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1 Introduction

JAE Oregon Inc., founded in 1988, and JAE Tijuana, founded in 1999, manufacture a wide variety of electrical connectors and harness assemblies for automotive safety systems, consumer electronics and computer applications. JAE Oregon, Inc. and JAE Tijuana are wholly-owned by Japan Aviation Electronics Industry, Ltd., located in Tokyo, Japan.

JAE Oregon Inc. and JAE Tijuana will be collectively identified as "JAE". Suppliers and sub-suppliers will be referred to as "suppliers". This JAE Supplier Quality Manual will be referred to as "SQM".

JAE is an ISO 9001 and ISO/TS 16949 registered corporation and is a VDA 6.3 approved supplier to the European automotive market. JAE is also an ISO 14001 registered corporation and encourages its suppliers to work towards implementing an ISO 14001 Environmental Management System. JAE Green Procurement Guidelines can be found on the JAE Oregon website at http://jaeoregon.com/.

2 Scope

The JAE SQM applies to JAE raw material, component, and service suppliers conducting business with JAE. It is the supplier's obligation to ensure that necessary requirements, including JAE customer CSRs, are forwarded as applicable to their upstream sub-suppliers.

3 Purpose

The purpose of this manual is to inform suppliers of JAE's core expectations of each supplier's quality management system. These expectations extend from supplier qualification through new product development, serial production, and service.

This SQM lists ISO 9001, ISO/TS 16949 and VDA 6.3 as quality system standards to be understood and adhered to by our suppliers.

The expectations noted within this SQM shall be considered JAE Customer-Specific Requirements (CSRs) for quality system conformance and audit purposes.

4 Applicable Documents

JAE controls documentation using the Q-Pulse database. References to other documents in the content of this document may not reflect the current state of these documents in Q-Pulse. Up-to-date control information and applicable documents may be requested from JAE. Refer to Table 1 for a provisional list of applicable documents:

Table 1 ····· Partial list of applicable documents

Section	Type	Q-Pulse Control Number	Title/Description/Notes
6.2, 10.2	DCF-Forms	DOC2147	*Request for Submission from Supplier of PPAP and CQI Assessments*
7	DCF	DOC2168	*Supplier Change Request Form*
7	DCF-Forms	DOC4728	*Supplier Risk Evaluation*
9	DCF-Forms	DOC4316	*Supplier Scorecard*
			AIAG Core Tools — external documents

5 Definitions

5-Why a method of establishing possible root-causes developed for the Toyota Production System.

8D (Eight Disciplines Problem Solving) a method of lean manufacturing developed by Ford.

D3 in the 8D method, the interim stage of developing and implementing a containment plan for a Corrective Action Request.

IMDS a global data repository used for meeting reporting requirements.

Ishikawa method, fishbone diagram methods of investigating and visualizing causal relationships.

ISO 9001 the ISO standard for quality management systems.

ISO/TS 16949 a development of ISO 9001 for the auto industry.

PPAP (Production Part Approval Process) process for establishing confidence in a supplier and their processes.

VDA 6.3 a standard for process audits.

6 Responsibilities and Requirements within the JAE Quality Management System (QMS)

JAE Quality system elements are based on ISO 9001, ISO/TS 16949 and VDA 6.3.

6.1 JAE QMS Requirements

Unless otherwise specified, JAE suppliers shall implement and be registered to the current revision of ISO 9001 by an accredited third party. Suppliers shall also strive to meet ISO/TS 16949 and VDA 6.3 standards.

6.2 Documentation Requirements

PPAP and IMDS submissions shall be required for all new or modified components supplied to JAE. Unless otherwise agreed with the JAE responsible Quality Engineer, all PPAP submissions must be Level 3 as stated in the AIAG PPAP manual current revision. Required reports shall be submitted to the global IMDS database using JAE ID No. 5450. Re-certification may be requested at any time.

Traceability shall be maintained by the supplier throughout the supplier's process from raw materials to final product received by JAE. All relevant documentation shall be controlled, maintained and accessible.

Supplier shall retain all quality data/records for a minimum of 20 years, or in accordance with contractual requirements.

6.3 Complaint Identification and Resolution

JAE utilizes a Supplier Corrective Action Request (SCAR) process to notify suppliers and manage any non-conformance or defect found in supplier product after receipt at JAE. The supplier shall work expeditiously with JAE to identify root cause and establish corrective action while at the same time ensuring that impact to JAE operations is minimized.

Any response to a non-conformance notification must be processed in accordance with 8D methodology. At JAE's request, the supplier shall furnish proof of the completion of root cause analysis using the 5-Why or Ishikawa methods.

The interim containment response, referred to as D3, must be submitted within 24 hours from the non-conformance notification. The final response must be submitted within 10 working days unless an agreement for an extension is reached with the JAE Responsible Quality Engineer. The supplier is expected to maintain metrics of both D3 and final response times in order to monitor and improve these indicators.

7 Change and Risk Management Responsibility

Suppliers shall submit any exceptions to JAE requirements in writing to the JAE Purchasing department. Any proposed changes by the supplier, including manufacturing location, process, tooling, material, or product modification shall be communicated via the JAE Supplier Change Request form found at the JAE website.

JAE requires every supplier to develop and maintain a contingency plan which will ensure continuous flow of JAE products, materials, and services during and after unexpected events or occurrences. JAE will be allowed to view this plan if requested. Supplier areas of risk will be identified and monitored via JAE's Risk Assessment form.

8 Deviations and Customer Approvals

Product intended for JAE delivery shall meet all applicable JAE product specifications and requirements as called out on the Purchase Order before delivery to JAE Oregon. Any deviations to these requirements will require advanced written notification and request for approval to JAE.

The supplier shall receive written approval from JAE prior to shipment of any known non-conforming material to JAE.

These requirements may include the following:

- Material Certification Documents included with shipments
- Packaging Specifications
- Delivery (Due) Date of the material/shipment
- Material Specifications (RAMS)

9 Supplier Rating

Strategic suppliers to JAE will receive a quarterly scorecard. The scorecard will track a supplier's performance in key areas.

9.1 On-time Delivery

On-time delivery performance is measured as a percentage of shipments which comply with on-time criteria within the evaluation period according to the formula:

$$\frac{\text{compliant shipments}}{\text{total shipments}} * 100$$

JAE suppliers are held to a 100% on-time delivery goal. On-time compliance is based on the following criteria:

Table 2 ····· Delivery compliance, early and late

	Early Non-Compliant	Compliant	Late Non-Compliant
Domestic Shipments	more than 3 days early	3 days early to 0 days early	1 or more days late
International Shipments	more than 7 days early	7 days early to 0 days early	1 or more days late

9.2 PPM (Parts Per Million)

Quality performance in defective parts per million is a percentage based on the total number of defective parts divided by total parts shipped multiplied by one million. JAE expects zero defects from all of its suppliers.

10 Additional Requirements

10.1 Audits

Upon request by JAE, the supplier shall agree to a process audit in accordance with ISO/TS 16949 which could include an evaluation of the supplier's quality system according to VDA 6.3. Audits of sub-suppliers may also be required.

10.2 Lot acceptance requirements

The supplier must provide a materials certificate of compliance via email to the corresponding SQE (Supplier Quality Engineer) or Incoming Inspection Supervisor for every lot of product that is shipped to JAE. This certificate must reflect the manufacturing conditions of the shipped lots and supporting data must be kept at the supplier to be provided upon request. The contents and format of the certificate will be determined case by case with the SQE depending on the commodity type of supplied product.

Manufacturing labels of all material shipped to JAE must clearly show the JAE part number as well as the lot manufacturing dates for FIFO and traceability purposes.

10.2 Annual Product Recertification Testing (PPAP Level 3)

Product recertification testing shall be requested and performed annually to ensure the specified design requirements are maintained. Level 3 PPAP shall be required unless otherwise indicated by JAE.

10.3 CQI Audit Requirements

Self-Assessments may be required of suppliers, including any sub-supplied parts or outsourced processes. Compliance shall be demonstrated to the latest edition of any of these applicable special processes:

CQI-9 Heat Treat Assessment (HTSA)

CQI-11 Plating System Assessment (PSA)

CQI-12 Coating System Assessment (CSA)

CQI-15 Welding System Assessment (WSA)

CQI-17 Soldering System Assessment (SSA)

10.4 Customer-Specific Requirements

JAE has established systems to comply with all JAE customers' specific requirements. JAE expects suppliers to abide by all applicable customer requirements provided by JAE.