

NOT MEASUREMENT  
SENSITIVE

MIL-A-8868B (AS)  
AMENDMENT 1  
24 MAY 1991

MILITARY SPECIFICATION

AIRPLANE STRENGTH AND RIGIDITY  
DATA AND REPORTS

This amendment forms a part of MIL-A-8868, dated 20 May 1987, and is approved for use by the Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

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Paragraph 3.1.1, delete and substitute as follows:

3.1.1 Submittal. The required data items for the acquisition of airplanes within the scope of this specification are listed in Table I, which specifies the latest acceptable time for the initial submittal of each item. Each submitted report shall be accompanied or preceded by the contractor's reports or data referenced therein. A cross reference for all data items by paragraph number and applicable data item description (DID) number is also shown in Table I (see 6.2.2).

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TABLE I. Latest initial submittal date. (Note 2)

Report subtitle (Block 3 of CDRL)	Applicable paragraph (Block 5 of CDRL)	DATE (Block 12 of CDRL)	DID no. (Block 4 of CDRL)	DID Title (Block 2 of CDRL)
Schedule of structural work	3.2	90 days after date of contract (Note 1)	DI-MGMT-81219	Schedule of structural work report
Structural description	3.3	90 days after date of contract (Note 1)	DI-S-3595	Structural description report
Flight loads design criteria	3.4.1	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Control systems loads design criteria	3.4.2	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Cargo, seat, and litters loads design criteria	3.4.3	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Ground loads design criteria	3.4.4	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Repeated loads criteria	3.4.5	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Dynamic loads and fatigue program and criteria	3.4.6	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Aeroelastic stability program	3.4.7	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Nuclear weapons delivery criteria	3.4.8	225 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Fracture control plan	3.4.9	90 days after data of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Inertia loads	3.5.1	30 days prior to submittal of stress or fatigue analysis supported by applicable loads analysis	DI-MISC-80711	Scientific and technical report
Flight loads	3.5.2	30 days prior to submittal of stress or fatigue analysis supported by applicable loads analysis	DI-MISC-80711	Scientific and technical report
Control system loads	3.5.3	30 days prior to submittal of stress or fatigue analysis supported by applicable loads analysis	DI-MISC-80711	Scientific and technical report
Ground loads	3.5.4	30 days prior to submittal of stress or fatigue analysis supported by applicable loads analysis	DI-MISC-80711	Scientific and technical report
Repeated loads	3.5.5	30 days prior to submittal of stress or fatigue analysis supported by applicable loads analysis	DI-MISC-80711	Scientific and technical report

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Report subtitle (Block 3 of CDRL)	Applicable paragraph (Block 5 of CDRL)	DATE (Block 12 of CDRL)	Applicable DID no. (Block 4 of CDRL)	DID Title (Block 2 of CDRL)
Initial dynamic loads environment analysis	3.6.1	270 days after date of contract or 90 days prior to structures CDR, whichever occurs first	DI-MISC-80508	Technical report study/services
Intermediate dynamic loads environment analysis	3.6.2	60 days after first flight	DI-MISC-80508	Technical report study/services
Final dynamic loads environment analysis	3.6.3	60 days after completion of applicable flight tests	DI-MISC-80508	Technical report study/services
Preliminary aeroelastic analysis	3.7.1	270 days after date of contract or 90 days prior to structures CDR, whichever occurs first	DI-MISC-80508	Technical report study/services
Initial aeroelastic analysis	3.7.2	90 days prior to first flight	DI-MISC-80508	Technical report study/services
Intermediate aeroelastic analysis	3.7.3	60 days after first flight or 15 days prior to start of aeroelastic stability flight tests, whichever comes first	DI-MISC-80508	Technical report study/services
Final aeroelastic analysis	3.7.4	60 days after completion of applicable flight tests	DI-MISC-80508	Technical report study/services
Internal loads methodology	3.8.1	90 days after date of contract (Note 1)	DI-MISC-80508	Technical report study/services
Stress analysis	3.8.2	120 days prior to start of applicable test	DI-MISC-80508	Technical report study/services
Fatigue analysis	3.8.3	120 days prior to start of applicable test	DI-MISC-80508	Technical report study/services
Damage tolerance analysis	3.8.4	120 days prior to start of applicable test	DI-MISC-80508	Technical report study/services
Sonic fatigue analysis	3.8.5.1	30 days prior to structures CDR	DI-MISC-80508	Technical report study/services
Dynamic loads fatigue analysis	3.8.5.2	30 days prior to structures CDR	DI-MISC-80508	Technical report study/services
Empennage dynamic fatigue analysis	3.8.5.3	30 days prior to structures CDR	DI-MISC-80508	Technical report study/services
Final dynamic-fatigue analysis	3.8.5.4	90 days after completion of applicable flight tests	DI-MISC-80508	Technical report study/services
Air loads model wind tunnel test	3.9.1	60 days after completion of each tunnel entry	DI-NDTI-80809	Test report
Flutter model wind tunnel test	3.9.2	60 days after completion of each tunnel entry	DI-NDTI-80809	Test report
Flutter compliance data	3.9.3	Note 3	DI-NDTI-80809	Test report

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TABLE I. Latest initial submittal date. (Note 2) - Continued

Report subtitle (Block 3 of CDRL)	Applicable paragraph (Block 5 of CDRL)	DATE (Block 12 of CDRL)	Applicable DID no. (Block 4 of CDRL)	DID Title (Block 2 of CDRL)
Ground vibration modal test	3.9.4	Note 3	DI-NDTI-80809	Test report
Thermoelastic test	3.9.4.1	90 days prior to first flight	DI-NDTI-80809	Test report
Rigidity tests	3.9.5	90 days prior to first flight	DI-NDTI-80809	Test report
Component endurance and wear test	3.9.6	60 days after comple- tion of applicable test	DI-NDTI-80809	Test report
Aeroacoustic environment ground test	3.9.7	60 days after comple- tion of applicable ground tests	DI-NDTI-80809	Test report
Catapult aeroacoustic and thermal environment test	3.9.8	60 days after comple- tion of applicable ground tests	DI-NDTI-80809	Test report
Description of test articles	3.10.1.1	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Static test plan	3.10.1.2	90 days prior to start of testing	DI-T-21463A	Static test plan
Fatigue test plan	3.10.1.3	90 days prior to start of testing	DI-NDTI-80566	Test plan
Sonic fatigue component test plan	3.10.1.3.1	90 days prior to start of testing	DI-NDTI-80566	Test plan
Dynamic fatigue component test plan	3.10.1.3.2	90 days prior to start of testing	DI-NDTI-80566	Test plan
Empennage dynamic fatigue test plan	3.10.1.3.3	90 days prior to start of testing	DI-NDTI-80566	Test plan
Structural design, devel- opment & preproduction verification test plan	3.10.1.4	90 days after date of contract	DI-NDTI-80566	Test plan
Static test progress	3.10.2.1	90 days after date of contract (Notes 1, 2)	DI-NDTI-80809	Test report
Fatigue test progress	3.10.2.2	90 days after date of contract (Notes 1, 2)	DI-NDTI-80809	Test report
Static test	3.10.3.1	90 days after comple- tion of each test	DI-NDTI-80809	Test report
Static design develop- ment and preproduction component design verification	3.10.3.1.1	30 days after tests	DI-NDTI-80809	Test report
Fatigue test	3.10.3.2	90 days after comple- tion of each test	DI-NDTI-80809	Test report
Fatigue development test	3.10.3.2.1	60 days after comple- tion of each test	DI-NDTI-80809	Test report

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Report subtitle (Block 3 of CDRL)	Applicable paragraph (Block 5 of CDRL)	DATE (Block 12 of CDRL)	Applicable DID no. (Block 4 of CDRL)	DID Title (Block 2 of CDRL)
Fatigue test teardown inspection	3.10.3.2.2	90 days after completion of full scale test article teardown inspection	DI-NDTI-80809	Test report
Sonic fatigue component test	3.10.3.3	60 days after completion of each test	DI-NDTI-80809	Test report
Dynamic fatigue component test	3.10.3.4	60 days after completion of each test	DI-NDTI-80809	Test report
Empennage dynamic fatigue test	3.10.3.5	60 days after completion of each test	DI-NDTI-80809	Test report
Material substantiating data and analysis	3.10.4	30 days prior to structures CDR	DI-MISC-80508	Technical report study/services
Aeroelastic stability, vibration and aeroacoustic flight test planning	3.11.1	90 days prior to start of installing instrumentation on airplane	DI-MISC-80711	Scientific and technical report
Structural flight and ground operations test planning	3.11.2	90 days after date of contract (Note 1)	DI-MISC-80711	Scientific and technical report
Flight and ground load survey instrumentation calibration planning	3.11.3	45 days prior to start of instrumentation	DI-MISC-80711	Scientific and technical report
Structural flight and ground operations test program	3.11.4	90 days prior to flight of test airplane	DI-S-30729	Flight loads survey data report
Aeroelastic stability flight test letter	3.11.5.1	Every two weeks after start of test program	DI-NDTI-80809	Test report
Vibration and aeroacoustic flight test letter	3.11.5.2	Every two weeks after start of test program	DI-NDTI-80809	Test report
Aeroelastic instability, vibration or sonic fatigue occurrence	3.11.5.3	Immediately after occurrence	DI-RELI-80253	Failed item analysis report
Vibration environment measurement	3.11.5.4	60 days after completion of tests	DI-NDTI-80809	Test report
Aeroacoustic environment measurement	3.11.5.5	60 days after completion of tests	DI-NDTI-80809	Test report
Gun fire vibration and aeroacoustic environment measurement	3.11.5.6	60 days after completion of tests	DI-NDTI-80809	Test report
Missile vibration and aeroacoustic environment measurement	3.11.5.7	60 days after completion of test	DI-NDTI-80809	Test report
Flight and ground load survey instrumentation and calibration progress	3.11.6	Each 30 days until calibration is completed	DI-T-30728	Instrumentation and calibration report
Flight and ground load survey instrumentation and calibration	3.11.7	60 days after completion of calibration	DI-T-30728	Instrumentation and cabibration report

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Report subtitle (Block 3 of CDRL)	Applicable paragraph (Block 5 of CDRL)	DATE (Block 12 of CDRL)	Applicable DID no. (Block 4 of CDRL)	DID Title (Block 2 of CDRL)
Flight load and ground operations survey data	3.11.8	60 days after comple- tion of tests	DI-T-30729	Flight loads survey data report
Dynamic response test	3.11.9	120 days after comple- tion of tests	DI-T-30730	Dynamic response test report
Structural flight test anomaly and failure	3.11.10	30 days after occurrence	DI-RELI-80253	Failed item analysis report
Nuclear weapons delivery capability	3.12	30 days prior to delivery for Navy nuclear weapons Board inspection & survey (BIS) trials	DI-MISC-80711	Scientific and technical report
Strength summary and operating restriction	3.13	30 days prior to request for autho- rization for first flight (Note 2)	DI-S-3589	Strength summary and operating restrictions report
Structural redesign	3.14	60 days prior to a proposed redesign or production change	DI-S-30590	Structural design report
Service life analysis	3.15	180 days after full- scale test completion and revised as dictat- ed by the life history recorder program	DI-MISC-80508	Technical report study/services
Service airplane fatigue estimate	3.16	To coincide with initial operational cap- ability (IOC) (Note 2)	DI-MISC-80508	Technical report study/services
Life history recording program	3.17	Every 180 days after start of program	DI-MISC-80508	Technical report study/services
Structural integrity methodology	3.18	270 days prior to initial operational capability	DI-S-30584	Force structural mainte- nance data requirements methodology report
Sonic fatigue inspection and repair schedule	3.19	60 days after test	DI-MISC-80711	Scientific and technical report
Airplane structural integrity program (ASIP) master plan	3.20	90 days after date of contract	DI-S-3570A	Aircraft structural integrity program master plan
Fatigue life monitoring systems	3.21	30 days before struct- ures CDR (Note 2)	DI-MISC-80711	Scientific and technical report
Structural manual	3.22	90 days after date of contract	DI-MISC-80711	Scientific and technical report
Structural dynamic manual	3.23	90 days after date of contract	DI-MISC-80711	Scientific and technical report
Maintenance instructions for control surfaces and tabs	3.24	Concurrent with delivery of first production airplane	MIL-M-81260	Manual, technical; aircraft/system/equipment/ maintenance

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- Note 1 - Date of authorization-to-proceed shall apply if such authorization is granted prior to date of contract.
- Note 2 - The dates in this table are initial submittal dates. Revisions to be submitted in accordance with applicable paragraph/CDRL.
- Note 3 - Fifteen days prior to first flight, or the contractor's flutter engineer shall present and discuss the results of the tests at the contracting activity 7 days prior to first flight. In the latter case these reports shall be submitted not later than the date required for submittal of the intermediate aeroelastic stability analysis report.

Custodians  
Navy - AS

Preparing Activity:  
Navy - AS  
(Project 1510-N055)