

**BY ORDER OF THE COMMANDER
EDWARDS AIR FORCE BASE**

**EDWARDS AIR FORCE BASE
INSTRUCTION 99-258**



23 MAY 2023

Test and Evaluation

**PREPARATION AND USE OF EDWARDS
AFB FORM 5258, RELIABILITY AND
MAINTAINABILITY REPORT**

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This publication implements Department of Defense Instruction (DODI)_Department of the Air Force Instruction (DAFI) DODI5000.89_DAFI 99-103, *Capabilities-Based Test Evaluation*; Air Force Instruction (AFI) 63-101/20-101, *Integrated Life Cycle Management*; Department of Defense Guide for *Achieving Reliability, Availability, and Maintainability*; Department of Defense Manual, *Reliability, Availability, Maintainability, and Cost Rationale Report*; and Technical Order (T.O.) 00-20-2, *Maintenance Data Documentation*. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Instruction (AFI) 33-322, *Records Management and Information Governance*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). This instruction gives block-by-block descriptions and examples on how to fill in the Edwards AFB Forms 5258(1-4) System Effectiveness Database System (SEDS) data collection forms. This instruction can be used as an example and may be supplemented at any level. This instruction applies to test organizations utilizing Edwards Forms 5258 (1-4) to document maintenance activities. Refer recommended changes and questions to the Office of Primary Responsibility using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. This instruction requires the collection and maintenance of information protected by the Privacy Act of 1974 authorized by Title 10 United States Code (USC), Section 9013, Secretary of the Air Force. The applicable System of Record Notices (SORNs) F036 AF PC Q, Personnel Data System and F036 AF PC C, Military Personnel Records System, are available at: <https://dpcl.d.defense.gov/Privacy/SORNs/>. The data collected on the Edwards AFB Forms 5258 (1-4) consist of on- and off-equipment maintenance actions used

to repair or service equipment, built-in test failure indications, piece-parts used in a repair, and the amount of time the test article is operated. These data are processed and analyzed after being entered into the SEDS database program. The SEDS database program is used to process, review, categorize, and analyze the resulting reliability and maintainability data. One or more Edwards AFB Form 5258-1 or 5258-2, Reliability and Maintainability Report(s) is/are filled in by a reliability and maintainability (R&M) data collector for each maintenance event. The completed forms are sent to the project engineer for entry into the System Effectiveness Database System. The Edwards AFB Form 5258-3, Reliability and Maintainability Mission Log is filled in for whatever period is established by the project engineer. The completed forms are sent to the project engineer at the end of the specified period. The Edwards AFB Form 5258-4, Reliability & Maintainability Data Collection Form for Contractors is used when a simplified data collection form is needed to capture the basic information needed for a reliability and maintainability evaluation. The form was designed so no accompanying instructions would be needed by a technician to fill it in.

SUMMARY OF CHANGES

This revision incorporates updated guidance from the consolidated DODI5000.89_DAFI 99-103, *Capabilities-Based Test Evaluation* and AFI 63-101/20-101, *Integrated Life Cycle Management*. Typos were corrected to ensure consistency with associated 5258 R&M data collection forms.

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Chapter 1

EDWARDS AFB FORM 5258 VERSION GENERAL DESCRIPTIONS

Section 1A—Overview

1.1. Form Versions. There are four versions of the Edwards AFB Form 5258. The Edwards AFB Form 5258-1 is used to record all equipment maintenance. An abbreviated Edwards AFB Form 5258-2 is available for situations where built-in test (BIT) data need to be recorded after a mission is completed (e.g., a master fault list). The Edwards AFB Form 5258-3 is used to record mission duration (e.g., time, cycles, or miles) and test item operational status. The Edwards AFB Form 5258 4 is an abbreviated form used to collect only essential maintenance data.

1.2. Additional Information. Additional information on SEDS and the Edwards AFB Form 5258 can be obtained from the Reliability and Maintainability Integration Flight, 773d Test Squadron, 412th Test Engineer Group, 412th Test Wing at Edwards Air Force Base. Air Force TO 00-20-1 Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures and TO 00-20-2 Maintenance Data Documentation were the sources of maintenance codes used in this document. Specific applications shall refer to their respective –06 technical order.

Section 1B—Roles and Responsibilities

1.3. Responsibilities of the Joint Reliability and Maintainability Review Board. DODI5000.89_DAFI 99-103 requires that a Joint Reliability and Maintainability Evaluation Team (JRMET) be formed and associated JRMET charter be created. The JRMET is responsible for ensuring the reliability and maintainability data be collected, analyzed, verified, and categorized. AFI63-101/20-101 requires the Chief Engineer (CE) and Product Support Manager to develop an R&M program to ensure reliability and maintainability requirements are achieved. R&M data collection is essential to help the CE quantify the reliability and maintainability performance.

1.4. Responsibilities of the Lead Developmental Test Organization. The lead developmental test organization is responsible for implementing the test and collecting the data for review and use by the test community. Day-to-day data collection is usually delegated to the maintenance organization or a team of observers that supports the tests. The collected data is documented on the EAFB Form 5258 and input into the SEDS database by the test team.

Chapter 2

EDWARDS AFB FORM 5258-1 & -2 GENERAL INSTRUCTIONS

Section 2A—AFTC Reliability & Maintainability Report for On-Equipment, Built-In Test, and Off-Equipment Maintenance General Instructions

2.1. Block numbers and directions on the Edwards AFB Forms 5258-1 and 5258-2: correspond to their equivalent counterparts on the Edwards AFB Form 5258-1 (i.e., BLOCK 1 on each form is the same).

2.2. The following Edwards AFB Form 5258-1/-2 blocks are required information and must be filled in:

Table 2.1. Required Data Blocks.

Block	Name
2	Job Control Number
3	Test Item
4	Work Center Event Number
11	End Item Identification
12	End Item Serial Number

2.3. A new Edwards AFB Form 5258 -1: must be started for each different test item (e.g., different aircraft, etc.) or when the end item changes (e.g., engine is removed from an aircraft and work is done on the engine while it is off the aircraft, etc.).

2.4. All work in the same job must be documented under the same job control number (JCN): using separate work center event (WCE) numbers. Use the reference JCN block to reference a related job (e.g., a cannibalization of a part from one aircraft to another aircraft, etc.).

2.5. Post-flight built-in test indications from a download shall be documented using the 5258-2. If BIT is used during maintenance, it shall be documented on the 5258-1 used to document the maintenance.

Section 2B—Edwards AFB Form 5258-1 and 5258-2 Block Descriptions for On-Equipment and Off Equipment Maintenance

2.6. BLOCK 1. – COLLECTED BY. Enter the name and employee number of the person who filled in the Edwards AFB Form 5258-1/-2.

2.7. BLOCK 2. – JOB CONTROL NUMBER. Designates the appropriate JCN. NOTE, group all related maintenance under the same JCN.

2.8. BLOCK 3. – TEST ITEM. The test item identifies which test article the failure occurred on (e.g., aircraft identifiers like P1, 0086, etc.). These codes are determined locally.

2.9. BLOCK 4. – WORK CENTER EVENT NUMBER (WCE). The WCE is a sequential number assigned by the person completing the Edwards AFB Form 5258. Each Edwards AFB Form 5258 within a JCN must have a different WCE or sheet number (e.g., 1, 2, 3, etc.).

2.10. BLOCK 5. – DATE WORK PERFORMED. Actual Date that the work in BLOCK 55 was completed.

2.11. BLOCK 6 – COMPLETED JOB. Check “Y” for yes, “N” for no to indicate if the entire job has been completed. “No” indicates that additional Edwards AFB Form 5258-1 will be written for this job. A “Yes” indicates that no additional forms will be written for this job.

2.12. BLOCK 7. – LOCATION. Select location where discrepancy was discovered (after completion of mission). Location codes are derived from the International Civil Aviation Organization (ICAO) or International Air Transport Association (IATA) airfield identification codes. [Table 2.2](#) lists some examples.

Table 2.2. Sample Location Codes.

Location Code	Location
KEDW	Edwards AFB
KFFO	Wright-Patterson AFB
KHRT	Hurlburt Field
KLSV	Nellis AFB
KMGE	Dobbins ARB, Marietta, Georgia
KSZL	Whiteman AFB
KVPS	Eglin AFB

2.13. BLOCK 8. – DATE DISCOVERED. Date when the discrepancy was discovered.

2.14. BLOCK 9. – TIME DISCOVERED. Time when the discrepancy was discovered.

2.15. BLOCK 10. – CONTRACTOR DOCUMENT NUMBER. Contractor document number for this maintenance action. For example, the contractor may have a separate failure and corrective action tracking system of their own.

2.16. BLOCK 11. – END ITEM IDENTIFICATION. Designate the end item. For example, aircraft, engine, propeller etc. See [Table 2.3](#) for example codes. These codes are determined locally.

Table 2.3. Sample End Item Identification Codes.

End Item Code	Description
A	Aircraft
P	Propeller
S	Auxiliary Power Unit
X	Engine

2.17. BLOCK 12. – END ITEM SERIAL NUMBER. Enter serial number of the end item from Block 11 above.

2.18. BLOCK 13. – POSITION. Enter position number of part being worked on if applicable.

2.19. BLOCK 14. – TIME/CYCLES/MILES. Enter time, cycles, or miles accumulated by the test item when the failure occurred (if available). Note, LRU TCMs are documented in BLOCK 33 and BLOCK 39.

2.20. BLOCK 15. – MISSION NUMBER. Enter the mission number for the mission that the discrepancy occurred on, or the last mission before the failure occurred.

2.21. BLOCK 16. – SYMBOL. Enter the Symbol for the effect of the discrepancy on the system or subsystem.

Table 2.4. Maintenance Symbols.

Symbol	Definition
X	Equipment considered unsafe
/	Unsatisfactory conditions exist
—	Required special inspection, accessory replacement, operational check or functional check flight is due
W	Inoperative for its intended use (ground-launched missile use only)

2.22. BLOCK 17. – REPEAT. If a maintenance event is a repeat occurrence (i.e., same discrepancy occurred on the next mission or attempted mission after corrective action was taken), then enter the number of times this problem repeated on consecutive sorties.

2.23. BLOCK 18. – RECUR. If a maintenance event is a recurrence (i.e., same discrepancy occurred within 2 to 4 missions or attempted missions), then enter the number of times the same malfunction recurred within a given time period or number of sorties after it was supposedly fixed and could not be repeated (i.e., CND).

2.24. BLOCK 19. – REFERENCE JCN. If this maintenance is related to another repair under a different JCN, enter the related JCN (e.g., cannibalization action, or induced condition).

2.25. BLOCK 20. – TECHNICAL SERVICE BULLETIN NUMBER. If performing a modification or special inspection, enter the modification or inspection number here.

2.26. BLOCK 21. – LEVEL OF MAINTENANCE. Circle the level of maintenance (see [Table 2.5](#)).

Table 2.5. Level of Maintenance Codes.

Level of Maintenance Code	Definition
O	Organizational
I	Intermediate
D	Depot

2.27. BLOCK 22. – SENDING TO SHOP/DEFER. Circle the appropriate letter shown in [Table 2.6](#) Use the Shop or Depot code if the item described by this form is going to be forwarded for back-shop or depot level maintenance. Use the Defer code if the maintenance is going to be deferred, describe in the narrative block when the maintenance will be completed. If a part will be sent to a shop or depot for repair, circle the “S” and:

2.27.1. Fill in blocks 1 and 2 on an Edwards AFB Form 5258-1,

2.27.2. Enclose an Edwards AFB Form 5258-1 with BLOCKs 2, 3 and 4 filled in with the part when the item is sent away for repair.

Table 2.6. Send Item To Codes.

Forward Item To Code	Definition
N	No (default value)
S	Shop or Depot
D	Defer

2.28. BLOCK 23. – PART CODE. Identifying part code of the item on which maintenance is performed from the removed item (BLOCK 30). Examples of part codes are Work Unit Codes (WUC), Unified Number Systems (UNS), and Logistic Control Numbers (LCN).

2.28.1. When the task performed is Support General – enter the Support General code that describes the overall task being performed. Use BLOCK 55A, to describe the detailed Support General codes used in support of the task.

2.28.2. Note, if the line replaceable unit (LRU) you are describing does not have a part code, describe the actual item worked on in the form’s narrative sections (Blocks 41 and 43) and use the part code of the next higher assembly.

2.29. BLOCK 24. – WHEN DISCOVERED CODE. Use the appropriate code that best describes when the discrepancy was discovered. [Attachment 2](#), ([Table A2.1](#)), contains a list of available when discovered codes.

2.30. BLOCK 25. – TYPE MAINTENANCE CODE. Use the appropriate code that best describes the type of maintenance performed for this item. [Attachment 3](#), ([Table A3.1](#)), contains a list of available type maintenance codes.

2.31. BLOCK 26. – HOW MALFUNCTION CODE. Use the appropriate code that best describes the nature of the failure or maintenance performed for this item. [Attachment 4](#), ([Table A4.1](#)), contains a list of available how malfunction codes.

2.32. BLOCK 27. – BUILT-IN TEST SCORING. Indicate the overall performance of the BIT and integrated diagnostics system here. Use Block 56, for details of the BIT message(s) and BIT scoring for each message. [Attachment 5](#) contains lists of pertinent scoring codes.

2.32.1. DETECTION CODES (D): State whether the system detected the fault. Select code from [Attachment 5](#), [Table A5.1](#).

2.32.2. ISOLATION CODES (I): Record the number of LRUs that the BIT system indicated as possible bad units.

2.32.3. VERIFICATION CODES (V): Record whether maintenance verified the BIT message. Select code from [Attachment 5](#), [Table A5.2](#).

2.32.4. SHOP VERIFICATION CODES (S): If the LRU goes to a shop, record results of shop analysis of BIT detection. Select code from [Attachment 5](#), [Table A5.3](#).

2.33. BLOCK 28. – BASIC WORK CENTER. Indicates which shop performed the maintenance. The first character indicates who performed the maintenance. The last four characters indicate which specialty shop performed the task.

2.34. BLOCK 29. – MANUFACTURER – Removed Item. Enter name of manufacturer of the item being worked on (if available).

2.35. BLOCK 30. – NOMENCLATURE – Removed Item. Name of item on which maintenance is being performed. Use term from the current part code list if available. If part is not coded (not otherwise coded), give the most descriptive name available for the part. Ensure nomenclature is consistent with the part code entered in Block 23.

2.36. BLOCK 31. – SERIAL NUMBER (S/N) – Removed Item. Serial number of item identified in Block 30.

2.37. BLOCK 32. – PART NUMBER (P/N) – Removed Item. Part number of item identified in Block 30.

2.38. BLOCK 33. – TIME/CYCLES/MILES (TCM) – Removed Item. If the item identified in Block 30 has a counter or elapsed time clock on it, enter the TCM.

2.39. BLOCK 34. – SOFTWARE VERSION – Removed Item. If the item identified in Block 30 has a software version, record it here. If the software is to be changed, record the old software version here.

2.40. BLOCK 35. – MANUFACTURER – Installed Item. Enter name or code for manufacturer of the item being installed (if available).

2.41. BLOCK 36. – NOMENCLATURE – Installed Item. The nomenclature for the installed item must be consistent with Block 23 and Block 30.

2.42. BLOCK 37. – SERIAL NUMBER (S/N) – Installed Item. Serial number of item identified in Block 36.

2.43. BLOCK 38. – PART NUMBER (P/N) – Installed Item. Part number of item identified in Block 36.

2.44. BLOCK 39. – TIME/CYCLES/MILES (TCM) – Installed Item. If the item identified in Block 36 has a counter or elapsed time clock on it, enter the TCM.

2.45. BLOCK 40. – SOFTWARE VERSION – Installed Item. If the item identified in Block 36 has a software version, record it here. If software was changed, record the new software version here.

2.46. BLOCK 41. – DESCRIPTION OF DISCREPANCY. Provide an accurate and legible description of the discrepancy or work that was performed (e.g., symptoms, fault messages, operator comments, etc.). Add insights, locations, and further descriptions of the discrepancy that may affect military utility.

2.47. BLOCK 42. – DISCOVERED BY. Name or employee number of the person who discovered the malfunction or was assigned to work the discrepancy. If appropriate, enter operator's name here.

2.48. BLOCK 43. – CORRECTIVE ACTION.

2.48.1. Must contain a full and accurate description of the maintenance performed in the Maintenance Performed section (Block 55, A through Q). Add detail as necessary to describe suspected causes, mission impact, and other circumstances that may have contributed to the discrepancy.

2.48.2. Ensure action taken code (ATC) in BLOCK 55Q, matches the corrective action description.

2.48.3. Include problems encountered, possible problem areas, and interface difficulties.

2.48.4. If a repeat, include the reference JCN if available (see Block 19).

2.48.5. Operational Checks that are performed in conjunction with a repair action shall be documented on a separate maintenance line (BLOCK 55) of the same Edwards AFB Form 5258 as the repair action. If an ops check is performed during a mission, annotate the results in BLOCK 43 and charge no maintenance time.

2.49. BLOCK 44. – CORRECTED BY. Name or employee number of the maintenance technician or mechanic who corrected the malfunction or was assigned to work the task.

2.50. BLOCK 45. – TECHNICAL DOCUMENT NUMBER. Indicate the number of the document (e.g., technical order, blueprint, engineering procedure, etc.) primarily used to accomplish the corrective action.

2.51. BLOCK 46. – DOCUMENT DATE. Indicate the date of the document shown in Block 45.

2.52. BLOCKS. 47 -54, – MAINTAINABILITY EVALUATION GENERAL INSTRUCTIONS. For Blocks 47 through 54 use the evaluation scale shown in [Table 2.7](#) to rate the technical data, tools, test equipment, and maintainability elements involved with the repair action. Write explanations for blocks that receive ratings between 1 through 4 in the Corrective Action Block (Block 43).

Table 2.7. Qualitative Evaluation Scale.

Evaluation Scale	Definition	Requires Explanation ¹
0	Not rated	No
6	Very Satisfactory	
5	Satisfactory	
4	Marginally Satisfactory	Yes
3	Marginally Unsatisfactory	
2	Unsatisfactory	
1	Very Unsatisfactory	
NOTE 1: Place explanation for rating in the Corrective Action, BLOCK 43.		

2.53. BLOCK 47. – DOCUMENT PROCEDURE. Evaluate the usefulness or adequacy of the document indicated in Block 45, in accomplishing the corrective action. Use the evaluation scale shown in [Table 2.7](#) above.

2.54. BLOCK 48. – TASK TOOLS. Evaluate the usefulness or adequacy of the tools required to accomplish the corrective action (e.g., specialty tools). Use the evaluation scale shown in [Table 2.7](#) above.

- 2.55. BLOCK 49.** – TASK TEST EQUIPMENT. Evaluate the usefulness or adequacy of the test equipment required to accomplish the corrective action. Use the evaluation scale shown in [Table 2.7](#) above.
- 2.56. BLOCK 50.** – SAFETY OF TASK. Evaluate the safety of performing the task required to accomplish the corrective action. Use the evaluation scale shown in [Table 2.7](#) above.
- 2.57. BLOCK 51.** – EASE OF TASK. Evaluate the ease of performing the task required to accomplish the corrective action. Use the evaluation scale shown in [Table 2.7](#) above.
- 2.58. BLOCK 52.** – TASK PHYSICAL ACCESS. Evaluate the physical access that was available to accomplish the corrective action. Use the evaluation scale shown in [Table 2.7](#) above.
- 2.59. BLOCK 53.** – TASK VISUAL ACCESS. Evaluate visual access that was available to accomplish the corrective action. Use the evaluation scale shown in [Table 2.7](#) above.
- 2.60. BLOCK 54.** – TIMELINESS OF TASK COMPLETION. Evaluate the timeliness of task completion to accomplish the corrective action (i.e., was the job guide estimate accurate, or did the amount of time required seem appropriate). Use the evaluation scale shown in [Table 2.7](#) above.
- 2.61. BLOCK 55.** – MAINTENANCE PERFORMED. This portion of the Edwards AFB Form 5258 is used to record the timeline for the troubleshooting, corrective actions, and testing indicated in Blocks 41 and 43. Each line describes a step in the maintenance task. Be sure to document different steps of a task (e.g., troubleshooting, repair, checkout, etc.). Note, do not record over-the-shoulder training. Time used by engineers for test activities shall be documented on a separate WCE and be clearly annotated as such.
- 2.62. BLOCK 55A.** – PART CODE. Identify the part code (WUC/LCN/UNS) of the part being worked on. If a part code is not available, use the parts nomenclature.
- 2.63. BLOCK 55B.** – WHEN DISCOVERED CODE (WDC). Use the appropriate code that best describes when the requirement for this maintenance was discovered. [Attachment 2, Table A2.1](#) contains a list of available when discovered codes.
- 2.64. BLOCK 55C.** – TYPE MAINTENANCE CODE (TMC). Use the appropriate code that best describes the type of maintenance performed for this item. [Attachment 3, Table A3.1](#) contains a list of available when type maintenance codes.
- 2.65. BLOCK 55D.** – HOW MALFUNCTION CODE (HMC). Use the appropriate code that best describes the nature of the discrepancy or maintenance performed for this item. [Table 18](#) contains a list of available how malfunction codes.
- 2.66. BLOCK 55E.** – PREFIX. Designate who performed the maintenance. Example codes are presented in [Table 2.8](#).

Table 2.8. Example Prefix Codes.

Prefix Code	Definition
A	Air Force
B	Boeing
C	Combined
L	Lockheed
M	Marines
N	Navy
R	Army
V	Vendor

2.67. BLOCK 55F. – SKILL CODE. Indicate appropriate skill code that performed or would perform task in the field (see AFECD).

2.68. BLOCK 55G. – SUFFIX. Skill code suffix.

2.69. BLOCK 55H. – CREW SIZE (CS). Record the number of people that performed the maintenance in the Corrective Action (BLOCK 43).

2.69.1. Include only the people who actually performed the task, not trainees or observers. If the number of people who performed the task exceeded the technical order requirement an explanation is required in the Corrective Action block. For example, if more than four people were used to recover an aircraft, an explanation is required (i.e., “Crew size of 6 to facilitate a quick turn”).

2.70. BLOCK 55J. – DATE. Enter date when maintenance action or delay ended.

2.71. BLOCK 55K. – START TIME. Enter time when maintenance action or delay began using military time (HHMM) to nearest 1-minute increment.

2.72. BLOCK 55L. – STOP TIME. Enter time when maintenance action or delay ended using military time (HHMM) to nearest 1-minute increment.

2.73. BLOCK 55M. – DELAY CODE. Enter a delay code from **Table 2.9** only if a delay occurs during the maintenance. The delay code must be entered on the same line as the last maintenance action preceding the delay.

Table 2.9. Delay Codes.

Delay Code	Definition
A	Work Stoppage – Unpowered support equipment
B	Rest break or meals
C	Delay due to conflicting maintenance
D	End of shift
E	Work Stoppage – Powered support equipment
P	Awaiting personnel assistance
S	Awaiting supplies and/or parts

2.74. BLOCK 55N. – ASSISTING WORK CENTER. Enter code for assisting work center.

2.75. BLOCK 55P. – UNITS. Shows if an action taken in BLOCK 55Q was completed. Enter a zero (0) when a task is not completed. Enter a one (1) for a completed task. If more than one like unit was completed, enter the number of units (e.g., 4 weapons were loaded, enter a 4).

2.76. BLOCK 55Q. – ACTION TAKEN (ATC). Enter an action taken code that matches the corrective action narrative in BLOCK 43. [Table A6.1](#) in [Attachment 6](#) contains a list of available action taken codes.

2.77. BLOCK 56. – BUILT-IN TEST AND FAULT ISOLATION. This portion of the Edwards AFB Form 5258-1/-2 is used to record BIT messages observed and used during maintenance and their corresponding BIT evaluation codes.

2.78. BLOCK 56A. – DATE. Record the date when the bit message occurred.

2.79. BLOCK 56B. – TIME. Record the time when the bit message occurred.

2.80. BLOCK 56C. – BIT PANEL MESSAGE. Record the BIT message(s) observed from the diagnostics system.

2.81. BLOCK 56D. – FREQUENCY. Record the number of times BIT messages were recorded by the system.

2.82. BLOCK 56E. – SOURCE. Record the source of the BIT message(s) observed on the diagnostic panels. Example codes are presented in [Table 2.10](#).

Table 2.10. Example Built-In Test Source Codes.

Source Code	Description
I	Initiated BIT (I-BIT)
L	Line Replaceable Unit (LRU)
M	Master Fault List (MFL)
W	Warning Annunciation Panel (WAP)

2.83. BLOCK 56F. – BIT SCORING. Indicate the detection, isolation, and verification performance of each BIT message here. [Attachment 5](#) contains lists of available BIT evaluation codes.

2.83.1. DETECTION CODES (D). State whether the system detected the fault, Selected from [Table A5.1](#) in [Attachment 5](#).

2.83.2. ISOLATION CODES (I). Record the number of LRUs that the BIT system indicated as possible bad units.

2.83.3. VERIFICATION CODES (V). Record whether maintenance verified the BIT message, selected from [Table A5.2](#) in [Attachment 5](#).

2.83.4. SHOP VERIFICATION CODES (S). If the LRU goes to shop record results of shop analysis of BIT detection, selected from [Table A5.3](#) in [Attachment 5](#).

2.84. BLOCK 56G. – REFERENCE REC ID. Enter the record ID of the maintenance action that corrects the indicated discrepancy/fault.

2.85. BLOCK 56H. – REFERENCE JCN. Record the JCN that documents work done as a result of the BIT detection.

- 2.86. BLOCK 57.** – PIECE PARTS (replaced during repair). Use this area to record piece parts or other consumables used during repair.
- 2.87. BLOCK 57A.** – PART NUMBER. Enter the part number of each piece part.
- 2.88. BLOCK 57B.** – NOMENCLATURE. Enter a description of the part. It must match the part code (Block 57C).
- 2.89. BLOCK 57C.** – PART CODE. Enter the part code, if available, for the part.
- 2.90. BLOCK 57D.** – CIRCUIT SYMBOL. Enter the Circuit Symbol or Circuit Card number for an electronics component.
- 2.91. BLOCK 57E.** – PRIMARY FAILURE. Place a check on the row that was the “primary failure” (i.e., the first part that failed).
- 2.92. BLOCK 57F.** – QUANTITY. Enter the number of this type of part used in the repair and list the unit of measure (e.g., each, ea.; quarts, qt; gallons, gal).
- 2.93. BLOCK 57G.** – HOW MALFUNCTION CODE. Use the appropriate code that best describes the nature of the discrepancy or maintenance performed for this item. See [Table A4.1](#) in [Attachment 4](#) for a list of how malfunction codes.
- 2.94. BLOCK 57H.** – MANUFACTURER. Enter the name or code for the manufacturer of the part (if available).
- 2.95. BLOCK 58.** – DEFICIENCY REPORTS. Use this area to document various deficiency reports and their associated control numbers.
- 2.96. BLOCK 58A.** – TYPE. Indicate what kind of deficiency report was submitted. Codes for this are developed locally. Examples deficiency report type codes are listed in [Table 2.11](#) below.

Table 2.11. Example Deficiency Report Types.

Type	Description
WIT	Watch Item
DR	Deficiency Report
PCR	Production Change Request
ECR	Engineering Change Request
TPR	Test Problem Report
SCR	Software Change Request

- 2.97. BLOCK 58B.** – CONTROL NUMBER. Enter the control number for the FTDR/TPDR.
- 2.98. BLOCK 58C.** – INITIATED BY. Enter the name of the person who initiated the FTDR/TPDR.
- 2.99. BLOCKS 59-70.** – OPTIONAL BLOCKS. Not used. Leave blank unless directed to use them. These blocks are provided in case additional information needs to be recorded that isn’t normally collected. Taylor this area as needed.
- 2.100. DATABASE RECORD NUMBER.** Enter the report number that is generated by the database program when the form is entered into the System Effectiveness Database System (SEDS). This block is located at the top of the EDWARDS AFB Form 5258.

2.101. TRANSCRIBED TO DATABASE BY. Enter the name of the person who input the EDWARDS AFB Form 5258-1/-2 into the SEDS.

2.102. DATE TRANSCRIBED TO DATABASE. Enter the date when the EDWARDS AFB Form 5258-1/-2 was input into the SEDS.

2.103. RECORD ACTION. Do not complete. Used by data entry technician to indicate that more information or clarification is required to complete the form.

2.104. QUALITY CHECKED BY. Enter the name of the person who reviewed and approved the EDWARDS AFB Form 5258-1/-2. Print the name and sign.

Chapter 3

EDWARDS AFB FORM 5258-3 RELIABILITY & MAINTAINABILITY MISSION LOG

3.1. General Instructions: A mission is considered to begin when the equipment is released by maintenance as ready for the next mission and ends when the mission is concluded (for example when an aircraft touches down for a full stop landing). The reason(s) for a mission ending with the equipment with a status code other than “1” must be recorded in Block 8.

3.2. BLOCK 1. – MISSION. Enter the mission and segment number information for the mission.

3.3. BLOCK 1A. – MISSION NUMBER. Enter the mission number for the mission.

3.4. BLOCK 1B. – MISSION SEGMENT. Enter the segment number for the mission. Examples of a segment could be a helicopter sortie that included several stops before returning to base.

3.5. BLOCK 2. – TEST ITEM. The test item identifies which test article performed the mission (e.g., aircraft identifiers like P1, 0086, etc.). These codes are determined locally.

3.6. BLOCK 3. – STATUS. Enter status code from [Table 3.1](#). The example elapsed time indicator (ETI) codes would be used if the system under test has an ETI meter. The two codes differentiate between mission times and between mission times (e.g., in-flight and ground operations). The numeric codes were derived from DAFI21-101 Table 3.1.

Table 3.1. Example Status Codes.

Mission Status Code	Equipment Status
F	Elapsed Time Indicator, mission
R	Elapsed Time Indicator, between missions
0	Ground Abort
1	Full Mission Capable
2	Partially Mission Capable
3	Not Mission Capable

3.7. BLOCK 4. – DEVIATION. Enter deviation type and cause codes.

3.8. BLOCK 4A. – DEVIATION TYPE. Enter deviation type code from [Table 3.2](#).

Table 3.2. Deviation Type Codes.

Deviation Code	Deviation Type
AA	Air Abort
AD	Ground Add
AI	Air Abort In-flight Incident
CX	Ground Cancellation
DE	Ground Delay
EL	Air Early Landing
ET	Ground Early Takeoff
FE	Air In-flight Emergency
FI	Air In-flight Incident
GA	Ground Abort
LL	Air Late Landing
LT	Ground Late Takeoff
SL	Ground Subsequent Late
SX	Ground Subsequent Cancellation

3.9. BLOCK 4B. – DEVIATION CAUSE. Enter deviation cause code from [Table A7.1](#) in [Attachment 7](#). These codes were derived from DAFI21-101 Table 3.3

3.10. BLOCK 5. – START. Enter date, location and time, cycles, or miles for the start of the mission.

3.11. BLOCK 5A. – DATE. Enter date mission was started.

3.12. BLOCK 5B. – LOCATION. Enter location code where mission started from [Table 3.3](#).

3.13. BLOCK 5C. – TCM. Enter time, cycles, or miles at the beginning of the mission.

3.14. BLOCK 6. – STOP. Enter date, location and time, cycles, or miles for the end of the mission.

3.15. BLOCK 6A. – DATE. Enter date mission ended.

3.16. BLOCK 6B. – LOCATION. Enter location code where mission ended from [Table 3.3](#).

3.17. BLOCK 6C. – TCM. Enter time, cycles, or miles at the end of the mission.

Table 3.3. Example Location Codes.

Location Code	Location
KEDW	Edwards AFB
KMGE	Marietta, Georgia
KBKY	Arlington, Texas

3.18. BLOCK 7. – JOB CONTROL NUMBER(S). Record job control number(s) of the maintenance action(s) associated with this entry.

3.19. BLOCK 8. – NOTES. Record any notes or comments pertinent to the mission.

3.20. DATABASE RECORD NUMBER. Enter the report number that is generated by the database program when the form was entered into the System the Effectiveness Database System (SEDS). This block is located at next to each mission row on the EDWARDS AFB Form 5258.

3.21. TRANSCRIBED TO DATABASE BY. Enter the name of the person who input the Edwards AFB Form 5258-1/-2 into the SEDS.

3.22. DATE TRANSCRIBED TO DATABASE. Enter the date when the EDWARDS AFB Form 5258-3 was input into the SEDS.

3.23. QUALITY CHECKED BY. Enter the name of the person who reviewed and approved the EDWARDS AFB Form 5258-3. Print the name and sign.

Chapter 4

EDWARDS AFB FORM 5258-4 RELIABILITY & MAINTAINABILITY DATA COLLECTION FORM FOR CONTRACTORS

- 4.1. General Instructions:** This form is used to collect reliability and maintainability data when minimal instructions to the maintainer are to be provided. The form is intended to be used when maintenance is performed by contractors who are not using Air Force maintenance documentation procedures.
- 4.2. BLOCK 1. – CONTRACTOR DOCUMENT NUMBER.** Tracking number used by contractor to perform maintenance on the system under test.
- 4.3. BLOCK 2. – JOB CONTROL NUMBER.** Job control number from Air Force maintenance forms.
- 4.4. BLOCK 3. – TEST ITEM.** The test item identifies which test article the discrepancy occurred on (e.g., aircraft identifier like P1, 0086, etc.). These codes are determined locally.
- 4.5. BLOCK 4. – DATE DISCOVERED.** Date when the discrepancy was noted.
- 4.6. BLOCK 5. – DATE CORRECTED.** Date when the discrepancy was corrected, and maintenance was completed.
- 4.7. BLOCK 6. – TYPE OF MAINTENANCE.** Check the box for the type of maintenance being performed: Corrective Maintenance, Scheduled Maintenance, or Modification.
- 4.8. BLOCK 7. – COMPLETED BY.** Name of the technician who performed the maintenance.
- 4.9. BLOCK 8. – JOB STATUS.** Check the box for the status of the job when this form was turned in: Closed (i.e., completed), In Work, or Deferred.
- 4.10. BLOCK 9. – REASON MAINTENANCE WAS PERFORMED.** Write down why the maintenance was accomplished. Where possible, provide enough detail so the reader does not need to look up other documents.
- 4.11. BLOCK 10. – WHAT WAS DONE.** Describe what was done to accomplish the maintenance action. If you check any of the Excess Time boxes in Block 12 provide an explanation of the cause. Where possible, provide enough detail so the reader does not need to look up other documents.
- 4.12. BLOCK 11. – PARTS AND/OR SOFTWARE WORKED ON OR CHANGED.** You may enter information for up to two-line replaceable units in this section.
- 4.13. BLOCK 11A. – PART CODE.** Identifying part code of the item on which maintenance is performed from the removed item (BLOCK 11B). Examples of part codes are Work Unit Codes (WUC), Unified Number Systems (UNS), and Logistic Control Numbers (LCN).
- 4.14. BLOCK 11B. – ITEM.** Indicates which row documents the item being worked on or removed (i.e., failed), and the item being installed if a removal took place.
- 4.15. BLOCK 11C. – NOMENCLATURE.** Name of item on which maintenance is being performed. Use term from the current part code list if available. If part is not coded (not otherwise coded), give the most descriptive name available for the part that was worked on. Ensure nomenclature is consistent with the part code entered in Block 11A.

- 4.16. BLOCK 11D.** – PART NUMBER. Part number of item identified in Block 11A.
- 4.17. BLOCK 11E.** – SERIAL NUMBER. Serial number of item identified in Block 11A.
- 4.18. BLOCK 11F.** – ELAPSED TIME. If the item identified in Block 11A has an elapsed time indicator, record the value here.
- 4.19. BLOCK 11G.** – SOFTWARE VERSION. If software was installed, or the software/firmware version is indicated on the item in Block 11A, record the version number here.
- 4.20. BLOCK 12.** – MAINTENANCE TIMES. Enter the maintenance times required to complete the maintenance task. Do not include time for logistics delays such as waiting for parts or engineering dispositions. The CS (crew size) column in each time are indicates how many workers were required for the task, don't include trainees. The M (maintainability problem) column is checked if there was a problem with the repair procedure, these could include but are not limited to: provided tools, test equipment, or access (physical and visibility) to the part(s). If a problem occurs describe it in detail in Block 10. There is a row of times available for each LRU worked upon in Block 11.
- 4.21. BLOCK 12A.** – UNITS. Enter the number of items worked on, installed, or removed. For example, if 6 chaff cartridges were installed the units would be 6.
- 4.22. BLOCK 12B.** – TROUBLESHOOT. Enter the total amount of time used to isolate the reason for maintenance. If troubleshooting was not performed, leave blank.
- 4.23. BLOCK 12C.** – ACCESS. Enter the total amount of time required to gain access to the LRU or part to be worked on. If no access time was required, leave blank.
- 4.24. BLOCK 12D.** – REPAIR. Enter the total amount of time to repair or perform the primary cause of the maintenance action.
- 4.25. BLOCK 12E.** – BACK-OUT. Enter the total time required to reassemble the system after the repair is completed. Leave blank if not required.
- 4.26. BLOCK 12F.** – OPS CHECK. Enter the total time required to complete an operational check if required. Leave blank if not required.
- 4.27. BLOCK 12G.** – CURE. Enter the total time required for materials to cure if required, otherwise leave blank. If cure time is entered indicate if it was Active (worker must remain present) or Passive (unobserved) by entering a "A" or "P" in the P/A column.
- 4.28. BLOCK 13.** – BUILT-IN TEST. If built- in test was used to detect or isolate a discrepancy indicate complete this section, otherwise leave it blank.
- 4.29. BLOCK 13A.** – MESSAGE. Enter the fault code or message presented by the system. If more than one fault code or message was used, document the codes or messages in Block 10 if more space is required.
- 4.30. BLOCK 13B.** – DETECT. Indicate if built- in test detected the discrepancy when it should have. Enter a "Y" (yes), "N" (no), or "X" (didn't check).
- 4.31. BLOCK 13C.** – ISOLATE #. Enter number of LRUs isolated to (e.g., ambiguity group). Enter a zero if the system failed to isolate.

4.32. BLOCK 13D. – VERIFY. Indicate if the built- in test fault was verified (i.e., was this a valid detection). Enter a “Y” (yes), “N” (no), or “X” (didn’t check).

4.33. BLOCK 14. – ASSOCIATED REPORT NUMBERS. Enter any associated report numbers for each LRU changed as needed. These report numbers could include any accompanying paperwork that would provide additional insight into the discrepancy or subsequent root cause analysis.

4.34. DATABASE RECORD NUMBER(S). Enter the report number(s) that were generated by the database program when the form was entered into the System the Effectiveness Database System (SEDS). This block is located at the bottom of the EDWARDS AFB Form 5258-4.

4.35. TRANSCRIBED TO DATABASE BY. Enter the name of the person who input the EDWARDS AFB Form 5258-4 into the SEDS.

4.36. DATE TRANSCRIBED TO DATABASE. Enter the date when the EDWARDS AFB Form 5258-4 was input into the SEDS.

4.37. QUALITY CHECKED BY. Enter the name of the person who reviewed and approved the EDWARDS AFB Form 5258-4. Print the name and sign.

CARL E. SCHAEFER
Brigadier General, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 33-322, *Records Management and Information Governance*, 27 July 2021

AFI 63-101/20-101, *Integrated Life Cycle Management*, 30 June 2020

DAFI 21-101 *Aircraft and Equipment Maintenance Management*, 16 January 2020

DAFI 90-160, *Publications and Forms Management*, 14 April 2022

DOD *Reliability, Availability, Maintainability, and Cost Rationale Report Manual*, 1 June 2009

DODI5000.89_DAFI 99-103, *Capabilities-Based Test Evaluation*, 9 December 2021

TO 00-20-1 *Aerospace Equipment maintenance inspection, documentation, policies, and procedures*, 21 June 2021

TO 00-20-2 *Maintenance Data Documentation*, 22 July 2021

Air Force *Enlisted Classification Directory (AFOCD)*, 30 April 2022

Prescribed Forms

EDWARDSAFB 5258-1, *Reliability and Maintainability Report*

EDWARDSAFB 5258-2, *Reliability and Maintainability Built-In Test Report*

EDWARDSAFB 5258-3, *Reliability and Maintainability Mission Log*

EDWARDSAFB 5258-4, *Reliability and Maintainability Data Collection Form for Contractors*

Adopted Forms

AF 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFECD—Air Force Enlisted Classification Directory

AFTC—Air Force Test Center

AFI—Air Force Instruction

AFMC—Air Force Material Command

ATC—Action Taken Code

BIT—Built-in Test

CAMS—Core Automated Maintenance System

CE—Chief Engineer

C-E—Communications electronics

CND—Can Not Duplicate

CS—Crew Size
DAFI—Department of the Air Force Instruction
DODI—Department of Defense Instruction
Ea—Each-unit of issue
Edwards AFB—Edwards Air Force Base
ENFR—Reliability and Maintainability Integration Branch Flight
FTDR—Flight Test Deficiency Report
Gal—Gallons
HHMM—Hours and Minutes
HMC—How Malfunction Code
Hrs—Hours
I-BIT—Initiated Built-in Test
ICAO—International Civil Aviation Organization
ICBM—Intercontinental Ballistic Missile
ID—Identification
IATA—International Air Transport Association
JCN—Job Control Number
LCN—Logistics Control Number
LRU—Line Replaceable Unit
MFL—Master Fault List
MMP—Maintenance Management Policy
P/N—Part Number
Qt—Quarts
S/N—Serial Number
SEDS—System Effectiveness Database System
SI—Special Inspection
SRU—Shop Replaceable Unit
TCM—Time, Cycles, Miles
TMC—Type Maintenance Code
TO—Technical Order
TPDR—Technical Publication Deficiency Report
TW—Test Wing

UNS—Unified Numbering System

WAP—Warning Annunciation Panel

WCE—Work Center Event

WDC—When Discovered Code

WUC—Work Unit Code

Attachment 2

WHEN DISCOVERED CODES

A2.1. The following list of when discovered codes (WDC) are provided as a sample. The list can be tailored to the needs of the test program. When discovered codes indicate when a need for maintenance was discovered (receiving/shipping/storage inspection, during load, calibration, mating, in-flight, alert, scheduled inspection, etc.). A complete list of when discovered codes are presented TO 00-20-2.

Table A2.1. When Discovered Codes.

When Discovered Code	Description
1	Magnetic Particle. (A)
2	During Operation of Malfunction Analysis and Recording Equipment or Subsequent Analysis. (A)
3	Eddy Current. (A)
A	<ol style="list-style-type: none"> 1. Before Flight Abort. (A) 2. Receiving inspection (general inspection and test) (B) 3. Countdown 4. Abort: This code applies to System Readiness Check for countdown for actual launch which results in a no-go condition; not applicable Minuteman exercises; this code is applicable to countdown for actual launch such as training or verification launches of all missiles. (D)
B	<ol style="list-style-type: none"> 1. Before Flight 2. No Abort. (A) 3. Shipping inspection (general inspection and tests). (B) 4. Countdown 5. No Abort: This code applies to discrepancies discovered as specified for code "A" when the discrepancy(s) does not cause the launch or exercise to be aborted. (D).
C	<ol style="list-style-type: none"> 1. In-flight abort 2. During operation. (B) 3. During equipment operation/caused equipment down time. (C) 4. Simulated Countdown 5. Abort: This code applies to the missile commanded calibrate, 60 second test or Sensitive Command Network Test for Minuteman; and missile and/or launch verification test for Titan II. when the discrepancy(s) discovered during these exercises caused the exercise to be aborted. (D)
D	<ol style="list-style-type: none"> 1. In-flight No Abort 2. Returned munitions inspection tests). (B) 3. During equipment operation/did not cause equipment down time. (C) 4. Simulated Countdown 5. No Abort: This code applies to discrepancies discovered as specified for code "C" when the discrepancy(s) does not cause the exercise to be aborted. (D)

When Discovered Code	Description
E	1. After Flight. (A) 2. Storage monitoring inspection. (B) 3. Post Launch/Refurbish Maintenance: Use for those discrepancies discovered during refurbishment of a launch after missile launch. (D)
F	1. Between Flight. 2. Ground crew (When not associated with an inspection). (A) 3. Unscheduled Maintenance: Use for discrepancies during phases of operational maintenance not covered by other when discovered codes. (B) (C) (D)
G	1. Ground Alert/Operationally Ready. 2. Not Degraded: Use for discrepancies discovered while the weapon system is in an operationally ready/alert status and the discrepancy(s) does not cause operationally ready/alert degradation; do not use this code for discrepancies discovered during maintenance/exercise covered by codes B, D, J, N, P, Q, R, T, or V. (A) (B) (D)
H	1. Thru Flight Inspection. (A) 2. Post load. (B) 3. Scheduled inspection, phase or periodic (does not include daily/shift). (C) 4. Ground Alert/Operationally Ready 5. Degraded: Use for discrepancies discovered while the weapon system is in an operationally ready/alert status and the discrepancy(s) caused operationally ready/alert degradation; do not use this code for discrepancies discovered during maintenance/exercises covered by codes A or C. (D)
J	1. Preflight Inspection. (A) 2. Daily Inspection/Shift Verification: Use for discrepancies discovered during the performance of regularly scheduled daily inspections or during shift verification, or inspections conducted during change of missile combat crews. (B) (C) (D)
K	1. Hourly Postflight Inspection. (A) 2. Before load. (B)
L	1. During Training or Maintenance on Training Equipment. (A) 2. During training or maintenance on equipment utilized in a training environment (Use only for Class II training equipment). (B) (C) (D)
M	1. Phased/Scheduled/Periodic Inspection: Use for discrepancies discovered during the performance of inspections specified by the Dash 6 Technical Order except Daily 2. Shift Verification Inspections (See Code J), Scheduled Calibrations (See Code T). (B) (D) NOTE, for countdowns (See Codes A and B), and Simulated Countdowns (See Codes C and D). (D)

When Discovered Code	Description
N	1. Ground Alert 2. Degraded. (A) 3. During load. (B) 4. Functional/Operation Check 5. Result "Good": Use for discrepancies discovered during performance of a functional/operational check and the discrepancy(s) did not cause the overall result of the check to be "Bad"; do not use this code for discrepancies discovered when checks are performed as a part of maintenance/exercises covered by codes B, D, J, M, or V. (D)
P	1. Functional Check Flight. (A) 2. Functional/Operational/Systems check. (B) (C) 3. Functional/Operational Check 4. Result "Bad": Use for discrepancies discovered during performance of a functional/operational check when the discrepancy(s) caused the result to be "Bad"; do not use this code for discrepancies discovered when checks are performed as part of maintenance/exercises covered by codes A, B, C, D, G, H, J, M, T, or V. (D)
Q	Special Inspection: Use for discrepancies discovered during the performance of "Special" or "One Time" inspections directed by local or higher authority including those directed by the "Special Inspection" portion of the Dash 6 Technical Order (Excluding Minuteman launch Capability Test). (A) (B) (C) (D)
R	Quality Control Check: Use for all discrepancies discovered by quality control personnel during any phase of maintenance/operation. (A) (B) (C) (D)
S	Depot Level Maintenance: Use only for discrepancies discovered during maintenance performed at depot activities and those discrepancies discovered during depot level maintenance performed "On Location" such as compliance with depot level time compliance technical orders, and modification programs by depot/contractor personnel; support base civil engineer shops may use this code when performing "Depot Level" category maintenance/repair/overhaul on missile weapon system. (A)
T	During Scheduled Calibration: Use only for discrepancies discovered during calibration actions directed by appropriate technical directives to be accomplished on a periodic/recurring basis. (A) (B) (C) (D)
U	Oil Analysis. (A)
	Non-destructive inspection. Includes optical, penetrant, magnetic particle, radiographic, eddy current, ultrasonic, spectrometric oil analysis, etc. (B) (C) (D)
V	During Unscheduled Calibration: Use for discrepancies discovered during calibrations actions not covered by code T. (A) (B) (C) (D)
W	In-Shop Repair and/or Disassembly for Maintenance: Use of this code is restricted to discrepancies discovered while an item is undergoing "In-Shop" bench check and/or repair; use code "F" for repair and/or disassembly actions performed "On-Equipment" when these actions are not part of an action covered by one of the other codes. (A) (B)

When Discovered Code	Description
X	1. Engine Test Stand Operation. (A) 2. Mating/Demating (warhead/clip-in, basic assembly/shape components). (B) 3. Engine Test Stand Operations: Use for discrepancies discovered during portable test stands or cell operation. (D)
Y	Upon Receipt or Withdrawal from Supply Stocks: Use for discrepancies discovered during bench check or installation on items received from depots, contractors, and/or supply stocks; this code is intended to pinpoint items which are classed as "Serviceable" at time of issue and later proved to be "Unserviceable". (A) (B) (C) (D)
Z	1. Air to ground missile under wing check. (A) 2. During initial equipment installation. (C) 3. Minuteman Launch Capability Test: Use for discrepancies discovered during performance of Minuteman Launch Capability Test. (D)
<p>NOTE: Each code may have more than one definition, depending on the group of systems under maintenance. Following each code is a letter in parentheses that identifies the systems it can be used with:</p> <p>(A) Aircraft, drones, and air launched missiles. (B) Conventional and nuclear munitions. (C) Ground trainers and aerospace ground equipment. (D) Ground launched missile weapon systems.</p>	

Attachment 3

TYPE MAINTENANCE CODES.

A3.1. The following list of type maintenance codes (TMC) is provided as a sample. The list can be tailored to the needs of the test program. A complete list of type maintenance codes are presented TO 00-20-2.

Table A3.1. Type Maintenance Codes.

Type Maintenance Code (TMC)	Description
A	Service: Includes all units of work associated with servicing, cleaning, and movement of equipment.
B	Unscheduled Maintenance: Includes all units of work accomplished between scheduled inspections, excludes time-compliance technical order (TCTO) accomplishment. ENGINE SHOP WORK ON REMOVED ENGINES – Gas Turbine Engine Field Maintenance: Includes all work required on an engine removed because of a failure or malfunction.
C	SHOP WORK – Manufacture and/or fabrication of aerospace vehicle components, aerospace ground equipment, ground C-E and real property installed equipment (RPIE). TYPE MAINTENANCE CODES FOR ENGINE SHOP WORK ON REMOVED ENGINES – Gas Turbine Engine Build-Up: Includes all work required during build-up of an engine from supply stock TYPE MAINTENANCE CODES FOR AIR LAUNCHED MISSILES AND RELATED AEROSPACE GROUND EQUIPMENT (AGE) AND TRAINING EQUIPMENT – Basic Postflight: Includes all units of work accomplished during all phases of an hourly postflight inspection. INSTALLED ENGINES AND RELATED MOBILE TRAINING SETS – Basic Postflight, Thruflight or Alert Exercise Postflight Inspection: Includes all units of work accomplished during all phases of the basic postflight, thruflight or alert postflight inspection.
D	Scheduled Inspection: Includes all units of work accomplished during scheduled inspections such as daily, safety, and servicing inspection, excluding periodic/phased inspection. INSTALLED ENGINES AND RELATED MOBILE TRAINING SET – Preflight, Combined Preflight/Postflight, or End of Runway Inspection: Includes all units of work accomplished during all phases of preflight, combined preflight/postflight, or end of runway check. ENGINE SHOP WORK ON REMOVED ENGINES – Gas Turbine Engine Tear-Down and Preparation for Shipment: Includes all work required to tear-down and prepare a failed or time-expired engine for shipment excluding periodic/phased inspection.

Type Maintenance Code (TMC)	Description
E	Hourly Postflight or Minor Inspection: Includes all units of work accomplished during all phases of an hourly or minor (Isochronal) inspection. ENGINE SHOP WORK ON REMOVED ENGINES – Unscheduled Test Cell Operation: To be used when the engine is removed for test cell operation and the removal was made for reasons other than a scheduled inspection or JEBM, i.e., directed removals or accessory replacement. All other test cell operations will be charged to the appropriate work order prefix.
F	GROUND LAUNCHED MISSILES, RELATED AGE, GROUND CEM, RPIE, TRAINING EQUIPMENT – Scheduled Ground-Launched Missile Maintenance: Excludes scheduled inspection. Includes all units of work. GROUND CEM, COMSEC. AND GROUND CEM "L" SYSTEMS (EXCEPTING GROUND-LAUNCHED MISSILE CEM) – Daily/Shift/Phase/Periodic: Includes all units of work accomplished during daily/shift/phased/periodic inspections. This code will be used on both the "Look" phase of the inspection and on all "Fix" phase documents generated for correction of deficiencies noted during the inspection accomplished during initial receipt and assembly, transportation to launcher, mating to launcher, checkout of missile on launcher, checkout to readiness condition, and the same functions involved in recycling the missile to and from a periodic inspection and return to launcher.
G	Transport: Includes all units of work performed by activities in recording aircraft and equipment transportability (to be used with action codes "P" and "Q"). This code should be used in conjunction with the tear-down and build-up of aircraft and equipment being transported by air, land and sea.
H	SHOP WORK – Maintenance of non-aerospace equipment received from activities other than maintenance. INSTALLED ENGINES AND RELATED MOBILE TRAINING SETS – Home Station Check: Includes all units of work accomplished during all phases of a home station (Isochronal) inspection. ENGINE SHOP WORK ON REMOVED ENGINES – Reciprocating Engine Build-Ups: Includes all work required during build-up of reciprocating engines drawn from supply stock. GROUND CEM, COMSEC, AND GROUND CEM "L" SYSTEMS (EXCLUDING GROUND-LAUNCHED MISSILE CEM) – Emergency On-Site Repair: Includes all units of work authorized and accomplished as a result of an emergency request for assistance. Applicable to all levels of maintenance performed by depot engineering and installation teams and organizational and intermediate maintenance performed by depot mobile depot activity teams. Excludes accomplishment of TCTOs.
J	Scheduled calibration of equipment or components, including all units of work accomplished concurrently with a scheduled calibration

Type Maintenance	Description
K	SHOP WORK – Manufacture and/or fabrication of non-aerospace equipment. ENGINE SHOP WORK ON REMOVED ENGINES – Reciprocating Engine Tear-Down and Preparation for Shipment: Includes all work required to tear-down and prepare a failed or time-expired engine for shipment when repair cannot be accomplished on base.
L	ENGINE SHOP WORK ON REMOVED ENGINES – Reciprocating Engine Field Maintenance: To be used for repair of an engine removed from aircraft when the engine will be retained by the activity for reinstallation in the same, or another aircraft.
M	Interior Refurbishment: Includes all work accomplished during interior refurbishment of aircraft.
P	Periodic or Phased Inspection/Maintenance Includes all units of work accomplished during look-and-fix phases of periodic or phased inspections, scheduled maintenance, and time-change items. Excluding accomplishment of TCTOs. SHOP WORK – Inspection, repair, maintenance and service of life-support (personal) equipment and flotation equipment such as parachutes, oxygen masks, flight clothing, life vests and rafts. Excludes accomplishment of TCTOs.
Q	Forward-Support Spares: Includes all units of work performed by all activities in recording in-shop maintenance actions on forward-support spares, excluding accomplishment of TCTOs.
R	Depot Maintenance: Includes all units of work accomplished when depot maintenance or rehabilitation is performed, regardless of location includes emergency on-site repair. Excludes accomplishment of TCTOs.
S	Special Inspection: Includes all units of work accomplished during all phases of special inspections. Excluding accomplishment of TCTOs. GROUND CEM, COMSEC, AND GROUND CEM "L" SYSTEMS (EXCLUDING GROUND-LAUNCHED MISSILE CEM) – This code will also be used for correction of deficiencies noted during the special flights.
T	Time-Compliance Technical Order: Includes accomplishment of all TCTOs and status reporting.
W	ENGINE SHOP WORK ON REMOLD ENGINES -Minor Maintenance: Performed on engines ("Short-Time Spares") removed to facilitate airframe TCTO; extensive aircraft structural repair; to be made within practical time limits due to untimely receipt of part, non-availability of required equipment, work priority, etc. reconcile airframe and engine time for alignment of periodic/phase inspections; and to record man-hours expended in repair (minor maintenance) of engines for which minor repair (other than and not to include JEBM) could not be accomplished. SHOP WORK – Special Support and Compliance with 00-20K Series Technical Orders: Includes inspection, testing checking, preservation, and/or packaging of serviceable items from base supply, or enroute- or flyaway-kit items.

Type Maintenance Code (TMC)	Description
Y	Aircraft/Engine Transient Maintenance: Include all units of work accomplished on/or for transient aircraft/engines, including non-Air Force. Excluding accomplishment of TCTOs.
Z	This code will be used only for Reliability Improvement Warranty items and for equipment managed under the Advanced Configuration Management System.

Attachment 4

HOW MALFUNCTION CODES

A4.1. The following list of how malfunction codes (HMC) is provided as a sample. The list can be tailored to the needs of the test program. A complete list of how malfunction codes are presented TO 00-20-2.

Table A4.1. How Malfunction Codes.

How Malfunction Code (HMC)	Description
001	Faulty tube, transistor, or integrated circuit
002	Servicing (may be used with work unit code items).
006	Contacts, connectors or connections defective
008	Noisy/chattering
011	Low-frequency vibrations
012	Medium-frequency vibrations
013	High-frequency vibrations
020	Cut, worn, chaffed, frayed, or torn
025	Capacitance incorrect
028	Conductance incorrect
029	Current incorrect
037	Fluctuates, unstable, or erratic
038	Repair deferred, awaiting parts, precision measurement equipment laboratory only.
039	Repair deferred, awaiting calibration procedure tech order, PMEL only.
040	Repair deferred, awaiting base calibration standard, PMEL only.
041	Repair deferred, awaiting other support equipment, PMEL only.
042	Repair deferred, awaiting facility temperature, PMEL only.
043	Repair deferred, awaiting facility humidity, PMEL only.
044	Repair deferred, workload backlog, PMEL only.
045	Battery replaced, no other fault
051	Fails to tune or drifts
064	Incorrect modulation
065	High voltage or standing wave ratio
069	Flameout
070	Broken
080	Burned out or defective lamp, meter or indicating device
086	Improper handling, shipping or maintenance damage
088	Incorrect gain
103	Attack display incorrect
105	Loose, damaged, or missing hardware (nuts, bolts, screws, clamps, safety-wire, etc.)
111	Burst or ruptured

How Malfunction Code (HMC)	Description
127	Adjustment or alignment improper
135	Binding, stuck, or jammed
136	Damaged/cracked fan stator case
137	Damaged/cracked fan stator vanes
138	Fan blade damage
139	Cracked or warped inlet guide
140	Frozen fan
141	Compressor case failure or excessive air leakage
142	Compressor damage due to failure or seizures
143	Damaged/cracked compressor case
144	Compressor rotor change (other than foreign object damage (FOD))
145	Cracked diffuser cases
146	Combustion case burn or hot spot
147	Combustion damage
148	Damaged/cracked turbine frame/case (burned through)
149	Flameholder or fuel ring/bars damaged
150	Thrown, damaged or failed buckets
151	Turbine wheel failure
152	Turbine nozzle failure
153	Turbine damage due to material failure
154	Engine or afterburner fire damage
155	Engine to aircraft mount failure
156	Afterburner or augmentor problem repair
157	Thrust reversor system failure
158	Accessory drive gear box failures (includes turboprop gearbox) (worn splines)
159	Internal reduction gear failure
160	Bearing and/or support failure
161	Bearing failure (causing rotor shift/seizure)
162	Scavenger pump failure (includes turboprop gearbox)
163	Engine decoupled (turboprop)
164	Propeller brake failed (turboprop)
165	Power section failure (turboprop)
166	Reduction gear box failure (turboprop)
167	Tension or torque incorrect
168	Torque meter failure (turboprop)
169	Voltage incorrect
170	Corroded mild/moderate
171	Impeller or inducer damage (recip only)
172	Slipped blower clutch (recip only)
173	Turbo supercharger failure (induction system contaminated with metal from turbo) (recip only)
174	Quick engine change discrepancy

How Malfunction Code (HMC)	Description
175	Condition monitoring-adverse exhaust gas temperature (EGT)/total inlet temperature (TIT) trend
176	Condition monitoring-adverse revolutions-per-minute (RPM) trend
177	High or low fuel consumption
178	Condition monitoring-vibration trend
179	Condition monitoring-exhaust pressure ratio (EPR) trend
180	Condition monitoring-adverse oil consumption trend
181	Condition monitoring-adverse fuel flow trend
182	Condition monitoring-performance trend indicates compressor section deterioration or damage.
183	Condition monitoring-performance trend indicates combustion section deterioration or damage.
184	Condition monitoring-performance trend indicates turbine section deterioration or damage.
185	Condition monitoring-performance trend indicates accessory section deterioration.
186	Condition monitoring-removed for further test cell diagnostic check
187	Condition monitoring-borescope indicates compressor section deterioration.
188	Condition monitoring-borescope indicates combustion section deterioration.
189	Condition monitoring-borescope indicates turbine section deterioration.
190	Cracked
191	High EGT
192	Over temperature
193	Excessive stalls
194	High breather pressure
195	Exceeding quality check temperature limit
196	Excessive oil from breather, or high sump pressure
197	Fuel leakage
198	Contaminated fuel
199	High or low oil consumption
200	Oil leakage
201	Contaminated oil
202	Low oil pressure
203	High oil pressure
204	Smoke or fumes in cockpit
205	Start or off idle stagnation
206	Steady state stagnation
207	Augmentor induced stagnation
208	Augmentor nozzle mechanism deterioration
209	Internal noise on shutdown/start
210	Servicing with improper grade or type of fuel or oil
211	Corroded internal surfaces

How Malfunction Code (HMC)	Description
212	Corroded external surfaces
213	Low compression (recip only)
214	Blow by or detonation (recip only)
215	Manifold pressure beyond limits, overboost (recip only).
216	Low manifold pressure (recip only)
217	Oil in induction system or compressor section (recip only).
218	Sudden stoppage or reduction or exceeded torque limits (recip/turboprop only)
219	Internal failure (recip only)
220	Loss of torque (recip only)
221	Will not carry load auxiliary power unit (APU).
222	Engine shuts down after start (APU).
223	Control system component malfunction
224	Backup/emergency control system failure
225	Bleed air malfunction
226	Engine start time beyond limits
227	Rear compressor variable vane (RCVV) geometry improper/axial flutter
228	Compressor inlet variable vane (CIVV) geometry improper
230	Dirty, contaminated, or saturated by foreign material
231	Augmentor blowout
232	Augmentor no light
233	Augmentor rumble
234	Turbine bore fire
242	Failed to operate – specific reason unknown
253	Misfires
254	No output
255	Incorrect output
277	Fuel nozzle /oil line coking
279	Spray pattern defective
290	Fails diagnostic/automatic test
300	Foreign object – no damage
301	Foreign object damage (FOD)
303	Damage by semi-solid foreign object (birds)
305	Equipment or material physically damaged
306	Equipment or material physically failed
307	Composite material defective
308	Improper operation
309	Electrical measurements incorrect
310	Incorrect navigation measurement
311	Damaged or defective component (bulb, transistor, integrated circuit, fuse,
312	Degraded system performance
314	Inability to accelerate, all power settings above idle.
315	Surges/fluctuates

How Malfunction Code (HMC)	Description
317	Hot starts
334	Temperature limits exceeded
350	Insulation breakdown
372	Metal in sump/screen or on magnetic (MAG) plug
377	Leaking – class A – slow seep (Technical Order (TO) 1-1-3)
378	Leaking- class B – seep (TO 1-1-3)
379	Leaking – class C – heavy seep (TO 1-1-3)
380	Leaking – class D – running leak (TO 1-1-3)
381	Leaking internal or external
383	Lock on malfunction
410	Lack of, or improper lubrication
425	Pitted, nicked, chipped, scored, scratched, or crazed
450	Open
457	Oscillating
458	Out of balance
464	Overspeed
472	Fuse blown or defective circuit panel/breaker
475	Inability to start, ground or air
476	Damage by solid foreign objects (metal, stone)
477	Damage by semi-solid foreign object (ice)
478	Damage by semi-solid foreign objects (rags, plastics, rubber, etc.)
479	Damage from simulated combat (air to air/air to ground)
480	Damage by aircraft accident or incident
481	Exposure to fire extinguishing agent
482	Excessive "G" force inspection
483	Dummy engine transaction
484	Blade shingling
513	Compressor stalls (afterburner)
525	Pressure incorrect/fluctuates
537	Low power or thrust
553	Does not meet specifications, drawing, or other conformance requirements (use with when discovered code Y).
561	Unable to adjust to limits
567	Resistance incorrect
580	Temperature sensitive
583	Scope presentation incorrect or faulty
585	Sheared
599	Travel or extension incorrect
602	Failed or damaged due to malfunction of associated equipment
607	No-go indication
609	Out of track/fails to track
611	Set clearance plane violation

How Malfunction Code (HMC)	Description
615	Shorted
622	Wet/condensation
625	Gating incorrect
626	Inductance incorrect
627	Attenuation incorrect
631	Gyro bias voltage incorrect
632	Expended (thermal battery, fire extinguisher, etc.).
635	Sensitivity incorrect
637	Triggering incorrect
644	Built-in test (BIT) indicated fault
649	Sweep malfunction
651	Air in system
652	Align time excessive
653	Ground speed error
654	Terminal error – circular error probable (CEP) excessive
655	Terminal error – range excessive
656	Terminal error – azimuth excessive
657	Distance measurement error (navigation equipment)
658	Bearing/heading error (navigation equipment)
667	Corroded severe
669	Potting material melting (reversion process)
670	Erroneous over "G" indicator
672	BIT false alarm
673	BIT fault indicator failure
674	BIT fault indicated wrong unit
675	BIT fault not duplicated. Parameters confirmed by data
676	BIT fault not duplicated on ground. Parameters do not confirm fault
690	Excessive vibration or rough operation
691	Video out of focus
692	Video faulty
693	Audio faulty
694	Weak video
695	Sync absent or incorrect
698	Faulty card, tape, program, or disk
710	Bearing failure or faulty
718	Improper response to mechanical input
721	Improper response to electrical input
730	Loose
731	Battle damage
750	Missing
752	Tape missing/defective
753	Tape removal to facilitate other maintenance (FOM)

How Malfunction Code (HMC)	Description
754	Fairing compound missing/defective
755	Gap filler missing/defective
756	Blade seals missing/defective
757	Outer mold line (OML) paint, coating missing/defective
780	Bent, buckled, collapsed, dented, distorted, or twisted
782	Tire tread area defective
783	Tire sidewall damaged or defective
784	Tire bead area damaged or defective
785	Tire inside surface damaged or defective
786	No defect – tire tread normal wear
787	No defect – brake adjustment normal wear
793	No defect – time-compliance technical order (TCTO) kit received by base supply or parts are available in supply.
796	No defect – TCTO not applicable: this is an error code used to tell the item/system manager that this specific piece of equipment should not have been included in the TCTO. This code is not to be used to report compliance.
797	No defect – TCTO previously complied with.
798	No defect – TCTO complied with by record check or inspection. No modification required.
799	No defect
800	No defect – component removed/reinstalled to facilitate other maintenance (includes disconnect/connection of electrical wires, hydraulic lines, etc.).
801	No defect – TCTO complied with, all applicable operations completed.
802	No defect – partial TCTO compliance.
804	No defect – removed for scheduled maintenance, modification or reliability assessment.
805	No defect – pre/post alert reprogramming
806	No defect – routine/emergency/special reprogramming
808	No defect – "B" plug combination change
812	No defect – indicated defect caused by associated equipment malfunction
813	No defect – indicated defect caused by associated software/key code failure
816	Impedance incorrect
824	Gyro precesses
842	Voids, (composites structure)
843	Unbonded defects in bonded joint (all structures)
844	Hole wear, out of round (composite structures)
846	Delaminated; separation of laminated layers (composite structure)
847	Abrasions, erosion, pits (composites)
848	Missing and loose fibers (composites)
849	Chemical imbalances (composites)
865	Deteriorated (for protective coating/sealing defective; use with action taken code z.)

How Malfunction Code (HMC)	Description
866	Expiration of maximum time, engine modules, components, time change items, etc.
867	Transfer time limit (TO 2-1-18)
868	Removed/rolled back for failed external engine component reinstalled in same aircraft.
870	Removal for research, test, or diagnostic event
872	Removal during aircraft programmed depot maintenance
874	Storage damage or deterioration
875	Removal for or replacement after (cannibalization)
876	Non-technical order directed removal/removal for reconfiguration
877	TO-identified components
878	Removal to perform scheduled/special inspection.
879	Expiration of maximum cycles/sorties for engines, modules or components (TO-directed).
880	Opportunistic maintenance removal (modules and tracked components approaching to limits).
881	Removal to perform minor inspection (borescope – to-directed)
884	Lead broken
890	Lightning strike damage
900	Burned or overheated
901	Intermittent
911	TCTO not complied with, TCTO complied with in error, or placed in work in error.
916	Joint oil analysis program (JOAP) removal
917	Impending failure or latent defect indicated by nondestructive equipment inspection (NDI)
921	No defect. Item has been rebuilt, refurbished, been replaced (consumable item) or has had parts replaced because of technical order (time change) requirements (to be used with action taken repair code G, or R, P, and Q for time change).
932	Does not engage, lock, or unlock correctly.
939	Unable to load program
941	Non-programmed halt
942	Illegal operation or address
943	Data error
944	Update or verification of program/software load
948	Operator error
949	Computer memory error/defect
956	Computer equipment malfunction
957	No display
959	Fails to transfer to redundant equipment
962	Low power (electrical)

How Malfunction Code (HMC)	Description
964	Poor spectrum
969	Cannot resonate input cavity
972	Damaged probe
974	Does not track tuning curve
982	Frozen tuning mechanism
987	Input/output pulse distortion
988	Loss of vacuum
989	Low coolant flow rate
991	Frequency out of band, unstable, or incorrect
995	Electromagnetic pulse (EMP) protection material defective
996	Radar absorption material defective

Attachment 5

BUILT-IN TEST EVALUATION CODES

A5.1. [Table A5.1](#) [Table A5.2](#) and [Table A5.3](#) present example Built-In Test (BIT) evaluation codes used to describe how well the BIT system detected and categorized failures.

Table A5.1. Built-in Test Detection Codes.

Built-in Test Detection Code	Built-in Test (BIT) Detection Code Description
A	Not applicable (i.e., BIT could not detect the specific failure/malfunction/condition).
N	Failed to detect a failure/malfunction/condition when one existed (BIT was designed to detect this malfunction). Item listed on BIT Capable LRU list.
X	Message not checked by maintenance personnel.
Y	Failure/malfunction/condition was detected.

Table A5.2. Built-in Test Verification Codes.

Built-In Test Verification Code	Built-in Test (BIT) Verification Code Description
A	Not applicable.
D	Deferred (initial deferral).
F	Deferred and fixed (final occurrence after which source of failure/malfunction/condition was corrected).
I	Integrated diagnostics to verify the failure/malfunction/condition.
N	Did not correctly verify the failure/malfunction/condition (i.e., cannot duplicate, CND).
R	Repeat (2nd and subsequent occurrence of a previously deferred failure/malfunction/condition)
U	Indication is a known nuisance (BIT message is on a list of messages that occur during every mission).
V	Indication is an advisory (e.g., indication of failure/malfunction/condition induced by operator).
X	Failure/malfunction/condition not checked by maintenance personnel.
Y	Indicated failure/malfunction/condition was verified by maintenance personnel.

Table A5.3. Built-in Test Shop Verification Codes.

Built-in Test Shop Verification Code	Built-In Test (BIT) Shop Verification Code Description
A	Not applicable (i.e., BIT could not detect the specific failure/malfunction/condition).
C	False alarm indication corrected.
F	Failed to detect a failure/malfunction/condition that BIT was designed to.
H	Indication is a known hardware false alarm.
N	Failure/malfunction/condition could not be verified (i.e., retest okay, RTOK).
S	Indication is a known software false alarm.
W	False indication awaiting disposition.
X	Indication not checked by shop personnel.
Y	Failure/malfunction/condition was verified by shop personnel.

Attachment 6

ACTION TAKEN CODES

A6.1. The following list of action taken codes (ATC) is provided as a sample. The list can be tailored to the needs of the test program. A complete list of action taken codes are presented TO 00-20-2.

Table A6.1. Action Taken Codes.

Action Taken Code	Action Taken Code (ATC) Definition
0	Bench Checked – Non-repairable this station (NRTS) Warranty Item: Repair not authorized, item under warranty.
1	Bench Checked – NRTS (Not Repairable This Station) -- Repair not Authorized -- Shop is not authorized to accomplish the repair. This code shall only be used when the repair required to return an item to serviceable status is specifically prohibited by current technical directives. This code shall not be used due to lack of authority for equipment, tools, facilities skills, parts, or technical data.
2	Test/Inspect -- NRTS -- Lack of Equipment, Tools, Skills, or Facilities -- Repair authorized but cannot be accomplished due to lack of equipment, tools or facilities. This code shall be used without regard as to whether the equipment, tools, or facilities are authorized or unauthorized. May be used for on-equipment when an end item is returned to depot.
3	Bench Checked -- NRTS -- Due to Lean Logistics Policy. Repair could not be accomplished due to parts non-availability within the time limit imposed by Lean Logistics Policy.
4	Bench Checked -- NRTS -- Lack of Parts -- Parts are not available to accomplish repair.
5	Bench Checked -- NRTS -- Shop Backlog -- Repair cannot be accomplished due to excessive shop backlog.
6	Bench Checked -- NRTS -- Lack of Technical Data -- Repair cannot be accomplished due to lack of maintenance manuals, drawings, etc., which describe detailed repair procedures and requirements.
7	Bench Checked -- NRTS--Lack of Equipment, Tools, Facilities, Skills, Parts or Technical Data – Repair authorized but cannot be accomplished due to lack of authorization to obtain or possess required equipment, tools, facilities, skills, parts, or technical data.
8	Bench Checked -- Return to Depots -- Returned to depots by direction of system manager (SM) or item manager (IM). Use only when items that are authorized for base-level repair are directed to be returned to depot facilities by specific written or verbal communication from the IM or SM, or when items are to be returned to depot facilities for modification in accordance with a time- compliance technical order (TCTO), or as MDR exhibits.

Action Taken Code	Action Taken Code (ATC) Definition
9	Bench Checked -- Condemned -- Item cannot be repaired and is to be processed for condemnation, reclamation or salvage. This code will also be used when a "Condemned" condition is discovered during field maintenance disassembly or repair.
A	Bench Checked and Repaired -- Bench check and repair of any one item is accomplished at the same time (also see code F).
B	Bench checked -- serviceable (for off-equipment work only) -- Item is bench checked and no repair is required. This code will be used when it is definitely determined that the reported discrepancy does not exist or cannot be replicated. Must be used with How Malfunction Code 672, 799, 812, or 948. Bench Check Serviceable (BCS) is the terminology for base-level action taken code B and Retest Okay (RTOK) is the terminology for depot-level action taken code B.
C	Bench checked-repair deferred -- Bench check is accomplished and repair action is deferred (See code F).
D	Bench checked-transferred to another base or unit -- Item is bench checked at a forward operating base, dispersed operating base, or enroute base and is found unserviceable and transferred to a main operating base or home base for repair. Not used for items returned to depot for overhaul. Used also for precision measurement equipment or other equip sent to another base/unit for bench check, calibration, or repair to be returned and for item forwarded to contractors on base level jobs.
E	Initial installation -- For installation actions not related to a previous removal action such as installation of additional equipment or installation of an item to remedy a ship-short condition. Must use with How Malfunction code 799.
F	Repair -- Not to be used to code "On-Equipment" work if another code will apply. When it is used in shop environment, this code will denote repair as a separate unit of work after a bench check. Shop repair includes the total repair man-hours and includes cleaning, disassembly, inspection, adjustment, reassembly and lubrication of minor components incident to the repair when these services are performed by the same work center. For precision measurement equipment, this code will be used only when calibration of repaired item is required (See code G).
G	Repairs and/or replacement of minor parts, hardware, and soft goods (seals, gaskets, electrical connectors, fittings, tubing, hose, wiring, fasteners, vibration isolators, brackets, etc.) -- Work unit codes do not cover most non-reparable items; therefore, when items such as those identified above are repaired or replaced, this action taken code will be used. When this action taken code is used, the work unit code will identify the assembly being directly related to parts being repaired.

Action Taken Code	Action Taken Code (ATC) Definition
H	Equipment checked -- no repair required (for "On-Equipment" work only) all discrepancies which are checked and found to require no further maintenance action. This code will be used only if it is definitely determined that a reported deficiency does not exist or cannot be duplicated. Must be used with How Malfunction code 672, 799, 812 or 948. Cannot Duplicate (CND) is the terminology for all on-equipment action taken code H maintenance actions.
J	Calibrated -- no adjustment required -- Use this code when an item is calibrated and found serviceable without need for adjustment or is found to be in tolerance but is adjusted merely to peak or maximize the reading. If the item requires adjustment to actually meet calibration standards or to bring in tolerance, use code K.
K	Calibrated -- Adjustment Required -- Item must be adjusted to bring it in tolerance or meet calibration standards. If the item was repaired or needs repair in addition to calibration and adjustment, use code F.
L	Adjust -- Includes adjustments necessary for safety and proper functioning of equipment such as adjust, bleed, balance, rig, fit, reroute, seat/reseat, position/reposition, program/reprogram, or actuating reset button, switch or circuit breaker. For use when a discrepancy or condition is corrected by these types of actions. If the identified component or assembly also requires replacement of bits and pieces as well as adjustment, enter the appropriate repair action taken code instead of L.
M	Disassemble -- Disassembly action when the complete maintenance job is broken into parts and reported as such. Do not use for on-equipment work.
N	Assemble -- Assembly action when the complete maintenance job is broken into parts and reported as such. Do not use for on-equipment work.
P	Removed -- Item is removed and only the removal is to be accounted for. This instance delayed or additional actions will be accounted for separately (see codes Q, R, S, T, and U).
Q	Installed -- Item is installed and only the installation action is to be accounted for (see codes E, P, R, S, T, and U).
R	Remove and Replace -- Item is removed and another like item is installed (see codes T and U) and removal and/or replacement of subassemblies from their next higher assembly.
S	Remove and Reinstall -- Item is removed and the same item reinstalled (see codes T and U). Must be used with How Malfunction code 800, 804 or 805.
T	Removed for Cannibalization -- A component is cannibalized. The work unit code will identify the component being cannibalized. Must be used with How Malfunctioned code 799 or 875.
U	Replaced after Cannibalization -- This code will be entered when a component is replaced after cannibalization. Must be used with How Malfunctioned code 799 or 875.

Action Taken Code	Action Taken Code (ATC) Definition
V	Clean -- Cleaning is accomplished to correct discrepancy and/or cleaning is not accounted for as part of a repair action such as code F. Includes washing, acid bath, buffing, sand blasting, degreasing, decontamination, etc. Cleaning and washing of complete items such as ground equipment vehicles, missiles, or airplanes should be recorded by utilizing support general codes.
W	Nondestructive Inspection.
X	Test-Inspection-Service -- Item is tested or inspected or serviced (other than bench check) and no repair is required. This code does not include servicing or inspection chargeable to support general work unit codes. Will be used when documenting time against a Reported Discrepancy identifying a test, inspect or service toward an item for On- and Off-Equipment maintenance which is unrelated to a CND action. Will be used when a Reported Discrepancy identifying a Deficiency toward a work unit code item is identified to be "Within Limits", with the appropriate no defect How Malfunction code W.
Y	Troubleshoot -- Time expended in locating a discrepancy is great enough to warrant separating the troubleshoot time from the repair time. Use of this code necessitates completion of two separate line entries, or two separate forms, one for the troubleshoot phase and one for the repair phase. When recording the troubleshoot time separate from the repair time, the total time taken to isolate the primary cause of the discrepancy should be recorded utilizing the work unit code of the defective item or assembly. If the discrepancy was not isolated, the subsystem or system work unit code should be U.
Z	Corrosion Treatment -- Includes cleaning, treating, priming, and painting of corroded or repaired components and deteriorated coatings. This code should always be used when actually treating corroded items or those with deteriorated paint. The item that is corroded or has damaged paint will be identified by the work unit code (also see support general code 09000).

Attachment 7

MISSION DEVIATION CAUSE CODES

Table A7.1. Mission Deviation Cause Codes.

Deviation Code	Deviation Cause	Deviation Code	Deviation Cause
AMC	Awaiting Mod Completion	MTA	G/A Before Engine Start
ATA	Airspace	MTB	G/A After Engine Start
ATC	Air Traffic Control	MTC	G/A After Taxi
ATF	Airfield	MTF	Air Abort, No IFE
AWI	Awaiting Installation	MTI	Air Abort, IFE
AWM	Awaiting Maintenance	MTM	Maintenance Manpower
AWP	Awaiting Parts	MTN	Maintenance
BCS	Bench Check Serviceable	MTT	Maintenance Turn Time
CND	Could Not Duplicate	NTT	Not Enough Turn Time
CON	Contractor	OLS	OPS, Life Support Equip
DCF	Awaiting FCF	OPO	OPS
DFY	Hold Fly	OPP	OPS Project
DMD	Awaiting Mod Docks	OPS	Test Pilot School
DMP	Awaiting Depot Personnel	OTH	Other
DXR	Awaiting NDI/XRAY	OTM	Other, MDS Change
EIU	Equipment in Use	OTR	Other, Range
ERR	Error	P04	Test Complete
FCF	Funct Check Flight	PAA	Purposeful Air Abort
GAA	G/A Before Eng Start, MX	PRJ	Project
GAB	G/A Aft Eng St, Before Taxi, MX	RNG	Range
GAC	G/A After Taxi Maintenance	SII	Special Instrumentation
HH1	Special Inspection	SOF	Safety of Flight, Material
HH2	Incentive	STM	Sent to Manufacturer
HH3	Exercise	SYM	Sympathy
HH4	VIP	WVR	ACFT Waivered
HOP	Hold Phase	WXA	Weather, WX Add
HPM	Higher Priority Mission	WXE	Weather, Enroot
HQN	HHQ, Numbered Air Force	WXL	Weather, Local

HQP	HHQ, Other	WXR	Weather, Range
HQS	Higher Headquarters	WXT	Weather, Temp
HQT	HHQ, MAJCOM	WXV	Visibility
INW	In Work	WXW	Winds

Attachment 8

JULIAN DATE CALENDARS

Figure A8.1. Julian Date Calendar.

JULIAN DATE CALENDAR (PERPETUAL)													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Day
1	001	032	060	091	121	152	182	213	244	274	305	335	1
2	002	033	061	092	122	153	183	214	245	275	306	336	2
3	003	034	062	093	123	154	184	215	246	276	307	337	3
4	004	035	063	094	124	155	185	216	247	277	308	338	4
5	005	036	064	095	125	156	186	217	248	278	309	339	5
6	006	037	065	096	126	157	187	218	249	279	310	340	6
7	007	038	066	097	127	158	188	219	250	280	311	341	7
8	008	039	067	098	128	159	189	220	251	281	312	342	8
9	009	040	068	099	129	160	190	221	252	282	313	343	9
10	010	041	069	100	130	161	191	222	253	283	314	344	10
11	011	042	070	101	131	162	192	223	254	284	315	345	11
12	012	043	071	102	132	163	193	224	255	285	316	346	12
13	013	044	072	103	133	164	194	225	256	286	317	347	13
14	014	045	073	104	134	165	195	226	257	287	318	348	14
15	015	046	074	105	135	166	196	227	258	288	319	349	15
16	016	047	075	106	136	167	197	228	259	289	320	350	16
17	017	048	076	107	137	168	198	229	260	290	321	351	17
18	018	049	077	108	138	169	199	230	261	291	322	352	18
19	019	050	078	109	139	170	200	231	262	292	323	353	19
20	020	051	079	110	140	171	201	232	263	293	324	354	20
21	021	052	080	111	141	172	202	233	264	294	325	355	21
22	022	053	081	112	142	173	203	234	265	295	326	356	22
23	023	054	082	113	143	174	204	235	266	296	327	357	23
24	024	055	083	114	144	175	205	236	267	297	328	358	24
25	025	056	084	115	145	176	206	237	268	298	329	359	25
26	026	057	085	116	146	177	207	238	269	299	330	360	26
27	027	058	086	117	147	178	208	239	270	300	331	361	27
28	028	059	087	118	148	179	209	240	271	301	332	362	28
29	029		088	119	149	180	210	241	272	302	333	363	29
30	030		089	120	150	181	211	242	273	303	334	364	30
31	031		090		151		212	243		304		365	31

Figure A8.2. Julian Date Calendar for Leap Years.

JULIAN DATE CALENDAR (FOR LEAP YEARS ONLY)													
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Day
1	001	032	061	092	122	153	183	214	245	275	306	336	1
2	002	033	062	093	123	154	184	215	246	276	307	337	2
3	003	034	063	094	124	155	185	216	247	277	308	338	3
4	004	035	064	095	125	156	186	217	248	278	309	339	4
5	005	036	065	096	126	157	187	218	249	279	310	340	5
6	006	037	066	097	127	158	188	219	250	280	311	341	6
7	007	038	067	098	128	159	189	220	251	281	312	342	7
8	008	039	068	099	129	160	190	221	252	282	313	343	8
9	009	040	069	100	130	161	191	222	253	283	314	344	9
10	010	041	070	101	131	162	192	223	254	284	315	345	10
11	011	042	071	102	132	163	193	224	255	285	316	346	11
12	012	043	072	103	133	164	194	225	256	286	317	347	12
13	013	044	073	104	134	165	195	226	257	287	318	348	13
14	014	045	074	105	135	166	196	227	258	288	319	349	14
15	015	046	075	106	136	167	197	228	259	289	320	350	15
16	016	047	076	107	137	168	198	229	260	290	321	351	16
17	017	048	077	108	138	169	199	230	261	291	322	352	17
18	018	049	078	109	139	170	200	231	262	292	323	353	18
19	019	050	079	110	140	171	201	232	263	293	324	354	19
20	020	051	080	111	141	172	202	233	264	294	325	355	20
21	021	052	081	112	142	173	203	234	265	295	326	356	21
22	022	053	082	113	143	174	204	235	266	296	327	357	22
23	023	054	083	114	144	175	205	236	267	297	328	358	23
24	024	055	084	115	145	176	206	237	268	298	329	359	24
25	025	056	085	116	146	177	207	238	269	299	330	360	25
26	026	057	086	117	147	178	208	239	270	300	331	361	26
27	027	058	087	118	148	179	209	240	271	301	332	362	27
28	028	059	088	119	149	180	210	241	272	302	333	363	28
29	029	060	089	120	150	181	211	242	273	303	334	364	29
30	030		090	121	151	182	212	243	274	304	335	365	30
	031		091		152		213	244		305		366	31