SMR Global Supplier Manual
Appendix T –Ford Customer Specific Requirements for Suppliers

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SMR Global Supplier Manual - Additional Customer Specific Requirements

Scope of this document

The scope of this document is to ensure compliance to customer requirement by sub-suppliers of SMR Automotive who are supplying for any Ford project. This document is listing requirements for these suppliers in addition to standard IATF16949 requirements and in addition to standard SMR requirements.

Responsibility:

Suppliers who are supplier for SMR of a component for a Ford product shall meet all requirements listed in this document during the whole project lifetime. This includes but not limited to:

- Regularly check for updates of this document on www.smr-automotive.com
- Ensure availability and awareness of related Ford standards and requirements mentioned in this document
- Ensure requirements are met in their supply chain

1.0 Planning (IATF 16949 section 6.1.2.3)

Contingency plans:

The Organization shall ensure that its Quality Operating System Supply Risk Management process includes:

- The application of the requirements for Risk analysis, preventive actions and contingency planning described in section 6.1.2.1 through 6.1.2.3 of IATF16949:2016 through the Organization's supply chain.
- Documentation of the Organization's supply chain (supplier name, location, parts) for all Ford-specified parts and associated raw materials
- A system to assess and monitor supply chain financial and operational risks.

2.0 Creating and updating (IATF 16949 section 7.5.2)

Engineering Specification (ES) Test Performance Requirements:

The goal of ES testing is to confirm that the parts meet design intent. ES test failure shall be cause for the organization to stop production shipments immediately and take containment actions. The organization shall immediately notify SMR of any test failure, suspension of shipments, and identification of any suspect lots shipped. After the root cause(s) of ES test failure are determined, corrected, and verified, the organization may resume shipments. The organization shall prevent shipment of suspect product without sorting or reworking, to eliminate the non-conformance.

These ES requirements apply equally to sub-tier suppliers.

3.0 Design and development planning – supplemental (IATF 16949 section 8.3.2.1)

Special Characteristic traceability for build to print organizations:

- The organization shall document special characteristics on the Special Characteristics including where special characteristics are controlled at sub-tier suppliers.
- This also applies to Ford-directed sub-tier suppliers without a Multi-Party Agreement. Documentation of Controls for Critical Characteristics. Both build-to-print and design responsible organizations identify in the APQP/PPAP Evidence Workbook the special controls to prevent shipment of any non-conformance to Ford specified Critical Characteristics, regardless of the location of the special controls in the supply chain (tier 1 through tier N).

4.0 Design and development controls (IATF 16949 section 8.3.4)

For organizations responsible for component level Design Verification (DV) testing, the organization shall have a documented Design Verification Plan and Report (DVP&R) that includes organization /sub-tier supplier and Ford responsible test(s) as applicable. The organization provides evidence of successful completion on all component level DV testing on the DVP&R. The organization shall obtain SMR engineer approval for all tests and results. These requirements apply to all organizations; regardless of the organization's or part's PPAP submission level or design responsibility.

5.0 Prototype programme (IATF 16949 section 8.3.4.3)

The organization is responsible for the quality of the parts it produces and for any subcontracted services, including sub-tier suppliers specified by Ford Motor Company without a Multi-Party Agreement. This applies to all phases of product development, including prototypes. Individual Statements of Work may specify alternate responsibilities.

6.0 Product approval process (IATF 16949 section 8.3.4.4)

For production parts and approval of components from sub-tier suppliers, the organization shall comply with the AIAG Production Part Approval Process (PPAP) manual and Ford's Global Phased PPAP available through https://web.qpr.ford.com/sta/Phased_PPAP.html . Additional requirements are specified in Q1 https://web.qpr.ford.com/sta/Q1.html. For service parts, in addition to meeting the requirements of the AIAG Production Part Approval Process (PPAP) manual, the organization must comply with the AIAG Service Production Part Approval Process (Service PPAP) manual. **Submission of Sub-tier supplier PPAP:**

Evidence of sub-tier component part approvals may be a summary (approved PSWs, a listing of PSW approvals or equivalent)

7.0 Supplier selection process (IATF 16949 section 8.4.1.2)

The Organization's supplier selection process should include evaluation of the supplier's supply chain management system. The Organization shall complete a financial assessment of the supply chain at a minimum annually, in conjunction with the annual audit program (see 9.2.2.2 of IATF 1 6949), not just at the initial supplier selection.

8.0 Customer directed sources/ Directed-Buy (IATF 16949 section 8.4.1.3)

9.0 Type and extent of control (IATF 16949 section 8.4.2)

- See ISO 9001:2015 requirements
- The organization shall have incoming product quality measures and shall use those measures as key indicators of sub-tier supplier product quality management.

10.0 Supplier quality management system requirements (IATF 16949 section 8.4.2.3)

Supplier quality management system development:

The organization may meet this requirement by successful assessments of the Sub-tier suppliers per the authorization stated on https://web.qpr.ford.com/sta/. The frequency of these reviews shall be appropriate to the subtier supplier impact on customer satisfaction.

Sub-tier supplier quality management system requirements:

- Where a sub-tier supplier is not third party certified to ISO/TS 16949, Ford reserves the right to require the organization to ensure sub-tier supplier compliance with the "Minimum Automotive Quality Management System Requirements for Sub-tier Suppliers" available through http://iatfglobaloversight.org/default.aspx. Evidence of effectiveness shall be based on having a defined process and implementation of the process including measurement and monitoring.
- Where any organization has sub-tier suppliers not third party certified to ISO/TS 16949, the organization is encouraged to require sub-tier supplier compliance with the "Minimum Automotive Quality Management System Requirements for Sub-tier Suppliers".

Ford or organization second party assessment or third party certification of sub-tier suppliers does not relieve the organization of full responsibility for the quality of supplied product from the sub-tier supplier (including Ford-directed sub-tier suppliers without a Multi-Party Agreement). Although all sub-tier suppliers must be assessed per this section, sub-tier supplier improvement efforts shall focus on those sub-tier suppliers with the highest impact on Supplier Improvement Metrics (SIM).

Sub-tier supplier Management Process:

Organizations are encouraged to apply the principles outlined in "CQI-19 AIAG Sub-tier Supplier Management Process Guideline" to all their sub-tier suppliers. Additionally, Ford reserves the right to require the organization to apply the principles outlined in "CQI-19 AIAG Sub-tier Supplier Management Process Guideline" to address issues identified in the organization's supplier development and management process. Ford will communicate the requirement to apply CQI-19 to the specifically selected organization(s) based on sub-tier supplier management issues attributed to the organization. Evidence of effectiveness shall be based on having a defined process and implementation of the process including measurement and monitoring. Critical Characteristic Controls at the sub-tier suppliers for Critical Characteristics, the responsible organization ensures that sub-tier suppliers have controls in place to prevent shipment of non-conforming product at the location where the associated physical characteristics are manufactured by sub-tier suppliers. The sub-tier supplier controls for the Critical Characteristics are identified by the organization in the APQP/PPAP Evidence Workbook. This also applies to Ford-directed sub-tier suppliers without a Multi-Party Agreement.

11.0 Supplier monitoring (IATF 16949 section 8.4.2.4)

- In support of Ford's expectation of 100% on-time delivery, the organization shall also require 100% on-time delivery from sub-tier suppliers. The organization shall communicate any delay or risk to the affected Ford customer.
- The organization should monitor and minimize any premium freight expenses related to sub-tier suppliers for late deliveries.
- These also apply to Ford-directed sub-tier suppliers without a Multi-Party Agreement.

12.0 Identification and traceability (IATF section 8.5.2)

- Part identification and tracking
- Lot traceability throughout the value chain (lot traceability shall include subcontracted components of an assembly/module that are associated with compliance to any inverted delta requirement)
- Electronic communication with Ford and sub-tier suppliers
- Prevention of damage or deterioration of supplied products

13.0 Identification of statistical tools (IATF 16949 section 9.1.1.2)

- The organization ensures that Critical Characteristics (CC) have controls which prevent the shipment of nonconforming product, regardless of the location in the supply chain (tier 1 through tier N) of the manufacture of the physical characteristic(s) associated with the Critical Characteristic.
- The organization records the CC controls in the APQP/PPAP Evidence Workbook. Statistical process control on product characteristics without continuous manufacturing process controls is not appropriate or sufficient for Critical Characteristics.

14.0 Manufacturing process audit (IATF 16949 section 9.2.2.3)

The organization is responsible to ensure that all tiers of suppliers are assessed to the applicable Ford manufacturing process standards.
Note: Self-assessment by the sub-tier suppliers, including implementation of corrective action plans as required, meets this requirement.
Refer to https://web.qpr.ford.com/sta/Ford_GTS.html on Ford Supplier Portal for all these standards except AIAG CQI-xx, which are available through AIAG.
Heat Treat Assessment Requirements:
Organizations and sub-tier suppliers providing heat treated product and heat treating services shall demonstrate compliance to AIAG CQI-9 "Special Process: Heat Treat System Assessment" and Ford Specific CQI-9 requirements (available through https://web.qpr.ford.com/sta/CQI9_Ford_Specific_requirements.xls); CQI-9 is available through AIAG http://www.aiag.org/CQI-9 Special Process: Heat Treat System Assessment.
All heat-treating processes at each organization and sub-tier supplier manufacturing site shall be assessed annually (at all tier levels), using the AIAG CQI-9 "Special Process: Heat Treat System Assessment" (HTSA) and Ford Specific CQI-9 requirements. Assessments are also required following any heat treat process and/or changes of heat treat equipment or additions.
The organization shall maintain the 2 prior annual CQI-9 assessment reports and related information at the organization's site and make them available to STA upon request. Heat Treat assessments are conducted by the organization, heat treat suppliers, sub-tier suppliers or by Ford. Demonstration of compliance to CQI-9 and Ford Specific CQI-9 requirements does not relieve the organization of full responsibility for the quality of supplied product. To reduce the risk of embrittlement, heat-treated steel components shall conform to the requirements of Ford Engineering Material Specification WSS-M99A3-A, also available per section 0 of the document. **Verification of supplier conformance to AIAG CQI-15 2nd Edition Welding System Assessment Requirements (letter sent by FORD in November/2019).**
Required compliance to the AIAG CQI-15 2nd Edition Welding System Assessment by all suppliers using welding processes. This requirement is reportable by the tier 1 but applies to all tiers of suppliers using welding processes. Suppliers are required to comply with all applicable requirements for all welding processes.
Consistent with IATF 16949 all tiers of suppliers are required to assess to the AIAG CQI-15 2nd Edition Welding System Assessment. This requirement can be found at:
• AIAG CQI-15 2nd Edition: www.aiag.org

History of Revision

No.	Cause of modification	Date	Modifier	Approved
1	First issue	26.10.2017	Altamiro Oliveira	Judith Robertson

2	Inclusion of the items 1.0 Planning (IATF section 6.1.2.3), 5.0 Prototype Programme (IATF 8.3.4.3), 12.0 Identification and traceability (IATF section	10.02.2020	Leandro Coletta	Judith Robertson
	8.5.2), and update items 10.0 Supplier quality management system requirements (IATF section 8.4.2.3), 11.0 Supplier Monitoring (IATF section 8.4.2.4), 14.0 Manufacturing process audit (IATF section 9.2.2.3)			
3				
4				
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