

**MIL-STD-831**

**28 August 1963**

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**SUPERSEDING  
MIL-T-9107 (USAF)  
13 JULY 1953**

**MILITARY STANDARD**

**TEST REPORTS,  
PREPARATION OF**

**FSC-MISC**

**MIL-STD-831**  
28 August 1963

## **DEFENSE SUPPLY AGENCY**

**Test Reports, Preparation Of**

**MIL-STD-831**

1. This standard has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force, effective
2. Recommended corrections, additions, or deletions should be addressed to Headquarters DSA, Standardization Division, Cameron Station, Alexandria, Virginia.

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## MILITARY STANDARD

# TEST REPORTS, PREPARATION OF

### 1. GENERAL

1.1 *Scope.* This standard delineates the format and content criteria to be used in the preparation of test reports covering tests on systems, subsystems, equipments, components, and parts.

1.2 *Purpose.* The purpose of this standard is to foster uniformity in the portrayal of test results on items of materiel. They also provide for greater ease in the evaluation of the design suitability and performance capability of test items for use in new applications.

### 2. APPLICABLE DOCUMENTS

2.1 *Not applicable.*

### 3. DEFINITIONS

3.1 *Universal document number.* That number which shall identify each test report and will be furnished by the procuring activity when it is required. This number is to be assigned in addition to any existing originator's report number.

3.2 *Appendixes.* An appendix is defined as any portion of a report which is necessary to its completeness but which is separated from the balance of the report for convenience, or because it does not logically fall under one of the preceding headings.

3.3 *Exhibits.* An exhibit is defined as any document which is furnished with a report but is not an integral portion thereof. It

might consist of a separate test report on the same or similar item, or pertinent correspondence or vendor data sheets, or a memo reporting important conversations.

### 4. GENERAL REQUIREMENTS

4.1 *Basic data.* All test reports shall contain all the collected data and all conclusions resulting therefrom for the tests performed.

4.1.1 *Test file.* A test file shall be established and maintained which shall include original log sheets, diagrams such as, wiring, piping, schematics or block, necessary to completely describe the purpose, conduct and results of tests. Upon creating, this file shall be given a permanent identifying number, which shall appear on all subsequent documents associated with a particular test.

4.1.2 *Notes.* Notes of all incidents of the testing, such as adjustments made, servicing performed, leaks, vibrations, and any other irregular functioning of the product and corrective measures taken shall be placed on log sheets and included in the test report.

4.1.3 *Use of supporting documents.* When applicable data has been previously submitted as a result of similar or related Government-funded tests, these shall be quoted, excerpted, or used in whatever manner possible to direct, guide, support, substantiate, or shorten test reports.

4.1.4 *Authentication.* The test report shall provide for the following signatures.

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4.1.4.1 *Responsible officer.* The test report shall be signed by a responsible officer of the contractor's organization.

4.1.4.2 *Government representative.* A Government representative may witness the test and countersign the report. The latter signature shall constitute verification of the data contained in the report, and shall not necessarily indicate concurrence in the conclusions presented.

**5. DETAIL REQUIREMENTS**

5.1 *Format.* Test reports shall be prepared in accordance with the following criteria.

5.2 *Paper.* Copies of documents intended for technical data repositories or data exchange programs shall be designated "data interchange submittal copies" and shall be on white opaque paper. Complete text shall be clear and sharp, of consistent high contrast, and preferably black-on-white. "Brownline" transparencies and "bluelines" shall not be used for the above purposes. All other copies shall be on carbon-backed vellum, parchment, ozo-parchment, 14 pound bond or equivalent translucent material for reproduction purposes.

**5.3 *Pagination.***

5.3.1 *Page size.* The size of each finished page shall be 8 by 10½ or 8½ by 11 inches. The universal document number, page number, and issue or revision date shall be included on all sheets. Sketches, drawings and diagrams may exceed the 8 or 8½ inch dimension to form foldouts where the alternative would be extreme reduction in size of graphic material.

5.3.1.1 *Margins.* Adequate margins shall be allowed so that the complete text can be easily read when the report is in bound form.

5.3.1.2 *Numbering.* Beginning with the first page, all pages of the test report shall be numbered consecutively. The page number shall be placed in the center of the bottom margin.

5.3.1.3 *Binding.* The test report shall be bound in such a manner that the pages can be removed without damage or mutilation to the pages. Full page tables, illustrations, etcetera, shall be arranged so that the bottom of the table or illustration will be either at the bottom or at the right hand edge of the bound document.

5.4 *Illustration.* Where practical, illustrations shall be provided when such would serve to clarify or otherwise aid in understanding the report. Illustrations shall fit the required 8 by 10½ or 8½ by 11 inch dimensions of the report as noted in 5.3.1. Illustrations may include sketches, drawings, graphs, photographs, etcetera, and may be included in the main body of the report as applicable and shall have dark line work on light background. Drawings over "C" size shall be avoided. However, inclusion of illustrations as appendixes under a proper group heading is preferred, provided references are indicated in the main body of the report. All photographic prints shall be of high contrast and definition and shall be page-size. When photographs are to be used as illustrations, 8 by 10 glossy prints shall be included in the bond copy, and a positive transparency shall be provided with the reproducible copy. In data interchange submittal copies, negatives are not acceptable in lieu of prints.

5.4.1 *Color differentiation.* Color differentiation shall not be used for graphs, diagrams, etcetera.

5.5 *Abbreviations.* Abbreviations shall be held to a minimum.

5.6 *Required elements.* The report shall contain the following elements in the degree of detail applicable to the size and complexity of the test item and the test performed, in the order specified.

5.6.1 *Title page and cover.* The cover is not mandatory, but if used shall contain the information shown in Figure 1, in approximately the same positions on the page. Cut-outs may be used to allow the same information to show through from the title page

shown in Figure 2. Data interchange submittal copies shall not bear "Company Confidential" or similar stampings restricting circulation by the procuring activity.

**5.6.2 Tabular summary sheet.** A tabular summary sheet shall be included as the first page of all component or parts test reports, containing all of the information called for in Figure 3 and 3A. Test reports on systems, subsystems, equipments, and others of a broad scope or general nature may require the use of the general report summary sheet, shown in Figure 4 or the test summary sheet shown in Figure 4A in lieu of that shown in Figure 3. This alternative shall be taken in reporting tests where the detail summary sheet (Figure 3) is definitely not applicable.

**5.6.3 Notice page.** The notice shown in Figure 5 shall be included as a full size page of all data interchange submittal copies of reports. Only the first paragraph shall be required as part of all other copies.

**5.6.3.1** Where security regulations are involved, the requirements herein shall be adapted as necessary to comply, but whenever possible, classified or proprietary components or parts test reports shall be downgraded by deleting classified or proprietary portions relating to usages and assemblies, without impairing the usefulness of documented contents pertaining to component or part performance.

**5.6.3.2 Classified reports.** In addition to the notice specified in 5.6.3, the following information shall be typewritten on the notice page of classified test reports:

**WARNING:**

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, title 18, U.S.C., secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

**5.6.4 Table of contents.** A table of contents shall include paragraph numbers, the subject of each paragraph, and the beginning page number for each.

**5.6.5 Reason for test.** The report shall contain a statement describing the specific reason for conducting the test, together with pertinent background information as applicable.

**5.6.6 Description of test samples.** Whenever possible, each test report shall describe tests on only one type of component, part, equipment or sub-system. The number of vendors whose product is represented in a single report shall be kept to a minimum. Where space does not allow sufficient detail on the summary sheet, additional description shall include the part manufacturer's address and when available all of the following: Size, type, rating, serial number(s), batch, lot, and date of manufacture. Vendor, trade association, Federal stock, and military part number designations shall be given when such numbers exist, but none of these shall be substituted for a complete description. Further description shall include method of sample selection, and whether tested item(s) are prototypes, pilot samples, from a model shop, or production items. When specimen(s) are components of a system, a brief description of the function within the system shall be given. Arbitrarily assigned numbers, if used to identify specimens during test, shall be tabulated against serial numbers or other means of positive identification.

**5.6.7 Disposition of test specimens.** Disposition of test samples shall be given.

**5.6.8 Narrative abstract, conclusions and recommendations.** This combined paragraph shall contain an expansion of the remarks on the tabular summary sheet or of any other portions of the test report. The test engineer shall include in this section any corrective measures taken, his recommendations as to better test methods, procedures, and sampling quantities. In connection with prepro-

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duction or qualification testing, this section shall contain a statement of the contractor's intention regarding each instance wherein the test items do not fulfill the specified requirements, i.e., corrections to be made on production items, or a statement that it is intended to request a waiver.

**5.6.9 References.** If not already completely listed on the tabular summary sheet, all specifications and other applicable documents referred to in the report shall be listed here. Specifications and other documents necessary for proper report interpretation, which are not normally available to persons outside the report originating location, shall be included with the report either as an appendix or an exhibit, and shall be listed as "attached."

**5.6.10 Main body of report.**

**5.6.10.1 Factual data.** The following sections shall be included under a main heading entitled factual data:

**5.6.10.1.1 Description of test apparatus.** A description of test apparatus shall include a tabulation of all instruments and equipment used, the manufacturers' names, serial numbers, ranges, accuracy, and dates of latest calibration.

**5.6.10.1.2 Test procedure.** This section shall contain a detailed explanation of what tests or measurements were made, how they were made, and any other pertinent criteria which may affect the interpretation of the test data in sufficient detail for separate formulation of conclusions by interested parties not witnessing the test. When sketches, diagrams and drawings are used, they shall be presented on separate sheets following the test data. Curves and graphs showing the spread of the results shall be provided, with performance tolerance brackets superimposed on graphic data. Sample calculations shall be included in this section. Criteria used to define a success or a failure shall be clearly stated after each test. If a military specification or standard specifies precisely the limits used as pass-fail criteria

for the test, it may be referred to by specific paragraphs for each test in lieu of writing out detailed descriptions. Also, when internal (company) specifications, drawings, or other corporate documents are included with a report as appendixes or exhibits, and these include test procedures and limits in detail, such documents may be referred to in the same manner. However, where the limits for a particular test cannot be precisely identified by such reference, they must be stated in detail. Where feasible, each test procedure shall reference the data page(s) containing the detail of the corresponding measurements obtained.

**5.6.10.1.3 Results of tests; summations and analyses.** In tests that are very long, data shall be summarized for study and analysis using either graphical or tabular techniques indicating the spread and distribution density of results, means and deviations, mean time to failure, or any applicable expressions or techniques summarizing the facts shown by the test data. Instructional detail may be added to a statistical and graphical presentation. More detailed test results shall be added when a test is of such complexity that such detail is not covered by summations and test data tabulations. All results shall be keyed to the test procedure, test data tabulations, and to specifications requirements to ensure ease of identification and relations between requirements, procedures and results.

**5.6.10.1.4 Test data.** Test data compiled in the performance of tests or measurements shall be included as data sheets or as an appendix. All tabulated data shall show the exact measurement value regardless of whether or not a failure is the result of deliberate test to destruction. Data interchange submittal copies of reports may include only summarizations of significant occurrences from a number of data pages in a single tabulation, or one representative page of each type included with a statement that the balance of "n" pages is available on request from the test file.

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**5.7 Revisions, additions, re-issues.**

**5.7.1 Title page.** The title page shall bear the notation "Revision" directly under the originator's report number. The latest revision letter shall be used to identify this issue of the entire report. A revision letter shall not be used on the initial issue.

**5.7.2 Revision page.** A revision page listing the revised pages and a brief description of the changes shall be inserted between the cover and the title page, or between the title page and the tabular summary sheet if no

cover is used. This insertion shall be numbered 1a, 1b, etc.

**5.7.3 Corrected pages.** All corrected pages in a revised report shall bear the notation "Revision A," "Revision B," etc., directly under each page number.

**5.8 Appendixes.** When only small parts of a long related document are applicable to a report, those portions may be excerpted and included as an appendix. Each appendix shall be properly identified on each page and in the table of contents.



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Universal Report No.* _____	Originator's Report No. _____ Revision _____
REPORT OF TEST ON* _____	
(Add necessary additional detail of type, size, rating, Mfg., brief purpose or type of test.)	

TEST PERFORMED BY:  _____
TEST AUTHORIZED BY:**  _____
CONTRACT NO. _____

\* As defined by the Procuring Activity

\*\*Include only if other than the organization performing test

Figure 1 COVER PAGE

NOTE: The cover shall contain information shown, either reproduced on the cover itself, or visible through openings cut in the cover.

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Universal Report No. _____	Originator's Report No. _____ Revision _____
REPORT OF TEST ON _____	
(Add necessary additional detail of type, size, rating, Mfg., brief purpose or type of test.)	

TEST PERFORMED BY:  _____
TEST AUTHORIZED BY:  _____
CONTRACT NO. _____

	Date	Signature	
Test Initiated			
Test Completed			
Report Written By			
Technician			
Test Engineer			
Supervisor			
Supervisor			
Government Repr. (if applicable)			
Final Release			

FIGURE 2 TITLE PAGE





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**GENERAL REPORT SUMMARY SHEET**

1. COMPONENT/PART NAME PER GENERIC CODE	2. PROGRAM OR WEAPON SYSTEM	3.		
	4. ORIGINATOR'S REPORT TITLE	5. ORIGINATOR'S REPORT NO.	DAY	MO.
6. TEST TYPE, ETC.		TEST COMPL.		
7. THIS TEST (SUPERSEDES) (SUPPLEMENTS) REPORT NO:		REPT. COMPL.		
8. OUTLINE, TABLE OF CONTENTS, SUMMARY, OR EQUIVALENT DESCRIPTION:				
9. DORNO		10. CONTRACTOR	SUBCONTRACTOR	
11. REPT. NO.				

REPRODUCTION OR DISPLAY OF THIS MATERIAL FOR SALES OR PUBLICITY PURPOSES IS PROHIBITED

**FIGURE 4**



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*Disclaimer of Liability from Act of Transmittal*

When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

Any information disseminated by the offices of data interchange programs is intended to promote test data utilization in the national interest among groups engaged in missile, space vehicle and related programs.

Dissemination of said information does not imply verification or endorsement of the information. The originator, in submitting the material is acting in accordance with the requirements of his contract, and neither the originator nor the disseminator assumes any liability to parties adopting any product, process or practice based upon the usage of the information. Its presenting the success or failure of one (or several) part number(s), model(s), lot(s) under specific environment and output requirements, does not imply that other products not herein reported on are either inferior or superior.

*Omission of Charges for Follow-on Actions*

Any compliance by the report originator with requests from recipients for more detailed information on reports originated under Government contracts will be considered within the scope of present contractual obligations. Compliance with such requests will be at the discretion of the report originator and will be performed without cost or obligation to the requestor unless otherwise negotiated in advance.

*Reproduction of this Report*

Reproduction or duplication of any portion of this report is expressly forbidden, except by those contractors receiving it directly from authorized data interchange offices or the originator, for their internal use or the use of their subcontractors. Reproduction or display of all or any portion of this material for any sales, advertising or publicity purposes is prohibited.

**FIGURE 5—NOTICES PAGE**

Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.

Copies of this standard for Military use may be obtained as indicated in general provisions to the Index of Military Specifications and Standards.

The title and identifying symbol number should be stipulated when requesting copies of Military Standards.

**Custodians:**

Army—Transportation Corps  
Navy—Bureau of Naval Weapons  
Air Force—ASD

Preparing Activity  
Air Force—ASD

**INSTRUCTIONS:** In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

**NOTE:** This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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DEPARTMENT OF THE AIR FORCE



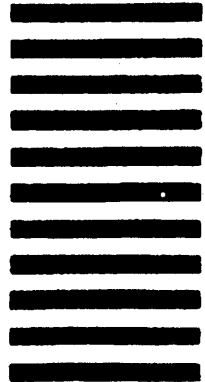
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## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER

2. DOCUMENT TITLE

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

 VENDOR USER MANUFACTURER OTHER (Specify): \_\_\_\_\_

b. ADDRESS (Street, City, State, ZIP Code)

## 5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

## 6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

b. WORK TELEPHONE NUMBER (Include Area Code) - Optional

c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional

8. DATE OF SUBMISSION (YYMMDD)

(TO DETACH THIS FORM, CUT ALONG THIS LINE.)