SMR Global Supplier Manual Appendix E – GM Customer Specific Requirements for Suppliers

As per General Motors Customer Specific Requirements for IATF 16949:2016
Publication Date: August 31, 2023
Effective Date: Aug 31, 2023

SMR Global Supplier Manual
Appendix E – GM CSR

Contents

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 GM project. This document is listing requirements for these suppliers in addition to standard IATF16949 requirements and in addition to standard SMR requirements.

Organizations shall refer to the CG4338 GM 1927 03 Supplier Quality Statement of Requirements (SOR), for requirements for organizations supplying parts and materials to General Motors.

IATF 16949:2016 Deviations (Waivers)

Organizations requesting deviations (waivers) for IATF 16949:2016 Certification must contact their GM SQE and complete the GM 1927 70 SQ IATF 16949 Certification Waiver request and obtain GM Supplier Quality Leadership approval. The completed and approved IATF 16949 Certification Waiver request will be stored in GM's Supplier Certification Management System (SCMS) under the requesting Organization's DUNS.

Responsibility

Suppliers who are supplier for SMR of a component for a GM 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 GM standards and requirements mentioned in this document Ensure requirements are met in their supply chain.

1.0 Record Retention (IATF 16949 section 7.5.3.2.1)

Supplier's business records must be maintained as specified in GMW15920. PPAP Records – Production Run + 50 years.

2.0 Customer-Designated Special Characteristics (IATF 16949 section 8.2.3.1.2)

The organization shall follow General Motors Key Characteristic Designation System Process GMW15049. Key characteristics shall be applied as per IATF16949:2016 8.3.3.3 Special Characteristics.

3.0 Second-party audits (IATF 16949 section 8.4.2.4.1)

Second-party auditors must meet the requirements in clause 7.2.4 Second-Party Auditor Compliance in IATF 16949 (latest revision) plus meet these additional requirements:

1. The organization (2nd party) must be IATF 16949:2016 certified and not on suspension.
2. The Second Party Auditor must be a qualified ISO Lead Auditor, or a qualified internal auditor with evidence of their successful completion of training, and a minimum of five internal ISO/TS16949:2009 and/or IATF 16949:2016 audits under the supervision of a qualified lead auditor.

3. The organization may conduct (2nd party) audits of their supplier per their supplier development risk management analysis.
4. For initial certifications, the first second party audit should use the initial days from Table 5.2. For subsequent second party use the recertification days Table 5.2. See Automotive Certification Scheme for IATF 16949 Rules for Achieving and Maintaining IATF Recognition, section 5.2, Table 5.2 Minimum audit days.
5. The second party audits shall identify an acceptable passing level and include a scoring or ranking to determine which suppliers have passed. The organization shall have documented evidence that they review and follow up on all non-conformances identified in the second-party audit with the intent to close these non-conformances.

4.0 Supplier development (IATF 16949 section 8.4.2.5)

When a supplier to an organization is so small as to not have adequate resources to develop a system according to IATF16949:2016 or ISO 9001:2015, certain specified elements may be waived by the organization of their supplier. The organization shall have decision criteria for determining "specially designated small suppliers". Such decision criteria shall be in writing and applied consistently in the application of this provision. The existence and use of such decision criteria shall be verified by 3rd party auditors.

NOTE 1: ISO 9001:2015 and IATF 16949:2016 Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers contain fundamental quality management system requirements of value to any size of provider of production materials, production, service, and accessory parts, or heat treating, plating, painting or other finishing services. There are a number of methods to implement a compliant system, so it is recognized that a simpler Quality Management System approach could be used for the smaller suppliers of organizations to which IATF 16949:2016 clause 8.4.2.3 applies.

NOTE 2: "Small" may also refer to volume supplied to automotive.

5.0 Control of Changes (IATF 16949 section 8.5.6.1)

The documented process shall require consideration of a production trial run for every product and process change.

Results of the trial run shall be documented

6.0 Customer Satisfaction – Supplemental (IATF 16949 section 9.1.2.1)

New Business Hold

The organization shall notify their Certification Body within 5 business days of receiving notice of special status condition of GM New Business Hold – Quality. The Certification Body shall take the decision to place the organization on immediate suspension* upon receiving notice of GM New Business Hold – Quality (NBH). *See ***Automotive Certification Scheme for IATF 16949, Rules for Achieving and Maintaining IATF Recognition, section 8.3.***

1. In the event of certification suspension as a result of an organization receiving notice of General Motors New Business Hold – Quality, the organization shall complete a corrective action plan. The organization shall submit the corrective action plan to the Certification Body and to the affected customer(s) within 10 business days of the effective date of the NBH.

The corrective action plan of the organization shall be consistent with the affected customer requirements including correction steps, responsibilities, timing information, and key metrics to identify effectiveness of the action plan.

2. Before any suspension can be lifted, the Certification Body shall take the decision to conduct an on-site special audit of appropriate length to verify effective implementation of all corrective actions. The special audit must be conducted within 90 calendar days from the notice of New Business Hold – Quality. • The Certification Body shall issue the certificate in accord with the IATF Rules.

- The Certification Body shall then place the new certificate in immediate suspension with the rules for lifting such suspension appropriately applied.

If suspension is not lifted within the maximum of 110 calendar days from the notice of New Business Hold – Quality, the Certification Body shall withdraw the IATF 16949 certificate of the organization. Exceptions to this withdrawal shall be justified in writing by the Certification Body based upon its on-site review of the effectiveness of the organization's corrective action plan and agreement obtained in writing from the authorized GM customer representative.

NOTE 1: When an organization is placed in NBH after a recertification (or initial) site audit but before the certificate is issued:

- The Certification Body shall issue the certificate in accord with the IATF Rules.
- The Certification Body shall then place the new certificate in immediate suspension with the rules for lifting such suspension appropriately applied.

BIQS Requirements

Suppliers shall achieve and maintain BIQS Level of 3, 4 or 5. The organization whose BIQS Level falls below Level 3 shall notify its Certification Body within 5 business days after falling below the stated requirement.

The Certification Body shall issue a major non-conformance against IATF 16949:2016, clause 9.1.2.1, when they are notified (or discover) the organization is at a BIQS Level 1 or 2.

If the organization failed to notify their Certification Body, the Certification Body shall also issue a minor non-conformance against IATF 16949:2016, clause 9.1.2.1.

NOTE 1: Two conditions where a major non-conformance is not required for BIQS level < 3 are:
- BIQS Level 0 – With no production receipts nor any quality SPPS records in the last 12 months; or
- Not yet nor previously certified to IATF 16949

NOTE 2: The GM system Source ability Report will indicate a BIQS Level of 1 or 2 for those organizations not meeting the BIQS requirements.

The Certification Body ~~shall~~ must conduct an on-site special audit per the IATF Rules to close out the non-conformance.

Suppliers that have not had their initial IATF 16949 certification and are BIQS Level 1 or 2 shall not be issued a nonconformance.

To close this major non-conformance during the on-site special audit, the supplier shall have either 1) achieved BIQS metrics of Level 3, 4 or 5; or 2) a documented action plan, confirmed by the GM SQE or SQE designee, detailing the steps, improvements, with target dates, being made to achieve BIQS Level 3, 4 or 5.

Organizations shall refer to the GM 1927 17 SQ Processes and Measurement Procedure, for metrics and status definitions.

CSII (Controlled Shipping Level 2)
The organization shall notify its Certification Body within 5 business days after being placed in Controlled Shipping – Level 2 (CS II) Status. The Certification Body is not required to issue a non-conformance for an organization placed in CSII status.
For CSII activities that are open during an audit, the organization's Certification Body shall verify that an effective corrective action is in process and, if closed, that the corrective actions have been implemented and read across to the entire organization's site for similar processes and/or products. The organization's Certification Body shall also investigate any CSII activities that have occurred and were closed between surveillance audits.
NOTE: The GM condition of CS II (Controlled Shipping – Level 2) is a performance indicator of problems in an organization's product realization process. The CSII condition should have resolution, or credible resolution and corrective plans in place, which are confirmed by the customer.

7.0 Manufacturing process audit (IATF 16949 section 9.2.2.3)

The organization shall incorporate an internal layered process audit process to assess compliance to standardized processes, to identify opportunities for continuous improvement, and to provide coaching opportunities.
The layered process audit is led by Management who are competent to conduct the audits.
The process shall include:
1. A schedule including frequency of audits and locations of planned audits.
2. Audit layers must be used and include different levels of employees, including top management.
3. Customer complaints or rejections trigger a layered audit on the process that was cause of the issue.
4. All departments within the organization.
5. All findings are recorded and measured for improvement.
6. Findings that cannot be corrected during the audit shall move to an action plan for monitoring to closure.
7. Records of audits shall be maintained.
8. Layered audit questions shall be reviewed periodically and changed if needed to focus on the organization's weaknesses.
9. Layered process audit shall be done as part of corrective action verification activities.

In addition to layered process audits the organization shall audit specific manufacturing processes (see chart below) annually to determine their effectiveness. Applicability and effectiveness of these processes shall be determined utilizing the most current version CQI standard (see chart below). The effectiveness evaluation shall include the organization's self-assessment, actions taken, and that records are maintained.
NOTE 1: The assessment must be performed by a competent auditor. An auditor is competent if they meet the following requirements:
• They shall be a qualified ISO 9001:2015 Lead Auditor, or a qualified internal auditor with evidence of their successful completion of training, and a minimum of five internal ISO/TS 16949:2009 and/or IATF 16949:2016 audits under the supervision of a qualified lead auditor.
• They shall have a minimum of 5 years' experience working with the process that is being audited or a combination of experience and education in the specific process.
NOTE 2: Audit findings must be addressed in an action plan, with champion(s) assigned and reasonable closure dates.
CQI Standards (as applicable):
Heat Treating Processes: CQI-9 Heat Treat System Assessment

Plating Processes: CQI-11 Plating System Assessment
Coating Processes: CQI-12 Coating System Assessment
Warranty Processes: CQI-14 Automotive Warranty Management
Welding Process: CQI-15 Weld System Assessment
Plastics Molding Processes: CQI-23 Molding System Assessment
Solder Processes: CQI-17 Soldering System Assessment
Casting Process: CQI-27 Casting System Assessment

8.0 Product audit (IATF 16949 section 9.2.2.4)

The organization shall perform quality focused checks on each shift.
The organization shall have a process for final inspection and/or Customer Acceptance Review & Evaluation (CARE). ~~GP-12~~ Early Production Containment (EPC) shall be performed as required during launch and until released by the organization's assigned SQE or designate and per GM 1927 28 Early Production Containment (EPC).

1. Final inspection shall be performed on all finished product prior to shipping. This inspection can be 100% inspection or less based on risk.
2. ~~GP-12~~ EPC inspection checks shall be included at an upstream inspection station (final inspection/CARE).
3. Quality checks shall be included in standardized work. Point, touch, listen, and count inspection method are incorporated.
4. Successive production/quality checks shall be increased in cases of high risks such as model launch, pass through components and characteristics pass through, major changes, shut down (see clause 8.5.1.4) or customer feedback.

9.0 Problem Solving (IATF 16949 section 10.2.3)

The supplier's documented problem-solving process shall include:

1. Tracking of issues through closure.
2. Daily review of issues by a multi-disciplined team including plant management.
3. Daily reviews are documented.
4. All levels of the organization are included in the problem-solving process.
5. Robust method to identify the verifiable root cause(s) of each issue.
6. Timely closure of corrective action(s) including exit criteria.
7. Initial containment is well documented using a containment worksheet or similar

10.0 Error-proofing (IATF 16949 section 10.2.4)

Error proofing devices shall be tested to failure or simulated failure at the beginning of each shift at a minimum, otherwise according to the control plan. The organization shall keep a list of all error proofing devices and identify which can be bypassed and which cannot (also see clause 8.5.6.1.1). The bypass determination shall consider safety, severity and overall RPN rating.

10.0 Warranty Management Systems

Organizations will support continual improvement through warranty reduction targets established by GM where applicable. Organizations will use the latest revision of CQI-14 Automotive Warranty Management to integrate warranty into their quality management system. Warranty integration effectiveness will be based on evidence of a process including: identification of internal auditors,

annual self-assessment schedule, defined continuous improvement process, defined corrective action process, record keeping process, monthly progress monitoring against GM targets, and supplier development process.

Evaluation shall be by self-assessment. The self-assessment shall be conducted annually but may be repeated as needed. The self-assessment may be conducted as part of the Organization's internal quality audit or conducted separately. The self-assessment shall be conducted using the self-assessment spreadsheet tool from CQI-14. The completed spreadsheet shall serve as a record of the self-assessment. Implementation of Automotive Warranty Management shall proceed in three stages:

1. Organization identifies and implements necessary changes to quality management system processes, trains responsible personnel and conducts initial, "baseline" self-assessment.
2. Organization establishes internal performance goals, develops prioritized corrective action plan to achieve these goals and prepares an assessment schedule.
3. Organization monitors performance continues with self-assessments and updates corrective action plan as required to meet GM requirements and internal improvement goals or maintain goal-level performance.

11.0 Initial Process Studies

When utilizing X-Bar and R charts, at least twenty-five subgroups (minimum of four pieces per sub-group) are required. When historical data are available or enough initial data exist to plot a control chart (at least 100 individual samples), Cpk can be calculated when the process is stable. For processes with known and predictable special causes and output meeting specifications, Ppk should be used. When not enough data are available (< 100 samples) or there are unknown sources of variation, contact the authorized customer representative to develop a suitable plan.

History of Revision

No.	Cause of modification	Date	Modifier	Approved
1	First issue	16.10.2017	Judith Robertson	Steffen Dehner
2	Update GM CSR	10.07.2019	Bill Kellogg	Steffen Dehner
3	Update Logo	24.11.2020	Maria Reyes	Judith Robertson
4	Update to GM CSR effective Dec 15, 2020	07.01.2021	R. Hochmuth	Rambir
5	Update to GM CSR dated August 31, 2023	05.02.2024	Bill Kellogg	Judith Robertson