Pivotal Supplier Quality Assurance Requirements (SQAR) Procedure

Table of Contents

1. Purpose

To define the Supplier Quality Assurance Requirements (SQAR) for suppliers providing products and services to Pivotal. This procedure ensures compliance with AS9100 Rev D requirements and promotes the delivery of high-quality products and services.

2. Scope

This procedure applies to all suppliers who provide products or services to Pivotal, including materials, components, sub-assemblies, and services.

3. Definitions

AS9100D	An international quality management system standard for the aerospace industry.
Supplier	An organization or person that provides a product or service.

First Article Inspection (FAI)	First Article Inspection (FAI): A complete, independent, and documented physical and functional inspection process to verify that prescribed production methods have produced an acceptable item as specified by engineering drawings, planning, purchase order, engineering specifications, and/or other applicable design documents.
Supplier Quality Survey (SQS)	A detailed questionnaire used to evaluate a supplier's quality management system and capabilities before approval.
Key Performance Indicators (KPIs)	Metrics used to evaluate supplier performance in quality, delivery and responsiveness.
Root Cause Analysis (RCA)	A method of problem solving used to identify the root cause of faults or problems.
Preventative Action	Action taken to eliminate the causes of potential nonconformities to prevent their occurrence.
Corrective Action	Action taken to eliminate the causes of an existing nonconformity to prevent recurrence.
Calibration	The process of verifying the accuracy and precision of measuring equipment by comparing it against reference standards.
Deviation	A departure from the established standards or specifications.
FOD	Foreign Object Debris/Damage; any object, particle, or substance not originally part of the item that could potentially cause damage.
Non-Conformity	Failure to meet specified requirements or standards.
MTS	Make to Specification

4. References

ID	Description
ANSI/NCSL Z540.3	Requirements for the Calibration of Measuring and Test Equipment.
AS13000	Problem Solving Requirements for Suppliers
AS5553	Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition
AS6081	Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition - Distributors
AS9100	Quality Management Systems - Requirements for Aviation, Space, and Defense Organizations
AS9102	Aerospace First Article Inspection Requirement
AS9131	Aerospace Series - Quality Management Systems - Nonconformity Data Definition and Documentation
AS9138	Aerospace Series - Quality Management Systems Statistical Product Acceptance Requirements
AS9145	Aerospace Series - Requirements for Advanced Product Quality Planning and Production Part Approval Process
AS9146	Foreign Object Damage (FOD) Prevention Program - Requirements for Aviation, Space, and Defense Organizations
DOC-PVTL-0000456	Configuration Management Master Definition List
DOC-PVTL-0000464	Lifecycle Process & Definitions for Design & Development
ISO 14001	Environmental Management Systems
ISO 17025	General Requirements for the Competence of Testing and Calibration Laboratories

ISO 9000	Quality Management Systems - Fundamentals and Vocabulary
ISO 9001	Quality Management Systems - Requirements
NAS 412	Foreign Object Damage (FOD) Prevention Guidance Document
DOC-PVTL-0000383	Supplier Initial Survey
DOC-PVTL-0000231	Part Identification and Serialization
DOC-PVTL-0000720	Supplier Process Change & Deviation Request form
NADCAP	National Aerospace and Defense Contractors Accreditation Program) is an industry-managed approach to conformity assessment of 'special processes'

5. Supplier Approval Process

5.1 Supplier Selection

- Suppliers shall be selected based on their ability to meet quality, delivery, and cost requirements.
- Suppliers must provide evidence of certification to the applicable standard (e.g., AS9100 Rev D, ISO 9001, or other relevant quality management systems).
- Suppliers without higher-level 3rd Party QMS certifications will undergo a supplier audit as outlined in Section 5.4.
- All approved MTS suppliers are required to input the necessary details into the Net-Inspect system prior to shipment. Failure to comply with this requirement may result in the following:
  1. Voidance of Purchase Order (PO)
  2. Cancellation of Shipment
  3. Delayed payment for Goods or Services
- It is the responsibility of the supplier to ensure that all required data is accurately submitted in Net-Inspect before shipment is made.

At the request of Pivotal, Suppliers must complete a Supplier Quality Survey (SQS) and provide all required documentation to Pivotal to become an approved supplier.

5.2 Supplier Evaluation

- New suppliers shall undergo an initial evaluation, including a review of their SQS, quality management system, capabilities, and performance history.
- The completed SQS will be reviewed by Pivotal's Quality Assurance team to determine if the supplier meets the required standards.
- Suppliers without higher-level 3rd Party QMS certifications will be subject to a supplier audit as part of the evaluation process as described in Section 5.4.
- Ongoing evaluations will be conducted based on supplier performance metrics, including quality, delivery, and responsiveness.
- Suppliers shall be rated based on their performance. Ratings will affect future procurement decisions and may result in increased surveillance, probation, or disqualification if performance criteria are not met.

5.3 Supplier Approval

- Approved suppliers will be added to the Pivotal Approved Supplier List (ASL).
- Suppliers must notify Pivotal of any significant changes to their quality management system, ownership, or key personnel.
- Re-evaluation of the SQS may be required periodically or if significant changes occur.
- Suppliers without higher-level 3rd Party QMS certifications will be approved based on the results of the audit conducted as described in Section 5.4.

5.4 Supplier Audit for Non 3rd Party Certified Suppliers

5.4.1 Purpose

To establish a process for auditing and validating the quality management systems and processes of suppliers who do not possess higher-level quality certifications such as AS9100 or ISO 9001.

5.4.2 Scope

This procedure applies to all suppliers providing products or services to Pivotal who do not have a recognized 3rd party QMS certification.

5.4.3 Supplier Audit Process

All tasks outlined in this section will be carried out by the Supplier Quality Group or their designee.

1. Initial Contact and Information Gathering:
    - Contact the supplier to gather preliminary information about their quality management system and processes.
    - Request relevant documentation and records that demonstrate their quality control measures.
2. Audit Planning:
    - Develop an audit plan outlining the objectives, scope, criteria, and schedule of the audit.
    - Select a qualified audit team with knowledge of quality management systems and the specific requirements of Pivotal.
3. On-Site Audit:
    - Conduct an on-site audit to evaluate the supplier's processes, procedures, and practices.
    - Use an audit checklist to ensure all critical areas are covered, including process controls, inspection and testing, nonconforming product management, and corrective and preventive actions.

4. Audit Findings and Report:
    - Document all findings, including any nonconformities or areas for improvement.
    - Prepare an audit report summarizing the findings, conclusions, and any required corrective actions.
5. Corrective Actions and Follow-Up:
    - Work with the supplier to develop and implement corrective action plans for any identified nonconformities.
    - Conduct follow-up audits or reviews to verify the effectiveness of the corrective actions.
6. Approval and Monitoring:
    - Based on the audit results, decide whether to approve the supplier.
    - Approved suppliers will be added to the Approved Supplier List (ASL) and subject to ongoing performance monitoring and periodic re-audits as necessary.

6. Supplier Quality Requirements

6.1 Quality Management System

- Suppliers must maintain a quality management system compliant with the applicable standard (e.g., AS9100 Rev D for aerospace suppliers, ISO 9001 for general suppliers).
- Suppliers without higher-level quality certifications must undergo a supplier audit as outlined in Section 5.4 to validate their quality management system and processes.
- Suppliers shall notify Pivotal of any changes to their certification status or quality management system.
- Suppliers shall implement and maintain processes to ensure continuous improvement.

Note: Specific requirements may vary based on the standard to which the supplier is certified.

6.2 Product and Process Control

- Suppliers shall ensure products conform to Purchase Order specified specifications, drawings, and purchase order terms and conditions. If there happens to be a conflict between specifications, drawings and purchase order terms, the drawing will always take precedence. For such situations, please contact Pivotal for clarity.
- Process controls must be established and maintained to ensure product quality.
- NADCAP accreditation is required for special processes (e.g., heat treating, welding, non-destructive testing) if specified by Pivotal.
- Suppliers must use adequate methods for product realization, including Production planning, and Quality Control processes.

6.3 Inspection and Testing

- Suppliers must perform 100% inspection and testing of all critical product characteristics to verify product conformity. In lieu of 100% characteristic inspection, sampling plans may be used with advanced approval by Pivotal QA. Statistical process control methods are encouraged to be used with advanced approval by Pivotal.
- Inspection and test records shall be maintained and made available upon request.
- Suppliers shall utilize appropriate inspection and test equipment and ensure its calibration and maintenance.

6.4 Nonconforming Product

- Suppliers must have a process for managing nonconforming products, including identification, segregation, disposition, and notification to Pivotal. This process must align with the delivery, inspection, and acceptance terms outlined in Section 4 of the General Terms and Conditions for Purchase of Goods, ensuring that nonconforming products are handled appropriately and timely.
- Nonconforming products must not be shipped without written authorization from Pivotal. Net-Inspect will be used for any deviation request.
- Corrective actions must be implemented to prevent the recurrence of nonconformities.

Note: Please refer to Pivotal Document DOC-PVTL-0000377 (General terms and conditions for purchase of goods.)

6.5 Corrective and Preventive Action

- Suppliers must have a process for corrective and preventive actions to address nonconformities and prevent recurrence.
- Suppliers shall provide root cause analysis and corrective action plans for any critical or major nonconformities identified by Pivotal within 30 days of an NCR submission.
- Corrective action effectiveness shall be verified and documented by supplier.

6.6 Control of Special Processes

- When special processes (e.g., heat treating, welding, non-destructive testing) are required, suppliers shall ensure that the processing source is approved by Pivotal.
- If specified by Pivotal, these processes must be performed by personnel and sources that are accredited by NADCAP (National Aerospace and Defense Contractors Accreditation Program).
- Suppliers shall maintain process control documentation and ensure compliance with applicable specifications.
- Special processes must be performed by personnel qualified and/or certified as applicable to the required standards.

6.7 Traceability

- Suppliers must maintain traceability of products from raw material through delivery.
- Traceability records shall include material certifications, inspection records, shipping documents, and test reports.
- Unique identification shall be applied to products, components, and materials as specified by Pivotal that are visible throughout the production process.

6.8 Control of Sub-Tier Suppliers

- Suppliers are responsible for ensuring that sub-tier suppliers comply with Pivotal's quality requirements.
- All applicable Pivotal requirements shall flow down to sub-tier suppliers.
- Suppliers shall monitor sub-tier supplier performance and take corrective actions as necessary.

6.9 Supplier Process Changes and Deviations

- Suppliers must notify Pivotal of any proposed changes to their manufacturing processes, materials, or design. This includes any deviations from approved processes or specifications. Net-Inspect will be used for any deviation request.
- Pivotal must approve any changes or deviations in writing before the supplier proceeds.
- Suppliers must ensure that all relevant documentation is updated to reflect approved changes or deviations.

7. Calibration Requirements

7.1 Calibration System

- Suppliers shall maintain a documented calibration system that conforms to ANSI/NCSL Z540.3 or ISO/IEC 17025 requirements.
- All measuring and test equipment used for product acceptance must be calibrated and traceable to national or international standards.

7.2 Calibration Intervals

- Calibration intervals shall be established based on the type of equipment, frequency of use, and manufacturer's recommendations.
- Calibration records must indicate the calibration status, including the date of last calibration and the due date for the next calibration.

7.3 Calibration Records

- Suppliers shall maintain records of all calibrations performed. These records must include the identification of the equipment, calibration date, calibration results, and the name of the individual or organization that performed the calibration.
- Calibration records must be made available to Pivotal upon request.

7.4 Nonconforming Equipment

- Any equipment found to be out of calibration shall be tagged and removed from service until it is recalibrated and verified to be within acceptable limits.
- If any product has been accepted using out-of-calibration equipment, the supplier must notify Pivotal immediately with a containment plan for the product affected.

7.5 Subcontract Calibration

- Calibration services provided by subcontractors must meet the same requirements as specified in this section.
- Suppliers must ensure that subcontracted calibration services are performed by accredited calibration laboratories.

8. Documentation and Record Retention

- Suppliers must maintain records of quality-related activities.
- Records must be made available for review upon request.

9. Communication and Reporting

- Suppliers shall report any quality issues that may impact Pivotal's products within 24 hours of detection.
- Regular communication and meetings with Pivotal's quality and procurement teams are encouraged to ensure alignment and address any issues proactively.

10. Supplier Performance Monitoring

- Pivotal will monitor supplier performance based on quality, delivery, and responsiveness.
- Performance metrics will be reviewed regularly, and when necessary, feedback will be provided to suppliers.
- Suppliers not meeting performance expectations may be subject to corrective actions or removal from the approved supplier list.

11. Audits and Assessments

- Pivotal reserves the right to audit supplier facilities and processes during reasonable working hours to ensure compliance with quality requirements. During these audits, suppliers must recognize their responsibilities as outlined in the indemnity and limitation of liability clauses (Section 8) of the General Terms and Conditions for Purchase of Goods.
- Audits may be scheduled or unscheduled (with 48-hour notice) and will be conducted by Pivotal or a designated representative.
- Suppliers shall support audits by providing access to facilities, records, and personnel.
- Suppliers shall take corrective actions to address any findings from audits and assessments.

  Note: Please refer to Pivotal Document DOC-PVTL-0000377 (General terms and conditions for purchase of goods.)

12. First Article Inspection (FAI)

- Suppliers must perform First Article Inspections (FAI) in accordance with AS9102 requirements for new products, changes in design, changes in manufacturing processes, and after a significant period of inactivity. Net-Inspect will be used for First Article Inspections.
- FAI reports must be submitted to Pivotal through Net-Inspect for approval prior to the first shipment of the product.

Note: Please refer to Pivotal Document DOC-PVTL-0000480

13. Product Release

- Products are subject to inspection and approval by Pivotal before shipment.
- Suppliers must provide Certificates of Conformance (C of C) with each shipment, certifying that products meet all applicable requirements.
- Product release documentation must include inspection and test records, traceability information, and any required certifications.

14. Packaging and Shipping

- Suppliers must ensure products are packaged and labeled according to Pivotal's requirements to prevent damage during transit and for product identification.
- Packaging materials must be suitable for the type of product and transportation method.
- Shipping documentation must include at a minimum the purchase order number, part number, and quantity.
- Suppliers must ensure timely delivery and communicate any potential delays to Pivotal.

15. Control of Customer Property

- Suppliers must exercise care with Pivotal's property, ensuring it is properly identified, used, maintained, and stored.
- Any loss, damage, or misuse of Pivotal's property must be reported immediately.
- Suppliers must return Pivotal's property upon request or upon completion of the contract.

16. Training and Competence

- Suppliers must ensure that personnel performing work are competent based on education, training, skills, and experience for the job at hand.
- Training records must be maintained and made available upon request.
- Suppliers shall provide ongoing training to ensure personnel remain competent and aware of current requirements.

17. Continuous Improvement

- Suppliers must strive for continuous improvement in quality, delivery, and cost performance.
- Suppliers shall establish objectives and metrics to drive continuous improvement.
- Regular reviews and assessments shall be conducted to identify opportunities for improvement.

18. Revision History

- This document shall be reviewed and updated as necessary to ensure it remains current and effective.
- Suppliers shall ensure they have the latest revision of this document and comply with any changes by downloading the latest revision from Pivotal website https://pivotal.aero/suppliers

19. Appendices

Appendix A: Templates and Forms

All Supplier forms can be found at https://pivotal.aero/suppliers.