

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

**AIR FORCE MATERIEL COMMAND  
INSTRUCTION 21-112**



**11 DECEMBER 2018**

**Maintenance**

**REPAIR OF AIRCRAFT ENGINE  
CRITICAL PARTS**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This Instruction implements AFD 21-1, *Managing Aerospace Equipment Maintenance*. It gives policy and instruction for the repair of aircraft engine critical parts. These policies/instructions shall form the framework for a secure and reliable operation of aircraft engines, develop an AFMC critical parts repair program, develop repair techniques and establish repair sources. It is applicable to any organization which is managing Critical Application Items (CAIs) and Critical Safety Items (CSIs). This instruction does not apply to the Air National Guard or US Air Force Reserve units and members. This publication may not be supplemented at any level. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847 from the field through the appropriate functional chain of command. Submit requests for waivers through the chain of command to this Publication OPR for non-tiered compliance items. See **Attachment 1** for a glossary of references and supporting information. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items.

## ***SUMMARY OF CHANGES***

This document has been substantially revised and must be completely reviewed. Changes include establishing repair qualification requirements; evaluating source approval packages; roles and responsibilities; and Source Approval Request Package Generation and Review Process. Additionally, 7 attachments were included to support the revised document. They include justification for qualification requirements; qualification requirement cost estimate; sample repair qualification requirement; purchase orders and shipping documents'; sample SAR review checklist; along with common use item coordination sheet and instructions.

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### **1. Objectives:**

1.1. This instruction provides the procedures for qualification of new repair sources to ensure requests are submitted with complete information and are evaluated thoroughly and consistently. Procedures are being provided to formalize the activities for ensuring appropriate responsible technical oversight of the repair source qualification process within AFMC.

1.2. Additionally, this instruction provides the procedures for development of new repairs when the cost of repairing a used part would be significantly lower than the cost of buying a new part. Note that the Engineering Support Activity (ESA) must ensure that all repairs maintain airworthiness of the air system to which they are applicable per the air system airworthiness certification.

### **2. Policy.** It is AFMC policy that:

2.1. The need to identify additional sources to increase competition is a direct outcome of the screening process described in the Defense Federal Acquisition Regulation (DFARS), PGI 217.7506 *Spare Parts Breakout Program* as implemented through AFI 23-101, Section

2K, *Spare Parts Breakout Program*. When the ESA identifies qualifications of a new and/or additional source as a requirement, qualification requirements must be generated. A qualification requirement waiver must be generated when it is determined unreasonable to specify the standards for qualification which a prospective offeror (or its product) must satisfy.

2.2. **Repair Development. Note:** For Federal Aviation Administration (FAA) type certified engines, each program will determine the applicability of the following policy.

2.2.1. Repairs should only be developed in instances where the cost to perform the repair does not exceed the beyond economical repair (BER) limit established in TO 00-20-3, *Maintenance Processing of Reparable Property and the Repair Cycle Asset Control System*. The exception to this rule is when there is a need for immediate support in order to maintain an acceptable level of War Readiness Engines (WRE).

2.2.2. Repairs will not be developed that reduce the life remaining of the item.

2.2.3. Original Equipment Manufacturer (OEM) Routine Repair Development. The OEM under Air Force (AF) direction as part of the Component Improvement Program (CIP) or other appropriate contract, performs routine engine part repair development.

2.2.3.1. The OEM will typically develop all required technical data for the repair including: repair procedures, spare parts drawings (SPD), and any special tooling required to perform the repair.

2.2.3.2. During the repair development process the United States Air Force (USAF) will coordinate with the OEM on all aspects of the repair. Early in the process the USAF should conduct a repair concept review. This review should at the minimum cover: the sequence of operations, tooling, SPD concept, unique facilities requirements, qualification criteria, program cost projections, projected validation, and qualification date.

2.2.3.3. The USAF will determine if the repair should be performed organically or via contractor.

2.2.3.4. Finalized OEM repair development will result in a fully validated, verified, and qualified repair that may be performed by either organic or contract repair facilities (**T-3**).

2.2.4. Non-OEM Contract Repair.

2.2.4.1. There are two types of non-OEM contract repair: those that a non-OEM repairer has already developed and fielded into a real world operations environment (pre-developed repair) and those that the USAF has a need for but have not been developed (developing repair).

2.2.4.1.1. Pre-Developed Repair.

2.2.4.1.1.1. Potential repair sources may submit an unsolicited pre-developed repair Source Approve Request (SAR) In Accordance With (IAW) the Repair Qualification Requirements (RQR) assigned to a part if all of the following requirements have been satisfied:

2.2.4.1.1.1.1. The repair has been fully validated and verified.

2.2.4.1.1.1.2. The repair has been successfully performed on regular production parts.

2.2.4.1.1.1.3. Parts that have undergone the repair have had sufficient operational experience, including either Accelerated Mission Testing (AMT) or field operational use.

2.2.4.1.1.2. Pre-developed repair SAR packages will be submitted as Category IV (see [paragraph 2.5.4](#)).

#### 2.2.4.1.2. Developing Repair.

2.2.4.1.2.1. When a repair requirement is established by the USAF for a non-OEM contractor, the ESA will develop a requirement detailing the desired repair and qualification testing necessary. The desired repair will then be advertised to the general public along with qualification requirements detailing how a new source may become qualified (**T-3**).

2.2.4.1.2.2. Any contractors that think they have a repair, or could develop a repair, that will satisfy the need by the USAF will submit a SAR IAW with the RQR referenced in the advertisement. The ESA will then assess the contractor SAR packages per the RQR utilizing the checklist found at the following [SharePoint site: https://org2.eis.af.mil/sites/22010/LPSE/Source%20Approval%20Request%20Training/Forms/AllItems.aspx](https://org2.eis.af.mil/sites/22010/LPSE/Source%20Approval%20Request%20Training/Forms/AllItems.aspx). Developing Repair SAR packages will be submitted as Category V (see [paragraph 2.5.5](#)).

2.2.4.1.2.3. Upon completion of the repair development and qualification the ESA will modify Technical Order (TO) as required to add new repair data. In the event that the repair results in a proprietary process, the TO will be updated with the Commercial and Government Entity (CAGE) of the vendor that the parts should be sent to for repair (**T-3**).

2.2.4.1.2.4. Finalized non-OEM repair development will result in a fully validated, verified, and qualified repair that may be performed by an approved contract repair facility.

2.2.5. At the discretion of the USAF ESA, qualification of a repair may be accomplished through demonstration, analysis, inspection, or testing. The extensiveness of the repair and prior history of performing similar repairs will be taken into account by the ESA when determining the level of qualification. As determined by the ESA, qualification of the repair may be performed by the following methods:

2.2.5.1. Similarity: Little to no testing performed to qualify the repair. This method should only be used for repairs that the ESA has extensive experience with, or for repairs that have been previously qualified on common items between engine platforms.

2.2.5.2. Component Test: Testing that may include bench testing, destructive laboratory testing, and/or non-destructive laboratory testing.

2.2.5.3. Engine Test: The most extensive and expensive qualification method. Engine test may include: Test Cell Runs, Fielded Engine Operation, or AMT.

### 2.3. Establishing repair qualification requirements.

2.3.1. **Figure 1** describes the process to generate repair qualification requirements.

2.3.2. The ESA will establish the repair qualification requirements for potential parts being considered. The repair qualification requirements will be IAW FAR 9.2 Qualification Requirements and DoD 4120.24-M, *Defense Standardization Program, Policy and Procedures*. Repair qualifications requirements will be documented as described in **Attachment 2**, *Justification for Repair Qualification Requirements*.

2.3.2.1. If it is reasonable to develop or specify the standards for qualification which a prospective offeror or its product must satisfy, the ESA will prepare repair qualification requirements.

2.3.2.1.1. The waiver process is available when qualification is required and it is unreasonable to develop or specify the standards for qualification which a potential source (PS) or its product must satisfy. Prepare waivers IAW FAR 9.202(b) and document as described in **Attachment 4**.

### 2.4. Evaluating source approval packages.

2.4.1. The process depicted in **Figure 1** describes the cycle for qualification requirements generation by the ESA, and **Figure 2** describes the subsequent evaluation and disposition of the resultant SAR submitted by a PS. SARs received from PSs for items not in active solicitation are processed through the Small Business Office (SB) and those received against active solicitations are processed through the Procurement Contracting Officer (PCO).

2.4.2. The ESA will evaluate the repair SARs for PSs being considered.

2.4.3. A PS seeking approval as a qualified source must meet the specified source qualification requirements established by the ESA. The PS must meet all qualification requirements before the date specified for award of the contract. PSs, at their own expense, with exceptions noted in FAR 9.204(a) (2), will be given an opportunity to demonstrate their abilities to meet the established qualification requirements (**T-3**).

2.4.4. Common items used in multiple systems must have the coordination of all users, unless that ESA has the documented delegated authority, as required by AFMCI 63-1201, *Implementing Operational Safety Suitability and Effectiveness, (OSS&E) and Life Cycle Systems Engineering (LCSE)* of the users, including the other services. If all AF users approve SAR but other services do not, then a separate National Stock Number (NSN) shall be initiated for AF use only, at the discretion of the ESA and program manager (PM).

2.5. **Source Approval Categories:** There are five categories under which SARs will be submitted:

2.5.1. ACTUAL ITEM (Category I): This category covers PSs who manufacture or repair the exact (Subject) item, using OEM technical data, for the prime contractor, OEM, another service, civil agencies, foreign governments, or for the civil sector under FAA. Category I applies to CSI and CAI. The item will be repaired and evaluated against the ESA approved technical data.

2.5.2. SIMILAR ITEM (Category II): This category covers the PSs who have not previously repaired the subject item, but have repaired other items similar in complexity, design, criticality, industrial processes, materials, and application for the prime contractor, OEM, another service, civil agencies, foreign governments or for the civil sector under FAA. Category II applies to CSI and CAI. The item will be repaired and evaluated against the ESA approved technical data.

2.5.3. NEW REPAIRER OF ITEM (Category III): This category covers the PSs who do not meet Category I or II criteria, but have the legal access to the OEM's technical data and intends to repair to the ESA approved technical data with the same part number. Category III applies to CAI only and cannot be used for CSI. The item will be repaired and evaluated against the ESA approved technical data (T-3).

2.5.4. PRE-DEVELOPED REPAIR (Category IV): This category applies only to repairs that are not already in established USAF technical data for the Type Model Series (TMS) in which the repair is proposed. This category covers unsolicited SAR submittals by PSs who have a previously developed repair that has met the requirements from [paragraph 2.2.4.1.1](#). Category IV applies to both CSI and CAI.

2.5.5. DEVELOPING REPAIR (Category V): This category applies only to repairs that are not already in established USAF technical data for the TMS in which the repair is proposed. This category covers the PSs who have a repair, or could develop a repair, that will satisfy the need of the USAF IAW an advertised requirement. PS approval of a Category V SAR may still require repair verification, validation, and testing prior to complete approval of PS as an approved source (see [paragraph 2.2.4.1.2](#)). Category V applies to both CSI and CAI.

### 3. Responsibilities:

#### 3.1. HQ AFMC/A4:

3.1.1. Serves as the AFMC OPR for the SAR process for AFMC.

3.1.2. Prepares, coordinates, and issues SAR policy consistent with AF and DoD efforts and ensures processes and procedures are implemented within AFMC.

3.1.3. Coordinates SAR efforts with other DoD activities, federal agencies, and industry.

#### 3.2. Weapon System Program Manager (PM):

3.2.1. Responsible for OSS&E implementation, execution, and assurance for their system(s)/end-item(s) as assigned/applicable; may delegate OSS&E authority per AFI63-101/20-101, *Integrated Life Cycle Management*, and AFMCI63-1201.

3.3. **Engineering Support Activity (ESA):** The ESA is the Chief Engineer (system or item) and Subordinate Lead Engineers/System Engineers delegated with OSS&E authority/responsibility from the PM.

3.3.1. All repairs shall comply with airworthiness IAW: AFI 62-601, AWB-330, and MIL-HDBK-516 (latest version).

3.3.2. Determines the need for establishing a repair qualification requirement per FAR 9.204(a) and prepares the justification for qualification requirements statement per [paragraph 4](#).

3.3.3. Establishes the repair qualification requirements for potential parts being considered.

3.3.4. If unreasonable to specify repair qualification requirements, a two year request for waiver of qualification requirement can be made using **Attachment 4** as a guideline.

3.3.5. Evaluates the SAR packages and estimates the costs for testing and evaluation which a PS will incur to become qualified using **Attachment 3** as a guideline.

3.3.6. Coordinates approval of new sources with other weapon systems or services prior to approval of the SAR.

3.3.7. Provides SAR evaluation response to SB or PCO within timeline established in **paragraph 4**.

3.3.8. Update Contract Repair Screening Analysis Worksheet per **paragraph 4**.

#### **3.4. The Procurement Contracting Officer (PCO):**

3.4.1. Receives SAR packages for active solicitations and process per **paragraph 4**.

3.4.2. If notified by PM about timeliness of need, ensures contracts are not delayed for pending SAR package evaluation per FAR 9.202(e) (T-3).

#### **3.5. Small Business Office (SB):**

3.5.1. IAW AFI 90-1801, *Small Business Programs*, the Source Development Specialist (SDS) manages the source development program for the center to which they are assigned.

3.5.2. Acts as the primary liaison with industry on all SAR proposal packages that are not in active solicitation. The receipt of a SAR proposal package from industry is the starting point in the process.

3.5.3. Reviews the non-technical aspects of any SAR proposal package received.

3.5.4. Notifies the PS if approved. If disapproved, notifies the PS and provide reasons for disapproval.

3.5.5. Notifies established sources of a loss in qualification status per **paragraph 4**.

3.5.6. If a SAR proposal package is received against an active current acquisition, the SDS will forward the SAR proposal package to the PCO for disposition.

3.5.7. The SDS monitors SARs, participates in source development surveys and market surveys (not to be confused with a Market Research Report which is a joint effort performed by the ESA, PM, Item Manager, Equipment Specialist, Buyer/PCO and SDS), to include the initiation of sources sought synopses.

3.5.8. Upon request by a prospective source/offeror, the SDS explains the qualification process, provides the repair qualification requirements as prescribed by the ESA, and disseminates the resultant SAR proposal packages. The checklist located at <https://org2.eis.af.mil/sites/22010/LPSE/Source%20Approval%20Request%20Training/Forms/AllItems.aspx> may be utilized as a sample SAR format for prospective sources/offerors.

#### **3.6. Competition Advocate:**



3.6.1. IAW FAR 9.202(b) the Competition Advocate shall review all requests for waiver of the qualification requirements and provide comments to the Head of the Procuring Agency (HPA) or delegated representative.

3.6.2. At the request of SB, review the justification for disapproved SARs.

3.6.3. Per AFFAR MP5306.502, Air Force Competition and Commercial Advocacy Program, tracks competition data to ensure center competition goals, including the objectives of this policy, are met and reported to HQ AFMC on an annual basis.

**3.7. Strategic Alternate Sourcing Program Office (SASPO):**

3.7.1. Per FAR 9.204(a)(1), ensures that a notice seeking additional sources for qualification is periodically published in Federal Business Opportunities (FedBizOpps).

3.7.2. Maintains a record of each publication from [paragraph 3.7.1](#).

**4. Procedures:**

4.1. The ESA will determine the need for establishing a repair qualification requirement per FAR 9.204(a) and prepare the justification for qualification requirements statement using [Attachment 2](#) as a guideline.

4.1.1. Justification for repair qualification requirements will be reviewed by the competition advocate and comments forwarded to the Chief of the Contracting Office.

4.1.2. Justification for repair qualification requirements will be approved by the Chief of the Contracting Office and the Chief Engineer.

4.2. The ESA will establish the repair qualification requirements for potential parts being considered using [Attachment 5](#) as a guideline.

4.2.1. Only those repair qualification requirements which are least restrictive to meet the purposes necessitating the qualification requirements shall be specified.

4.2.2. Repair qualification requirements will be reviewed by the Competition Advocate and comments forwarded to the Chief of the Contracting Office.

4.2.3. Repair qualification requirements will be approved by the Chief of the Contracting Office and the Chief Engineer.

4.3. If unreasonable to specify the repair qualification requirements, the ESA will request a two year waiver of this requirement (for the development of the qualification requirements) using [Attachment 4](#) as a guideline. Reasons for the waiver may include:

4.3.1. Extensive design engineering effort to determine exact requirements.

4.3.2. Limited government technical expertise to determine exact requirements.

4.3.3. Design instability of the article.

4.3.4. The government does not possess either the data or the rights to the engineering data required to develop the repair qualification requirements and it is cost prohibitive to obtain those rights.



4.4. IAW FAR 9.202(b) on waiver requirements, the determination must be submitted first to the Competition Advocate for review and comment and then submitted for approval to the designated HPA or delegated representative.

4.5. The ESA will upload the qualification requirement or the waiver to the Purchase Request Processing System (PRPS).

4.6. If the ESA is planning to consider qualification by similarity, a comprehensive analysis of the differences and the similarities (as opposed to just the similarities) between the similar item/processes proposed by the PS versus the subject item/processes must be accomplished by the PS as a key element of the repair qualification requirements and must be evaluated subsequently by the ESA.

4.6.1. The comprehensive analysis of the SAR must contain a detailed engineering evaluation of the similar items/processes that is reasonably proportioned to the complexity of the subject item/processes.

4.6.2. Typical elements of such an analysis of the SAR include: design features including circuits, components, electrical characteristics, mechanical/physical characteristics, select-at-test components, characteristic-matched components, grounding, plating, composites, quality history, sub-assembly integration, manufacturing/repair (comparative capacity assessments, tooling analysis for both new and old, shop floor procedures, work instructions, and process control characteristics as well as how they're managed), test methodology and tested performance as well as form, fit, and function.

4.6.3. If correlating experience (qualification by similarity) is useful in determining a PS's ability to meet the repair qualification requirements, use the information in **Attachment 2** in the qualification justification to promote the use of Category II submissions. If no correlating experience is applicable, the PS must meet other source qualification requirements defined in **Attachment 2** through the use of Category I, III, IV, or V submissions.

4.7. The PCO will forward any source approval packages received in response to a solicitation directly to the ESA for processing. The PCO will also notify SB SDS and make available a copy of the SAR and final disposition, if requested.

4.8. The contracting officer shall follow FAR 9.202(c) if a PS meets the qualification requirements or can meet them before the date specified in the contract. Also, the contracting officer shall follow the FAR 9.202(e) procedures to not delay a proposed award in order to provide a PS with an opportunity to demonstrate its ability to meet the standards specified for qualification. If a PM determines that timeliness of the acquisition will not allow a delay for SAR proposal package evaluation, the PCO will document the supporting rationale in the contract file for that acquisition and provide notification back to SB for possible future requirements. The ESA shall continue with the engineering evaluation of the SAR proposal package and take the appropriate actions upon conclusion of the project (per **paragraph 4.14**).

4.9. If a SAR package is received for an item managed by another center, it must be forwarded to that center's SDS, and the responsibilities identified in **paragraphs 4.9.1** and **4.9.2** become the responsibility of the center which manages the item. For items managed by

a weapon system at a Product Center, the responsibilities identified in [paragraphs 4.9.1](#) and [4.9.2](#) would be the responsibility of the weapon system PM.

4.9.1. If a SAR proposal package is received against an active current acquisition, the SDS will forward the SAR proposal package to the PCO for disposition.

4.9.2. The SDS reviews the non-technical aspects of any SAR proposal package received to ensure compliance with submittal format, presence of relevant documentation and information, then forwards SAR proposal packages to the ESA for evaluation.

4.10. Upon receipt of a SAR, the ESA will evaluate and determine approval/disapproval of the potential source. The ESA will perform a comprehensive evaluation to determine if the PS complies with the repair qualification requirements.

4.10.1. The checklist provided in [Attachment 5](#), or tailored as approved by the ESA, will be used to ensure consistent and thorough evaluation of the SAR package.

4.11. Common use items require coordination and approval by the other weapon systems or services prior to source approval. A common use item coordination sheet can be found in the Joint Aeronautical Commanders Group - Aviation Critical Safety Item Management Handbook, Exhibit A.

4.12. Approval of new sources will be contingent upon the ESA's determination (as outlined in [paragraph 4.10.](#)) that the prospective source has satisfied the qualification requirements. In addition to comprehensive qualification testing, submittal of engineering data and evaluation of samples, typical repair qualification requirements may include but are not limited to the following elements:

4.12.1. Source demonstration.

4.12.2. Product verification testing.

4.12.3. Quality assurance measures.

4.12.4. Plant facility reviews and tooling inspection consistent with the new program requirements for Manufacturing Readiness Assessments (MRAs) and Manufacturing Readiness Levels (MRLs).

4.12.5. Form, fit, function and interface verification of a part.

4.13. If a decision on the manufacturer's request for approval cannot be provided within 30 days (60 days for items not on active solicitation), the ESA will provide a written response to the requestor (SB or PCO if there is an active solicitation) as to when the evaluation will be complete.

4.14. When the evaluation is complete, the ESA will provide a written response to the requestor as to the success or failure of the PS in meeting the repair qualification requirements. The ESA will also provide specific reasons for disapproval to the requestor.

4.15. Update of the Contract Repair Screening Analysis Worksheet (CRSAW) shall be accomplished by the ESA to add additional source(s) as a result of approval of SAR proposal packages.

4.16. The SDS will notify the PS if approved. If disapproved, notify the PS and provide reasons for disapproval.

4.17. Sources that were previously qualified and that now do not meet the repair qualification requirements will be advised of the reasons IAW FAR 9.207.

4.17.1. The ESA will provide SB a valid, documented reason for requesting removal of the source consistent with the repair qualification requirements.

4.17.2. SB will coordinate on the request and notify the source so that they may take action to become re-qualified. A copy of the notification letter, along with the attachments, will be forwarded to the Competition Advocate.

4.17.3. The ESA will provide the Production Management Specialist (PMS) with a copy of the source removal letter, after which the source will be removed from the CRSAW.

Figure 1. Source Approval Request Qualification Requirements Generation Process.

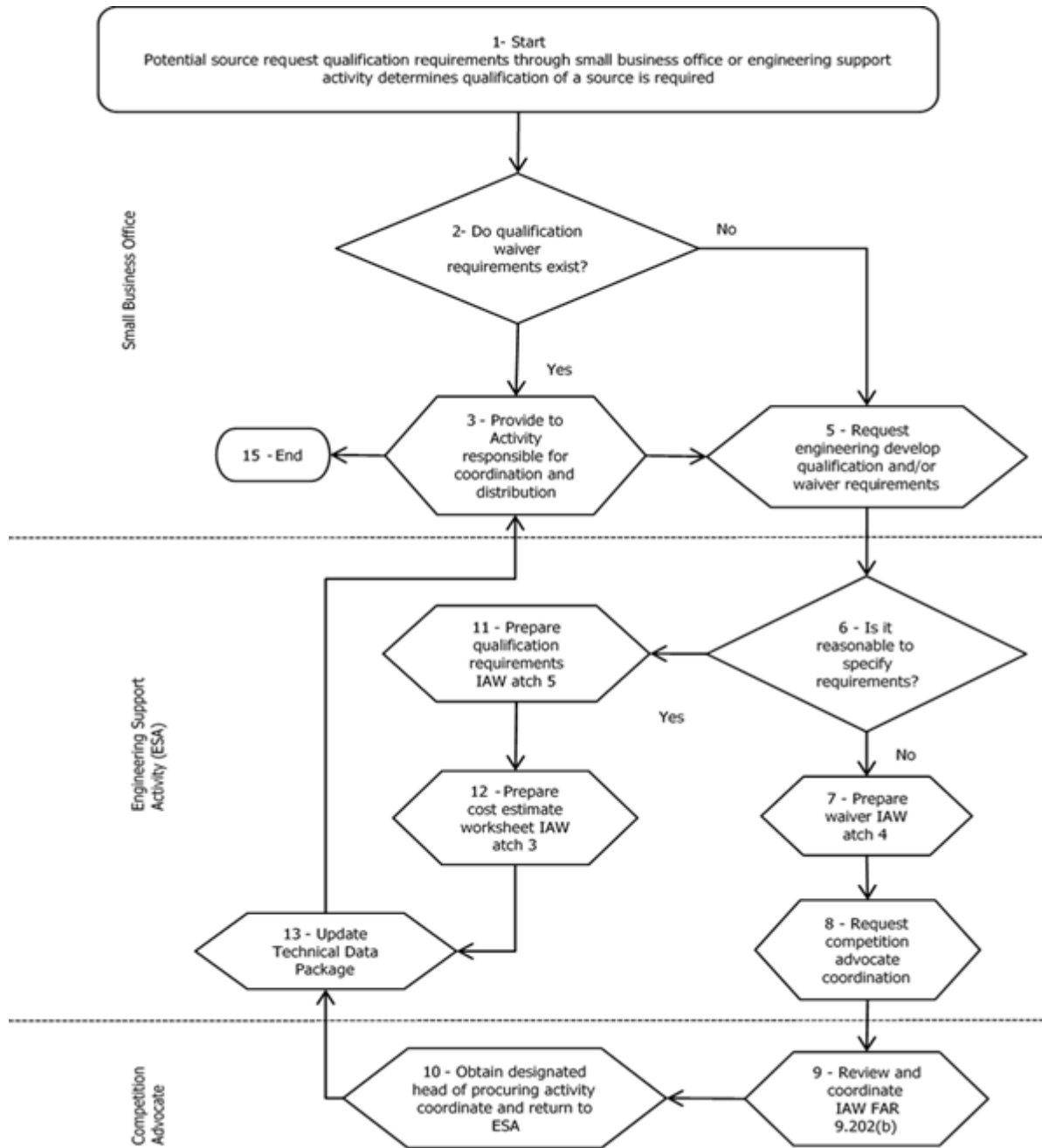
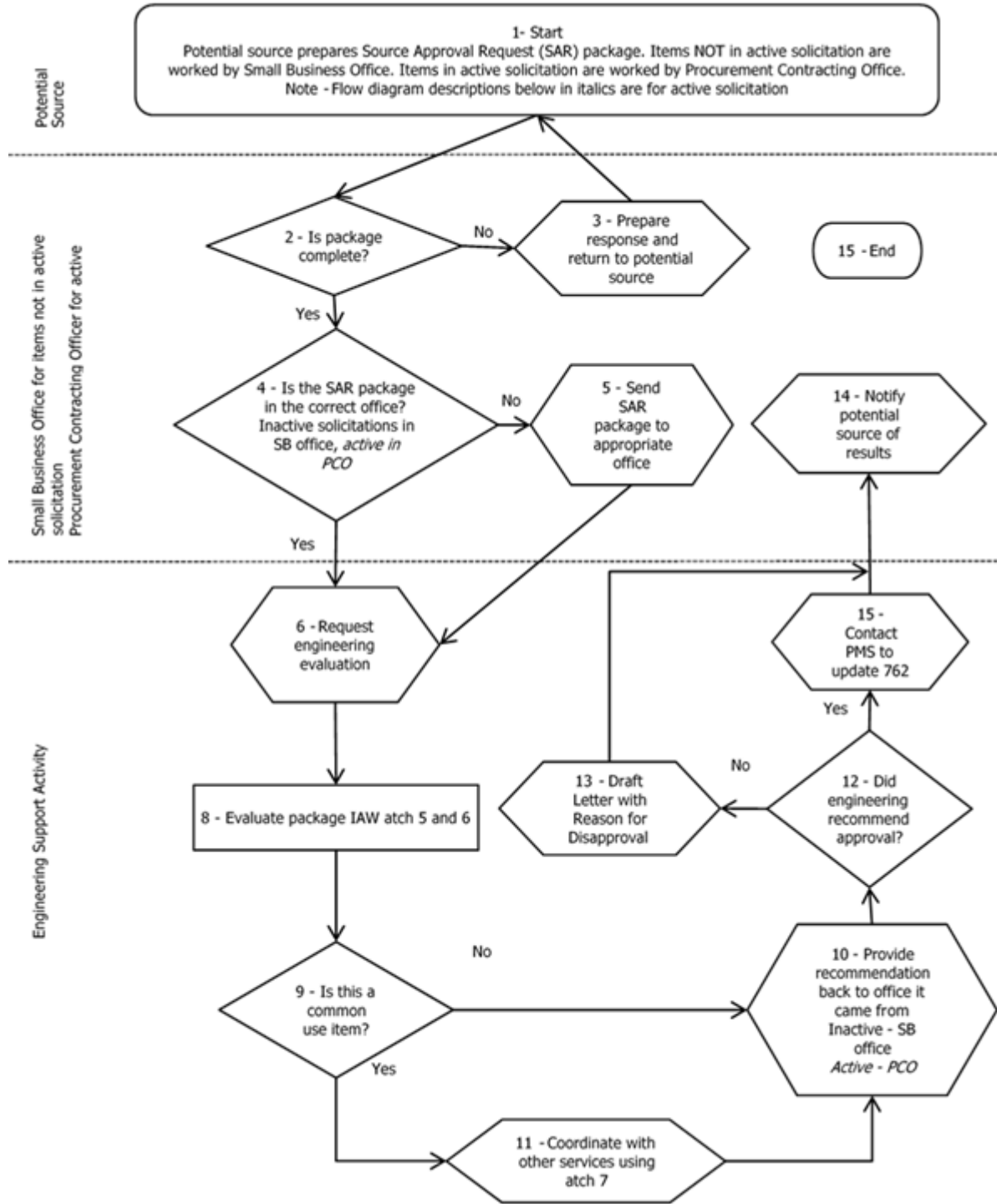


Figure 2. Source Approval Request Package Generation and Review Process.



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

Public Law 96-369, *Competition In Contracting Act of 1984*

10 U.S.C. 2304, *Contracts*

DoD 4120.24-M, *Defense Standardization Program, Policy and Procedures*, 13 December 2017

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AFMCI 63-1201, *Implementing Operational Safety Suitability and Effectiveness, (OSS&E) and Life Cycle Systems Engineering (LCSE)*, 28 March 2017

AFMC FAR Supplement Subpart 5309.2, *Qualifications Requirements*, 03 October 2017

TO 00-20-3, *Maintenance Processing of Reparable Property and the Repair Cycle Asset Control System*, 10 July 2017

MIL-HDBK-516 (latest version), *Airworthiness Certification Criteria*, 12 December 2014

***Prescribed Forms***

None

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

DD Form 250, *Materiel Inspection and Receiving Report*

***Abbreviations and Acronyms***

**AF**—Air Force

**AFI**—Air Force Instruction



**AFMC**—Air Force Materiel Command  
**AFMCI**—Air Force Materiel Command Instruction  
**AFMCPD**—Air Force Materiel Command Policy Directive  
**ALC**—Air Logistics Complex  
**AMT**—Accelerated Mission Testing  
**BER**—Beyond Economical Repair  
**CAGE**—Commercial and Government Entity  
**CAI**—Critical Application Item  
**Cat I**—Category I  
**CDRL**—Contract Data Requirement List  
**CIP**—Component Improvement Program  
**CSI**—Critical Safety Item  
**DFARS**—Defense Federal Acquisition Regulation Supplement  
**DoD**—Department of Defense  
**EMP**—Electromagnetic Pulse  
**ESA**—Engineering Support Activity  
**FAA**—Federal Aviation Administration  
**FAR**—Federal Acquisition Regulation  
**FedBizOpps**—Federal Business Opportunities  
**HPA**—Head of the Procuring Activity  
**HQ**—Headquarters  
**IAW**—In Accordance With  
**MAJCOM**—Major Command  
**MIL-HDBK**—Military Handbook  
**MRA**—Manufacturing Readiness Assessment  
**MRL**—Manufacturing Readiness Level  
**NSN**—National Stock Number  
**OEM**—Original Equipment Manufacturer  
**OPR**—Office of Primary Responsibility  
**OSS&E**—Operational Safety, Suitability and Effectiveness  
**PCO**—Procurement Contracting Officer  
**PM**—Program Manager

**PMS**—Production Management Specialist

**P/N**—Part Number

**PQDR**—Product Quality Deficiency Report

**PRPS**—Purchase Request Processing System

**PS**—Potential Source

**QWC**—Qualification Waiver Criteria

**ROMM**—Repair, Overhaul, Maintenance and Modification

**RQR**—Repair Qualification Requirements

**SAR**—Source Approval Request

**SASPO**—Strategic Alternate Sourcing Program Office

**SB**—Small Business Office

**SDS**—Source Development Specialist

**SPD**—Spare Parts Drawing

**TMS**—Type Model Series

**TO**—Technical Order

**UID**—Unique Identification

**USAF**—United States Air Force

**WRE**—War Readiness Engine

### *Terms*

**Acceptance Test** —A test conducted under specified conditions, by or on behalf of the government, using delivered or deliverable items in order to determine the item's compliance with specialized requirements.

**Actual Manufacturer** —An individual, activity, or organization that performs the physical material fabrication processes that produce the deliverable part or other items of supply for the Government. The actual manufacturer must produce the part in-house. The actual manufacturer may or may not be the design control activity.

**Approved or Qualified Source** —Any potential offeror which has satisfactorily furnished or has formally demonstrated the ability to meet the qualifications established for the spare parts or services, as determined by the responsible engineering activity. Note: A subcontractor, which has previously provided parts through a prime contractor, may be approved when it can be demonstrated that the subcontractor has the ability to meet the qualification requirements.

**Cognizant Engineer**—The chief or lead engineer as defined in AFMCI63-1201, *Implementing Operational Safety, Suitability and Effectiveness and Life Cycle Systems Engineering* policy or their delegated representative.

**Common Use Item**—A part, assembly, subsystem, or store used in different military aviation systems or that are unique to a specific aviation system used by multiple military services.

**Complete Current Configuration Drawings**—Complete set of the latest revision drawings including forging/casting data and all drawings referenced therein, when applicable.

**Correlating Experience (Qualification by Similarity)**—Previous experience in the manufacture and qualification of articles which can be correlated with the part being procured.

**Critical Application Item (CAI)**—An item, part, assembly, installation or production system that is essential to weapon system performance or operation, or the preservation of life or safety of operating personnel, as determined by the military services.

**Critical Characteristic**—Any feature throughout the life cycle of a Critical Item, such as dimension, tolerance, finish, material, or assembly, repair, manufacture or inspection process, operation, field maintenance, or depot overhaul requirement that if non-conforming, missing, or degraded may cause the failure or malfunction of the Critical Item.

**Critical Safety Item (CSI)**—An item, part, assembly, installation or production system with one or more critical or critical safety characteristics that, if missing or not conforming to the design data or quality requirements, would result in an unsafe condition that could cause loss or serious damage to the end item or major items, loss of control, uncommanded engine shutdown, or serious injury or death to personnel. Unsafe conditions relate to hazard severity categories I and II of MIL-STD-882, System Safety Requirements. The determining factor in CSIs is the consequence of failure, not the probability that the failure or consequence would occur.

**Data Certification (Certificate of Law)** —A certification statement on company letterhead signed by an authorized binding company official that states the said company has obtained the data by legal means and has the right to use the data for manufacturing purposes.

**Design Control Authority** —A contractor or government activity having responsibility for the design of a given part and for the preparation and updating of engineering drawings and other technical data for that part. The design control authorities within the product directorates are the weapon system engineers.

**Engine Critical Part** —Any part designated either CSI or CAI is considered engine critical.

**Engineering Support Activity (ESA)**—The ESA is the Chief Engineer for the item and/or system, and his/her delegated lead/system engineers having Operational Safety Suitability and Effectiveness (OSS&E) authority/responsibility. ESA and cognizant engineering authority are used interchangeably.

**Inspection Method Sheets**—Sheets used to document the inspection of items repaired. Sheets must be certified by an authorized representative empowered to comply with the inspection process.

**Inspection Procedures**—An outline of the step-by-step procedures used for the inspection.

**National Stock Number**—A 13-digit number assigned by the Defense Logistics Information Service (DLIS) to identify each item of material in the federal supply distribution system of the United States.

**Non-Conforming Material**—The failure of a unit or product to conform to specified requirements for any quality characteristic.

**Potential Source**—Any potential offeror who wants to be considered as a source of repair for a given part, but who has not yet been approved/disapproved. A source of this type would

normally be required to meet qualification requirements prior to contract award and may also be subjected to production inspection or surveillance if a contract is received.

**Prime Contractor**—A contractor having responsibility for design control and/or delivery of a system/equipment such as aircraft, engines, ships, tanks, vehicles, guns and missiles, ground communications and electronics systems, and test equipment.

**Process/Operation Sheets**—Sheets used during repair to reflect the step-by-step process/operation used to repair the complete item. Includes detailed shop sketches.

**Production Sample**—A sample item taken from the production line that will be subjected to testing and evaluation to verify that it meets the requirements of the contract.

**Purchase Order**—The original order with precise accounting and tracking for each item referenced on order.

**Qualification Article**—An item repaired prior to contract award to verify a potential offeror's capability to produce the item IAW the qualification requirements.

**Qualification Requirement** —A government requirement for testing or other quality assurance demonstration that must be completed before award of a contract (FAR 2.101 & 10 USC 2319(a)).

**Qualification Waiver Criteria (QWC)**—A set of guidelines that may be used to determine if part or all of the source qualification requirements may be waived.

**Repair** —Necessary preparation, fault correction, disassembly, inspection, replacement of parts, adjustment, reassembly, calibration, or tests accomplished in restoring items to serviceable status.

**Repair Method Code/Repair Method Suffix Code (RMC/RMSC)**—Two single digit numeric codes, assigned by a contract repair screening activity, used in conjunction to provide PCOs approved repair sources, determined and justified based on the availability and adequacy of resources required to effect timely repair and high quality workmanship. The RMC identifies engineering, manufacturing and technical data used in the repair process and the RMSC represents the results of a technical review and denotes the method used in repairing the item. Refer to AFMCI 21-149 for more detail.

**Repair Process Sheets (RPS)**—Documents used to describe the steps involved in executing an operation or series of operations to include tooling, machinery, dimensions, speeds, feed rates, coolants, cutters, tape numbers and other operating, process and/or set-up parameters necessary to execute the operation. At a minimum, significant processes in Appendix B shall be fully defined.

**Similar Part**—Item is similar to item previously provided to the OEM, Air Force, Army or Navy within the last three years. A similar item in this context is one whose design, application, operating parameters, material and manufacturing processes are similar to those of the item for which you are seeking source approval.

**Shipping Documents**—DD Form 250, *Material Inspection and Receiving Report*, or documents related to the movement of items which reflect the point of origin and destination.

**Source Approval Request Package**—A vendor proposal that should include all of the technical data required for a competent manufacturer to manufacture an item, including a CSI, to a level of quality that is equal or better than an OEM part.

**Source Approval Request Review**—A technical and engineering review to determine the viability of a part and vendor for breakout. A review is performed to ensure complete data is available, the vendor is capable, and a complete quality source plan is defined to support the alternate source qualification effort.

**Test Procedures**—A document that provides a step-by-step description of the operations required to test a specific item.

**Value Added**—Any technical support or required manufacturing process for system/subsystem parts that the prime contractor or other party provided, which is otherwise not documented or described in operation sheets, drawings, specifications, quality assurance procedures in the technical data package.

**Vendor, Supplier, or Subcontractor**—An individual, partnership, company, firm, corporation, or association who enters into an agreement with the prime contractor to perform work or furnish supplies, usually the actual manufacturer of a part.

## Attachment 2

## JUSTIFICATION FOR QUALIFICATION REQUIREMENTS

Table A2.1. Justification for Qualification Requirements.

**FAR 9.202(a) Policy and DoD 4120.24-M Defense Standardization Program, Policy and Procedures (or if section A of the below identifies the item as an aviation critical safety item, revise the heading to:)**

**Qualification Requirements**

**FAR 9.202(a) Policy as amended by DFARS 209.270-4(a)(2) Procedures**

***Section A: Item Identification***

1. Stock Number (NSN): \_\_\_\_\_
2. Part Number (P/N): \_\_\_\_\_
3. Noun: \_\_\_\_\_
4. Application: \_\_\_\_\_

***Section B: Justification for Establishing a Qualification Requirement and Reason Why Qualification Requirement Must Be Demonstrated Prior to Any Contract Award.*** (Section B may be documented separately, providing the separate document contains Section A, identification and Section D, signature requirements as identified in this attachment.)

(Identify in this section criticality of part, defining criticality in terms of failure which would result in loss of weapon system or life or extensive secondary damage; complexity of part, special material or manufacturing process; and rationale why requirements must be met prior to any contract awards. Include the hazardous consequence of not performing tests as qualification test and specify why tests cannot be conducted post award. Address only the item circumstances. Do Not Identify the particular material, processing procedures, testing, etc. These are to be part of Section C: Qualification Requirements).

***For example:***

1. Characteristics associated with machining and processing of the components within this assembly can result in product structural or durability degradation. Close tolerance matching of components is required. Special care and attention is required for surface finish, assembly, and sealing of this item to assure compliance with specified acceptance test requirements.
2. The qualification requirements specified herein are necessary to verify the structural and/or functional integrity and/or fit and form of the item being repaired.
3. Failure to repair these items from a fully qualified source can result in structural or functional deficiencies that will compromise the mission capability of the respective weapon system.
4. Completion of the specified pre-contract award qualification requirements will assure the government that the offeror is capable of repairing the item in compliance with the applicable technical specification/data and within the schedule and economic constraints of our contracts. There are significant technical and schedule risks which can only be minimized by a

completion of the requirements prior to contract award.

***Section C: Qualification Requirements That Must be Satisfied to Become a Qualified Source and Qualification Waiver Requirements.***

Identify specific detailed requirements for the item, material, processing or test procedures. Limit requirements to least restrictive. Qualification requirements shall contain comprehensive requirements for ensuring the preservation of the OSS&E-approved configuration baseline. The ESA must take into consideration the risk of performance degradation when new sources attempt to repair older technology items which they did not design.

Identify any item security restrictions, site survey requirements, and ability to obtain contract security of facility clearance. Identify forging requirements, special tooling, special testing, etc. Identify other means of becoming qualified, such as manufacturing or repairing similar item or part for prime contractor and providing verification documentation of such.

***For example:***

***1. Qualification Notice.*** The offeror shall notify the Small Business Office or, if responding to a solicitation, the contracting officer in Center PKs, of intent to qualify as a source of repair for this item.

***2. Facilities.*** The offeror must certify to the government that he has the required facilities and equipment to repair, inspect, test, package, and store the item. The offeror shall make his facilities, equipment, tooling, and personnel available for evaluation and inspection by the government.

***3. Data Verification.*** The offeror must verify that he has a complete data package. This verification must include a complete list of all the technical orders/instructions and specifications, including change notices, in the offeror's possession. The offeror may also be required to produce copies of the technical orders/instructions or specifications.

***4. Manufacture.*** The offeror must repair this item to conform to the government requirements as prescribed within the ESA-approved engineering data package. The offeror must provide, at their own expense, data showing the results of all quality, performance, and environmental evaluations conducted by the offeror to show compliance with the government requirements as prescribed by the ESA. The offeror shall also identify its sources for materials and its standards for internally used processes. If the item considered a safety critical item or contains critical characteristics then the offeror must also provide evidence in the form of a management process in which they will manage Critical Safety Items (CSIs) and all of the critical characteristics.

***5. Test and Evaluation and/or Verification.*** The offeror, at his own expense, shall prepare and submit to the design control authority (\_\_\_\_\_), for their prior approval, a qualification test plan/procedure detailing how he intends to verify compliance with all performance, environmental, mechanical and quality assurance requirements identified by technical order (\_\_\_\_\_\_). After completion of the approved qualification testing, the offeror shall be required to submit a complete test report of the results to the design control authority (\_\_\_\_\_) for their review and approval prior to the contract award. The government retains the right to exercise the option to inspect the testing processes, including on-site witnessing of



any or all documented testing. To allow accomplishing this, the offeror shall notify the government at least 30 days in advance of the occurrence of any testing that will be used as a basis for qualification. The offeror's facilities shall be made available for government inspection during these tests.

**6. Article Verification.** The offeror must provide, at his own expense, a pre-contract award qualification article for evaluation by the government. This article must comply with all of the requirements of technical order (\_\_\_\_\_). This article shall be subjected to a form, fit and function evaluation to demonstrate compatibility with the weapon system and to evaluate the repair capability of the offeror. Successful offerors shall be identified as an approved source for this item. However, successful completion of the qualification testing does not guarantee any contract award.

**7. Waiver.** Sources who meet any of the following Source Qualification Waiver Criteria (QWC) may apply for a waiver of all or part of the qualification requirements. If a waiver is granted and the offeror is awarded a contract, the offeror may still be required to undergo a pre-contract award source demonstration to verify repair capability:

**QWC1:** The potential source submits written certification that the articles have been repaired for the government or original equipment manufacturer (e.g., DD Form 250, Material Inspection and Receiving Report, Purchase Order invoice, e.g.).

**QWC2:** The potential source is qualified on the right-hand article and requests to be qualified on the left-hand article. If the right-and left-hand articles are mirror images of each other, then approval can generally be given.

**QWC3:** A source qualified to repair an assembly is usually qualified to repair subassemblies, major components, and items of that assembly.

**QWC4:** A source qualified to repair earlier dash numbers of a basic P/N may be qualified to repair other dash numbers of that same basic P/N, provided there is no increase in complexity, criticality, or other relevant requirements.

**QWC5:** A source qualified to repair a similar or like item can be qualified to repair the required item. However, for approval, the engineering authority must verify that there is no increase in complexity, criticality, or other requirements over that of the similar item. At a minimum, the source shall provide a complete set of repair data for the similar item and written proof, such as purchase orders, shipping documents, etc., to show that the similar item was repaired for the original equipment manufacturer or DoD.

**QWC6:** A source previously qualified to repair an item, but which has been purchased, sold, merged, absorbed, reformed, split, etc., may qualify if it can be established that the qualification is currently with the requester and that the requester has the same or equivalent facilities, tooling, equipment, personnel, and utilizes the original forging, castings, etc., in the manufacturing process.

**QWC7:** Other

**Section D: Signatures**

\_\_\_\_\_

Weapon System or Specific System Engineer

\_\_\_\_\_

Signature

Date

\_\_\_\_\_  
Engineering Support Activity

\_\_\_\_\_  
Signature

Date

(This is the Signature Date Head of the Design Control Activity or the chief/lead engineer in the AF)

\_\_\_\_\_  
Chief of Contracting Office

\_\_\_\_\_  
Signature

Date

**(Note:** The Chief of Contracting signature is only required if the qualification requirements being specified are for products that are NOT to be included on a Qualified Products List, or manufactured by business firms NOT being included on a Qualified Manufacturers List per DFARS PGI 209.202. This signature is not required if the item is identified in block A as an aviation CSI per DFARS 209.202(a)(1))

\_\_\_\_\_  
Standardization Office

\_\_\_\_\_  
Signature

Date

**(Note:** The Standardization Office signature is only required if the qualification requirements being specified are for products that ARE included on a Qualified Products List, or manufactured by business firms BEING INCLUDED on a Qualified Manufacturers List per DFARS PGI 209.202.

The authority granted by the signatures for qualification requirement shall not exceed seven (7) years past the last signed date. Qualification requirements shall be examined and revalidated if the last signed date is over 7 years old (FAR 9.202(f)).

## Attachment 3

## QUALIFICATION REQUIREMENT COST ESTIMATE

Table A3.1. Qualification Requirement Cost Estimate.

**Estimate the likely cost for testing and evaluation which will be incurred by the potential offeror to become qualified.** This is a requirement of FAR 9.202(a)(1)(ii) and 10USC2319(b)(3). (The following categories may not apply in all cases. The product engineer should identify the costs applicable to the project and indicate N/A on all sections that do not apply.)

**Section A. Shipping,** if required, use DD Form 1654, Evaluation of Transportation Cost Factors to develop the information. Refer any questions to the Procurement Contracting Officer for cost estimation. \$ \_\_\_\_\_

**Section B. Dimensional/Electronic Verification.** Contact the science/engineering laboratory to obtain cost estimates (bids) for tests such as:

- |                               |          |
|-------------------------------|----------|
| a. Chemical                   | \$ _____ |
| b. Metallurgical              | \$ _____ |
| (1) Destructive               | \$ _____ |
| (2) Non-Destructive           | \$ _____ |
| c. Dimensional                | \$ _____ |
| d. Electronic                 | \$ _____ |
| e. Mechanical                 | \$ _____ |
| f. Non-Destructive Inspection | \$ _____ |

**Section C. Nuclear Hardness** [This includes cost of shock, vibration, and Electro-Magnetic Pulse (EMP)]. Contact Systems Engineering Integration and Test Division for hourly rate. \$ \_\_\_\_\_

**Section D. Form, Fit, Function and Interface.** Contact your organizational Production Management Specialist (PMS) to obtain information on the same or similar item where work has been accomplished in the past using AFMC Form 206, **Temporary Work Request**. \$ \_\_\_\_\_

**Section E. Original Equipment Manufacturer (OEM) Qualification Testing** (If required) \$ \_\_\_\_\_

**a. Laboratory Costs** (Costs are directly dependent on the type of testing to be accomplished and the location and duration of the testing. For example, landing gear laboratory testing is normally accomplished on a dynamometer and costs vary from \$25,000 to \$500,000 depending on the depth of testing. Aircraft and missile testing will vary as the requirement dictates and the cost will have to be identified by the source of testing). \$ \_\_\_\_\_

**b. Flight/Data Reduction & Analysis Costs.** \$ \_\_\_\_\_

**Section F. Travel to Contractor or Test Site** (if required) \$ \_\_\_\_\_

a. Lodging	\$ _____
b. Per Diem	\$ _____
c. Rental Cars	\$ _____
d. Incidentals (Verified)	\$ _____
Total:	\$ _____

**Section G. SAR Package Development/Evaluation Cost:** A potential new source's development of a Source Approval (SAR) package may cost as much as \$\_\_\_\_\_. In addition, the cost incurred for Government evaluation of their SAR may be as much as \$\_\_\_\_\_. Evaluation cost may be borne by the government if it is in the best interest of the Government to qualify alternate sources.

## Attachment 4

## QUALIFICATION REQUIREMENT WAIVER FAR 9.202(B)

Table A4.1. Qualification Requirement Waiver Far 9.202(b).

**Section A. Description of Supplies or Services:**

(National Stock Number (NSN), Part Number (P/N), NOUN/Nomenclature, Applicable end item or WEAPON SYSTEM)

**Section B. Rationale Supporting Unreasonableness:**

(Detailed, specific actions, milestone, or dates) Include considerations as to why it is unreasonable to develop or specify the qualification requirements such as extensive design engineering efforts to determine exact requirements, extensive research to determine exact requirements, limited Government technical expertise in determining exact requirements, design instability of the part. Also consider if the data to define and control reliability limits is or is not available, can such data be obtained and is it possible or not possible to draft adequate specifications for this purpose.

**Section C. Planned Corrective Action and Schedule: (if feasible)**

(Detailed, specific actions, milestone, or dates)

**Section D. Determination:** Due to the rationale in Part B above, it is hereby determined that it is unreasonable to develop or specify the qualification requirements for the supplies or services in Part A above.

Engineering Support Activity (This is the Head of the Design Control Activity or the chief/lead engineer in the AF)

ALC Competition Advocate

**Approval:**

\_\_\_\_\_  
Head of Procuring Activity or Designee  
approval)

\_\_\_\_\_  
Date (Expires 2 years after

## Attachment 5

### SAMPLE REPAIR QUALIFICATION REQUIREMENT

**A5.1. REPAIR QUALIFICATION REQUIREMENTS (RQR) FOR CRITICAL SAFETY (CSI) and CRITICAL APPLICATION ITEMS (CAI) with a SOURCE DEMONSTRATION.** WARNING: This Qualification Requirement (QR) does not apply to any items with a Repair Method Suffix Code (RMSC) of G, A, B, H, L, U or Y. AFLCMC/LPS Engineering Support Activity (ESA) must obtain a waiver for these items, except for G coded items, from the appropriate authorization office, AFLCMC/LPS or AFSC/PZ, depending upon the item criticality.

**A5.2. APPLICATION.** This QR applies to CSI and CAI with an ERRC code of C, P, S, T or U and a RMSC code of C, D, K, M, N, P, Q, R, S, V and Z. This QR does not apply to items with an RMSC of G, A, B, H, L, U and Y.

A5.2.1. The intent of this QR is to meet the Operational Safety, Suitability and Effectiveness (OSS&E) requirement, while maximizing competition and complying with AFMCI 21-112, *Repair of Aircraft Engine Critical Parts* and the Use of the Source Approval Request (SAR) and the Joint Aeronautical Commander's Group Aviation Sources Approval and Management (SAM) Handbook.

A5.2.2. This QR sets Qualification Waiver, SAR and Source Resubstantiation Request (SRR) requirements.

### **A5.3. SCOPE.**

A5.3.1. This QR establishes the minimum technical requirements, which Potential Sources (PSs) must satisfy in order to obtain ESA approval to repair propulsion items for the specific applications. RQR-PSD-2 has two phases. The first phase is the Waiver or SAR submittal and evaluation. The second phase is the Source Demonstration (SD) and evaluation.

A5.3.2. The PS may qualify for a number of waivers. The waiver conditions are defined in section 7. PS should submit waiver request when one of the waiver conditions applies.

A5.3.3. If the PS does not qualify for any of the waivers, then the PS must submit a SAR package. The SAR requirements are defined in section 8.

A5.3.4. Approved sources shall submit SRR package prior to expiration of the current approval period or when any significant changes to ownership, address, process sequence, process parameters, technical data, Sub-Tier Supplier (STS) and/or significant quality deficiencies occur. The re-substantiation requirements are defined in section 9.

A5.3.4.1. Significant changes, as defined in FAR 9.207, or unresolved quality deficiencies may result in additional testing, or revocation of source approval status, depending on the nature and extent of the changes and/or quality deficiencies.

A5.3.4.2. If an SRR is not submitted prior to the expiration date or after significant changes have occurred, the associated CAGE shall be removed from the approved sources listing.

A5.3.5. ESA source approval expiration is defined in section 12.

A5.3.6. Once the Waiver or SAR phase is complete, the PS must complete the SD. The SD requirements are defined in section 15.

#### **A5.4. CONTRACTOR RESPONSIBILITY STANDARDS (FAR 9.104).**

A5.4.1. PS must submit a complete waiver request or SAR data package as defined per the category selected.

A5.4.2. General standards as specified in FAR 9.104-1 apply.

A5.4.3. Special standards as specified in FAR 9.104-2 apply.

A5.4.4. Certification Regarding Responsibility Matters as specified in FAR 9.105-1 apply.

A5.4.5. Qualifications Requirements as specified in FAR 9.2 apply.

A5.4.6. Higher-Level Contract Quality Requirement as specified in FAR 52.246-11 apply.

#### **A5.5. POTENTIAL SOURCE SUBMITTAL DETERMINATION .**

A5.5.1. The forecasts contained on Requirement Projections on the Web (RPOW) may or may not generate due to variability in customer demands and priorities. The forecast data is for planning purposes only and does not constitute an invitation for bid or request for proposal and is not a commitment by the government to purchase the described items/services.

A5.5.2. The PS should consider submitting a SAR package for evaluation after considering the following:

A5.5.2.1. Has the United States Air Force (USAF) listed a requirement in the Federal Business Opportunities (FEDBIZOPPs) at [www.fbo.gov](http://www.fbo.gov) or RPOW at <http://www.tinker.af.mil/Home/429SCMS-SASPO/>?

A5.5.2.2. Has the procurement history for the item been researched and determined to be active?

A5.5.2.3. Has the PS established that they can conduct business with the Government?

#### **A5.5.3. Technical Data Request**

A5.5.3.1. Requests Related to Procurement Announcements. Request should be submitted to the announcing Contracting Officer and specify the solicitation, specific drawing(s) and specification(s) for verification and authorization of requested data on company letter head. The PS must provide an approved DD Form 2345.

A5.5.3.2. Requests Related to SAR Package Approval – The PS must provide contractor justification letter identifying specific drawing(s) and specification(s) on company letterhead to the Tinker Engineering Drawing Public Sales. The PS must provide an approved DD Form 2345.

A5.5.3.3. SAR Data Request can be submitted via mail to:

#### **Table A5.1. SAR Data Request.**

Technical Orders Sales 7851 Arnold Ave
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Tinker AFB OK 73145
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A5.5.3.3.1. SAR Data Request can be submitted via e-mail to [AFLCMC.LZPTP.PublicTOrequests@us.af.mil](mailto:AFLCMC.LZPTP.PublicTOrequests@us.af.mil).

A5.5.4. AFSC/SB, Small Business Office (SBO) contact information can be found at <http://www.afsc.af.mil/Units/SBO.aspx> and the SASPO contact information can be found at [www.tinker.af.mil/429scms.saspo](http://www.tinker.af.mil/429scms.saspo), along with other helpful tips.

**A5.6. SAR, WAIVER, OR RE-SUBSTANTIATION FORMAT.** All financial data must be redacted from all documents submitted.

A5.6.1. SAR(s), WAIVER(s), OR RE-SUBSTANTIATION(s) packages can be submitted in one of three ways:

A5.6.1.1. The packages can be submitted in a 3 ring binder. The three-ring binder or a similar product will contain a table of contents and 21 A-U element tabs. This will significantly reduce the turn-around time for engineering evaluation as well as reduce the likelihood of oversight or loss of valuable data that could have a significant bearing on the outcome of the evaluation.

A5.6.1.2. The package can be submitted on a Compact Disc (CD) in a .pdf file format. The package can be a single .pdf file with index to each element or a series of folders for each element.

A5.6.1.3. The package can be a combination of the physical paper and CD with .pdf files.

A5.6.2. The documentation should follow the RQR call out order. Quality Manual and supporting documentation can be submitted on a CD in .pdf file format. All CDs should be scanned for viruses prior to submitting the documentation.

A5.6.3. A table of contents is required for both the physical paper and electronic submittal.

A5.6.4. Each package will have all required tabs. If an element is not required by the category selected, it must be labeled and the PS must state that the element does not apply.

**A5.7. USE OF PROPRIETARY DATA IN SOURCE APPROVAL REQUESTS.** PSs are not to utilize intellectual property (IP) of any third parties without appropriate authorization of the IP owner. The PSs are cautioned that no part of the government QR is intended to endorse or encourage the improper use of IP developed by the Original Equipment Manufacturer (OEM) or any other third party.

**A5.8. QUALIFICATION WAIVER REQUIREMENTS .** Waiver elements are listed in [Table A5.2](#) and defined in section 8.

A5.8.1. QUALIFICATION WAIVER REQUEST DETERMINATION. The PS may apply for a waiver for all or part of the qualification requirements, if any of the following Source Qualification Waiver Criteria (QWC) apply.

A5.8.1.1. QWC1: The PS submits written certification that the articles have been supplied or repaired for the government or OEM (e.g., DD Form 250, Material Inspection and Receiving Report, Purchase Order invoice, e.g.). This waiver condition will be used to meet the AFI 20-106 waiver conditions.

A5.8.1.2. QWC2: The PS submits written certification that the articles have been supplied within 36 months for CSI or within 84 months for CAI to the DoD or OEM (e.g., DD Form 250, Material Inspection and Receiving Report, Purchase Order, invoice, e.g.). This waiver condition will be used to meet the AFI 20-106 waiver conditions.

A5.8.1.3. QWC3: A source qualified to repair an assembly is usually qualified to repair subassemblies, major components, and items of that assembly. Applies only if all the manufacturing or repair for subcomponents is conducted in-house and elements G, H, K, L, and M were provided during the qualification of the assembly.

A5.8.1.4. QWC4: A source qualified to repair earlier dash numbers of a basic P/N may be qualified to repair other dash numbers of that same basic P/N, provided there is no increase in complexity, criticality or other relevant requirements.

A5.8.1.5. QWC5: Does not Apply, PS must submit SAR CAT II.

A5.8.1.6. QWC6: A previously qualified source, which has been purchased, sold, merged, absorbed, reformed, split, etc., may qualify if it can be established that the qualification is currently with the PS and that the PS has the same or equivalent facilities, tooling, equipment, personnel and utilizes the original forging, castings, etc., in the repair process.

A5.8.1.7. QWC7: Other.

A5.8.1.7.1. The PS will provide a cover letter detailing the specifics of how the waiver category applies.

A5.8.1.7.2. SBO will forward the request to the ESA, who will determine if the QWC7 applies. If it is determined that the QWC7 applies, the ESA will specify the elements required for the waiver and the submitter will provide the required data.

A5.8.1.8. QWC8: Manufacturer. A source qualified to manufacture an item, may qualify to repair the item, if it can be established that PS has the same or equivalent facilities, tooling, equipment, data and personnel and utilizes them for the repair of the item.

A5.8.1.9. If the waiver is granted and the offeror is awarded a contract, the offeror may be required to undergo Source Demonstration or In Process Evaluation (IPE) to verify production capability.

A5.8.2. QUALIFICATION WAIVER REQUEST (QWR) REQUIREMENTS. QWC elements are listed in **Table A5.2** and defined in section 8. The CSI production documentation will be frozen, after the ESA has granted approval or after the FAT is completed, if required.

**Table A5.2. Qualification Waiver Request Requirements.**

Element	Title	Qualification Waiver Criteria							
		1	2	3	4	6	7	8	
A	Cover Letter	■	■	■	■	■	■	■	■
B	Technical Data Rights Certification Statement, if	■	■	■	■	■	□	■	■

	required							
C	Brochure & Correspondence (Tool List Only)	■	■	■	■	■	□	■
D	Quality Assurance Documentation					■	□	
E	Subject Item Technical Data							■
G	Sub-Tier Supplier (Sub-Vendor) Information (Frozen for CSI)	■	■	■	■	■	□	■
H	Quality History	■	■	■	■	■	□	■
J	Similarities/Differences of Subject/Similar Items		■		■		□	
K	Purchase Orders & Shipping Documents	■	■	■	■	■	□	■
L	Process/Operations Sheets & Travelers (Frozen for CSI)	■	■	■	■	■	■	■
M	Inspection Method Sheets (IMS) (Frozen for CSI)	■	■	■	■	■	■	■
N	Prime Contractor's Quality Rating System Report	■				■	□	
O	License Agreement, if applicable	■	■	■	■	■	□	■
Q	Government/Prime Contractor Surveys	■			■	■	□	
T	Master Tooling Certifications	■	■	■	■	■	□	■
U	Government Quality Assurance Compliance	■	■	■	■	■	□	■
AA	ESA/OEM Approval Letter	■	■	■	■	■	□	■
AB	Novation Letter					■	□	

**A5.9. SOURCE APPROVAL REQUEST REQUIREMENTS.** SAR elements are listed in [Figure A5.1](#) and defined below.

A5.9.1. SAR Categories Determination. There are three SAR categories and two formats:

A5.9.1.1. ACTUAL ITEM (Category I). This category covers PSs who manufacture or repair the exact (Subject) item, using OEM technical data, for the prime contractor, OEM, another service, civil agencies, foreign governments, or for the civil sector under Federal Aviation Administration (FAA). Category applies to CSI and CAI. The item will be repaired and evaluated against the ESA approved technical data.

A5.9.1.2. SIMILAR ITEM (Category II). This category covers the PSs who have not previously repaired the subject item, but have repaired other items similar in complexity, design, criticality, industrial processes, materials, and application for the prime contractor, OEM, another service, civil agencies, foreign governments or for the civil sector under FAA. Category applies to CSI and CAI. The item will be repaired and evaluated against the ESA approved technical data.

A5.9.1.3. NEW REPAIRER OF ITEM (Category III). This category covers the PSs, who do not meet Category I or II criteria, but have the legal access to the OEM's technical data and intends to repair to the ESA approved technical data with the same part number. Category Revision 1 applies to CAI only, and cannot be used for CSI. The item will be repaired and evaluated against the ESA approved technical data.

A5.9.1.4. PRE-DEVELOPED REPAIR (Category IV). This category covers unsolicited SAR submittals by PSs who have a previously developed repair that has: been fully validated and verified, successfully performed on regular production parts, and those parts that have undergone the repair have had sufficient operational experience (including either AMT or field operational use).

A5.9.1.5. DEVELOPING REPAIR (Category V). This category covers the PSs who have a repair, or could develop a repair, that will satisfy the need of the USAF IAW an advertised requirement. PS approval of a Category V SAR may still require repair verification, validation, and testing prior to complete approval of PS as an approved source.

#### A5.9.2. SAR Format Determination.

A5.9.2.1. If multiple SAR packages are to be submitted within a one month period, then the PS can submit one Master SAR (MSAR) package and a SAR lite package for each additional NSN that will be submitted.

A5.9.2.2. MSAR Package is the same as individual SAR packages.

A5.9.2.2.1. The MSAR must be constructed in a manner that reduces data required in SAR lites. The MSAR elements should include all part numbers, license agreement(s) and Enterprise Quality History providing an enterprise point of view.

A5.9.2.2.2. The MSAR should be the most complex part that will be submitted within the 30 days period.

A5.9.2.3. SAR lite packages. The SAR lite packages must be submitted within one month of the MSAR submittal.

A5.9.2.3.1. Each SAR lite cover letter will reference the MSAR.

A5.9.2.3.2. The SAR lite package will only contain the unique part data for each additional NSN.

**Figure A5.1. Source Approval Request Requirements**

ELEMENT	REQUIRED ELEMENTS	CAT I		CAT II		CAT III		CAT IV		CAT V		Remarks
		CI	CI	CI	CI	CAI Only	CI	CI	CI	CI		
		M	S	M	S	M	S	M	S	M	S	CI- Critical Safety & Application Items
A	COVER LETTER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	M (MASTER) S (SAR LINE)
B	TECHNICAL DATA RIGHTS CERTIFICATION STATEMENT (CRITICAL)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Include all NSN and PN
C	BROCHURE & CORRESPONDENCE	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Submit the complete tool list
D	QUALITY ASSURANCE DOCUMENTATION * Site Survey Meets Requirement	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Only submit once for all the SARs
E	SUBJECT ITEM TECHNICAL DATA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			For all NSN and PN
F	SUBJECT ITEM SPECIFICATIONS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			For all NSN and PN
G	SUB-TIER SUPPLIER LIST (FROZEN FOR CSI)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
H	QUALITY HISTORY	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Include all NSN and PN
I	SIMILAR ITEM TECHNICAL DATA			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
J	SIMILARITIES/DIFFERENCES OF SUBJECT/SIMILAR ITEMS			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
K	PURCHASE ORDERS & SHIPPING DOCUMENTS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
L	TRAVELERS & PROCSOPERATIONS SHEETS (POS) (FROZEN FOR CSI)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
M	REPAIR PROCESS SHEETS AND / OR INSPECTION METHOD SHEETS (IMS) (FROZEN FOR CSI)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
N	PRIME CONTRACTOR'S QUALITY RATING SYSTEM REPORT	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Only submit once for all the SARs
O	LICENSEE AGREEMENT (IF APPLICABLE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Include all NSN and PN
P	VALUE ADDED (BY PRIME OR OEM)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		For all NSN and PN. Only submit once for all the SARs
Q	GOVERNMENT / PRIME CONTRACTOR SURVEYS	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Submit once per CAGE
R	PRE-QUALIFICATION TEST PLANS							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
S	TEST RESULTS							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
T	MASTER TOOLING CERTIFICATIONS		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
U	GOVERNMENT QUALITY ASSURANCE COMPLIANCE	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Include all NSN and PN
AC	REPAIRED PART USAGE HISTORY							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

An element may have been covered in the MSAR by the overall statement, if not provide individual data or statements for the additional part number

A5.9.3. Element A, Cover Letter. Provide a cover letter that includes the following information: Solicitation Number (if applicable):

**Table A5.3. Element A, Cover Letter.**

<p>Contracting Officer POC (if applicable):</p> <p>Engine Type:</p> <p>Company Name:</p> <p>Company CAGE:</p> <p>Company Address:</p> <p>Company Point of Contact: (Name, phone, fax and email):</p> <p>Company Size: (Large or Small),</p> <p>Qualification Requirement Designation and Revision: (i.e. MQR-PSD-1, Rev 1)</p>
--

Qualification Waiver Criteria: (if Applicable)

SAR: (SAR, Master SAR or SAR lite (Master SAR Date: \_\_\_\_\_))

Technical Data Proprietary: No, Yes or Partial (Select One)

NSN(s):

Part Number(s):

**Nomenclature:**

Type: (New or Distributor (New))

Submittal Category: (Cat I (Subject), Cat II (Similar) or (Cat III (New)

ERRC Code (if known):

SAR Package Inventory: (Paper/Binder, CDs, Electronic or sample parts)

Disposition: (Return to Vendor or Destroy)

A5.9.3.1. For proprietary data, the PS must provide a statement that proprietary data or processes will be used and submit an ownership statement or a Licensing Agreement that conveys the rights to specifically use the data or process in element O.

A5.9.3.2. PS must provide a statement that the contractor is willing to provide a technical briefing on the SAR package submittal to the procuring activity or ESA, if required.

A5.9.3.3. PS must provide a disposal statement that directs the destruction/shredding of the submitted material or the return of the submitted material at their expense after the evaluation is complete.

A5.9.3.3.1. If no disposal statement is provided, the SAR will be shredded, after the evaluation is complete.

A5.9.3.3.2. If the SAR is to be returned, SBO will contact the cover letter POC to obtain the authorization shipping code or label to return the submitted material.

A5.9.4. Element B, TECHNICAL DATA RIGHTS CERTIFICATION STATEMENT. The PS must provide a certification of rights to use technical data in the format provided in Appendix A, signed on company letterhead by an authorized binding company official, President, Owner or Facility General Manager. This certificate states the data was obtained by legal means and the company has the rights to use the data supplied in the SAR for manufacture/repair purposes.

A5.9.5. Element C, BROCHURE AND CORRESPONDENCE.

A5.9.5.1. Provide a company brochure and website if available.

A5.9.5.2. Provide a synopsis outlining the applicant firm's capabilities, experience, and facilities including location, number of buildings, square footage, etc.

A5.9.5.3. Provide an equipment list. The equipment list must list equipment, the equipment's accuracy, size, capability and precision. This information should be updated as facility and facility operations change.

A5.9.6. Element D, QUALITY ASSURANCE DOCUMENTATION. Provide a synopsis of the proposed PS's Quality Assurance System (QAS) capabilities, reporting system and its certifications.

A5.9.6.1. Quality Assurance System (QAS)

A5.9.6.1.1. Provide a statement that the DOD site survey approval letter with a current expiration date has been attached in Tab Q or

A5.9.6.1.2. Provide a copy of the PS's QAS manual and all supporting/referenced documentation. A copy of the documentation may be kept by the ESA.

A5.9.6.2. The PS's QAS must comply with the requirements as described in this document and meet one of the following, AS9100, ISO 9001:2008, NATO AQAP-2070 or equivalent. Provide a copy of the QAS certificate with a valid expiration date.

A5.9.6.3. OEM, DOD or NADCAP approval/certification is required for all significant industrial processes. Provide a copy of special industrial process approvals and certifications for those that require third party certification as denoted by the NADCAP checklist indication in Appendix B.

A5.9.7. Element E, SUBJECT ITEM TECHNICAL DATA. The subject item technical data may include references to materials, mandatory inspections, inspection intervals, processes, and specifications. **Note:** Before proprietary data is submitted, the PS should determine if the data is available (see section 4.3). If so, it should be submitted in place of the proprietary marked data, else a license agreement or ownership statement will be required in Element L.

A5.9.7.1. For Government Technical Data.

A5.9.7.1.1. If located within the United States or Canada, provide the PS's DD Form 2345 with a valid expiration date, a Repair Data List (RDL) and the latest legible revision of all technical data required to disassemble, clean, inspect, repair, assemble and test the subject item or a copy of the sales receipt detailing the data purchased.

A5.9.7.1.2. If not located within the United States or Canada, provide a copy of the export control license, Repair Data List (RDL) and the latest legible revision of all technical data required to disassemble, clean, inspect, repair, assemble and test the subject item or a copy of the sales receipt detailing the data purchased.

A5.9.7.2. For Proprietary Technical Data.

A5.9.7.2.1. If proprietary data can be submitted, provide RDL and the latest legible revision of all technical data required to disassemble, clean, inspect, repair, assemble and test for the subject item.

A5.9.7.2.2. If proprietary data cannot be provided, submit a statement declaring that the data cannot be submitted and that the licensing agreement or ownership statement ensures the most current data will be used to perform the required work, RDL and a copy of the title page. The images may be redacted to only reveal the technical data number, title, revision and proprietary statement.

A5.9.7.3. Provide a special tool statement detailing the tooling or tooling drawings availability, ownership, usage rights and state if the special tools will be leased, purchased or manufactured.

A5.9.8. Element F, SUBJECT ITEM SPECIFICATIONS.

A5.9.8.1. For Government available Subject specifications, provide:

A5.9.8.1.1. For CAT I and III, Subject Item, provide a complete list of the applicable specifications identified on the subject item repair technical data and a copy of the title page of the latest revision of each specification.

A5.9.8.1.2. For CAT II, Similar Item, provide a complete list of the applicable specifications identified on the subject and similar item(s) repair technical data and a copy of the title page of the latest revision of each specification.

A5.9.8.2. For Proprietary, OEM or Prime Subject Specifications, provide:

A5.9.8.2.1. For CAT I, III, and IV, Subject Item, provide a complete list of the applicable specifications identified on the subject item repair technical data and a copy of the title page of the latest revision of each specification. The images may be redacted to reveal the Specification Number, Title, Revision and proprietary statement.

A5.9.8.2.2. For CAT II, Similar Item, provide a complete list of the applicable specifications identified on the subject and similar item(s) repair technical data and a copy of the title page of the latest revision of each specification. The images may be redacted to reveal the Specification Number, Title, Revision and proprietary statement.

A5.9.8.3. For PS or Internal specifications, identify the commercial or government equivalent specification (if known/available) and provide a copy of the latest revision of each specification.

A5.9.9. Element G, SUB-TIER SUPPLIER (STS) INFORMATION. OEM, DOD or NADCAP significant industrial processes approval/certification is required for those processes denoted by the NADCAP checklist indication in Appendix B. Either ISO 9001:2008 or AS 9100 Rev C certification is required for all STS used to perform work on Critical Items. Provide a matrix, **Figure A5.2**, with the CAGE, STS Name, Specification/Process, Prime/OEM, Government, or NADCAP certification/approval date, ISO 9001:2008, and AS 9100 for all STSs. Please select all that apply.

**Figure A5.2. Sub-Tier Supplier Qualifications.**

G. SUB-TIER SUPPLIER (STS) (SUB-VENDOR) INFORMATION:			Yes	No	NA		
1. Are STS used for manufacture or repair?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. If STS are used for manufacture or repair, enter data below: (Select all that apply)			Certifications or Approval (Expiration Date)				
CAGE	STS Name	Specification/Process	Prime/ OEM	DoD	NADCAP	AS9100	ISO 9001 :2008+

A5.9.9.1. For raw material STS, provide CAGE, STS Name and material specification/process only.

A5.9.9.2. For STS(s) of castings or forgings, substantiate that the source(s) are currently OEM or DOD approved. If not approved by the OEM or DOD provide a rationale



proving to the ESA that the casting or forging source is capable of manufacturing the replacement part to the established OEM or DOD quality standards.

A5.9.9.3. For laboratory testing STS, provide CAGE, STS Name, specification/process, ISO/IEC 17025 or NADCAP certification only.

A5.9.9.4. Provide copies of the current STS's Prime/OEM, DOD or NADCAP certificates or approval letter(s) and all conditions and restrictions imposed for the significant industrial processes with the expiration date highlighted.

A5.9.9.4.1. It should be noted that ESA may specify additional testing.

A5.9.9.4.2. If approval is specified in the technical data, select DOD under the Certification or Approval section of the matrix and provide a copy of page from the technical data. No additional significant industrial processes certification documentation is required.

A5.9.9.4.3. If the approval does not have a defined expiration date, enter IND for indefinite.

A5.9.9.5. Provide a copy of ISO 9001:2008 or AS9100 certifications for the STS used to perform work on Critical Items.

A5.9.9.6. Provide a copy of NDI Level III certificate for all NDI Methods for the PS or/and STS.

A5.9.9.7. For assemblies, identify all sub-assembly component sources. All Critical Item sub-components must only be supplied by government approved suppliers.

A5.9.9.8. For STS providing proprietary industrial process support, provide a letter of support, capability and an expiration date.

A5.9.10. Element H, QUALITY HISTORY. **Note:** Nonconformance is not necessarily perceived as an increase in risk when considering alternate source qualification. In fact, identification of nonconformance can illustrate a successful quality assurance program.

A5.9.10.1. If the PS and STS facilities have not experienced any quality deficiencies within the last 36 months, provide a statement stating such.

A5.9.10.2. Else, provide a PS and all STS quality history summary of Deficiency Reports experienced for the last 36 months including but not limited to, internal deficiencies, commercial deficiencies, FAA Service Bulletins, MRB actions, Quality Deficiency Reports (QDR), Laboratory Quality Review Orders (LQRO), Offeror Report of Nonconformance (ORON), Supplier Report of Nonconformance (SRON), Material Deficiency Reports (MDR), statistical reports of nonconformance and nonconforming material rejection reports for the subject and/or similar item(s).

A5.9.10.2.1. The Company President, Facility General Manager or the Quality Assurance Manager must coordinate on the summary. If the government source inspections were conducted, the Government Quality Assurance Representative will coordinate on the summary.

- A5.9.10.2.2. The summary will include the following data: P/N, Nomenclature, feature, deficiency, quantity, date and corrective action. It can be provided for the entire company or the specific part number or NSN.
- A5.9.10.3. Provide all corrective action requests and corrective action plans or resolutions for identified deficiencies.
- A5.9.10.4. Provide the PS's and the STS's scrap rates.
- A5.9.11. Element I, SIMILAR ITEM TECHNICAL DATA. For Category II and V SARs Only **NOTE:** This information includes repair manuals, technical orders, drawings (casting, forging, detail, assembly, source controlled, masters, airfoil data, schematics, etc.), configuration (revision), parts list and Quality Assurance Document (QAD), etc.
- A5.9.11.1. For Government Similar Item Technical Data, provide:
- A5.9.11.1.1. The similar item RDL and the front page of the all similar item technical data or a copy of the sales receipt detailing the data purchased.
- A5.9.11.1.2. If not located within the United States or Canada, provide a copy of the export control license.
- A5.9.11.2. For Proprietary Similar Item Technical Data, provide:
- A5.9.11.2.1. The similar item RDL, the latest legible revision of all drawings and specifications required to clean, inspect, repair, assemble and test the similar item.
- A5.9.11.2.2. If proprietary similar item data cannot be provided, submit a statement declaring that the data cannot be submitted, RDL and a copy of the title page, the licensing agreement or ownership statement ensuring the most current data was used to perform the required work. The images may be redacted to only reveal the technical data number, title, revision and proprietary statement.
- A5.9.11.3. For Non-Proprietary or Non-Government Similar Item Technical Data, provide RDL, the latest legible revision of drawings and specification required to clean, inspect, repair, assemble and test the similar item.
- A5.9.12. Element J, SIMILARITIES AND DIFFERENCES BETWEEN SUBJECT AND SIMILAR ITEMS.
- A5.9.12.1. For QWC 8, provide a comparison matrix between the manufacturing and repair process.
- A5.9.12.2. For CAT II SARs Only, provide a comparison matrix identifying the specific similarities and differences in materials, coatings, design features, industrial processes, operating environment, etc. between the subject and similar item. Multiple similar items can be used to illustrate the capability necessary to perform work on the subject item.
- A5.9.12.3. For CAT V SARs Only, provide a comparison matrix identifying the specific similarities and differences in materials, coatings, design features, industrial processes, operating environment, etc. between the proposed subject item repair and the existing similar item repair. Multiple similar items can be used to illustrate the capability necessary to perform work on the subject item.

A5.9.12.4. For Proprietary industrial processes supported by a STS place an \* next the process. Ensure Element G has a support letter for that process.

**A5.10. Element K, PURCHASE ORDERS AND SHIPPING DOCUMENTS** . The contract performance documentation provided for CSI shall be within three (3) years and within seven (7) years for CAI, as evidenced by latest shipping document. The threshold should apply on the date the SAR is received by the Small Business Office. All financial information must be removed, else the SAR may be returned. Highlight the date on all documents in this section and ensure all items repaired are accounted for. The data provided in this section should be for the same contract(s) as those provided in SAR Elements L and M.

A5.10.1. For QWC 8, provide the purchase order and shipping documents for the manufactured subject item.

A5.10.2. For Cat I, II, or IV, provide copies of at least one purchase order(s), all amendments and shipping documents from the Prime/OEM, DOD, foreign government, or other commercial customers for the Subject or Similar item.

A5.10.3. For Cat III or V, provide a statement stating no repair(s) has been conducted for the Subject item.

A5.10.4. If a contract was terminated, state the reason for the termination.

**A5.11. Element L, TRAVELERS AND PROCESS/OPERATION SHEETS (POS)**. The data provided in this section pertaining to repair history should be for the same contract(s) as those provided in SAR Elements K and M. **Note:** Travelers that may be enclosed in this section are not to be considered a replacement for detailed POS. Lack of detailed POS(s) pertaining to repair is cause for disapproval of the PS's SAR.

A5.11.1. The subject item travelers and/or POS must have the Name, Address and CAGE for the PS on the top of every page. The following requirements must be met:

A5.11.1.1. The documentation must be from the actual repair provider.

A5.11.1.2. The traveler and POS must include all part numbers that are covered by the production documentation.

A5.11.1.3. The traveler must include a detailed step-by-step account of the proper sequenced procedures necessary for the repair.

A5.11.1.4. The traveler must include the operation number, process description, location, STS Name and CAGE; repair software data file name, etc. necessary to control the repair operations and must be signed or stamped off by in-process operator and/or inspector. For Proprietary Travelers and POS, the process description may be redacted.

A5.11.1.5. The traveler must track the disposition of all parts during the entire repair operation to include rejects and laboratory samples.

A5.11.2. Any sub-vended process listed in the traveler must identify the STS by name and CAGE at each applicable operational step with clearly identified process or procedure.

A5.11.3. For Category I and IV, provide copies of the actual subject item traveler and POS used for the repair submitted.

A5.11.4. For Category II and V provide copies of the actual similar item repair traveler and POS used for the repair and detailed proposed subject item traveler and POS to be used in the repair.

A5.11.5. For Category III, provide the proposed subject item detailed traveler and POS sheets.

**A5.12. Element M, REPAIR PROCESS SHEETS (RPS) and INSPECTION METHOD SHEETS (IMS).** The RPS and IMS should include the nomenclature, part number, characteristics inspected, special instructions, zone, tolerances and actual measurements, inspection tooling/method, frequency and inspector's stamp. RPS and IMS may be included as an integral part of the POS(s) in SAR Element L. The data provided in this section should be for the same contract(s) as those provided in SAR Elements K and L.

A5.12.1. The subject item IMS or RPS must have the Name, Address and CAGE for the PS on top of every page. The following requirements must be met:

A5.12.1.1. The documentation must be from the actual PS.

A5.12.1.2. The IMS or RPS must include part number(s), dimensions and proper units.

A5.12.1.3. The IMS or RPS must include a detailed step-by-step account of the proper sequenced procedures necessary to inspect the subject and/or similar item.

A5.12.1.4. If a sampling plan is used, provide the sampling plan and the approval letter.

A5.12.2. For QWC 8, provide manufacturing subject item MPS and IMS with the manufacturing data and proposed blank RPS and IMS for subject item.

A5.12.3. For Category I and IV, provide the actual subject item RPS and IMS with the repair data. Blank Subject RPS and IMS do not meet this requirement.

A5.12.4. For Category II and V, provide the actual similar item RPS and IMS with the repair data and proposed RPS and IMS for subject item. Blank similar item RPS and IMS do not meet this requirement.

A5.12.5. For Category III, provide proposed detailed RPS and IMS for subject item.

**A5.13. Element N, PRIME/OEM CONTRACTOR'S QUALITY RATING SYSTEM REPORT.**

A5.13.1. If the company has not repaired the item(s) for a Prime/OEM and thus no quality rating is available, provide a statement stating that no quality rating is available.

A5.13.2. Provide the PS's quality system report or rating from the Prime/OEM responsible for the subject item. If no rating is available for the subject part from Prime/OEM, provide alternate quality ratings from another prime contractor, OEM and/or commercial customer.

**A5.14. Element O, LICENSEE AGREEMENT** (If applicable).

A5.14.1. If there is no proprietary data or process used, provide a statement stating as such.

A5.14.2. For an item with a RMSC Code of V or where proprietary data is used, provide an ownership statement or a copy of the licensee agreement between the PS and the data owner.

A5.14.2.1. If an ownership statement or a copy of the entire licensee agreement cannot be provided, at a minimum provide a redacted portion showing the details of Material Review Board (MRB) activity, data rights, configuration control, source control, etc.

A5.14.3. If a STS will be supporting a proprietary process, the PS will provide a letter of support from the STS. The letter should state the duration of the proprietary process support, availability and capacity.

**A5.15. Element P, VALUE ADDED (By Prime OR OEM).**

A5.15.1. If there is no Prime/OEM value added, provide a statement stating as such.

A5.15.2. Provide a statement identifying any value added provided by the Prime, OEM or any Proprietary Industrial Process STS in the repair of the subject or similar item(s).

**A5.16. Element Q, GOVERNMENT/PRIME CONTRACTOR SURVEYS .** This section can include any available DOD technical evaluations of the PS's repair capability, quality assurance procedures, industrial resources, material purchasing and STS controls.

A5.16.1. If no onsite inspection, site survey or self-assessment has been performed within the last seven (7) years, provide a statement stating as such.

A5.16.2. If applicable, provide a copy of the latest onsite inspection, site survey, self-assessment (survey, findings, and corrective actions) or DOD site survey acceptance letter performed within the past seven (7) years.

**A5.17. Element R, PRE-QUALIFICATION TEST PLANS .** For Category IV and V SARs Only.

A5.17.1. All proposed test plans necessary to completely qualify the part must be submitted for approval prior to beginning testing.

A5.17.2. Testing may be at the contractor's expense.

A5.17.3. The pre-qualification test/inspection procedures proposed and independent test laboratories proposed to be used have to be identified by Name, CAGE, address and telephone number. Test requirements are part specific.

**A5.18. Element S, TEST RESULTS .** For Category IV SARs Only.

A5.18.1. Provide all part specific qualification and validation/verification test results for the subject item to include: analysis, bench, and/or accelerated mission testing results.

**A5.19. Element T, MASTER TOOLING CERTIFICATIONS .**

A5.19.1. Provide a list for all equipment/tooling requiring calibration to include the part number, serial number, location and date of calibration and expiration for each item.

A5.19.2. If no master tooling is required, provide a statement stating as such.

A5.19.3. Provide certification of access to and the right to use any required master tooling, special tooling/test equipment, Mylars (stable base drawings), glass layout, and loft data/contour data as applicable to the latest item technical data or drawing.

**A5.20. Element U, GOVERNMENT QUALITY ASSURANCE COMPLIANCE .** Provide a statement that the PS will comply with all government imposed quality assurance provisions,

testing requirements, etc. as identified in the solicitation or contract for the subject item. **Note:** Elements V-Z Left Blank Intentionally

**A5.21. Element AA, ESA/OEM APPROVAL LETTER .** Provide a copy of the ESA/OEM approval letter or certificate with the expiration or issuance date circled.

**A5.22. Element AB, NOVATION LETTER .** Provide a copy of the novation letter submitted to the PCO for the given NSN.

**A5.23. Element AC, REPAIRED PART USAGE HISTORY.** For Category IV and V SARs only. Provide all available usage history for repaired subject item parts.

**A5.24. SOURCE RESUBSTANTIATION REQUEST (SRR )**. Only Approved Sources that have produced CSI within 36 months or CAI within 84 months can submit a SRR. SRR elements are listed in [Table A5.4](#) and defined in section 8.

A5.24.1. SRR DETERMINATION.

A5.24.1.1. If multiple SRR packages are to be submitted within a one month period, then the PS can submit one Master SRR (MSRR) package and a SRR lite package for each additional NSN.

A5.24.1.2. MSRR packages.

A5.24.1.2.1. The MSRR must be constructed in a manner that reduces the data required for SRR lites. The MSAR elements should include all part numbers, license agreement(s) and Enterprise Quality History providing an enterprise point of view.

A5.24.1.2.2. The MSRR should be the most complex part that will be submitted within the 30 days period.

A5.24.1.3. SRR lite packages. The SRR lite packages must be submitted within one month of the MSRR submittal.

A5.24.1.3.1. Each SRR lite cover letter will reference the MSRR.

A5.24.1.3.2. The SRR lite package will only contain the unique part data for each additional NSN.

**A5.25. Requirements .** SRR elements are listed in [Table A5.3](#) and defined in section 8.

**Table A5.4. Source Resubstantiation Request Package Requirements.**

Element	Source Resubstantiation Request	MSRR	SRRL	Remarks
A	Cover Letter	■	■	
B	Technical Data Rights Certification Statement	■		Include all NSN and PN
C	Brochure & Correspondence	■		
D	Quality Assurance Documentation	■		* Site Survey Meets Requirement
E	Subject & Alternate Item Drawings or Technical Data	■	□	For all NSN and PN

F	Item Specification	■	<input type="checkbox"/>	For all NSN and PN
G	Sub-Tier Supplier (Sub-Vendor) Information (Frozen for CSI)	■	■	
H	Quality History (Entire Site and All Parts)	■		Include all NSN and PN
K	Purchase Orders & Shipping Documents	■	■	
L	Process/Operations Sheets & Travelers (Frozen for CSI)	■	■	
M	Repair Process Sheets and/or Inspection Method Sheets (IMS) (Frozen for CSI)	■	■	
N	Prime Contractor's Quality Rating System Report	■	<input type="checkbox"/>	
O	Licensee Agreement	■		Include all NSN and PN
P	Value Added (By Prime or OEM)	■		For all NSN and PN
Q	Government/Prime Contractor Surveys	■		Per CAGE
T	Master Tooling Certifications & Calibration	■	■	
U	Government Quality Assurance Compliance	■		For all NSN and PN

**Notes and Comments:**

Each PS must submit a SAR or one Master SRR Package and SRR lite packages for each additional Output NSN.

- An element may have been covered in the MSRR by the overall statement, if not provide individual data or statements for the additional part number.

SD – Source Demonstration may be combined to reduce the number as approved by ESA. All required processes should be demonstrated in the selected Source Documentation(s).

**A5.26. WAIVER, SAR or SRR SUBMITTALS** . Waiver, SARs or SRR packages can be submitted to:

A5.26.1. AFSC/SB (Repair).

**Table A5.5. AFSC/SB (Repair).**

Staff Drive, Ste 1AG85A  
Tinker AFB OK 73145-3009

A5.26.2. If in Solicitation:

**Table A5.6. Solicitation.**

AFSC/SB (Repair)

ATTN: (Procurement Official's Name) Solicitation Number: (Solicitation Number)

Staff Drive, Ste 1AG85A

Tinker AFB OK 73145-3009

A5.26.3. The PS shall retain the SAR package or a copy until the approval expires.

**A5.27. SAR, WAIVER AND SRR EVALUATION .**

A5.27.1. The ESA will evaluate the approval request, SAR, Waiver or SRR packages, submitted using the LPS Form 815 (815), Propulsion Sustainment Directorate Source Request Review. The ESA will tailor the 815 to the type of approval request and category identified in the approval request package. ESA will scan all CD(s) for viruses prior to inserting them into the assigned government computer system. **Note:** A public release copy of the 815 can be found on the following site: <http://www.tinker.af.mil/429scms.saspo/index.asp>. The 815 can be modified by the ESA IAW the established QR.

A5.27.2. The ESA will identify any issues, missing data or discrepancies, found during the evaluation of the approval request package. The ESA will provide the PS a list of issues that need to be resolved.

A5.27.2.1. The PS will be given three (3) working days to provide either the data required to eliminate the issues identified or provide a date the data will be submitted.

A5.27.2.2. If the PS provides a Data Submission Date (DSD), then the ESA will determine if the established deadline allows for the approval request package to sit in abeyance until the DSD. If the DSD is acceptable, the ESA will continue the evaluation once the data is provided within the set DSD. If the DSD is not met, then ESA will complete the evaluation and forward a disapproval letter. The PS will be encouraged to resubmit the SAR, waiver or RSS package once all identified issues have been resolved.

A5.27.2.3. If the PS provides the required data, the ESA will complete the evaluation. If the issues were not resolved, the ESA will forward a disapproval letter with a list of issues that need to be resolved. If the issues were resolved, the ESA will approve the approval request package and inform AFS/SB of the results.

A5.27.3. If the ESA evaluation determines that the approval request package met the requirements established in the QR, then the ESA will approve the source and update the approved source list.

A5.27.4. All transactions required to evaluate the approval request will be documented on the 815. All necessary artifacts will be recorded on the 815 and retained in an ESA designated information system.

A5.27.5. Once all the approval request requirements have been met, the ESA will issue an approval letter with expiration date IAW section 12.



A5.27.6. SAR, WAIVER AND RESUBSTANTIATION APPROVAL DURATION. ESA source approval expiration is defined **Table A5.7**. The expiration date will be based on the date affixed on the Propulsion ESA approval letter.

**Table A5.7. Propulsion Approval Duration.**

APPROVAL DURATION MATRIX		
Criticality	Approval Duration	Reference
CSI	3 Years	AFI 20-106_IP
CAI	7 Years	AFMCI 23-113/(SAM)

**A5.28. Self-Assessment Checklist (SAC) and Site Survey Checklist (SSC).** The ESA may require a SAC and then a SSC, after determining if one has been conducted by the USAF or another Military Service.

A5.28.1. SAC. The SAC is similar to the Site Survey checklist found in the SAM.

A5.28.1.1. The ESA will forward the SAC to the PS with a 30 day deadline.

A5.28.1.2. The PS will provide a completed SAC to the ESA with all the artifacts required to demonstrate compliance.

A5.28.1.3. The ESA will review the SAC and determine if a follow-on site survey is required.

A5.28.2. SSC. The SSC will use the SAC submitted by the PS to conduct a site survey of the PS facility. The primary focus of the site survey will be to resolve any issues that were discovered during the SAC. The site survey duration will be between one to three days.

**A5.29. LOSS OF QUALIFICATION APPROVAL .** The PS should be aware that qualification approval may be lost per the conditions detailed in FAR Part 9.207 and the following:

A5.29.1. Products or services, submitted for inspection or acceptance, that do not meet the requirement;

A5.29.2. Products or services that were previously rejected and the defects were not corrected when submitted for inspection or acceptance;

A5.29.3. An approved source fails to request resubstantiation following change of location or ownership of the plant where the product which met the qualification requirement was repaired (see the FAR clause at 52.209-1, Qualification Requirements);

A5.29.4. If repair is discontinued;

A5.29.5. A condition of meeting the qualification requirement was violated; e.g., advertising or publicity contrary to FAR part 9.204(h)(5);

A5.29.6. A revised specification imposes a new qualification requirement;

A5.29.7. Manufacturing, design or repair changes have been incorporated in the qualification requirement;

A5.29.8. Performance of a contract subject to a qualification requirement is otherwise unsatisfactory.

**A5.30. Phase II, Source Demonstration (SD).** The SD phase will not start until Phase 1, SAR approval, is complete.

A5.30.1. This SD Phase of the qualification process is the substantiation of specific repair procedures, process control and the specialized sample testing. The SD will be performed by the ESA or designee after completion of the SAR package and prior to source approval. ESA will determine SD acceptance.

A5.30.2. SD requirement may be waived by the ESA for the following:

A5.30.2.1. If PS has been approved by the OEM and the PS can provide a copy of the certification or approval within 36 months for CSI and 60 months for CAI.

A5.30.2.2. If PS can provide a part-process matrix and provide a NADCAP or third party certification(s) for all the significant industrial processes as defined in Appendix B.

A5.30.3. After the SAR is approved, the PS shall notify the ESA, if the PS intends to proceed to source demonstration of the qualification process.

A5.30.4. The ESA will advise the PS of the availability of USAF Source Demonstration asset(s). The ESA will provide a Repair Program Plan (RPP) for a specific part to the PS. After notification that SD assets are available, the PS shall proceed as follows:

A5.30.4.1. The PS shall submit a final RPP copy of all required production documentation and a shipping address for the SD asset(s) shipment.

A5.30.4.2. After the ESA approves production documentation and the PS has completed all prototyping efforts, the PS will provide the ESA with a SD schedule and agenda.

A5.30.4.3. The ESA or designee will advise the PS if the ESA will be on site to witness the actual repair procedure(s) or allow for the video recording of select repairs or the entire repair procedure.

A5.30.4.4. The PS shall perform all repairs specified in the approved Repair Program Plan IAW the approved Traveler, POS, RMS/IMS and comply with all other RPP requirements. If changes are required due to the prototyping effort, ESA approval must be reaffirmed, prior to final acceptance.

A5.30.5. After completion of all repairs and RPP requirements, the PS will submit all RPP documentation and artifacts to the ESA. Once the SD is completed, the ESA will notify the PS of the return shipping address for the repaired asset(s).

**Table A5.8. Signatures**

Coordination: <hr/>
Competition Advocate 
Approval: <hr/>

Chief of Contracting Office

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Chief Engineer

The authority granted by the signatures for qualification requirement shall not exceed seven (7) years past the last signed date. Qualification requirements shall be examined and revalidated if the last signed date is over 7 years old (FAR 9.202(f)).

**Table A5.9. Technical Data Rights Certification Letter Example.**

**APPENDIX A**

**TECHNICAL DATA RIGHTS CERTIFICATION LETTER**

*I am an officer and employee of the above name legal entity with the responsibility for investigating the facts upon which this certification is made. To the best of my knowledge and information obtained from my recent investigation:*

I certify that the technical data submitted as a part of my company's request for approval as potential source for the purpose of obtaining a contract were obtained by legal means by my company, without breach of any contractual or confidential relations pertaining to said technical data by my company, its current or recent employees; and

I certify that my company, its current or recent employees did not obtain or receive any technical data marked with a company's proprietary rights legend or a Government limited rights legend from any U.S. Government's agency or employee or other third parties that were used in the preparation of or were incorporated into the request for approval or its supporting technical data other than as described herein; and

I certify that my company has the legal right to use said technical data to manufacture/repair the below identified part for the United States Government. To the extent that said technical data are marked with a company's proprietary rights or a Government limited rights legend or are otherwise believed to be or have in the past been the proprietary data of another company, the following documents which are attached hereto and made a part of the certification have formed the basis for claiming legal right to use said technical data. Such documentation must clearly cover the data necessary for source approval.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER THE TITLE 18, UNITED STATES CODE, SECTION 1001.

THIS CERTIFICATION APPLIES TO:

NSN\_\_P/N\_\_

NOTE: If SAR package is for multiple NSNs, all NSNs, Part Numbers, Nouns must be listed. The list can be attached to the letter.

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(Signature)

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(Date)

(Typed or printed name & title)

**This document must be signed by the Company President, Owner or Plant Manager.**

**Table A5.10. Significant Industrial Processes**

<b>APPENDIX B</b>		
<b>SIGNIFICANT INDUSTRIAL PROCESSES</b>		
The following examples are typical processes considered significant in that they are capable of producing alterations to material structures, mechanical properties, and ultimately, item reliability, if performed improperly, and cannot normally be evaluated without destructive testing.		
#	SIGNIFICANT INDUSTRIAL PROCESSES	NADCAP
1	Casting Processes	NA
2	Forging Processes	NA
3	Other Forming Processes	NA
4	Disassembly Procedures	NA
5	Blending/Reworking	NA
6	Heat Treatment and Surface Hardening Processes	7102
7	Brazing	7102
8	Chemical Processes: Chemical Cleaning, Anodizing, Conversion/Phosphate Coatings, Paint/Dry Film Coatings, Stripping, Chemical Milling, Surface Treatment/Passivation and Etching (Nital/Pre-Penetrant/Temper/Macrostructure/Blue Etch Anodize)	7108
9	Metal Electroplating (Plating) Processes	7108
10	Coating Processes:	7109
10a	Plasma Spray	7109
10b	Wire Spray	7109
10c	HVOF	7109
10d	Diffusion Coatings	7109
11	Welding/Fusion	7110
12	Non-Destructive Inspections:	7114
12a	Visual Inspection	7130*
12b	Fluorescent Penetrant	7114
12c	Magnetic Particle	7114

12d	Eddy Current	7114
12e	Ultrasonic	7114
12f	Radiography	7114
12g	Laser Holography	NA
13	Electrochemical Machining Processes (Cavity Sinking, Drilling, Grinding, etc.)	7116
14	Electro-Discharge Machining	7116
15	Electro-Stream Drilling	7116
16	Laser Beam Metal Removal Processes	7116
17	Electron Beam Processes	7116
18	Blasting Processes:	NA
18a	Aluminum Oxide	NA
18b	Silicon Carbide	NA
18c	Plastic Bead	NA
18d	Glass Bead	NA
19	Peening Processes	7117
20	Soldering	7120
21	Broaching	7126
22	Grinding	7126
23	Drilling, Reaming and Boring	7126
24	Milling	7126
25	Finish Turning	7126
26	Surface Finishing Processes:	NA
26a	Honing	NA
26b	Sutton Barrel	NA
27	Dimensional Inspection/Tolerancing	7130
28	Water-Jet Stripping	NA
29	Assembly Procedures	NA

**Table A5.11. Definitions**

**APPENDIX C**  
**DEFINITIONS**

**Approval Part/Item** – Part/Item for which source approval is sought.

**Critical Application Item** – (CAI) An item, part, assembly, installation or production system that is essential to weapon system performance or operation, or the preservation of life or safety of operating personnel, as determined by the military services.

**Critical Characteristic** – Any feature throughout the life cycle of a Critical Item, such as dimension, tolerance, finish, material, or assembly, repair, manufacture or inspection process, operation, field maintenance, or depot overhaul requirement that if non-conforming, missing, or degraded may cause the failure or malfunction of the Critical Item.

**Critical Safety Item (CSI)** – An item, part, assembly, installation or production system with one or more critical or critical safety characteristics that, if missing or not conforming to the design data or quality requirements, would result in an unsafe condition that could cause loss or serious damage to the end item or major items, loss of control, uncommanded engine shutdown, or serious injury or death to personnel. Unsafe conditions relate to hazard severity categories I and II of MIL-STD-882, System Safety Requirements. The determining factor in CSIs is the consequence of failure, not the probability that the failure or consequence would occur.

**Engineering Support Activity (ESA)** – The Military Service organization assigned responsibility and authority to perform and approve engineering and quality assurance actions necessary to evolve detail design disclosures for systems, subsystems, equipment, and components exhibiting attributes essential for products to meet specific military requirements. During the operational phase, it includes any engineering activity, the results of which would add to or alter the design of equipment in such a manner, or to such an extent, as to change its operational capabilities or its design attributes of performance, reliability, maintainability and parts interchangeability, or to render it capable of alternative or additional use. For the purpose of this QR, the ESA is the USAF Propulsion Division Engineering Chief as delegated for the respective propulsion system and Design Control Activity. Also known as the Cognizant Engineering Authority (CEA).

**Fully Licensed Repair/Overhaul Facility** – A repair/overhaul facility with current, formal authorization by the prime contractor or OEM to repair/overhaul CSIs on behalf of the prime contractor. To be a fully licensed repair/overhaul facility, the prime contractor must have reviewed and approved the facility's repair/overhaul processes and controls, technical documentation, quality and inspection capabilities, and item support practices. Licensing must assure that the prime contractor shall provide technical assistance to the customer, when requested, for items, equipment, or systems repaired/overhauled by the facility under the license agreement.

**Inspection Method Sheets (IMS)** – Document used to describe the steps involved in executing an inspection or series of inspections to include tooling, gages, fixtures, dimensions and other parameters necessary to execute the required inspections(s).

**Major Characteristics** – A part feature which, if non-conforming, could compromise the function of the part, resulting in a significant maintenance burden and/or reduction in weapon system performance.

**Material** – A general term referring to material at any stage in the repair process.

**National Aerospace & Defense Contractors Accreditation Program (NADCAP)** – The Performance Review Institute (PRI), an independent, not-for-profit trade association affiliated with the Society of Automotive Engineers (SAE) through NADCAP, accredits subcontractors and sub-tier suppliers to aerospace and defense industry consensus standards.

**NIST** – National Institute of Standards and Technology.

**Original Equipment Manufacturer (OEM)** – An individual, activity, or organization that performs the physical fabrication processes that produce the deliverable part or other items of supply for the prime contractor. The OEM must produce the part in-house. The OEM may or may not be granted design responsibility by the prime contractor for preparation and technical currency of technical data.

**Potential Source** – Company furnishing a source approval request, waiver, or resubstantiation package in an attempt to obtain ESA source approval to supply/repair the subject part in its finished state to Air Force.

**Prime Contractor** – A contractor having responsibility for design and/or delivery of a system, subsystem, or equipment such as aircraft, engines, ships, tanks, vehicles, guns and missiles, ground communications and electronics systems, and test equipment.

**Production Quantities** – Quantities that establish a reasonable level of confidence in a prospective source's ability to consistently produce parts whose integrity is equivalent to that exhibited by parts that originally passed substantiation testing. As a minimum it shall be considered representative of several production lots or greater quantities commensurate with those specified in current solicitations or AFSC annual buy projections and shall be exclusive of quantities produced in experimental or developmental programs.

**Purchaser** – The Purchaser as defined in all applicable government specifications as well as all OEM specifications relative to the part described in this document shall refer to the AFMC contracting activity issuing the procurement requirement.

**Raw Material** – Ingot, bar, billet, or sheet stock used directly in the fabrication/repair of the replacement part or forgings/castings used in the repair.

**Repair** – Necessary preparation, fault correction, disassembly, inspection, replacement of parts, adjustment, reassembly, calibration, or tests accomplished in restoring items to serviceable status.

**Repair Process Sheets (RPS)** – Documents used to describe the steps involved in executing an operation or series of operations to include tooling, machinery, dimensions, speeds, feed rates, coolants, cutters, tape numbers and other operating, process and/or set-up parameters necessary to execute the operation. At a minimum, significant processes in Appendix B shall be fully defined.

**Significant Industrial Process** – A process which is capable of producing alterations in the material structure of a part which cannot normally be evaluated without destructive testing and which can compromise the mechanical properties and ultimately the reliability of the part. Examples of processes that are considered to be significant by AFLCMC/LPS are listed in Appendix B.

**Similar Part** – The part must be used in a proven aircraft turbofan or turbojet engine. The part

must be fabricated from the same or a similar material that is equivalent or more difficult than the subject item to form and finish. The similar part must demonstrate the ability of the prospective source, in conjunction with their STSs, to perform all requisite significant manufacturing/repair processes applicable per the technical data and sub-tier specifications. Significant processes are defined in Appendix B.

**Sub-Tier Supplier (Sub-Vendor) (STS)** – A source supplying material, products, and/or services to the PS as required in the performance of the contract. This term applies to all facilities other than the PS's facility including those of the same company.

**Technical Data** – Data required for the accomplishment of logistics and engineering processes in support of the contract end item. It includes drawings, operating and maintenance instructions, provisioning information, specifications, inspection and test procedures, instruction cards and equipment placards, engineering and support analysis data, special purpose computer programs, and other forms of audio visual presentation required to guide personnel in the performance of operating and support tasks.

**Technical Order** – A technical manual published by the Air Force containing (in this case) technical information required to develop inspection methods processes for aircraft engine parts.

**Value Added By OEM** – Any action, repair or inspection process, data, instructions, or equipment that is essential to the repair of the part, but is not documented in the data package. Examples of value added are the use of OEM qualification of sources for forgings, castings, and raw materials; the use of OEM tooling, fixtures, gages or inspection master hardware; the use of OEM MPS, IMS, or other process related data not referenced on the part drawing(s); quality assurance of sub-vendors of significant processes all as related to the performance of manufacture/repair.