

DATA ITEM DESCRIPTION

Title: RELIABILITY CENTERED MAINTENANCE (RCM) FUNCTIONAL FAILURE ANALYSIS (FFA) REPORT

Number: DI-SESS-80981A

Approval Date: 20100923

AMSC Number: N9164

Limitation: N/A

DTIC Applicable: N/A

GIDEP Applicable: N/A

Office of Primary Responsibility: SH/SEA 04RM

Applicable Forms: N/A

Use/Relationship:

The Reliability Centered Maintenance (RCM) Functional Failure Analysis (FFA) defines what constitutes a functional failure.

This Data Item Description (DID) contains the format, content, preparation instructions and intended use information for the data deliverable resulting from the work task described in 5.1.2 of MIL-STD-3034.

This DID is related to DI-SESS-80979A, RCM Master System and Subsystem Index (MSSI); DI-SESS-80994A, RCM Functional Block Diagram (FBD); DI-SESS-80983A, RCM Additional Functionally Significant Item (AFSI) Selection Report; DI-SESS-80982A, RCM Functionally Significant Items (FSI) Index; DI-SESS-80980A, RCM Failure Modes and Effects Analysis (FMEA) Report; DI-SESS-80984A, RCM Logic Tree Analysis (LTA) with Supporting Rationale and Justification Report; DI-SESS-80985A, RCM Servicing and Lubrication Analysis (SLA) Report; DI-SESS-81829, RCM Corrective Maintenance (CM) Development Report; DI-SESS-80989A, RCM Inactive Equipment Maintenance (IEM) Requirement Analysis Report; DI-SESS-80986A, RCM Maintenance Requirements Index (MRI); DI-SESS-80988A, RCM Task Definition Report; DI-SESS-80987A, RCM Procedure Validation Report.

This DID supersedes DI-MNTY-80981.

Requirements:

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

2. Format. This report shall be in Contractor's format and shall be presented in the electronic database specified in the contract.

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3. Content. The report shall contain all of the information specified in the sample form of Figure 1 of this DID as follows:

3.1 Block 1. ESWBS number. Duplicate the Expanded Ship Work Breakdown Structure (ESWBS) entry for each sub-system assigned from the Master Systems and Subsystems Index (MSSI) Form, block 8.

3.2 Block 2. Nomenclature. Enter the nomenclature used on the MSSI form, block 9, for the selected system or subsystem.

3.3 Block 3. Ship class. Duplicate the entries on the MSSI form, block 3.

3.4 Block 4. Prepared by. Enter the analyst's name and the date.

3.5 Block 5. Reviewed by. Enter the first level reviewer's name and the date.

3.6 Block 6. Approved by. Reserved for the maintenance coordinating activity approval signature and the date.

3.7 Block 7. Revision. Enter Original, or A, B, or C, sequentially and the date.

3.8 Block 8. Sources of information. Enter the drawing, manual, document, and report numbers. Enter titles or reference material used in this analysis.

3.9 Block 9. Description. Referring to the Functional Block Diagram prepared in Phase 1, enter a brief physical and functional description of the subdivision. Focus on what the hardware is and what it does, oriented toward preventive maintenance needs. After this narrative, document the following specific information about the system:

a. Redundancy: Enter "None" or describe the redundant relationship.

b. Protective Devices: List any protective devices and the circumstances under which they operate; for example, "circuit breaker -30 amp", "casing relief valve - lifts at 150 pounds per square inch (PSI), reseats at 135 (PSI)".

c. Safety Features: Describe special safety features such as interlocks.

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d. Fail Safe or Unsafe Features: State whether system is fail safe or unsafe; describe any fail safe features.

e. Condition Indicators: Document TYPE, INDICATION, and TO WHOM in a single group for each indicator.

(1) TYPE: Enter gauge, thermometer, meter, bite, indicator light, audible or visual alarm, as appropriate.

(2) INDICATES: Describe what the indicator tells about the system.

(3) TO WHOM: List the watch station or the title of the operator who observes the indicator. Specify the conditions when that station is manned.

f. Environment: Describe the environment to which the system is exposed; for example, "exposed to weather", "exposed to high humidity", "exposed to high heat", or other.

g. Duty Cycle: Describe the particulars of normal operational practices and estimated operational time per year. For example, "the system is normally on line when underway and is automatically controlled." "Air compressors cycle on and off under control of associated receiver pressure switches. Compressors run about 250 hours a year, depending on demand."

h. Use Restrictions: Enter, in capital letters, any special restrictions on the operation of the system: for example, "CANNOT BE SAFELY ACTIVATED IN PORT."

i. Special Maintenance Features: Describe any special provisions for maintenance installed; for example, "System is equipped with external test connections enabling full diagnostics while on line."

j. Regulatory. Enter any regulations (EPA, OSHA, etc.) requiring maintenance tasks.

3.10 Block 10. Functions and out interfaces. Enter a description of functions of the system. Include safety, regulatory, and protective features, out interfaces and all co-functions. State function minimum operational parameters or performance standards if appropriate. Number functions sequentially; for example, "1.0", "2.0", and "3.0."

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3.11 Block 11. System in interfaces. Enter sources of input and critical values. Specify the level four ESWBS number for each source.

3.12 Block 12. Functional failures. Enter the definition of what constitutes a failure for each function and output interface listed in paragraph 3.j above. There may be several functional failures for each function; all functional failures must be identified. Number each functional failure 1.1, 1.2, 1.3, 2.1, 2.2, and 2.3 to correspond to the function number in paragraph 3.j above.

3.13 Block 13. Serial numbers. Enter a four-segment serial number as follows:

a. Segment 1 - Enter the developing organization abbreviation followed by a slant (/).

b. Segment 2 - For developers, enter the development authorization number followed by a slant (/); for other development activities, assign a development number followed by a slant(/).

c. Segment 3 - Enter the number 116 indicating the FFA, followed by a slant (/).

d. Segment 4 - Enter the ESWBS indenture level for this analysis as identified in paragraph 3.a above.

4. End of DI-SESS-80981A.

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1.ESWBS NUMBER	2.NOMENCLATURE		3.SHIP CLASS	SH OF
4.PREPARED BY	5.REVIEWED BY	6.APPROVED BY	7. REVISION	
DATE:	DATE:	DATE:	DATE:	
8.SOURCE OF INFORMATION				
9. DESCRIPTION				
10.FUNCTIONS AND OUT INTERFACES				
11.SYSTEM IN INTERFACE				
12.FUNCTIONAL FAILURES				
				13.SERIAL NUMBER

FIGURE 1.FUNCTIONAL FAILURE ANALYSIS