 The report shall provide evaluations of the test and inspection results and identify critical structural areas of the airframe not previously identified by analyses or development testing. Changes to the previously predicted crack growth rates, critical crack sizes, and critical locations necessary to update the durability and damage tolerance analyses shall be stated.