



Supplier Quality Assurance Manual

Quality System Requirements

INTRODUCTION

This manual is issued to all Suppliers having business relations with Tom Smith Industries, Inc., herein referred to as TSI, to stipulate the Quality Assurance requirements of products supplied. The supplier should understand the importance of the quality requirements of TSI, and the Suppliers' Quality representative should utilize this manual to adopt policies and procedures for planning, control, and quality improvements for all products supplied to TSI. This manual constitutes an integral part of the Purchasing Agreement between TSI and our Suppliers.

Concept

TSI Suppliers are considered to be fully responsible for the quality of their products and must ensure that all products are produced in conformance to all required standards and specifications.

Quality Representative

Suppliers must establish cross-functional teams to develop and manage the product planning process and requirements. A Quality Representative must be assigned by the Supplier to interface with TSI in order to resolve quality related issues.

To ensure effective communication between TSI and our Suppliers, it is necessary for the Suppliers to complete the last page of this manual outlining current contacts and acknowledging receipt of the manual. This document must be signed by the Supplier's Quality Management personnel and Tom Smith Industries (purch@tomsmithindustries.com). The contact list must be updated as personnel changes occur.

Supplier Review

Prior to the initiation of production of Supplier products, a Quality Systems Audit may be conducted of Suppliers of TSI, regardless of registration status. The purpose of this audit is to confirm the characteristics to be inspected, the manufacturing processes to be used, and the inspection methods that will be incorporated to satisfy the quality requirements. These audits will be conducted by members of the TSI management team.

Quality System

Suppliers are required to develop, maintain, and document a Quality System which ensures that quality requirements are met. The Supplier shall develop a Quality Manual that addresses those requirements and makes reference to the quality system procedures and documentation used to satisfy the requirements. Suppliers to TSI are required to be, at a minimum, ISO 9000 registered. If the supplier is TSI customer directed, the requirement for ISO9000 registration may be waived.

1.0 Scope

Unless otherwise specified herein, the requirements outlined in ISO9000 and [MAQMSR](#) must be met and adhered to for all products.

2.0 Normative Reference

No TSI customer specific requirements

3.0 Terms and Definitions

No TSI customer specific requirements

4.0 Context of the Organization

4.1 Understanding the organizations and its context

No TSI customer specific requirements

4.2 Understanding the needs and expectations of interested parties

No TSI customer specific requirements

4.3 Determining the scope of the quality management system

No TSI customer specific requirements

4.3.1 Determining the scope of the quality management system-supplemental

No TSI customer specific requirements

4.3.2 Customer- specific requirements

No TSI customer specific requirements

4.4 Quality management system and its process

4.4.1

No TSI customer specific requirements

4.4.1.1 Conformance of products and processes

No TSI customer specific requirements

4.4.1.2 Product safety

No TSI customer specific requirements

4.4.2

No TSI customer specific requirements

5.0 Leadership

5.1 Leadership and commitment

5.1.1 General

No TSI customer specific requirements

5.1.1.1 Corporate responsibility

No TSI customer specific requirements

5.1.1.2 Process effectiveness and efficiency

No TSI customer specific requirements

5.1.1.3 Process owners

No TSI customer specific requirements

5.1.2 Customer focus

No TSI customer specific requirements

5.2 Policy

5.2.1 Establishing the quality policy

No TSI customer specific requirements

5.2.2 Communication the quality policy

No TSI customer specific requirements

5.3 Organizational roles, responsibilities and authorities

No TSI customer specific requirements

5.3.1 Organizational roles, responsibilities and authorities-supplemental

No TSI customer specific requirements

5.3.2 Responsibility and authority for product requirements and corrective actions

No TSI customer specific requirements

6.0 Planning

6.1 Actions to address risks and opportunities

6.1.1 and 6.1.2

No TSI customer specific requirements

6.12.1 Risk Analysis

No TSI customer specific requirements

6.1.2.2 Preventive action

No TSI customer specific requirements

6.1.2.3 Contingency plans*

The supplier shall have a documented contingency plan to satisfy TSI requirements in the event of an emergency such as utility interruptions, labor shortages, key equipment failures, and natural disasters.

6.2 Quality objectives and planning to achieve them

6.2.1 and 6.2.2

No TSI customer specific requirements

6.2.2.1 Quality objectives and planning to achieve them-supplemental

No TSI customer specific requirements

6.3 Planning

No TSI customer specific requirements

7 Support

7.1 Resources

7.1.1 General

No TSI customer specific requirements

7.1.2 People

No TSI customer specific requirements

7.1.3.1 Plant, facility, and equipment planning

No TSI customer specific requirements

7.1.4. Environment for the operation processes

No TSI customer specific requirements

7.1.4.1 Environment for the operation processes- supplemental

No TSI customer specific requirements

7.1.5 Monitoring and measuring resources

7.1.5.1 General

No TSI customer specific requirements

7.1.5.1.1 Measurement systems analysis

No TSI customer specific requirements

7.1.5.2 Measurement traceability

No TSI customer specific requirements

7.1.5.2.1 Calibration/verification records

No TSI customer specific requirements

7.1.5.3 Laboratory requirements

7.1.5.3.1 Internal laboratory

No TSI customer specific requirements

7.1.5.3.2 External laboratory

No TSI customer specific requirements

7.1.6 Organization knowledge

No TSI customer specific requirements

7.2 Competence

No TSI customer specific requirements

7.2.1 Competence-supplemental

No TSI customer specific requirements

7.2.2 Competence-on-the-job training

No TSI customer specific requirements

7.2.3 Internal auditor competency

No TSI customer specific requirements

7.2.4 Second-party auditor competency

No TSI customer specific requirements

7.3 Awareness

No TSI customer specific requirements

7.3.1 Awareness-supplemental

No TSI customer specific requirements

7.4 Communication

No TSI customer specific requirements

7.5 Documentation

7.5.1 General

No TSI customer specific requirements

7.5.1.1 Quality management system documentation

No TSI customer specific requirements

7.5.2 Creating and updating

No TSI customer specific requirements

7.5.3 Control of documented information

7.5.3.1 and 7.5.3.2

No TSI customer specific requirements

7.5.3.2.1 Record retention

No TSI customer specific requirements

7.5.3.2.2 Engineering specifications

No TSI customer specific requirements

8.0 Operations

8.1 Operations planning and control

No TSI customer specific requirements

8.1.1 Operations planning and control-supplemental

No TSI customer specific requirements

8.1.2 Confidentiality

No TSI customer specific requirements

8.2 Requirements for products and services

8.2.1 Customer communication

No TSI customer specific requirements

8.2.1.1 Customer communication-supplemental

No TSI customer specific requirements

8.2.2 Determining the requirements for products and services

No TSI customer specific requirements

8.2.2.1 Determining the requirements for products and services-supplemental

No TSI customer specific requirements

8.2.3 Review of the requirements for products and services

8.2.3.1

No TSI customer specific requirements

8.2.3.1.1 Review of the requirements for products and services-supplemental

No TSI customer specific requirements

8.2.3.1.2 Customer designation special characteristics

No TSI customer specific requirements

8.2.3.1.3 Organizational manufacturing feasibility

No TSI customer specific requirements

8.2.3.2

No TSI customer specific requirements

8.2.4 Changes to requirements for products and services

No TSI customer specific requirements

8.3 Design and developments of products and services

8.3.1 General

No TSI customer specific requirements

8.3.1.1 Design and developments of products and services- supplemental

No TSI customer specific requirements

8.3.2 Design and development planning

No TSI customer specific requirements

8.3.2.1 Design and development planning-supplemental

No TSI customer specific requirements

8.3.2.2 Product and design skills

No TSI customer specific requirements

8.3.2.3 Development of products with embedded software

No TSI customer specific requirements

8.3.3 Design and development

No TSI customer specific requirements

8.3.3.1 Product design and input

No TSI customer specific requirements

8.3.3.2 Manufacturing process design input

No TSI customer specific requirements

8.3.3.3 Special Characteristics

No TSI customer specific requirements

8.3.4 Design and development controls

No TSI customer specific requirements

8.3.4.1 Monitoring

No TSI customer specific requirements

8.3.4.2 Design and development validation

No TSI customer specific requirements

8.3.4.3 Prototype programme

No TSI customer specific requirements

8.3.4.4 Product approval process*

The Supplier shall be responsible for submitting the required PPAP package for all products supplied to TSI, as an indication of the verification that the products produced are in conformance to all applicable product specifications and requirements.

TSI PPAP Submission Requirements

Submissions must be made in accordance with AIAG Production Part Approval Process (PPAP) manual to the latest revision.

PPAP submission shall be required for the following:

- 1) Newly designed / ordered product.
- 2) Design changed product.
- 3) Parts which have not been supplied for a period of six (6) months.
- 4) Process changed product, defined as;
 - a) change to process conditions.
 - b) change to process sequence or location.
 - c) change to process equipment. (new or re-built)
 - d) change of manufacturing facility.
 - e) change to material. (different specification)
 - f) changes to supplier or outsourced process. (same or different specification)

TSI will need notified 120 days in advance of any changes to allow for adequate time for PPAP evaluation.

Suppliers are not approved, or authorized, to begin production or shipment of product to TSI prior to written PPAP approval.

PPAP Production Run

The PPAP production run must be a minimum of 30 pieces, unless agreed upon in writing by TSI Quality, with the required Ppk of 1.33 or greater for all agreed-upon special or critical product characteristics. A detailed action plan must be established for capability of less than the required 1.67, and detailed in the PPAP submission. The manufacturing process shall be performed using production intent machines, equipment, and tooling capable of maintaining the required quality requirements.

Master PPAP Sample

Suppliers must retain a Master PPAP Sample (N=3) for the same period as the PPAP records, or;

- a) until a new master sample is required for the same part number for TSI approval,
- b) where a master sample is required by the design record, Control Plan, or inspection criteria, as a reference or standard to be used. The Master Sample must be clearly identified, and tagged, as such, and show the customer approval date on the sample. Master Samples must be stored in a manner to protect the samples from degradation, including dirt, dust, rust, oxidation, or physical damage. Suppliers must retain a Master Sample for each position of a cavity, die, mold, tool, or production process (N=3 per cavity).
Note: When part volume from multi-cavity tooling creates a difficult storage condition, exceptions may be granted by TSI Quality but approval must be made in writing by a signed request form the Supplier.

8.3.5 Design and development outputs

No TSI customer specific requirements

8.3.5 Design and development outputs-supplemental

No TSI customer specific requirements

8.3.5.2 Manufacturing process design output

No TSI customer specific requirements

8.3.6 Design and development changes

No TSI customer specific requirements

8.3.6.1 Design and development changes-supplemental*

No TSI customer specific requirements

8.4 Control of externally provided processes, products and services

8.4.1 General

No TSI customer specific requirements

8.4.1.1 General-supplemental

No TSI customer specific requirements

8.4.1.2 Supplier selection process

No TSI customer specific requirements

8.4.1.3 Customer directed sources (also known as “Directed-Buy”)

No TSI customer specific requirements

8.4.2 Type and extent of control

No TSI customer specific requirements

8.4.2.1 Type and extent of control-supplemental

No TSI customer specific requirements

8.4.2.2 Statutory and regulatory requirement*

TSI has developed vendor terms and conditions which include the requirement that any materials or services performed against a TSI issued purchase order must meet all the statutory and regulatory requirements for the country of receipt, country of shipment, and the customer-identified country of destination, if provided. Please review the terms and conditions form TSI847.

8.4.2.3 Supplier quality management system development*

TSI will track the supplier's progress for developing TSI's supply base, towards achieving IATF certification. Suppliers will be scored in four distinct categories;

1. Current Quality management system.
2. Automotive or non-automotive supplier.
3. Supplier overall rating.
4. Any statutory or regulatory requirement associated with product provided.

TSI will create a score for each supplier. An audit schedule will be generated. The higher scored automotive suppliers will take top priority for second party audits.

8.4.2.3.1 Automotive product-related software or automotive products with embedded software

No TSI customer specific requirements

8.4.2.4 Supplier monitoring*

Supplier performance will be monitored by tracking quality, quantity, disruptions at customer locations, on-time delivery, premium freight and PPM. These measurables are set at the beginning of each new year. These targets represent the overall goal for TSI's supply base, as well as each supplier's individual goals.

If supplier performance is unacceptable, a Supplier Corrective Action Request (SCAR) will be given to the supplier to resolve the problem. Unacceptable performance automatically resulting in a SCAR is defined as;

- 1) Three consecutive late deliveries on the same part / material number.
- 2) Any rejection of raw material due to parts or resins not meeting print or specifications.
- 3) Three consecutive months of performance under target for the year.

All suppliers, included those directed by the customer, will be handled in the same manner. Suppliers who receive three or more SCAR's in one year will be put on probation and will not be allowed to quote new projects. Suppliers who do not meet the targets for on-time delivery and PPM in the calendar year will be put on probation and will not be allowed to quote new projects. If problems persist for more than a 12-month period, Purchasing will begin moving the offending supplier's existing business to other suppliers that are on the approved supplier list.

In order to be removed from probation a supplier must successfully complete the assigned SCARS. Have three consecutive on time deliveries and no SCARS for three consecutive months.

8.4.2.4.1 Second-party audits

No TSI customer specific requirements

8.4.2.5 Supplier development*

To ensure the quality of parts or products and to maintain acceptable levels of quality assurances, TSI must be notified of the use of a sub supplier

Facilities performing "special processes" on behalf of the supplier, such as plating, or other processes whose results are hidden shall be subject to prior examination by representatives of TSI.

Any change to a sub-supplier must be approved by TSI prior to the change and will require a PPAP. The responsibility of the sub-supplier's quality rests with the Supplier. Procedures must exist describing the criteria used for selecting suppliers and subcontractors.

Suppliers and sub-contractors should be evaluated based on their quality system, cost, delivery, and conformance to a specified level. A listing of approved suppliers and sub-contractors shall be maintained.

8.4. Information of external provided suppliers

No TSI customer specific requirements

8.4. Information of external provided suppliers-supplemental

No TSI customer specific requirements

8.5 Production and services provision

8.5.1 Control of production and services provision

No TSI customer specific requirements

8.5.1.1 Control Plan

No TSI customer specific requirements

8.5.1.2 Standardized work-operator instructions and visual standard

No TSI customer specific requirements

8.5.1.3 Verification of job set-ups

No TSI customer specific requirements

8.5.1.4 Verification after shutdown

No TSI customer specific requirements

8.5.1.5 Total productive maintenance

No TSI customer specific requirements

8.5.1.6 Management of production tooling and manufacturing, test, Inspection tooling and equipment

No TSI customer specific requirements

8.5.1.7 Production scheduling

No TSI customer specific requirements.

8.5.2 Identification and traceability

No TSI customer specific requirements

8.5.2.1 Identification and traceability-supplemental

No TSI customer specific requirements

8.5.3 Property belonging to customers or external providers

No TSI customer specific requirements

8.5.4 Preservation

No TSI customer specific requirements

8.5.4 Preservation-supplemental

No TSI customer specific requirements

8.5.5 Post-deliver activities

No TSI customer specific requirements

8.5.5.1 Feedback of information from service

No TSI customer specific requirements

8.5.5.2 Service agreement with customer

No TSI customer specific requirements

8.5.6 Control of changes

No TSI customer specific requirements

8.5.6.1 Control of changes-supplemental

No TSI customer specific requirements

8.5.6.1.1 Temporary change of process controls

No TSI customer specific requirements

8.6 Release of products and services

No TSI customer specific requirements

8.6 Release of products and services-supplemental

No TSI customer specific requirements

8.6.2 Layout inspection and functional testing*

Suppliers are required to perform a layout with a current ballooned drawing on an annual basis.

Suppliers must develop a means of tracking when to complete the required information. The annual requirement is due 1 year after the last (previous) PPAP approval date. Suppliers shall maintain all completed layouts and shall provide that information upon request. For suppliers supplying materials for an automotive application, layouts must be submitted annually.

8.6.3 Appearance Items

No TSI customer specific requirements

8.6.5 Statutory and regulatory conformity

No TSI customer specific requirements

8.6.6 Acceptance criteria

No TSI customer specific requirements

8.7 Control of nonconforming outputs

8.7.1

No TSI customer specific requirements

8.7.1.1 Customer authorization of concession

No TSI customer specific requirements

8.7.1.2 Control of nonconforming product-customer specified process

No TSI customer specific requirements

8.7.1.3 Control of suspect product

No TSI customer specific requirements

8.7.1.4 Control of reworked product

No TSI customer specific requirements

8.7.1.4 Control of repaired product

No TSI customer specific requirements

8.7.1.6 Customer notification

No TSI customer specific requirements

8.7.1.7 Nonconforming product disposition

No TSI customer specific requirements

8.7.2

No TSI customer specific requirements

9.0 Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

9.1.1 General

No TSI customer specific requirements

9.1.1.1 Monitoring and measuring of manufacturing process

No TSI customer specific requirements

9.1.1.2 Identification of statistical tools

No TSI customer specific requirements

9.1.1.3 Application of statistical concepts

No TSI customer specific requirements

9.2 Customer satisfaction

No TSI customer specific requirements

9.1.2.1 Customer satisfaction-supplemental

No TSI customer specific requirements

9.1.3 Analysis and evaluation

No TSI customer specific requirements

9.1.3.1 Prioritization

No TSI customer specific requirements

9.2 Internal audit

9.2.1 and 9.2.2

No TSI customer specific requirements

9.2.2.1 Internal audit programme

No TSI customer specific requirements

9.2.2.2 Quality management system audit

No TSI customer specific requirements

9.2.2.3 Manufacturing process audit*

If heat treating, the supplier is to follow the CQI-9 heat treat assessment and plating assessment. This assessment is to be provided to TSI on an annual basis.

9.2.2.4 Product audit

No TSI customer specific requirements

9.3 Management review

9.3.1 General

No TSI customer specific requirements

9.3.1.1 Management review-supplemental

No TSI customer specific requirements

9.3.2 Management review inputs

No TSI customer specific requirements

9.3.2.1 Management review inputs

No TSI customer specific requirements

9.3.3 Management review outputs

No TSI customer specific requirements

9.3.3 .1 Management review outputs-supplemental

No TSI customer specific requirements

10.0 Improvement

10.1 General

No TSI customer specific requirements

10.2 Nonconformity and corrective action*

10.2.1 and 10.2.2

Nonconforming Material found at TSI

Suppliers shall establish procedures to react to nonconforming products discovered at TSI within 24 hours. Nonconforming material conditions will be reported to Suppliers by issuance of a Supplier Corrective Action Report (SCAR). Suppliers are expected to maintain 100% on-time delivery and a PPM of 0. Any deviation from these expectations will result in a SCAR issuance. TSI reserves the right to determine means for control of non-conforming product. Options include, but are not limited to;

- Onsite sort by supplier
- Exchange of stock
- Use of independent sorting facility at supplier cost

Supplier Corrective Action Report

Initial response to SCAR's for quality rejections or concerns must be submitted to TSI Quality within 24 hours of notification. Initial response must include the immediate containment actions taken and the ongoing actions to prevent further shipments of nonconforming materials. Disposition of nonconforming material must be determined in the initial response, including all suspect material at TSI, material in route to TSI, and all in-process and finished material at the Supplier location.

Suppliers are expected to utilize 8-D or 7 Step problem solving techniques to resolve nonconforming material issues. Unless otherwise indicated, the final countermeasure response must be provided in writing, on the supplier format, to TSI Quality within 15 business days.

Final SCAR response shall include all containment actions taken, complete root cause analysis, corrective and preventative actions, how the proposed actions effectiveness will be evaluated, how the solution will be implemented to other similar processes or products, necessary revisions to the control plan, PFMEA, process flows, work instructions, and other associated documents. If a final countermeasure cannot be completed within the required 15 business days, a completion plan must be detailed in the final SCAR response. The Supplier is responsible for updating TSI

Quality on the progress of countermeasure plans and for forwarding updated 8-D or 7 step responses once the actions are implemented.

Errors in workmanship and/or discrepancies in delivery may result in charge backs to the supplier. Charge backs are typically recorded by TSI as debits against open invoices.

- A \$250.00 administration, cost recovery charge will be issued in the event nonconforming material is found.
- Any and all TSI customer charges incurred as a result of our suppliers' nonconforming product.
- A \$75.00 per man hour charge on behalf of TSI time spent sorting and/or reworking our suppliers' product.
- Any and all machine stoppages based on both man hour and machine idle time.
- Any and all premium freight incurred by TSI to move suppliers' product and/or TSI's product due to shortage in material supply that is the fault of the supplier.

Charges will be determined through TSI's Accounting and Quality departments.

The costs incurred to process a SCAR, including all sorting, reworking, and line downtimes, will be charged to the responsible Supplier. A debit memo number will be issued to the Supplier with a copy of the final SCAR detailing the charges incurred. The final SCAR must be reviewed by the Supplier for verification of all charges incurred, signed, and returned to TSI within five (5) business days. Inquiries in regard to the final SCAR and the charges incurred must be directed to TSI Quality within the same five (5) business days. After 5 business days, the debit memo will be automatically processed.

10.2.3 Problem solving

No TSI customer specific requirements

10.2.4 Error-proofing

No TSI customer specific requirements

10.2.5 Warranty management systems

No TSI customer specific requirements

10.2.6 Customer complaints and field failure test analysis

No TSI customer specific requirements

10.3 Continual improvement

No TSI customer specific requirements

10.3.1 Continual improvement-supplemental

No TSI customer specific requirements

Green Initiative*

Suppliers are expected to support a proactive approach to environmental responsibility by protecting the environment, conserving natural resources and reducing the environmental footprint of the supplier's production, products and services throughout their life-cycle. Environmental protection has a high priority at TSI for both financial and ethical reasons. The management and employees of TSI recognize the importance of being good stewards of the natural resources. Environmental risks, if not recognized and effectively addressed, may result in an incident that could cause serious health problems, loss of operating capacity, loss of customer good will and significant costs in the form of remediation and fines.

Suppliers to TSI should promote the principles of good stewardship, evaluate environmental aspects and prioritize their impact, adopt appropriate objectives and targets in order to prevent environmental incidents and continually improve environmental performance.

Supplier Sustainability*

TSI requires its suppliers to follow the [AIAG- Automotive Industry Guiding Principles to Enhance Sustainability Performance in the Supply Chain](#).

EPA List of lists*

When a product supplied to TSI contains items that are found on the EPA list of lists, it is the supplier's responsibility to ensure that those items along with their quantities are reported to TSI.

Conflict Minerals*

Suppliers to TSI are required to disclose whether the product they supply uses "conflict minerals" that are "necessary to the functionality or production" of a product that they either manufacture or contract to be manufactured that originate from the Democratic Republic of the Congo or adjoining countries.

****Denotes customer specific requirements***

Supplier Contacts

Supplier Name: _____

Supplier Address: _____

Key Sales / Account Manager: _____

Phone: _____

Fax: _____

Email: _____

Key Customer Service Contact: _____

Phone: _____

Fax: _____

Email: _____

Key Quality Contact: _____

Phone: _____

Fax: _____

Email: _____

Acknowledgement of Receipt

I, the undersigned, do hereby acknowledge the receipt of the Tom Smith Industries Supplier Quality Assurance Manual and understand the requirements that have been set forth within.

Quality Representative

Date