

## DATA ITEM DESCRIPTION

### **Title: RELIABILITY CENTERED MAINTENANCE (RCM) FAILURE MODES AND EFFECTS ANALYSIS (FMEA) REPORT**

**Number: DI-SESS-80980A**

**Approval Date: 20100923**

**AMSC Number: N9163**

**Limitation: N/A**

**DTIC Applicable: N/A**

**GIDEP Applicable: N/A**

**Office of Primary Responsibility: SH/SEA 04RM**

**Applicable Forms: N/A**

#### **Use/Relationship:**

Reliability Centered Maintenance (RCM) Failure Modes and Effects Analysis (FEMA) defines the dominant failure modes and the effect each failure mode has on the item.

This Data Item Description (DID) contains the format, content, preparation instructions and intended use for the data deliverable resulting from the work task described in 5.1.4 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-80981A, RCM Functional Failure Analysis (FFA) Report; DI-SESS-80983A, RCM Additional Functionally Significant Item (AFSI) Selection Report; DI-SESS-80982A, RCM Functionally Significant Items (FSI) Index; 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-80980.

#### **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.

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

3. Content. This report shall be contain separate forms, containing all of the information specified in the sample form of Figure 1 of this DID, for each Functionally Significant Item (FSI) Index block 8 entry as follows:

3.1 Block 1. ESWBS Number. Duplicate the entry from the FSI index form, block 8.

3.2 Block 2. Nomenclature. Duplicate the entry from the FSI index form, block 9.

3.3 Block 3. Ship Class. Duplicate the entry from the FSI index 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 maintenance coordinating activity approval signature and the date.

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

3.8 Block 8. Function(s). Enter the numbers of the functions listed in Functional Failure Analysis (FFA) Report form, block 10, or the Additional Functionally Significant Item (AFSI) Selection Report form, block 11.

3.9 Block 9. Functional failures. Duplicate entries from applicable FFA form, block 12, or AFSI Selection form, block 12, as applicable.

3.10 Block 10. Dominant failure modes. Enter the dominant failure mode(s) for each functional failure. Number sequentially to correspond to the appropriate functional failure and function; for example, "1.1a", "1.1b", "1.2a". Failure modes should be identified at the level at which the analysis is made. If there are no dominant failure modes, enter "NONE".

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3.11 Block 11. Failure effects (local, subsystem, end effect). Enter the details of the effects of each failure mode on the FSI where the failure mode occurs; at local (point of failure), subsystem, and the end effect (ship or mission). If the failure mode has no effect on a particular level, enter "none" in the appropriate column. If the particulars of the effects are such that a safety hazard or reduction in mission capability results, indicate (for example):

- a. Safety hazard to operators
- b. Safety hazard to personnel in vicinity
- c. Partial loss of capability to detect and track surface contacts with radar
- d. Total loss of mobility capability
- e. Threat to environment
- f. Violation of regulatory requirement
- g. If the details of the effects are such that only a redundant item is lost, indicate by using the phrase "LOSS OF REDUNDANCY".

3.12 Block 12. Transfer. Enter "YES" if the failure mode indicates that further analysis should take place. If the failure mode has insignificant effects, or if it is only remotely likely to occur, enter "NO" and provide rationale for this decision on clearly labeled backup sheets. For failure modes of redundant items, the likelihood of failure of redundant items must be considered.

3.13 Block 13. Serial number. 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 by a slant (/); for other development activities, assign a development number followed by a slant (/).
- c. Segment 3 - Enter the number 119, indicating the FMEA form, followed by a slant (/).
- d. Segment 4 - Enter the ESWBS number for the item from the FSI Index for the item.

4. End of DI-SESS-80980A.

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1. ESWBS NUMBER		2. NOMENCLATURE			3. SHIP CLASS	SH OF
4. PREPARED BY DATE:		5. REVIEWED BY DATE:		6. APPROVED BY DATE:		7. REVISION DATE:
8. FUNCTION(S)	9. FUNCTIONAL FAILURES	10. DOMINANT FAILURE MODES		11. FAILURE EFFECTS: a. LOCAL b. SUBSYSTEM c. END EFFECT		12. TRANSFER Y / N
				13. SERIAL NUMBER		
FAILURE MODES AND EFFECTS ANALYSIS						

FIGURE 1. FAILURE MODES AND EFFECTS ANALYSIS