

**BY ORDER OF THE COMMANDER
AIR FORCE MATERIEL COMMAND**

**AIR FORCE MATERIEL COMMAND
MANUAL 63-1202**



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**ENGINEERING TECHNICAL
ASSISTANCE REQUEST (ETAR)
PROCESS**

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This publication implements Air Force Instruction 63-101/20-101, *Integrated Life Cycle Management*. It provides responsibilities and procedures for implementing and managing the AF Engineering Technical Assistance Request (ETAR) process. This publication applies to all AFMC military, civilian, and contractors, members of the Air Force Reserve Command, Air National Guard, and United States Space Force. This publication may be supplemented by AFMC Centers, but all supplements must be routed to the Office of Primary Responsibility (OPR) listed above for coordination prior to certification and approval. Refer recommended changes and questions concerning this publication to the OPR using the DAF Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate chain of command. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. See **Attachment 1** for a glossary of references and supporting information. HQ AFMC/A4/A10 is the waiver authority for wing/unit level requirements in this publication. Submit requests for waivers through the chain of command to the publication OPR for consideration.

SUMMARY OF CHANGES

This document has been substantially revised and needs to be completely reviewed. This revision has changed the order of information within each section and revised formatting.

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1. General Business Practices, Guidance, and Information.

1.1. **Purpose.** This publication is intended to provide the engineering and maintenance communities with a clear process to develop necessary procedures to mitigate maintenance operation anomalies and work stoppages. This publication addresses business practices to be implemented, and explains the roles and responsibilities of AFMC in providing assistance to maintenance organizations. This publication provides information for use by personnel at Air Force Life Cycle Management Center (AFLCMC), Air Force Sustainment Center (AFSC), and Air Force Nuclear Weapons Center (AFNWC) as well as maintenance organizations within the supported AFMC Major Commands (MAJCOM). Separate and unique local assistance request processes may exist only as approved waivers to this publication. Compliance with the attachments in the publication is mandatory.

1.2. **Business Practices and Guidance.** The AFMC Form 202, *Engineer Technical Assistance Request*, is the official method to request and provide engineering technical assistance in support of maintenance operations. ETAR Disposition Instructions are used to provide technical assistance for (a) conditions or procedures beyond published technical data and authority under work stoppage and anticipated work stoppage conditions; (b) instances where technical data does not exist and must be developed, approved, and provided to maintenance technicians; (c) procedures and engineering authorization for rework and restoration of damaged or worn parts and components for return to serviceable condition through repair, overhaul, or processes not covered by applicable technical data; (d) engineering authorization for a one-time substitution of parts, components, or materials determined to be suitable replacements for specified items; and (e) engineering authorization for a one-time substitution of support equipment, special tools, test equipment, fixtures or ground handling equipment determined to be suitable replacements for specified items. For the purposes of this manual, the Cognizant Technical Authorities in the ETAR process are the Program Manager/Product Group Manager (PM/PGM), Lead Systems Engineer (LSE) and Chief Engineer (CE) as identified in paragraphs 1.2.1 and 1.2.2 below.

1.2.1. **PM/PGM.** The PM/PGM is responsible for investigating and documenting user-identified changes in operational usage as de-facto requirements baseline changes, and adjusts the engineering support accordingly IAW AFMCI 63-1201, *Implementing*

Operational Safety, Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE).

1.2.2. Engineering Authority. In accordance with AFMCI 63-1201, the terms Lead Systems Engineer (LSE) and Chief Engineer (CE) are synonymous, referring to the senior responsible engineer in a program office.

1.2.3. Information Links. URL links to information in other databases or forms (drawings, technical orders (TOs), etc.) pertinent to the recommended solution shall be included on ETAR.

1.3. Limitations. ETAR dispositions must not degrade reliability, performance, form, fit or function beyond acceptable limits as determined by the CE or Delegated Engineering Authority (DEA). ETARs shall not be used:

1.3.1. As authorization for part or material substitution unless there is a critical shortage and the item is needed urgently to prevent maintenance or modification work stoppage.

1.3.2. As a change to the intent of a Time Compliance Technical Order (TCTO) or to extend TCTO rescission dates or reinstate rescinded TCTOs.

1.3.3. To change nuclear certified equipment, systems or technical data unless authorized by the responsible CE (or designee).

1.3.4. As authorization to obtain funding for tools, equipment and other Government expenditures.

1.3.5. For routine Technical Order (TO) changes.

1.4. Restriction. The preferred method for submitting a request for engineering technical assistance is via an automated ETAR system. However, submittal of PDF versions of the forms via email is permitted for the following situations: (a) when the automated ETAR application is unavailable, or (b) when the field users (i.e., those in the Area of Operational Responsibility do not have access to the automated ETAR application, but have email access. All paper/PDF Form 202s are to be entered into the appropriate automated system as soon as the system is available.

1.5. ETAR, Flow, and Approval Process. Requests for engineering technical assistance will be initiated via the AFMC Form 202, or designated automated ETAR system. All request activities shall submit requests for engineering technical assistance to the applicable LSE/CE/Engineering Approval Authority (EAA) and will follow the process flow depicted in **Figure 1**, ETAR Process Flow, which identifies a step-by-step process from initiation to closure.

1.5.1. Completion Timeline – Response. Refer to **paragraph 3.2.13** and all sub-paragraphs for Priority descriptions.

1.5.1.1. Emergency requests - The engineering authority shall provide a dispositioned and approved ETAR response within 4 hours of engineering receiving the request.

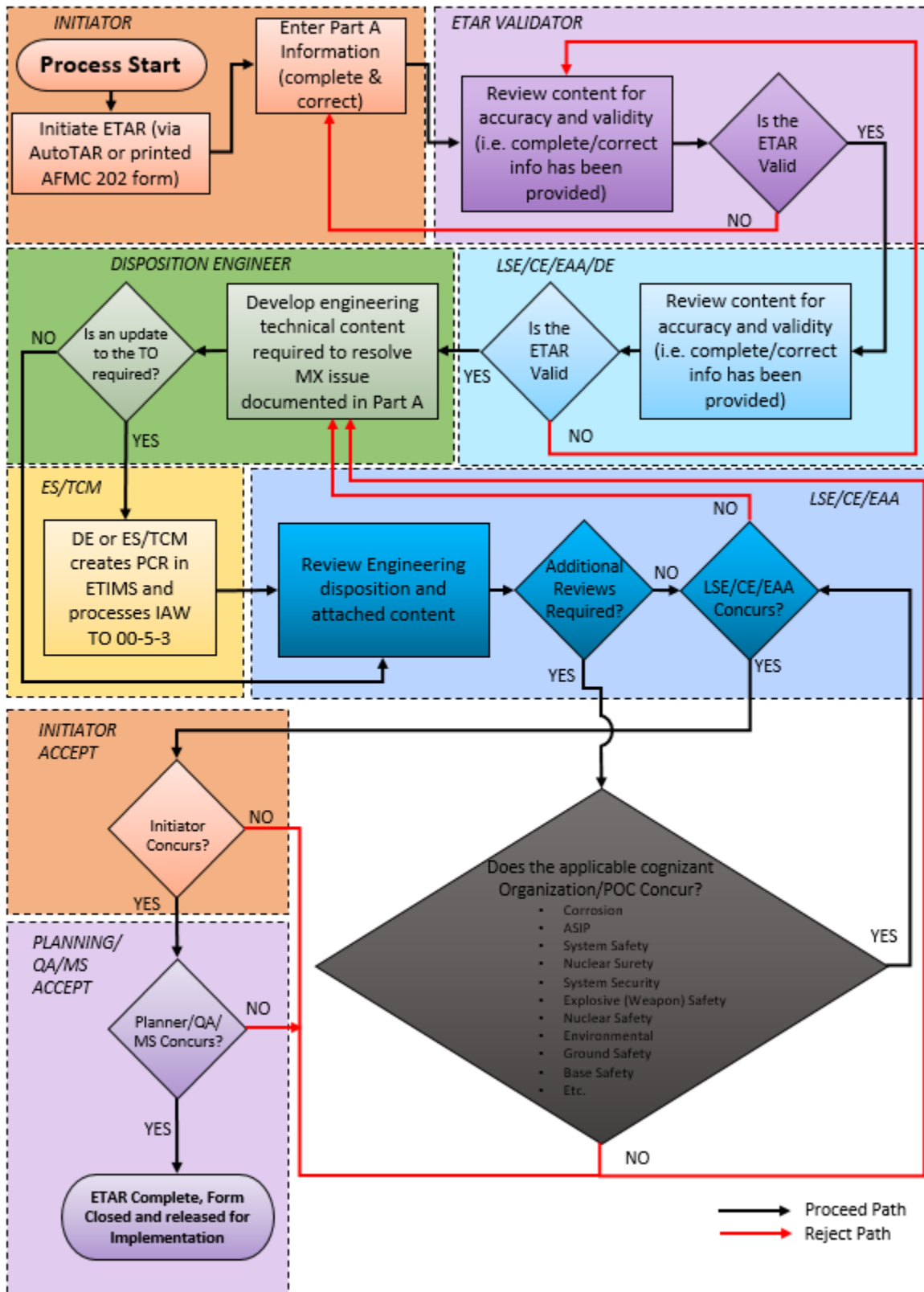
1.5.1.2. Work-stoppage requests - The engineering authority shall provide a dispositioned and approved ETAR response within 7 calendar days after engineering has received the request.

1.5.1.3. Routine requests - The engineering authority shall provide a dispositioned and approved ETAR response within 21 calendar days after engineering has received the request.

1.5.1.4. If a solution cannot be evaluated and completed within the specified time limits, the engineering authority must contact the requesting office by phone and e-mail and provide (a) the intended course of action; (b) and expected resolution date. This must be documented in the Disposition Instructions block of the ETAR.

1.5.2. **Completion Timeline – Receipt.** The initiating organization shall review and concur with the engineering disposition instructions within 2 calendar days or disapprove for return to engineering.

Figure 1. ETAR Process Flow.



1.6. Automated Systems.

1.6.1. **Enhanced Technical Information Management System (ETIMS).** ETIMS is the AF Technical Order System of Record, a secure web application accessible via the AF portal with the TO catalog, ordering and the TO Distribution Office (TODO) account management functions. ETIMS system functions to acquire, improve, publish, catalog, manage, store, distribute and display official TOs needed for the safe and effective operation of AF weapon systems and equipment. An organizational TODO must establish an account and register electronic Tools (eTools) devices for non-repudiated electronic distribution.

1.6.1.1. ETIMS is the required system for changes to Technical Orders (TOs). To maintain the accuracy and currency of TOs, the AF has instituted an enterprise electronic TO Recommended Change (RC) process. The ETIMS RC process replaces the AFTO Form 22, *Technical Manual (TM) Change Recommendation and Reply*, AFTO Form 252, *Technical Order Publication Change Request*, and the AF Form 847, *Recommendation for Change of Publication*. Refer to IAW TO 00-5-1, *Air Force Technical Order System*, for specific guidance on the TC process.

1.6.2. **Automatic Technical Assistance Request (AutoTAR).** AutoTAR is the AF Enterprise tool for consolidation of automated ETAR capabilities. All other automated ETAR systems shall have a signed DAF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*, identifying the alternate system that is being used.

1.6.2.1. **Other ETAR Systems.** These systems shall follow the guidelines, definitions, basic processes, timelines, and generate metrics outlined in this manual.

1.7. Delegation of Authority.

1.7.1. **Delegated Engineering Authority (DEA).** DEA will be documented IAW AFMCI 63-1201. Typical tasks include those that have the following characteristics: negligible consequences IAW Military-Standard (MIL-STD) 882, *DoD Standard Practice System Safety*; known approved repair using standard process; qualified proven process; repair expected to last through Programmed Depot Maintenance (PDM) cycle. Depot maintenance tasks that typically have these characteristics include, but are not limited to ETAR rejection, condemnations, reclamations, oversize holes/fasteners, rework assessment, primary and secondary structure repairs, clarification of TO, troubleshooting, catalog analysis, remove and replace a qualified part, temporary Systems Engineering substitutes, repairing beyond TO limits due to limited supply, repeat authority, sequencing of subsystem/component removal/installation, and parts substitution where previously approved or not yet in TO and Consumables (Common, Recurring, Bench Stock).

1.7.2. **Delegable and Non-Delegable Tasks.** IAW AFMCI 63-1201, the CE may delegate down to a qualified person. Delegations will be documented in a delegation letter IAW AFMCI 63-1201. Tasks must be specific in nature, documented by official memo and regularly reviewed/updated over time. IAW applicable policy and local instructions, individuals with delegated authority may temporarily sub-delegate one level down to a qualified person; however, responsibility for sub-delegated actions remain with the delegated authority. Sub-delegations will be documented IAW AFMCI 63-1201.

1.8. Attachments to Approved ETARs. Supplemental information may be included as part of an ETAR. All attachments/supplemental information will be marked with corresponding ETAR Control Number IAW **paragraph 3.2.4.2** and appropriate distribution statement IAW DAFI 61-201, *Management of Scientific and Technical Information (STINFO)*.

1.8.1. The evaluation of an ETAR by the assigned Disposition Engineer (DE) may result in the development of an Engineering Order (EO), when the solution requires an engineering drawing change. The DEA will complete and expedite processing of an EO IAW DAFPAM 63-128, *Integrated Life Cycle Management*. A copy of the EO may be attached to the ETAR.

1.8.2. When evaluation of an ETAR by the DE results in the need to change information in a published TO, the DE will create an RC in ETIMS to document the specific changes required to the affected TO. The ETIMS generated Special Handling 252 (SH252) will be created following disposition of an approved RC. If formal TO changes cannot be distributed within 120 calendar days, an Interim Operational Supplement (IOS) coversheet will be created by the Technical Order Manager (TOMA), concurrent with the ETIMS generated SH252. The SH252 will be attached to the IOS, published, and indexed in ETIMS as a private increment. Refer to TO 00-5-3, *AF Technical Order Life Cycle Management*, for additional information.

1.8.3. Weapon system Program Offices (POs) and maintenance units may develop supplemental information and attach to an ETAR as supporting information and reference the applicable block of the ETAR. Examples of supplemental information include an assembly or component schematic specifically formatted for use in reporting a recurring Non-Destructive Inspection (NDI) task, drawings, a list for data which must be fully reported to properly address a specific hazard, and tailored “bad actor” information forms. All supplemental information shall include an ETAR control number.

1.9. Other ETARs.

1.9.1. **Aerospace Maintenance and Regeneration Group.** For storage operations at Aerospace Maintenance and Regeneration Group, refer to TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies and Procedures* and TO 00-20-2, *Maintenance Data Documentation*.

1.9.2. ETARs from Outside the AF.

1.9.2.1. Security Assistance Program recipient country requests for engineering assistance shall be submitted through the designated country representative using the AFMC Form 202. ETARs shall be submitted via secure e-Mail by the designated country representative to the weapon system program office via the Foreign Military Sales (FMS) Foreign Disclosure Office (FDO). The FMS FDO will enter the pertinent information into the appropriate automated ETAR system.

1.9.2.2. ETAR for Security Assistance Program aircraft under the control of Air Combat Command Air Defense Group during flight delivery shall be submitted directly to the LSE/CE.

1.9.3. **Contractor-Managed Depots.** The term Contractor-Managed Depots applies to situations where a contractor is responsible for submitting or answering ETARs under the

terms and conditions of a government contract. This may include Contractor Logistics Support (CLS), Performance Based Logistics (PBL), or Private-Public Partnerships. ETARs from contractor-managed depots are to follow contract-specific direction through the applicable contracting officer.

1.9.4. **Partnerships.** Partnerships are contractual workloads that require “core capability” (including personnel, equipment, and facilities) to be performed by the government at government facilities. Partnerships must follow AF regulations and use AF Systems of Record unless waivers are submitted by the Program Office.

1.9.4.1. For ETARs generated under a Partnership, the contract number may be placed in the recession block.

1.10. **Records.** Copies of completed ETARs shall be physically and/or electronically stored (in the appropriate automated 202 system) until such time as the weapon system is decommissioned and the PM/PGM or LSE/CE determines retention is no longer necessary.

1.10.1. **Contractor Managed Depots & Partnerships.** For contractor managed and partnership depots, the weapon system Program Office should have access to any contractor operated/owned automated ETAR system, and any ETARs in that system should be delivered to the weapon system Program Office prior to contract completion.

1.11. **Item Unique Identification (IUID).** If the IUID marking is not legible on an asset identified for serialized tracking, an ETAR shall be submitted to include all available information about the part. ETARs initiated for this reason shall be coordinated with the Item Manager (IM)/Supply Planner for the asset.

2. ETAR Responsibilities. The following subparagraphs identify the responsibilities associated with the ETAR Process.

2.1. **Headquarters (HQ) AFMC/A4/10 Responsibilities.** HQ AFMC/A4/10 shall be responsible for the following:

2.1.1. **ETAR Guidance.** Issuing and sustaining AFMC ETAR process and requirements including supporting changes to AFMC Form 202.

2.1.2. **ETAR Process Policy Waivers.** Requests for waivers to processes or policy within this publication must be prepared on the DAF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*. HQ AFMC/A4/10-EN will evaluate waiver requests IAW DAFI 90-160, *Publications and Forms Management*.

2.1.3. **Recommending Changes to ETAR Process and Policy.** HQ AFMC/A4/10-EN will evaluate all recommendations for change to this publication and the AFMC Form 202. All changes to this publication will be vetted with the using community before publication.

2.2. **ETAR Functional Responsibilities.** The following paragraphs identify the responsibilities of personnel within the ETAR process.

2.2.1. **ETAR Initiator Responsibilities.** The ETAR Initiator shall be responsible for the preparation and completeness of the ETAR Part A information.

2.2.1.1. Within requesting organizations, initiator roles should be limited to personnel that have previous experience or training with the ETAR process and automated ETAR

system. These initiators should act as the focal point for all ETAR requests within that organization and provide a pre-review of the ETAR requests prior to being initiated.

2.2.1.2. Prior to initiating the ETAR, ensure that the discrepancy or request being made is not already covered by existing technical data.

2.2.1.3. Ensure initiated ETAR complies with established local quality control criteria.

2.2.1.4. Notify first level supervisor, Industrial Engineering Technician (IET), Planner, PM/PGM, Quality Assurance (QA), or Production Engineer (PE) as applicable of the affected maintenance operation problem, unworkable item, damage, or other discrepancy that require engineering assistance and review the problem description. **Note:** If the problem was organically caused, the initiator, submitter, or supervisor will coordinate with the PE or Maintenance QA Office as applicable to develop Root Cause/Corrective Actions.

2.2.1.5. When the ETAR is intended as a temporary workaround to alleviate part or material shortages, the Initiator will mark the Part Supportability check box (if available), or annotate "Part Supportability" at the top of the Problem Description and Recommendation block to identify the possible need for a Demand History Adjustment (DHA) where applicable. Include details on all logistics/material supportability efforts conducted to date.

2.2.1.6. Include a detailed description of the problem, the maintenance operation requirement and attach photographs and/or sketches necessary to clarify the location and extent of the problem. Refer to [paragraph 3.2.14](#) for recommended information to include on the request. Any attachments to the ETAR referenced in Part A must be annotated with the ETAR Control Number and be marked with the appropriate Distribution Statement IAW DAFI 61-201.

2.2.1.7. Include details concerning recommendations for a solution to the problem, or limitations which would impact the ability to perform a particular repair.

2.2.1.8. Submit the completed Part A to the ETAR Validator and notify the Maintenance Supervisor (MS), QA, PE, and/or PM/PGM as applicable.

2.2.1.8.1. When using an automated ETAR system, notification of identified personnel may be handled by that system.

2.2.1.8.2. If an ETAR is generated but not submitted, it shall be deleted or destroyed within 7 calendar days.

2.2.1.9. When an automated ETAR system is not available, submit requests for engineering technical assistance using a PDF (manual process) IAW the process established by the cognizant LSE/CE. PDF formatted documents are available for download from Air Force E-Publishing (<http://www.e-publishing.af.mil/Product-Index/>) by searching for "AFMC202". Contact the LSE/CE in order to obtain the most current manual process requirements.

2.2.1.9.1. Ensure that all manually processed ETARs are routed through the automated system once it becomes available.

2.2.1.10. Upon receiving the approved ETAR disposition from the cognizant engineering organization, the initiator shall review the instructions to verify that the action identified can be performed, and accept the response. Initiator shall coordinate this review with maintenance supervision, QA, Planning, PE, or PM/PGM as applicable.

2.2.1.10.1. If the action identified in the response cannot be complied with, Initiator shall reject the ETAR back to the disposition engineer and include justification for the rejection as well as any requested changes.

2.2.2. **ETAR Validator.** The ETAR Validator reviews Part A to verify if the current technical data (engineering drawings, TOs, Process Orders, etc.) already exists to address the Problem Description and Recommendation. If technical data does not exist, they will ensure that the Problem Description and Recommendation is accurate and clearly documented in Part A of the ETAR.

2.2.2.1. Within requesting organizations, ETAR Validator roles should be limited to personnel that have previous experience or training with the ETAR process and automated ETAR system.

2.2.2.2. For depot originated requests, the ETAR Validator role may be assigned to an appropriate Subject Matter Expert (SME) as determined by the organization, such as the Maintenance Supervisor, Maintenance Planning organization, or other functional areas as applicable.

2.2.2.3. For field originated requests, the ETAR Validator role may be assigned to an appropriate Subject Matter Expert (SME) as determined by the organization, such as local maintenance QA, unit, or MAJCOM functional areas as applicable.

2.2.2.4. The ETAR Validator shall assign a control number to track valid requests if not assigned by an automated system.

2.2.2.5. The ETAR Validator shall return invalid requests (e.g. those for which existing technical data is adequate) to the Initiator and assist them with problem resolution.

2.2.2.6. Submit the validated Part A to the responsible engineering organization for disposition, and notify the Maintenance Supervisor (MS), QA, PE, and/or PM/PGM as applicable.

2.2.3. **Disposition Engineer (DE).** Serves as the DE authority as delegated by the LSE/CE to evaluate the submitted ETAR and shall develop ETAR corrective action, step-by-step instructions, and complete the ETAR Part B. A DE signature in the ETAR Part B attests that engineering analysis was completed IAW AFMCI 63-1201. DE authority may not be delegated to an ES/TCM.

2.2.3.1. Ensures authorities are executed within the scope of the DEA letter from the CE. The DE will collaborate with other engineers/equipment specialists/item managers/logisticians in the program office as needed to develop complete ETAR Part B Instructions.

2.2.3.2. Develop agreements with maintenance office supported counterparts in defining how they will interact with the development of ETAR issues.

2.2.3.3. Review ETAR Part A Discrepancy and attachments to ensure problem is clearly described and that pertinent technical data references, pictures, etc., are provided.

2.2.3.3.1. If any of the Part A information is incomplete or incorrect, the DE shall reject the ETAR back to the initiator and include justification for the rejection and any requested changes.

2.2.3.4. When necessary, to review the problem, if you have access to the weapon system asset, first action is to view the actual item and if necessary, converse with the initiating personnel to ensure visibility of the solution.

2.2.3.5. Utilize all available technical data, information, and resources to analyze reported problems, establish solution, and assess related risks to establish appropriate ETAR Instructions.

2.2.3.6. When there is a need to correct or update formal technical data (TOs, Process Orders, engineering drawings, etc.) document the specific problem, recommended resolution as required for the type of technical data, and notify/coordinate the responsible activity (ES/TCM, PE, CE).

2.2.3.7. Certain categories of ETAR Instructions will require Subject Matter Expert (SME) coordination. As specified below, the DE will coordinate and developed ETAR Instructions with appropriate SMEs prior to submitting the ETAR to the EAA.

2.2.3.7.1. The DE may coordinate with the maintenance organization, PE, and the Nondestructive Inspection office to discuss materials, tooling, and process limitations related to repairs or replacement.

2.2.3.7.2. The DE will contact the Aircraft Structural Integrity PM/PGM when repair or replacement of fatigue critical structure must be addressed with the program office.

2.2.3.7.3. NDI required in the ETAR instructions shall be conducted IAW published AF NDI TO guidance. All revised, new, or prototyped NDI related procedures that are not included in existing published TO guidance, shall be reviewed and approved by certified Level 3 NDI personnel prior to approval by delegated EAA as required by DAFI 21-101, *Aircraft and Equipment Maintenance Management*.

2.2.3.7.4. The DE will coordinate with the PM/PGM to assess life cycle impacts when the ETAR Instruction defers repairs, establishes interim repairs, or specifies substitution of alternate parts.

2.2.3.7.5. The DE shall coordinate with the responsible ES/TCM if new or alternate parts are specified to be used in the ETAR Instructions. The ES/TCM will initiate action to stock list the part(s), update the D043 system, Master Item Identification Control System, and update the affected TO Illustrated Parts Breakdown (IPB) as required to preclude future ETAR submissions. The ES/TCM will collaborate and coordinate with the respective IM/Supply Planner for parts forecasting to ensure availability for maintenance activities.

2.2.3.7.6. In conjunction with LSE/CE, ensure proper use of Warnings and

Cautions IAW MIL-STD 38784, *General Style and Format Requirements for Technical Manuals*, when failure to comply with instructions could result in injury to personnel or damage to equipment.

2.2.4. Engineering Approval Authority (EAA). The EAA reviews ETAR Part A and approves ETAR Part B Instructions and approves the ETAR (signs as EAA). The engineer delegated as EAA shall not be the same engineer delegated as the DE who developed the ETAR Instructions.

2.2.4.1. May review ETAR Part A to ensure problem is clearly described and that pertinent technical data references, pictures, etc., are provided.

2.2.4.1.1. During review, if any of the Part A information is incomplete or incorrect, the EAA shall reject the ETAR back to the initiator and include justification for the rejection and any requested changes.

2.2.4.2. Ensures ETAR Instructions are accurate, represent engineering analysis and are within the scope of the written DEA for the DE.

2.2.4.3. Ensures that the documented Instruction considered cost, schedule, available resources and materials, and weapon system life cycle.

2.2.4.4. Ensures that required coordination (additional reviews and signatures) is complete and annotated on the ETAR.

2.2.4.5. Ensures Part B instructions and information provided is adequate.

2.2.4.6. In conjunction with the DE, ensure that ETAR Instruction steps provide available published AFTO numbers and paragraphs to govern maintenance action. Ensure all revised, or modified NDI procedures developed to support ETAR Instructions have been reviewed and approved by certified level 3 NDI personnel.

2.2.5. Lead System Engineer/Chief Engineer (LSE/CE). The LSE/CE is the overall engineering/technical authority for programs and systems. The LSE/CE reviews and approves ETAR Part B Instructions for all areas which have not been specifically delegated to the EAA in a delegation letter.

2.2.5.1. May review ETAR Part A to ensure problem is clearly described and that pertinent technical data references, pictures, etc., are provided.

2.2.5.1.1. During review, if any of the Part A information is incomplete or incorrect, the LSE/CE shall reject the ETAR back to the initiator and include justification for the rejection and any requested changes.

2.2.5.2. Delegate engineering authority for completion of ETARs IAW AFMCI 63-1201. Such delegations shall be documented in writing in a DEA letter with a written or electronic signature. Delegations may include EAA and DE authority for the review, analysis, disposition and approval of ETARs.

2.2.5.2.1. Ensure DEA letters are reviewed regularly, IAW AFMCI 63-1201.

2.2.5.3. Periodically review completed ETAR(s) to ensure appropriate changes are identified, and take appropriate action to update technical data (Process Orders, TOs,

and engineering drawings). Ensure OSS&E is maintained through robust and thorough engineering analysis and solutions.

2.2.5.4. Assist the PM/PGM to develop and track metrics necessary to gauge key Technical Performance Measures and state of OSS&E baseline characteristics. Collect ETAR usage and response data, and track the number of repeat ETARs that drive permanent change to TOs IAW [paragraph 4](#), Metrics.

2.2.5.5. Ensure organizational processes are in place to address contractual agreements for assistance requests to/from contractor-based maintenance or engineering functions to include incorporation of this policy where appropriate. An automated ETAR system may support implementation of some or all of administrative tasks, which consist of the following:

2.2.5.5.1. Receive and record ETARs sent from initiating activities.

2.2.5.5.2. As soon as possible, notify the designated DE who will be responsible for evaluating ETARs.

2.2.5.5.3. Verify that required/referenced attachments (ETAR Problem Description and Instruction) are included and correctly marked and that required coordination (e.g., Safety, Bio-Environmental Engineering (BEE), and TOMA etc.) has been obtained.

2.2.5.5.4. Provide the Initiator/IET/Planner/QA/MS/PE/PM/PGM Manager a copy of the completed ETAR and attachments.

2.2.5.5.5. Maintain a file copy of approved ETARs and attachments IAW DAFI 90-160. Copies of completed ETARs shall be stored for historical purposes with a preference for electronic media.

2.2.5.6. Use of an automated system does not eliminate the requirement to accept and process an ETAR submitted using a manual process. The LSE/CE shall ensure that a manual process for submitting/processing technical assistance requests is developed and available to be used if an automated ETAR system is unavailable (e.g. the automated ETAR system is down for maintenance). Establish a manual process focal point local to the system program office or publish a list of engineering focal points and ensure maintenance personnel are aware of manual process requirements.

2.2.6. Equipment Specialist/Technical Content Manager (ES/TCM) Responsibilities. The ES/TCM responsibilities consist of executing the TO change process per TO 00-5-3. The ES/TCM should acknowledge coordination of ETARs that require TO changes in accordance with [paragraph 3.3.18](#) below.

2.2.7. Item Manager (IM)/Supply Planner Responsibilities. The IM/Supply Planner should acknowledge coordination of ETARs that require condemnation in accordance with [paragraph 3.3.1](#) below and execute actions in accordance with AFI 23-101, *Materiel Management Policy*.

2.2.8. Quality Assurance (QA) Activity Responsibilities. The QA activity shall be responsible for the following:

2.2.8.1. The QA activity should execute actions in accordance with AFMCI 21-100, *Depot Maintenance Management*, and AFSCMAN21-102, *Depot Maintenance Management*, as applicable.

2.2.8.2. For field initiated ETARs, the QA activity for the initiator may provide the additional review and acceptance after completion of ETAR Part B where a maintenance planning organization does not exist and sign acceptance of the ETAR Part C within 2 calendar days of completion of Part B Instructions. Notify the initiator, PE, PM/PGM as applicable upon completion of the ETAR.

2.2.8.2.1. When using an Automated ETAR system, notification of identified personnel may be handled by that system.

2.2.9. Production Engineer (PE) Responsibilities. Production Engineer provides depot logistics support for industrial process development, validation, and maintenance IAW AFSCMAN21-102.

2.2.9.1. Review provided copies of completed and signed ETAR to determine impact to industrial processes.

2.2.9.2. Coordinate with the IET/Planner office to validate PDM process requirements as part of the LSE/CE engineering requirements review process IAW AFMAN 63-143, *AF Centralized Asset Management Procedures*.

2.2.9.3. Approves changes to locally designed/modified Test, Measurement & Diagnostic Equipment (TMDE) requirements specified in TOs 00-20-14, *AF Metrology and Calibration Program*, and 33K-1-100-1, *Calibration Procedure -- Maintenance Data Collection Codes and Calibration Measurement Summaries*.

2.2.9.4. In the situation where an ETAR is initiated requesting assistance with a PE area of responsibility, the PE organization shall comply with the roles and responsibilities of the LSE/CE, EAA, and DE accordingly.

2.2.10. Maintenance Supervisor (MS) Responsibilities. The MS shall be responsible for the following:

2.2.10.1. Review ETARs initiated by assigned personnel to ensure requests identified in the ETAR Part A are complete and not already covered by existing technical data.

2.2.10.2. Notifying maintenance QA/PE when a nonstandard deficient condition is organically caused by maintenance procedures or malpractice. MS shall also initiate investigation of Root Cause/Corrective Actions as required by local policy.

2.2.10.3. Review disposition instructions and/or procedures provided on the ETAR Part B for any compliance problems, material availability, tooling, special processes, support equipment shortfalls, or personnel training issues.

2.2.10.4. Ensure technicians annotate applicable equipment historical documents (AFTO Form 95, *Significant Historical Data*, or AFTO Form 781-series aircraft forms).

2.2.10.5. Notify the initiator 21 calendar days before the rescission event/date of any ETAR for which a requirement still exists.

- 2.2.10.6. Inform the IET/Planner or QA of any issues encountered during accomplishment of the instructions.
- 2.2.10.7. Upon completion of the ETAR, the MS shall ensure that the maintenance personnel have updated Work Control Documents (WCDs) prior to the maintenance actions as required.
- 2.2.10.8. For field initiated ETARs, the MS or Maintenance Lead for the initiator may provide the additional review and acceptance after completion of ETAR Part B where a maintenance planning organization does not exist and sign acceptance of the ETAR Part C within 2 calendar days of completion of Part B Instructions. Notify the initiator, PE, QA, PM/PGM as applicable of completion of the ETAR.
- 2.2.10.8.1. When using an automated ETAR system, notification of identified personnel may be handled by that system.
- 2.2.11. **Industrial Engineering Technician (IET)/Planner.** For depot initiated ETARs, the IET/Planner shall be responsible for reviewing and updating changes to maintenance procedures as outlined in the ETAR disposition instructions.
- 2.2.11.1. Once the ETAR Instruction is approved by an LSE/CE/EAA and accepted by the initiator, the IET/Maintenance Planner shall ensure that new or changed maintenance operation procedures are verified as specified in the ETAR Instructions by the DE or ES/TCM for the Publication Change Request (PCR).
- 2.2.11.2. Sign acceptance of the ETAR Part C within 2 calendar days of completion of Part B Instructions. Notify the initiator, PE, QA, MS, and PM/PGM as applicable of completion of the ETAR.
- 2.2.11.2.1. When using an automated ETAR system, notification of identified personnel may be handled by that system.
- 2.2.11.3. Review all ETAR Instruction for the need to recommend permanent technical data updates. Initiate a Change Request when governing TOs specified in Depot Maintenance Work Specification must be corrected or improved. When applicable, note the TO recommended change Local Control Numbers on the ETAR.
- 2.2.11.4. Maintain a file of the completed ETARs with the master WCD file or in a planning file.
- 2.2.11.5. Upon completion of the ETAR, the IET/Planner shall make updates to appropriate WCD as required.
- 2.2.12. **Technical Order Manager (TOMA) Responsibilities.** The TOMA shall coordinate with the ES/TCM and be responsible for complying with TO 00-5-3 for any SH PCR associated with the ETAR.
- 2.2.13. **Technical Order Distribution Office (TODO) Responsibilities.** The TODO shall coordinate with the TOMA and be responsible for complying with TO 00-5-3 for any SH PCR associated with the ETAR.
- 2.2.14. **Program Office / Complex / Supply Chain Engineering Office Responsibilities**

- 2.2.14.1. Ensures internal reviews of completed ETARs to identify duplicate/similar failures and repair trends IAW internal processes.
 - 2.2.14.2. Ensures ETARs are processed.
 - 2.2.14.3. Ensures best practices appropriate to the nature of Program Office/Complex/Supply Chain programs are implemented.
 - 2.2.14.4. Implements LSE and OSS&E policy consistent with DoD, AF, AFMC and Center policies.
- 2.2.15. Center Engineering Office Responsibilities.**
- 2.2.15.1. Ensures internal reviews of completed ETARs to identify duplicate/similar failures and repair trends IAW internal processes.
 - 2.2.15.2. Ensures ETARs are processed.
 - 2.2.15.3. Ensures best practices appropriate to the nature of Center programs are implemented.
 - 2.2.15.4. Select the standard format for monthly and quarterly ETAR reports IAW [paragraph 4](#) below and identify offices responsible for providing that data to the Center.
- 2.2.16. AFMC Director of Engineering Responsibilities.**
- 2.2.16.1. Ensures all AFMC engineering entities (i.e., Air Force Nuclear Weapons Center, AFSC, AFLCMC, Air Force Research Laboratory, Air Force Test Center) implement ETAR process controls to ensure an accurate and efficient process.
 - 2.2.16.2. Select the standard format for quarterly ETAR reports IAW [paragraph 4](#) below and identify offices responsible for providing that data to HQ AFMC.

3. ETAR Data Elements.

3.1. **ETAR.** Requests for engineering technical assistance to complete tasks beyond the scope of published technical data are documented and submitted using an AFMC Form 202, *Engineering Technical Assistance Request (ETAR)*, or an automated ETAR system. The following general procedures apply to the preparation, submission, processing, and execution of all ETARs, automated or paper/PDF. There are three Parts to the ETAR: Part A, Request, represents the initial submittal of the ETAR and defines the urgency of need (i.e., work stoppage or non-work stoppage), Part B, Response, represents disposition direction provided by the LSE/CE, including whether to repair, rework, use as-is, condemnation, or other direction of the item/part and coordination and approval of the proposed disposition within the applicable engineering offices, and Part C, Receipt, documents coordination and approval of the ETAR submittal back with the requesting organization.

3.1.1. The data elements of an ETAR are described in paragraphs [3.2](#) through [3.4](#) below. Data elements are identified as either “Core” or “Optional”.

3.1.1.1. Core data elements are found on the AFMC Form 202 and should be used by all POs as the minimum required data for traceability, metrics, and tracking of discrepancies and resolution.

- 3.1.1.2. Optional data elements may be used at the discretion of the LSE/CE. Data captured in these fields must adhere to the description provided to ensure standardized data across AFMC. Optional data elements typically represent information that is captured or tracked within other data systems (i.e. Maintenance Information System, Logistics, or Product Lifecycle Management tools) or data elements that are useful for filtering or tracking of ETARs.
- 3.1.2. Any entries on paper/handwritten forms must be typed or neatly printed in blue or black ink. The program office shall be responsible to ensure all form information is maintained in the official repository system (paper and/or automated ETAR system). The AFMC Form 202 is available from AF ePublishing at the following link <http://www.e-publishing.af.mil/index.asp>.
- 3.2. **Part A – Request.** A complete and validated Part A is submitted to the cognizant engineering activity for the problematic system/end item. Part A is completed by the Initiator and co-developed by the MS & PE where available before being submitted to the LSE/CE for assistance. The Problem Description and Recommendation section must completely describe the problem (non- conforming situation), and provide information to support the data included in the End Item Serial/Tail/Work Request No. section of ETAR. Once Part A information is complete and validated, the ETAR is delivered to the responsible LSE/CE/EAA for assignment to a DE.
- 3.2.1. **Requesting Office.** (Core) Enter the Org/Office Symbol of the requesting organization.
- 3.2.2. **Responding Office.** (Core) Enter the Org/Office Symbol of the cognizant engineer activity from whom engineering assistance is being requested.
- 3.2.3. **Initiate Date.** (Core) Enter the date that the ETAR is being created.
- 3.2.4. **Control Number Assigned.** (Core) A unique and individual control number shall be assigned to each ETAR. Automated systems will populate this field.
- 3.2.4.1. If the ETAR is manually prepared, enter the next available control number from a log maintained by the IET/Planner for the depot maintenance activity. The local depot maintenance activity establishes requirements for the construction of the ETAR Control Number.
- 3.2.4.2. The control number must be included in the upper right hand corner of all attachments regardless of the method created. This is required to maintain configuration control and ensure safety of the technicians performing maintenance. **Note:** There are no exceptions. The LSE/CE is responsible for ensuring control numbers are included on all attachments.
- 3.2.5. **Nomenclature.** (Core) Enter the nomenclature of the part(s)/item(s) affecting the problem. Use the associated Illustrated Parts Breakdown (IPB) TO nomenclature reference whenever possible. If IPB nomenclature is not available, use the associated engineering drawing nomenclature.
- 3.2.6. **Part Number.** (Core) Enter the part number of the affected part(s)/item(s) in the Part Number block.

3.2.7. **NSN.** (Core) Enter the NSN for the item(s) and/or part(s) affected to be used in the Instructions section for the ETAR. The NSN in conjunction with the part number(s) ensure that the identical part number(s) used by different manufacturers for completely different parts are not confused with each other.

3.2.8. **End Item Serial/Tail/Work Request/SW Version No.** (Core) Enter the affected end item serial number, tail number, work request number, and/or computer software version number. When an ETAR applies to the repair or substitution of more than a specific end item serial number, tail number, or work request number, enter 'Other' and utilize the Problem Description and Recommendation to provide more information. Refer to Blanket Authority where applicable.

3.2.9. **Location(s).** (Core) Enter the physical location(s) (Resource Control Center [RCC], base/post, building number, shop, dock, ramp, etc.) where the item causing the problem is located.

3.2.10. **TO Number.** (Core) Enter the affected TO number and figure or section reference.

3.2.11. **Drawing Number.** (Core) Enter the affected engineering drawing number if known.

3.2.12. **Work Unit Code (WUC).** (Core) Enter the WUC associated with the item/location of the discrepancy within the affected weapon system.

3.2.13. **Priority.** (Core) Mark the appropriate priority for the request.

3.2.13.1. **Emergency** – An emergency request is one that has an immediate impact on critical operational mission requirements. Emergency requests are intended for Presidentially-directed missions (Chairman of the Joint Chiefs of Staff priority 1A1) or situations where the current location presents immediate risk to personnel or equipment. These requests may be initially made by telephone, but must be documented with a follow-up ETAR through the automated ETAR system or AFMC Form 202.

3.2.13.2. **Work-Stoppage** – A work-stoppage request is one that refers to the inability to proceed with maintenance or production on a repair or modification of an end item or commodity, or where a given process stops due to nonconforming material, inadequate technical data, or lack of proper parts, materials, components, tooling, or facilities. Halted production of a component or part that negatively impacts the critical path of an end item or scheduled flow of a commodity production line (from an operational/systemic view) constitutes a work-stoppage.

3.2.13.3. **Routine** – Routine requests are ones that don't fall under the Emergency or Work-Stoppage categories. Requests against non-critical path repair or production are considered routine.

3.2.14. **Discrepancy and Recommendation.** (Core) Enter a complete, concise description of the problem and include any recommended corrective actions. The discrepancy and recommendation shall include enough information or attachments to completely describe and locate the issue for the cognizant engineering organization to analyze and disposition the discrepancy.

- 3.2.14.1. Indicate if the problem is related to a faulty TO or Process Order operation. If so, identify the TO number, Process Order, and operations reference. Include a detailed description of visible damage; malfunctioning items; and operating anomalies. As applicable, include left/right, forward/aft, upper/lower, inboard/outboard dimensions (length/width/depth); fuselage station; wing station; water line; photographs; plus applicable engineering drawing, TO IPB figure, and index; part number; stock number; Next Higher Assembly (NHA) part number; serial number; and aircraft tail number.
- 3.2.14.2. For automated ETAR systems, a detailed Discrepancy and Recommendation should be captured within the appropriate text field to enable data tracking and searching.
- 3.2.14.3. Any attachments provided with the ETAR must be annotated with the Control Number of the ETAR as well as the appropriate Distribution statement IAW DAFI 61-201.
- 3.2.15. **Initiator Signature.** (Core) Enter the signature and/or printed name, date, office symbol and phone number of the initiator reporting the problem.
- 3.2.16. **Validator Signature.** (Core) Enter the signature and/or printed name, date, office symbol and phone number of the validator of the problem.
- 3.2.17. **Attachments.** (Core) List the attachments associated with the ETAR discrepancy and recommendation.
- 3.2.18. **Follow-on.** (Optional) Indicate if the subject request or discrepancy is a follow-on to a previous ETAR and the control number of that request.
- 3.2.19. **Request Type.** (Optional) Identify the type of request being made (i.e. Evaluation, Repair Instructions).
- 3.2.20. **Organically Caused Discrepancy.** (Optional) Identify if the subject discrepancy was caused by maintenance actions.
- 3.2.21. **Part Supportability Issue.** (Optional) Indicate if replacement parts have been requested through supply but are unavailable.
- 3.2.22. **Supply Document Number.** (Optional) Record the supply document number associated with the replacement part that is unavailable.
- 3.2.23. **Work Specification Task Number.** (Optional) Identify the Work Spec. Task number associated with the discrepancy.
- 3.2.24. **Work Control Document (WCD) Number.** (Optional) Identify the WCD number associated with the discrepancy.
- 3.2.25. **Job Order Number (JON).** (Optional) identify the JON associated with the discrepancy.
- 3.2.26. **Operation Number.** (Optional) Identify the specific operation number in the WCD/JON where the discrepancy was identified.

- 3.2.27. **Over G.** (Optional) Identify whether the discrepancy/request is being made due to the item/aircraft/component experiencing Over G conditions. (i.e., operating outside prescribed flight envelope)
- 3.2.28. **Fault Indicator.** (Optional) Record the fault indicator or codes associated with the subject discrepancy.
- 3.2.29. **Corrosion Related.** (Optional) Indicate whether the subject discrepancy is related to corrosion on the subject item.
- 3.2.30. **Life Support Related.** (Optional) Indicate whether the subject discrepancy is related to the weapon system life support.
- 3.2.31. **Time Controlled Part/Scheduled Maintenance Extension.** (Optional) Indicate whether the request being made is a request to delay time controlled part replacement or scheduled maintenance. Extensions of this nature shall include specific reason for the request in the discrepancy/recommendation field.
- 3.2.32. **System/Sub-System/Subject Number (SSSN).** (Optional) Enter the SSSN associated with the item/location of the discrepancy.
- 3.2.33. **Reference Designator.** (Optional) Enter the reference designator associated with the item/location of the discrepancy.
- 3.2.34. **Damaged Area.** (Optional) Identify the area of the weapon system where the damage is located. (i.e., fuselage, landing gear, etc.)
- 3.2.35. **Damaged System.** (Optional) Identify the system where the damage is located. (i.e., structure, mechanical, electrical, etc.)
- 3.2.36. **Mission Design Series (MDS)/Type/Model/Series (TMS).** (Optional) Enter the MDS/TMS of the weapon system affected.
- 3.2.37. **Aircraft Model/Block.** (Optional) Enter the model and block of the weapon system affected.
- 3.2.38. **Wing Serial Number.** (Optional) Enter the serial number of the wing associated with the discrepancy.
- 3.2.39. **Wing Hours.** (Optional) Enter the number of flight hours associated with the wing.
- 3.2.40. **Horizontal Stabilizer Serial Number.** (Optional) Enter the serial number of the horizontal stabilizer associated with the discrepancy.
- 3.2.41. **Engine Serial Number.** (Optional) Enter the serial number of the engine associated with the discrepancy.
- 3.2.42. **Engine Hours.** (Optional) Enter the number of hours associated with the engine.
- 3.2.43. **Ejection Seat Serial Number.** (Optional) Enter the serial number of the ejection seat associated with the discrepancy.
- 3.2.44. **Ejection Seat Position.** (Optional) Enter the position (forward/aft, instructor/student, left/right, etc.) of the ejection seat associated with the discrepancy.

- 3.2.45. **Equipment Status.** (Optional) Enter the current equipment status reference AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*.
- 3.2.46. **Hours/Cycles/Mileage.** (Optional) Enter the number of hours, cycles, or miles associated with the discrepant item.
- 3.2.47. **Command.** (Optional) Enter the Command associated with the end item in question.
- 3.2.48. **Last PDM Depart Date.** (Optional) Enter the date when the end item last departed Programmed Depot Maintenance (PDM).
- 3.2.49. **Last PDM Base.** (Optional) Enter the base/location associated with the last PDM.
- 3.2.50. **Next PDM Start date.** (Optional) Enter the date when the end item is expected to enter PDM next.
- 3.2.51. **Next PDM Base.** (Optional) Enter the base/location associated with the next PDM.
- 3.2.52. **Last Phase Completion Date.** (Optional) Enter the date when the end item completed the last phase.
- 3.2.53. **Phase.** (Optional) Enter the current phase associated with the end item in question.
- 3.2.54. **120-Day Suspense Request.** (Optional) Identify if the request is being made against multiple items (e.g., the entire fleet, every asset through production, etc.). Engineering may choose to approve or deny this request utilizing the “Authorized Until” data field. Refer to [paragraph 3.3.3](#) and all sub-paragraphs below.

3.3. **Part B – Response.** Part B of the ETAR is completed by the DE to evaluate the discrepancy/recommendation, and develop and document disposition instructions, then reviewed and approved by LSE/CE/EAA and associated reviewing organizations. The receiving engineering office will annotate the form with the date the ETAR was received. For automated ETAR systems, the received date shall be the same date that the ETAR was submitted by the initiator.

3.3.1. **Disposition.** (Core) The DE will determine and document the type of disposition (Repair, Rework, Use As-Is, Condemn or Other) and document the procedure to resolve the problem in the Instructions block.

3.3.2. **Instructions.** (Core) As defined by DAFI 61-201 and Department of Defense Instruction (DoDI) 5230.24, *Distribution Statements on Technical Documents*, technical documents/information documented as ETAR Instructions, including attachments, are considered to be STINFO, and shall be marked with the appropriate Distribution Statement. The LSE/CE, or delegated engineering authority, will determine and mark the ETAR Instruction, as well as any attachments, with appropriate Distribution Statements.

3.3.2.1. Enter a complete, concise, response to the request, or step-by-step instruction for resolving the problem. Include references to drawings or technical orders as applicable.

3.3.2.2. The Instruction should be mindful of local maintenance capabilities including accessibility, fabrication, processing, and inspection. The Instructions should also

identify if the given repair procedures are intended as a temporary repair or contain future repair restrictions.

3.3.2.3. The Instruction should be mindful of any impacts to other functional areas including the ES/TCM, Item/Material Manger, PE, and Logistics. The DE shall coordinate with these areas as applicable prior to disposition.

3.3.2.4. For automated ETAR systems, the complete Instruction should be detailed within the appropriate text field to enable data tracking and searching.

3.3.2.5. Any attachments provided with the ETAR Instructions must be annotated with the Control Number of the ETAR as well as the appropriate Distribution statement IAW DAFI 61-201.

3.3.3. Authorized Until Date or Completion Of. (Core) If the ETAR applies to the repair or substitution of more than a specific end item serial number, tail number, or work request number, enter a date (not to exceed 120 calendar days from the date of disposition by the DE) at which the instruction will be no-longer authorized. Otherwise, check the appropriate box (serial number, tail number, or work request number) to which the ETAR applies as it relates to the information in the request.

3.3.3.1. ETARs shall be applicable to specific serial numbers, tail numbers, work request numbers, or computer software version numbers whenever possible to allow for traceability.

3.3.3.2. ETARs granting 120 day authorization indicate that there is a lack of technical data or capability and should be addressed by the PO.

3.3.4. Equipment Historical Entry. (Core) Enter the repair history of the equipment.

3.3.4.1. Enter 'Not Applicable' or document the exact wording of statements to be placed on the applicable End Item Historical Form/Record (AFTO 95, *Significant Historical Data*, or AFTO 781 series, DoD Form 1574, *Serviceable Tag - Materiel*, etc.).

3.3.4.2. Provide instructions, as required, to document weapon system's historical records concerning significant maintenance actions resulting in conditions that could have a bearing on future maintenance actions (such as material substitutions, oversized fasteners, etc. which may affect requirements for future maintenance actions), deferment until future maintenance, and nonstandard repairs, which will be readily apparent to field/owning organizations.

3.3.4.3. If future actions are required on aircraft, such as inspections or component replacement, an AFTO Form 781 entry shall be made.

3.3.4.4. Include a complete description and location of nonstandard repairs (e.g., fuselage station) as well as the ETAR control number, and the name, office symbol and phone number of the engineer authorizing the repair IAW TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies and Procedures*.

3.3.5. Attachments. (Core) List the attachments associated with the ETAR Disposition and instructions. Automated ETAR systems may include the actual attachment.

- 3.3.6. **Engineering Notes.** (Core) Include any engineering notes related to the discrepancy or repair.
- 3.3.7. **Disposition Engineer (DE).** (Core) Upon completion of Part B, Enter the signature and/or printed name, Office Symbol, Phone, e-Mail address, and Date of the DE preparer of the disposition instructions.
- 3.3.8. **Lead System Engineer/Chief Engineer/Engineering Approval Authority (LSE/CE/EAA).** (Core) LSE/CE/EAA approval shall be performed by personnel with appropriately delegated engineer authority. After reviewing Part B for completeness and accuracy and coordinating any additional reviews/signatures, the LSE/CE/EAA shall enter the signature and/or printed name, office Symbol, phone, e-Mail address, and Date of approval.
- 3.3.9. **Significant Impact to Cost/Schedule/Performance.** (Optional) Indicate if the disposition instructions are expected to result in a significant increase to the cost, schedule, or performance of Programmed Depot Maintenance (PDM) activities and the Pertinent Oversight Authority (POA) needs to be notified.
- 3.3.10. **Additively Manufactured Part.** (Optional) Indicate if the instructions include the use/creation of an additively manufactured (3D Printed) component.
- 3.3.11. **Locally Manufactured Part.** (Optional) Indicate if the instructions include the use/creation of a locally manufactured component.
- 3.3.12. **Temporary Repair.** (Optional) Indicate if the instructions include direction to perform a repair that is designated as a temporary repair and should be removed or inspected at a later date.
- 3.3.13. **Critical Safety Item (CSI).** (Optional) Indicate if the subject item is identified as a CSI on the AF CSI Master List.
- 3.3.14. **Hardness Critical Item (HCI).** (Optional) Indicate if the subject item is identified as (nuclear) hardness critical.
- 3.3.15. **Repeat ETAR.** (Optional) Indicate if the ETAR request and/or response is a recurring issue/solution. ETARs identified as repeats shall be considered for incorporation into technical data.
- 3.3.16. **Risk Level.** (Optional) Indicate the risk level associated with the disposition instructions. Risk level shall be determined IAW AFI 90-802, *Risk Management*.
- 3.3.17. **Dispositioning Engineer.** (Optional) Indicates the DE currently assigned to review the discrepancy and recommendation and/or provide the disposition instructions. This data field allows for visibility of the currently assigned engineer when the disposition instructions have not been signed/completed.
- 3.3.18. **TO/Drawing Change.** (Optional) Identify if the discrepancy or disposition instructions require the creation of a TO PCR or ECO/EO.
- 3.3.19. **Additional Reviews.** (Optional) Additional reviews of the ETAR discrepancy and/or disposition instructions may be added at the discretion of the LSE/CE. These additional reviews and signatures may include, but are not limited to: IM/Supply Planner, Equipment Specialist/Technical Content Manager (ES/TCM), Safety, Environmental,

Aircraft Structural Integrity Program (ASIP), Nuclear Surety, Corrosion, Nuclear Hardness, etc.

3.3.19.1. The LSE/CE shall determine and document which organizations/personnel will provide additional reviews and when they are required.

3.3.19.2. The EAA shall ensure that additional reviews, as required, are completed prior to EAA signing the completed ETAR.

3.3.19.3. Additional reviews, as required, shall include the signature and/or printed name, Office Symbol, Phone, e-Mail address, and Date of the review/approval of the disposition instructions.

3.4. **Part C – Receipt.** Part C documents the receipt of the ETAR back to the requesting organization.

3.4.1. **Requestor Acceptance.** (Core) Upon completion of Part B, the ETAR will be routed back to the initiator for review and acceptance of the disposition instructions. The initiator shall review the instructions to ensure that they are capable of carrying out the instructions. Enter the signature and/or printed name, office symbol, phone number, e-Mail address, and date of acceptance.

3.4.2. **IET/Planning/QA/Maintenance Supervisor (MS) Acceptance.** (Core) Additional review and acceptance of the disposition instructions, and update to maintenance documentation is required. Upon completion of this secondary review and acceptance, the ETAR is completed and closed in the automated ETAR system.

3.4.2.1. For depot initiated requests, the maintenance planner shall review and accept the disposition instructions and make updates to the appropriate WCD as required. Enter the signature and/or printed name, office symbol, phone number, e-Mail address, and date of acceptance.

3.4.2.2. For field initiated requests, the local QA or MS shall review and accept the disposition instructions and ensure the maintenance information system is updated accordingly.

3.4.3. **Planning/QA Notes.** (Optional) Include any planning or QA notes related to the discrepancy or repair.

3.4.4. **Requestor Notes.** (Optional) Include any notes related to the discrepancy or repair.

3.4.5. **Attachments.** (Optional) List the attachments associated with the ETAR maintenance planning. Automated ETAR systems may include the actual attachment.

4. Metrics.

4.1. Process Metrics.

4.1.1. **ETAR Metrics.** Emphasis is placed on the ETAR receipt and completion process. This metric is based upon [paragraph 1.5.1](#) above which requires engineering to provide a response within 4 hours for Emergency requests, 7 calendar days on Work-Stoppage requests, and within 21 calendar days on Routine requests. The following basic metrics will be available on a monthly basis. (The following assumes a first-of-the month snapshot for the preceding month.)

- 4.1.1.1. ETARs.
 - 4.1.1.1.1. Number of ETARs created during the month (total, work stoppage, and non-work stoppage).
 - 4.1.1.1.2. Number of ETARs completed during the month (total, work stoppage, and non-work stoppage).
 - 4.1.1.1.3. Number of remaining active ETARs at end of month (total, work stoppage, and non-work stoppage).
- 4.1.1.2. Part A.
 - 4.1.1.2.1. Average Part A time (duration) of all completed ETARs.
- 4.1.1.3. Part B.
 - 4.1.1.3.1. Average Part B time (duration) of all completed ETARs.
 - 4.1.1.3.2. Number of Part B work stoppage occurrences that exceed 7 calendar days.
 - 4.1.1.3.3. Number of Part B non-work stoppage occurrences that exceed 21 calendar days.
- 4.1.1.4. Part C.
 - 4.1.1.4.1. Average Part C time (duration) of all completed ETARs.
 - 4.1.1.4.2. Number of Part C occurrences that exceed 4 calendar days.
- 4.1.1.5. Total Technical Resolution (TTR).
 - 4.1.1.5.1. For each TTR occurrence/string, string identifier and calculated TTR.
 - 4.1.1.5.2. Total number of TTR occurrence/strings.
 - 4.1.1.5.3. Average number of Follow-on ETARs.
 - 4.1.1.5.4. Maximum number of Follow-on ETARs.
- 4.1.1.6. Elapsed Resolution Time (ERT).
 - 4.1.1.6.1. ERT for each TTR.
 - 4.1.1.6.2. Average ERT.
 - 4.1.1.6.3. Maximum ERT.
- 4.1.2. **Monthly Report.** Monthly ETAR metrics reporting requirements will be determined by the individual centers (AFLCMC, AFSC, and AFNWC) based upon center policy and needs.
- 4.1.3. **Quarterly Report.** For each weapon system PO, monthly ETAR metrics will be provided once per quarter to AFLCMC, AFSC, and AFNWC, and aggregately, to AFMC/A4/10 leadership, and will include:
 - 4.1.3.1. Total number of processed ETARs, by work stoppage vs. non-work stoppage.

4.1.3.2. Number of instances that ETARs exceed predefined Part B threshold limits (7 calendar days for work stoppage, and 21 calendar days for non-work stoppage).

4.1.3.3. The monthly average of Part B time by work stoppage and non-work stoppage.

4.1.3.4. Trailing 12 month history of each of the above Quarterly requirements.

5. AFMC Engineering Support Provided to DLA via the 339 Process.

5.1. **Purpose.** This section defines the process for engineering support provided by AFMC engineering to the Defense Logistics Agency (DLA) IAW DoDI 4140.69, *Engineering Support Instructions for Items Supplied by Defense Logistics Agency and the AF/DLA Product Support Engineering (PSE) Performance Based Agreement (PBA)*. Refer to the Integrated Engineering Support (IES) 339 Instructions (<https://prd-ies02.tinker.af.mil/docs/339Instructions.htm>) within the IES system for additional information on the 339 itself and relevant information.

5.1.1. **AFMC Engineering Support to DLA.** AFMC engineering, as an extension of the AF, provides engineering support to DLA. Engineering Technical Assistance shall be provided to DLA using the 339, Request for Engineering Support. Engineering support provided shall encompass First Article Test (FAT), Critical Application Items (CAI), Critical Safety Items (CSI) assistance, developing, validating and approving Technical Data Packages (TDP), developing and engineering criteria, representing the military service engineering interests, and providing technical guidance and decisions required in the management and procurement of an item for its entire life cycle. Refer to the AF/DLA Product Support Engineering (PSE) Performance-Based Agreement (PBA) for information on other instances that require engineering support. As an agent of AFMC/A4, AFLCMC is responsible for assigning focal points that act as the entry and exit points for requests for engineering support within the AF.

5.1.1.1. Examples of CSIs include safety of flight, parts/repairs with catastrophic failure consequences, major structural repairs, nuclear certified items, deferred repairs, interface changes, deviation to work specifications, new manufacturing processes, low observable critical processes, disposition of Product Quality Deficiency Report material substitution, new repairs and/or repair processes, changes with the potential to degrade reliability or performance, changing of test limits/requirements, changing of calibration requirements on weapons system support equipment, Hardness Critical Items/Hardness Critical Processes, corrosion prevention and control requirements, changes that affect PO contract or warranty, and dispositions that require contracted expertise.

5.1.1.2. Examples of TDPs include applicable technical data such as models, drawings, associated lists, specifications, standards, patterns, performance requirements, QA provisions, computer software, computer software documentation, and packaging details.

5.2. DLA 339 Request for Engineering Support.

5.2.1. Supervisor, Lead Engineer and/or Log Point routing Responsibilities:

5.2.1.1. Monitor IES system inbox on a regular basis, daily review is recommended.

5.2.1.2. Review 339s within 3 calendar days of receipt to verify correct Engineering Support Activity (ESA).

5.2.1.3. Assign 339 to cognizant engineer.

5.2.1.4. Monitor assigned 339s for impending suspense dates and coordinate with the ESA to take appropriate action in advance.

5.2.1.5. If your organization is not the ESA, identify the correct ESA, provide supporting information in block 22 (Supplemental information/comments) and 23 (Enclosures) and route to the correct ESA or back to the Focal Point office as required.

5.2.1.6. If unable to determine the correct ESA, provide all relevant information regarding the identity of the correct ESA in IES, block 22 (Supplemental information/comments) and 23 (Enclosures) and route the 339 back to the Focal Point office.

5.2.2. Cognizant Engineer Responsibilities:

5.2.2.1. Monitor IES system inbox on a regular basis, daily review is recommended.

5.2.2.2. Review the information contained in Part I of the 339 from DLA Initiator. Part I (Header Information) includes:

5.2.2.2.1. Secondary Inventory Control Activity (SICA) Code from the latest Total Item Record.

5.2.2.2.2. DLA Point of Contact.

5.2.2.2.3. Engineering suspense date.

5.2.2.2.4. Item NSN, Part Number, Nomenclature, and CAGE code.

5.2.2.2.5. Previous, or DLA expected Acquisition Method Code/Acquisition Method Suffix Code (AMC/AMSC).

5.2.2.3. Review the information contained in Part II of the 339 from DLA Initiator. Part II (Engineering Support) includes:

5.2.2.3.1. Information that DLA is requesting.

5.2.2.3.2. Supplemental information to the request.

5.2.2.3.3. Attachments/Enclosures related to the requested information.

5.2.2.4. Complete Part III of the 339 and respond to the DLA request. Part III includes:

5.2.2.4.1. Verify that the request is accurate and applicable to the item in question.

5.2.2.4.2. Refer to past 339s on the subject NSN for previous DLA requests.

5.2.2.4.3. Verify the part number being referenced is the correct configuration for the request.

5.2.2.4.4. Verify the AF need for the subject NSN and Part Number.

5.2.2.4.5. Determine if the item is a CSI and/or Critical Application Item (CAI) IAW established procedures and take necessary steps to ensure your determination is consistent with the AF master CSI list.

5.2.2.4.5.1. The AF Master CSI list is located with AFLCMC/EZP Product Support
Engineering

(<https://usaf.dps.mil/teams/21080/csi/projdocs/forms/allitems.aspx>).

5.2.2.4.5.2. If the AF CSI Master List needs to be updated, contact AFLCMC/EZP (AFLCMC.EZPR.CSI339andDMSMS@us.af.mil).

5.2.2.4.5.3. Reference AFLCMC CSI Process Guidance, OPR: AFLCMC/EZP for additional information on CSI processing.

5.2.2.4.6. Coordinate with the ES and verify that cataloging actions are initiated to support TDPs IAW AFMCI 23-105, *Planning for DLA-Managed Consumables (PDMC)*. Cataloging actions include but are not limited to updating of Material Management Aggregation Code (MMAC), ES Code, AF IM code, and Major Organization Entity (MOE) rule, and Criticality Code if not previously determined.

5.2.2.4.7. If the item is used by multiple program offices, use the IES Validate/Coordinate feature (button labeled “Create Val-Coor Request”) to coordinate with appropriate personnel in other POs that have an interest in the item. See **Figure 2**.

5.2.2.4.8. If a new or updated Technical Data Package (TDP) is required, prepare IAW MIL-STD 31000, *Department of Defense Standard Practice: Technical Data Packages (TDP)*.

5.2.2.4.8.1. If screening is required, coordinate with Screening with requested changes to initiate the AFMC Form 761, *Screening Analysis Worksheet (SAW)*. Screening will also generate Engineering Instructions or Engineering Notes (ENs) and an Engineering Data list (EDL) if applicable.

5.2.2.4.8.2. Determine if Post Award Verification is required (First Article Testing, Production Lot Testing, Fit/Form/Function, etc.) and prepare required documents IAW AFMCI 23-110, *Post-Award Part Verification and Approval*.

5.2.2.4.9. If the 339 is marked for alternate/surplus offer, waiver/deviation, or reverse engineering requests, Source Approval Request (refer to AFMCI 23-113, *Source Approval Requests (SAR)*), review the attached/enclosed documentation for ESA response.

5.2.2.4.10. If the 339 cannot be completed prior to the ESA suspense date:

5.2.2.4.10.1. Set an Estimated Completion Date (ECD). Note that the 339 suspense date will not be affected by entering this ECD; or,

5.2.2.4.10.2. Extended Engineering Effort (See **Figure 3**) may be requested. Coordinate with the 339 Focal Point Office (AFLCMC/LZPED) for this process.

5.2.2.4.11. Provide ESA contact information.

5.2.2.4.12. Document all man-hours expended with 339 review and response.

5.2.3. Complete Engineering Review:

5.2.3.1. Verify that the 339 is marked CAI and/or CSI and determination is consistent with the AF Master CSI list.

5.2.3.1.1. The AF Master CSI list is located with AFLCMC/EZP Product Support Engineering

(<https://usaf.dps.mil/teams/21080/csi/projdocs/forms/allitems.aspx>).

5.2.3.1.2. If the AF CSI Master List needs to be updated, contact AFLCMC/EZP (AFLCMC.EZPR.CSI339andDMSMS@us.af.mil).

5.2.3.2. Verify that the ESA response and attachments/enclosures in Part III is accurate, complete, and consistent with the information being requested in Part II.

5.2.3.3. For new or updated technical data packages, verify all applicable documents (SAW, EDL, EN, First Article, etc.) are complete and accurate.

5.2.3.3.1. Review all available associated engineering drawings, Advanced Drawing Correction Notices (ADCNs), Engineering Orders/Engineering Change Orders (EOs/ECOs) and request any missing documents.

5.2.3.3.2. Evaluate all pertinent documents indicated above for data restrictions (i.e. licensing agreements, distribution restrictions) and technical restrictions (i.e. CSI, hardness critical items, source control) which may affect the technical data package.

5.2.3.3.3. Compare drawings and specifications to EDL and ENs.

5.2.3.4. Request/initiate with appropriate personnel to ensure updates occur to all technical orders, technical and engineering data, as applicable.

5.2.3.5. If Air Force interest in the NSN is to be removed, initiate Acquisition Advice Code (AAC) "Y" per AFMCMAN 23-103, *Cataloging and Standardization*.

5.2.3.6. Document all man-hours expended providing response (engineer, engineering reviewer, equipment specialist, IM, production manager, etc.).

5.2.4. **CSI Policy.** USAF CSI Parts are managed in accordance with AFI 20-106, *Management of Aviation Critical Safety Items*. The USAF CSI Master List is managed by AFLCMC/EZP through the Product Support Engineering SharePoint. (<https://usaf.dps.mil/teams/21080/csi/projdocs/forms/allitems.aspx>). This list is regularly sent to DLA.

5.2.4.1. When the ESA responds to a 339 Request for Engineering Support, they shall ensure that the item is marked CSI or non-CSI in accordance with the USAF CSI Master List.

5.2.4.2. Items that the ESA believes should be CSI, should have both the NSN, P/N and approved sources (if available) for that item added to the USAF CSI Master List. It is also recommended that the ESA identify the specific features or processes that make the item CSI.

5.2.4.3. Unless authority is delegated IAW AFMCI 63-1201, the CE/LSE is responsible for determining whether an item is CSI and which features/processes are identified as critical. Contact AFLCMC/EZP (AFLCMC.EZPR.CSI339andDMSMS@us.af.mil) to make updates to the AF CSI Master List.

Figure 2. Val-Coor Request in IES.

Internal Data (Internal Information)
 Note to Users:
 Indicate Date, Name and Office Symbol when using internal comments fields below.
 Internal Data (Electronic Enclosures, Comments and EST data) will not be furnished to DLA with DLA FORM 339.

The Engineer may create a Validate and Coordinate Request by clicking the Create Val-Coor Request button. Data from the 339 will be copied to the new Val-Coor Request. The newly created request will automatically be owned by the user that created it and reside in the Validate and Coordinate Process New Val-Coor Record state.

Figure 3. Extended Engineering Effort in IES.

20. ENGINEERING SUPPORT EVALUATION (Check all applicable blocks)

a. Alternate Method of Support for subject NSN has been identified as follows: (See Block 22 for Details)

(1) Replacement Identified:
 NSN: or P/N: CAGE:

(2) Alternate Source/Replacement Item/Technical Data cannot be identified

(3) (a) Supply by next higher assembly/kit, NSN:

(b) Fabricate/Assemble from the following: (Click the plus (+) button below to add line entries for NSN, Unit Issue, and Quality)
 Fab From Tbl

Fab NSN	Fab U/I	Fab QTY
<input type="button" value=" (+)"/>		

(c) Support Through Cannibalization

b. The Alternate Offer has been:
 (1) Approved Disapproved (see Block 22 for Details) Conditionally Approved (see Block 22 for Details)

c. The ECP/Request for Waiver or Deviation has been:
 (1) Approved Disapproved (see Block 22 for Details) Conditionally Approved (see Block 22 for Details)

d. TDP Development/Validation/Screening status:
 (1) Enclosed Technical data is not available

e. Reverse Engineering Project Initiation has been:
 (1) Approved Disapproved (see Block 22 for Details)
 No. of Prototypes: Cost Estimate of Test: \$

Testing: ESA Outside Source (Describe tests to be performed in Block 22)

f. Reverse Engineering (Approval) has been:
 (1) Approved Disapproved (see Block 22 for Details) Conditionally Approved (see Block 22 for Details)

g. Contract Deliverables have been:
 (1) Contract Quality Requirements
 Approved Disapproved (see Block 22 for Details) Conditionally Approved (see Block 22 for Details)

(2) Testing Requirements
 Approved Disapproved (see Block 22 for Details) Conditionally Approved (see Block 22 for Details)

(3) Waiver of First Article Test or Production Lot Test
 Approved Disapproved (see Block 22 for Details) Conditionally Approved (see Block 22 for Details)

h. Miscellaneous Technical Requirements. (See block 22 for details)

i. Critical Application Item (CAI)/ Critical Safety Item (CSI) Challenge (See Block 19).

j. The Surplus Offer has been:
 (1) Approved Disapproved (see Block 22 for Details) Conditionally Approved (see Block 22 for Details) Approved Pending Testing (see Block 22 for Details)

k. **Extended Engineering** (See Block 22 for Details)

l. NSN Cancellation Authorized

m. Shelf Life Evaluation Completed

n. PQDR Issue Addressed/Resolved

C. McCauley von Hoffman, Major General
 Director, Logistics, Civil Engineering, Force
 Protection, and Nuclear Integration

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

- AFI 20-106, *Management of Aviation Critical Safety Items*, 25 Jan 2006
- AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*, 30 Apr 2020
- AFI 23-101, *Materiel Management Policy*, 22 Oct 2020
- AFI 33-322, *Records Management and Information Governance Program*, 23 Mar 2020
- AFI 63-101_20-101, *Integrated Life Cycle Management*, 30 Jun 2020
- AFMAN 63-143, *Centralized Asset Management Procedures*, 18 Dec 2020
- AFMCI 21-100, *Depot Maintenance Management*, 07 Jun 2022
- AFMCI 23-110, *Post-Award Part Verification and Approval*, 03 Apr 2020
- AFMCI 23-113, *Pre-Award Qualification of New or Additional Parts Sources and the use of the Source Approval Request (SAR)*, 31 Mar 2020
- AFMCI 63-1201, *Implementing Operational Safety, Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE)*, 28 Mar 2017
- AFMCMAN 23-103, *Cataloging and Standardization*, 17 Jun 2021
- AFSCMAN 21-102, *Depot Maintenance Management*, 5 Apr 2021
- DAFI 21-101, *Aircraft and Equipment Maintenance Management*, 16 Jan 2020
- DAFI 61-201, *Management of Scientific and Technical Information (STINFO)*, 30 Nov 2020
- DAFMAN 90-161, *Publishing Processes and Procedures*, 15 April 2022
- DAFPAM 63-128, *Integrated Life Cycle Management*, 03 Feb 2021
- DoDI 4140.69, *Engineering Support Instructions for Items Supplied by Defense Logistics Agency (DLA)*, 30 Sep 2016
- DoDI 5230.24, *Distribution Statements on Technical Documents*, 23 Aug 2012
- MIL-STD 882, *DoD Standard Practice: System Safety*, 11 May 2012
- MIL-STD 31000, *Technical Data Packages*, 05 Nov 2009
- MIL-STD 38784, *General Style and Format Requirements for Technical Manuals*, 16 Nov 2020
- TO 00-5-3, *AF Technical Order Life Cycle Management*, 09 Sep 2021
- TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies and Procedures*, 25 Jun 2021
- TO 00-20-2, *Maintenance Data Documentation*, 22 Jul 2021
- TO 00-20-14, *AF Metrology and Calibration Program*, 28 Feb 2022
- TO 33K-1-100-1, *Calibration Procedure -- Maintenance Data Collection Codes and Calibration Measurement Summaries*, 03 Dec 2021

Prescribed Forms

AFMC Form 202, *Engineering Technical Assistance Request*

Adopted Forms

AFMC Form 761, *AMC/AMSC Screening Analysis*

AFTO Form 95, *Significant Historical Data*

AFTO Form 252, *Technical Order Publication Change Request*

AFTO Form 781, *Maintenance Data Documentation Series*

DAF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*

DAF Form 847, *Recommendation for Change Publication*

DoD Form 1574, *Serviceable Tag – Materiel*

Abbreviations and Acronyms

AAC—Acquisition Advice Code

ADCN—Advanced Drawing Correction Notice

AFLCMC—Air Force life Cycle Management Center

AFMC—Air Force Materiel Command

AFNWC—Air Force Nuclear Weapons Center

AFRIMS—Air Force Records Information Management System

AFRL—Air Force Research Laboratory

AFSC—Air Force Sustainment Center

AFTC—Air Force Test Center

AMC—Acquisition Method Code

AMSC—Acquisition Method Suffix Code

BEE—Bio-Environmental Engineering

CAI—Critical Application Item

CE—Chief Engineer

CLS—Contractor Logistics Support

CSI—Critical Safety Item

DE—Disposition Engineer

DEA—Delegated Engineering Authority

DHA—Demand History Adjustment

DLA—Defense Logistics Agency

DoD—Department of Defense

DoDI—Department of Defense Instruction
EAA—Engineering Approval Authority
ECD—Estimated Completion Date
ECO—Engineering Change Order
EDL—Engineering Data List
EO—Engineering Order
ERT—Elapsed Resolution Time
ES—Equipment Specialist
ESA—Engineering Support Activity
ETAR—Engineering Technical Assistance Request
ETIMS—Enhanced Technical Information Management System
FAT—First Article Test
FDO—Foreign Disclosure Office
FMS—Foreign Military Sales
HCI—Hardness Critical Item
IAW—In Accordance With
IES—Integrated Engineering Support
IET—Industrial Engineering Technician
IM—Item Manager
IPB—Illustrated Parts Breakdown
JON—Job Order Number
LCSE—Life Cycle Systems Engineering
LSE—Lead System Engineer
MAJCOM—Major Command
MDS—Mission Design Series
MMAC—Materiel Management Aggregation Code
MS—Maintenance Supervisor
NDI—Non-Destructive Inspection
NHA—Next Higher Assembly
NSN—National Stock Number
OPR—Office of Primary Responsibility
OSS&E—Operational Safety, Suitability and Effectiveness

PBL—Performance Based Logistics
PCR—Publication Change Request
PDF—Portable Document Format
PDM—Programmed Depot Maintenance
PE—Production Engineering
PGM—Product Group Manager
PM—Program Manager
PSE—Product Support Engineering
QA—Quality Assurance
SH PCR—Special Handling Publication Change Request
SICA—Secondary Inventory Control Activity
STINFO—Scientific and Technical Information
TCM—Technical Content Manager
TCTO—Time Compliance Technical Order
TDP—Technical Data Package
TMS—Type/Model/Series
TO—Technical Order
TODO—Technical Order Distribution Office
TOMA—Technical Order Manager
TTR—Total Technical Resolution
WCD—Work Control Document
WUC—Work Unit Code

Office Symbols

AFLCMC/EZP—Product Support Engineering
HQ AFMC/A4/10—HQ AFMC Directorate of Logistics, Civil Engineering, Force Protection, and Nuclear Integration
HQ AFMC/A4/A10—EN—HQ AFMC Division of Engineering, Technology, and Technical Policy

Terms

Alternate Source—An offeror (Government or Contractor) other than the Prime Contractor or Original Equipment Manufacturer to provide the identical part numbered item.

Approved Source—Any supplier who has been approved by the cognizant engineering organization(s) to supply parts manufactured to the original specifications of the item.

Authority—The legitimate right or power of an individual to make determinations or direct actions within the scope of the position to achieve specific objectives. Assigned persons are responsible to exercise their authority to accomplish the assigned task(s).

Blanket Authority—Extended use of an ETAR to authorize use of substitute parts, support equipment or procedures on all jobs worked during a specified period of time, not to exceed 120 calendar days per approved ETAR.

Chief Engineer (or Designee)—The CE for any system is the individual designated as the CE per AFMCI 63-1201 and has ultimate cognizant technical authority responsibility for that system. The CE may designate an individual(s) to assist with the approval of ETAR requests. This (these) designee(s) shall be designated by name in writing annually.

Computer Software—Computer programs, source code, source code listings, object code listings, design details, algorithms, processes, flow charts, formulae and related materials that would enable the software to be reproduced, recreated, or recompiled. Computer software does not include computer data bases or computer software documentation.

Contractor-Managed Depot—Depot level maintenance performed by a government depot capability while the engineering responsibility (for ETARs) resides with a contractor under the terms and conditions of the government contract.

Critical Application Item (CAI)—An item that is essential to weapon system performance or operation, for the preservation of life or safety of operating personnel, as determined by the engineering activity(s). The subset of CAIs whose failure could have catastrophic or critical safety consequences (Category I or II as defined by MIL-STD-882) is called CSIs.

Critical Safety Item (CSI)—CSIs are a sub-set of CAIs. A part, assembly, installation equipment, launch equipment, recovery equipment, or support equipment for an aircraft or aviation weapons system that contains a characteristic for which any failure, malfunction, or absence could cause a catastrophic or critical failure resulting in the loss or serious damage to the aircraft or weapons system; an unacceptable risk of personal injury or loss of life; or an uncommanded engine shutdown that jeopardizes safety.

Depot Level Maintenance—The level of maintenance consisting of those on- and off-equipment tasks performed using highly specialized skills, sophisticated shop equipment, or special facilities of an ALC, centralized repair activity, contractor facility, or, in some cases, by field teams at an operating location. Maintenance performed at a depot also includes those field-level tasks required to prepare for depot maintenance, and, if negotiated between the depot and the operating command, scheduled field-level inspections, preventative maintenance or TCTOs which come due while equipment is at the ALC for Programmed Depot Maintenance (PDM).

Disposition Engineer—Cognizant engineer (weapon system, maintenance, production, etc.) with the specific delegated authority to develop the ETAR engineering disposition.

Distribution Statement—A statement used in marking a technical document, regardless of publication media or form, to denote the extent of its availability for distribution, release, and disclosure without additional approvals and authorizations from the controlling DoD office. Distribution statements shall be marked in accordance with DAFI 61-201.

DLA Engineering Support Request—Previously known as DLA Form 339, used to obtain engineering support for standardization for DLA managed items supplied to the services/agencies.

Categories of engineering support supplied and Decision Support Center/service/agency responsibilities are defined in General Services Administration Revision Control System DoD-DLA (A) 259(s) and DoDI 4140.69, *Engineering Support Instructions for Items Supplied by DLA*.

Elapsed Resolution Time—Is the cumulative time for all MX initiated (A time), engineering dispositions (B time), MX coordination/approval (C time), and calculated maintenance time (D time) for a given MX incident (PDM-tail# or item). ERT is calculated from the MX initiation (first 202) start date to the final MX coordination/approval date. An ERT consists of two or more 202 cycles (i.e. follow-on submissions). ERT is not calculated for Repeat ETARs.

Figure A1.1. Elapsed Resolution Time.—

$$\text{Example: } \text{ERT} = \sum_{n=1}^{R+1} A_n + B_n + C_n + D_n = 55 \text{ calendar days}$$

where R = Number of follow-on submissions

$A_1 = 2$ calendar days, $B_1 = 5$ calendar days, $C_1 = 1$ calendar day, $D_1 = 15$ calendar days

$A_2 = 1$ calendar day, $B_2 = 4$ calendar days, $C_2 = 1$ calendar day, $D_2 = 30$ calendar days

$A_3 = 1$ calendar day, $B_3 = 4$ calendar days, $C_3 = 1$ calendar day, D_3 is unknown (0 days)

Alternately: $\text{ERT} = \text{Calendar Days} [\text{Date } (C_3 \text{ complete}) - \text{Date } (A_1 \text{ start})]$

Engineering Support—Engineering and technical assistance, including, but not limited to: developing, validating and approving TDPs; developing and reviewing engineering criteria; representing the military service engineering interests; and providing technical guidance and decisions required in the management and procurement of an item for its entire life cycle.

Engineering Support Activity (ESA)—The organization/individual designated to provide engineering or technical assistance, including the development of technical data and engineering criteria, engineering representation, guidance, and decisions.

Engineering Support Activity Focal Point—Entry and exit point(s) for requests for engineering support within the Air Force.

Engineering Technical Assistance Request (ETAR)—The document and process for maintenance organizations to request and receive disposition instructions, from the cognizant engineering organization, when published technical data is inadequate for the task at hand.

Extended Engineering Effort—A request for engineering support that requires the use of dedicated resources to work a defined requirement, has a clearly specified end product, and incurs a one-time negotiated charge.

Field-Level Maintenance—On- or Off-Equipment maintenance performed at an operating location. Field maintenance includes the traditional Organizational-level and portions of Intermediate level maintenance under the Two-level maintenance concept (the rest of intermediate-level maintenance is covered under depot level maintenance).

Follow-on—An ETAR request that has relationship to prior ETAR activity. A Follow-on is not a Repeat ETAR. The follow-on action provides for a parent/child relationship to be created between the prior ETAR and the new ETAR where the prior disposition action did not result in a final serviceable status and additional disposition instructions are required.

Item Unique Identification (IUID)—DoD program that that enables easy access to information about DoD possessions that make acquisition, repair, and deployment of items faster and more efficient to track. It is a permanent marking method used to give equipment a unique identification. Marking is essential for all equipment with an acquisition cost of over \$5,000, equipment which is mission essential, controlled inventory, serially-controlled, or consumable. Item Unique Identification-marking is a set of data for assets that is globally unique and unambiguous. Tangible items are distinguished from one another by the assignment of a unique identifier in the form of a unique data string and encoded in a bar code placed on the item. An item unique identifier is only assigned to a single item and is never reused. Once assigned to an item, the Item Unique Identification is never changed even if the item is modified or re-engineered. Refer to DoDI 5000.64 *Accountability and Management of DoD Equipment and Other Accountable Property*.

Materiel Management Aggregation Code (MMAC)—A two-position alphabetic code authorized to identify specific items (NSNs) to be managed by a specific manager. Materiel Management Aggregation Codes apply to systems, programs, aggregation to related equipment, and selected Federal Supply Class. Refer to Federal Logistics Information System (FLIS) Technical Procedures for available MMAC. (<https://www.dla.mil/HQ/LogisticsOperations/TrainingandReference/FLISProcedures/>)

Production Engineering—For the purposes of this AFMC Manual maintenance engineering is referred to as logistics support for depot maintenance repair facilities and provides plant facilities, equipment engineering, calibration, and installation support as required. Refer to AFSCMAN21-102, *Depot Maintenance Management*.

Planner—Persons (typically GS0895, IETs) responsible for development, preparation, revision, coordination and accuracy of technical content of WCDs. Reviews/updates/maintains files of WCD change requests, and maintain documentation for AFMC. Refer to AFSCMAN21-102, *Depot Maintenance Management*.

Project Manager/Program Manager—The PM/PGM is the senior individual responsible and accountable for management of a weapon system or sub-systems. PM/PGM refers to Product Group Manager which has engineering and programmatic responsibility for the discrepant item. Refer to AFMCI 63-1201, *Implementing Operational Safety, Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE)*.

Repeat—A Repeat is not a Follow-on ETAR. A repeat is an approved ETAR for a particular weapon system or item. Unless intended to be temporary, these ETAR dispositions are candidates for incorporation to future TO changes.

Reverse Engineering—The process of examining an item to determine its function, material composition, construction, and its electrical, physical, and environmental requirements for the

development of a TDP adequate for procurement. The output of the reverse engineering project will be a TDP for an item that has the same form, fit, and function of the original item.

Systems Engineering—Comprises the scientific, technical, and managerial efforts needed to define/refine requirements, develop, test, verify, deploy, support, sustain and dispose of a product, platform, system, or integrated System-of-Systems/Family-of-Systems capability to meet user needs. SE may be referred to as a discipline, a methodology, an approach, a practice, a process, a set of processes and sub-processes, or various other terms; however, its fundamental elements – systematic technical and managerial processes and measurements – remain the same regardless of the collective nomenclature. Refer to AFMCI 63-1201, *Implementing Operational Safety, Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE)*.

Technical Content Manager (TCM)—The individual, usually an Equipment Specialist (ES) or Engineer, responsible for maintaining the accuracy, adequacy, modification, classification, review, and currency of the technical content of TOs and TCTOs supporting assigned systems, commodities or processes. Refer to TO 00-5-3, *Air Force Technical Order Life Cycle Management*.

Technical Data—Recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation). The term does not include computer software or data incidental to contract administration, such as financial and/or management information.

Technical Data Package—A technical description of an item adequate for supporting an acquisition strategy, production, engineering, and logistics support. The description defines the required design configuration or performance requirements, and procedures required to ensure adequacy of item performance. It consists of all applicable technical data such as models, drawings, associated lists, specifications, standards, patterns, performance requirements, QA provisions, computer software documentation and packaging details.

Technical Order Distribution Account (TODA)—An authorized technical order distribution activity serviced by the TODO and assigned as a sub-account of the TODO.

Technical Order Distribution Office (TODO)—The office or individual responsible for providing TO account administrative services for a unit or activity. These services will include consolidation and submission of subscription requirements and one-time requisitions for TOs/TO updates, receipt and distribution of TOs to unit or activity TO library custodians and oversight of TO library operations.

Test, Measurement, and Diagnostic Equipment (TMDE)—Devices used to maintain, evaluate, measure, calibrate, test, inspect, diagnose, or otherwise examine materials, supplies, equipment, and systems to identify or isolate any actual or potential malfunction, or decide if they meet operational specifications established in technical documents.

Time Compliance Technical Order (TCTO)—Authorized method of directing and providing instructions for modifying equipment, and performing or initially establishing one-time inspections.

Total Technical Resolution—Is the cumulative time for all MX initiated (A time), engineering dispositions (B time), and MX coordination/approval (C time) for a given MX incident (PDM-tail# or item). TTR is calculated from the MX initiation (first 202) start date to the final MX

coordination/approval date. A TTR consists of two or more 202 cycles (i.e., follow-on submissions). TTR is not calculated for Repeat ETARs.

Figure A1.2. Total Technical Resolution.—

$$\text{Example: TTR} = \sum_{n=1}^{R+1} A_n + B_n + C_n = 20 \text{ calendar days}$$

where R = Number of follow-on submissions

$A_1 = 2$ calendar days, $B_1 = 5$ calendar days, $C_1 = 1$ calendar day

$A_2 = 1$ calendar day, $B_2 = 4$ calendar days, $C_2 = 1$ calendar day

$A_3 = 1$ calendar day, $B_3 = 4$ calendar days, $C_3 = 1$ calendar day

Work Control Document (WCD)—The official record for (depot) work including control, identification, certification, and routing of items. It is an instruction document summarizing sequenced steps and the TO references for processing the item. WCDs are developed by authorized planner/IET IAW approved technical data. The WCD is the record documenting that the task was performed by certified technicians IAW authorized technical data. The WCD is not considered technical data. Refer to AFSCMAN21-102, *Depot Maintenance Management*.