

Vehicle Group Addendum - Truck Division Global Quality Expectations of Suppliers

- **ISO/TS16949**

Suppliers with production purchase order(s) must be third party registered by an accredited registrar (i.e. IATF, IAF) to the latest version of ISO9001 and/or TS-16949. Non-production suppliers, such as a distribution facility or warehouse, must maintain ISO9001 third party registration. Suppliers who do not meet this certification requirement must provide a plan to achieve to their Eaton Supplier Development Representative or risk potential loss of business. Suppliers who are only ISO9001 certified are encouraged to pursue TS-16949 certification as the next level of continuous improvement. Sourcing award decision priority, on new and continuing business, will be extended to suppliers that can achieve the highest quality standards (TS-16949), provided that their overall competitiveness and performance meet or exceed Eaton's expectations.

- **Special Sourcing Evaluations**

Suppliers are expected to meet and support the elements of the Eaton Truck North America supplier sourcing process. Supplier manufacturing locations may be required to support this process through completion or participation in certain sourcing evaluations such as:

- **Supplier site Assessment (SSA)**

Supplier manufacturing locations are required to have an approved supplier site assessment in the WISPER system. Suppliers with an approved assessment that is more than 2 years old on file may be requested to complete an updated assessment prior to receiving any new business. Completed supplier assessments should be submitted to the SSA Evaluation team at SSA@eaton.com. Assessment evaluations that contain an "Eaton Minimum Requirement" of a "RED" require the supplier to implement corrective actions and obtain closure of the identified item by the SSA Evaluation team before sourcing or new business will be awarded. Assessment evaluations that contain a system item identified "YELLOW" require the supplier to provide a corrective action plan to the SSA Evaluation team before sourcing or new business will be awarded.

- **Design & Specification Feasibility Review**

Supplier manufacturing locations may be required to participate in a preliminary design review with Eaton engineers to ensure manufacturability of the Eaton design. Feasibility agreement to all design characteristics, specifications, and special characteristics is the output of this process. This is the opportunity for the supplier to highlight any potential design implementation concerns for mitigation prior to final sourcing.

• APQP / PPAP

Compliance with latest AIAG requirements and requirements within the EATON Supplier Excellence Manual is mandatory. Suppliers are expected to ensure all PPAP elements are managed for compliance regardless of submission level requested by EATON.

All suppliers to Vehicle Group are expected to follow the AIAG APQP guidelines for any production launch. Eaton Corporation has a standard APQP/PPAP workbook template that is required for use unless the supplier has equivalent AIAG compliant standard templates. The Excel workbook is a very useful tool for documenting completion of APQP elements and PPAP requirements.

(<http://www.eaton.com/Eaton/OurCompany/DoingBusiness/SellingtoUs/SupplierAPQPProcess/index.htm>)

In addition to AIAG requirements, Eaton TNA has identified additional specific requirements that are required to also be completed prior to PPAP submission. These documents and instructions can also be found within the above referenced APQP/PPAP workbook.

Eaton TNA specific requirements include:

- Packaging Approval
- Safe Launch Documents
- Design and Specification Review*
- Pass-Thru Characteristics*
- APQP Timeline*
- Overall Equipment Effectiveness (OEE) Documents*
- Capacity Constraint Workbook*
- Production Readiness Review*

**Indicates documentation may not be required for identified "Low/Med" risk components*

Suppliers are required to register and enter product data into IMDS. Supplier IMDS entries must be APPROVED by Eaton prior to obtaining an approved PPAP disposition.

The default submission level for PPAP will be Level 3, unless specified on the PPAP request letter. Suppliers are to assume responsibility to update appropriate elements of the submission and determine use of previous level data in accordance with guidance provided within the AIAG PPAP manual. Suppliers are also expected to maintain these "living documents" and keep them current to the process, in accordance with section 3.2 of AIAG PPAP manual. PPAP submissions will be directed to the Eaton Supplier Development Engineer or TNA PPAP Center of Excellence as communicated on the received PPAP request letter.

Annual PPAP is required to be completed by the supplier and documented on the supplier control plan and shall include dimensional layout and material certification at a minimum. Evidence of Annual PPAP compliance may be requested at Eaton's discretion.

Suppliers are not authorized to ship product to Eaton without an approved PPAP disposition (full or interim) documented at the revision level of shipment in the WISPER system. Supplier parts that are shipped at a revision level without an approved PPAP may be issued a DMR with any associated disruption costs charged back to the supplier.

Product or Process deviations may be requested by the supplier for any dimensional, specification, functional, or process related issues that deviate from the approved PPAP product or process. Deviations are temporary in nature and require corrective actions to bring the product or process back into PPAP compliance. Suppliers shall complete the required deviation request form and submit to their commodity manager for processing. A deviation required for initial PPAP submission must have the approved deviation submitted with the PPAP submission to obtain appropriate disposition.

MSA documentation is required to be submitted for all gauges identified on the control plan. "Family" MSA information may be acceptable for gauges used on non-CTQ features. The expectation is that MSA GR&Rs must be <10% at PPAP. Results between 10% - 30% must obtain Eaton and potentially Eaton customer approval. Results >30% are not acceptable and must be resolved prior to PPAP approval.

Functional verification of product or other customer specific verification may be required in addition to receiving a PPAP approval disposition.

Dimensional Results, Metallurgical Analysis, and Engineering Testing must be completed by an appropriate accredited laboratory. A supplier that does not have appropriate internal lab accreditation is responsible to contract a third party accredited laboratory to complete the requirement. Third party results must be submitted on the accredited laboratory letterhead or normal laboratory report format per AIAG requirements. Results that are not submitted under an appropriate accredited laboratory scope may be subject to Eaton verification at the supplier's expense.

- **Special Processes**

Suppliers are required to complete an applicable subject AIAG CQI Special Process Assessment on an annual basis, which includes a Job Audit. Eaton may request evidence of compliance at any time. The following is the current listing of required special assessments:

- CQI-9 Heat Treat System Assessment

Suppliers should be aware of the complete inventory of AIAG CQI special assessments. Other CQI Assessments may be requested from Eaton with notification.

- **Parts Protection**

Purchased components shall be managed in such a way as to ensure that components shall be free of contaminants, corrosion, and foreign debris until components are consumed by the targeted using facility or as otherwise specified by the purchasing contract.

Completed packaging approval form is required as part of the PPAP submission. A Packaging Approval Form is required to be submitted by the supplier and the approved form is to be retained with the PPAP documentation. The form may be found within the Eaton APQP/PPAP workbook linked in the APQP/PPAP section of this document.

- **Supplier Performance**

EATON Truck expects suppliers to drive continuous improvement into their business and manufacturing operating systems. With this philosophy, EATON Truck supports a “drive for zero” communication on supplier performance: Zero ZMPD (PPM to our customers); Zero DMR’s (No Eaton plant line disruptions); Zero PPM.

- **DMR/24-3-10 Policy**

WISPER system utilization is required for Defective Material Report (DMR) management as per section 7 of the EATON Supplier Excellence Manual. In addition, Suppliers are required to manage DMR responsiveness in support of our 24-3-10 policy: **24** hour containment (Supplier responsible), + **3** day root cause and +**10** day full corrective action plans identified. Suppliers are expected to provide containment responsiveness for all suspect inventory and in-transit material.

- **24 Hour Containment.** Your Company is required to provide immediate containment, sorting, and certification activities on all suspect product(s) at the affected Eaton and/or Eaton customer facilities in an effort to isolate, and remove all nonconforming products from the supply chain. This containment may be done by one or more of your employees or by an Eaton approved 3rd party containment organization at your company’s expense.
 - Note 1: If your company chooses to perform the containment action itself and requires assistance from a temporary labor firm, a representative from your company must be on-site to manage all of the temporary firm’s activities.
 - Note 2: Failure to provide certified product within the required 24 hr timeframe may result in containment to be initiated by Eaton at your expense.
 - Note 3: Eaton may initiate containment prior to 24 hours at the supplier’s expense in order to sustain immediate production needs
- **Controlled Shipping – Level 1 (CS1).** CS1 must be implemented at your facility beginning immediately after the DMR is received. The results of the CS1 inspection must be sent electronically to the Supplier Quality Representative who issued the DMR prior to the next shipment of parts. You are required to continue to send the CS1 results to Eaton until the DMR is closed. Additionally, the CS1 results should be posted in the WISPER system for review prior to 8D closure. If CS1 inspection is determined ineffective (escape of the same defect to Eaton during the quarantine period), a mandatory CS2 inspection will be required at your location and expense by a 3rd party.
- **+ Three (3) day Root Cause Analysis.** This is part of the 8D reporting that is to be submitted via WISPER within 4 days of the DMR being submitted within WISPER.
- **+ Ten (10) day Permanent Corrective Action.** The corrective action plan must be identified and reported within the WISPER 8D within 14 days of the DMR being submitted within WISPER. The requirement for CS1 inspection will not be removed until the corrective action plan is implemented and verified effective by the Eaton Supplier Quality Representative within the WISPER system.
- **Thirty (30) day Automatic Return.** Material on Quality Hold that does not have an approved mitigation plan by the supplier (e.g. certification action identified, RMA for return, etc.) may be returned to the supplier after 30 days from DMR issuance at the supplier’s expense.

A supplier that does not provide corrective actions within the required timeline or does not reconcile a rejected Eaton response to DMR within 7 days of the rejection, may have the DMR closed and a new DMR opened for the issue.

As per Section 6 of the Eaton Supplier Excellence Manual, all costs incurred by Eaton that are associated with the failure of a supplier to meet Eaton's quality requirements may be charged back to the supplier.

Supplier shall pay a minimum \$250 Administration Fee for any Defective Material Report (DMR) issued regardless of the value of rejected Lot received or number of parts being rejected.

- **Supply Chain Hierarchy**

EATON Suppliers are responsible for the quality of the entire component shipped to Eaton, including all sub-supplier's contributions even if an Eaton directed source.

EATON expectation is that Tier I suppliers, as well as their sub-Tier suppliers, meet all supplier requirements.

- **Change Notification**

EATON Suppliers shall follow all guidelines in the latest version AIAG PPAP manual for customer notification. The supplier shall submit any Supplier Change Request (SCR) to the SCR mailbox: VGSCR@Eaton.com for processing. EATON Truck North America requires minimum of 4-6 weeks for review and approval disposition of a submitted SCR. Approval of an SCR will be communicated to the supplier and will identify the appropriate Eaton implementation process (e.g. Engineering Change Request, PPAP request, etc.) and does not imply approval for the supplier to implement the change. Supplier's change requests that require expedition or cause manufacturing line disruption may be issued a DMR and costs associated for mitigation charged back to the supplier.

- **CTQ (Critical to Quality) Characteristics**

Special Characteristics are identified as CTQs (CPC; C1; C2; TP; Safety, et al) and may be identified on the product drawing or supporting CTQ drawing. Definitions and requirements for each CTQ type can be found within the Eaton TES-001 engineering specification. Compliance data for any CTQ characteristic may be requested for review at the discretion of EATON. Reference the latest version of the appropriate AIAG SPC manual.

Suppliers must notify Eaton and identify containment and corrective actions whenever the long term capability (Cpk) falls below the applicable requirement or a DMR or other Supplier Performance Management process may be initiated. In the event that there are not enough data points collected for long term capability, the supplier shall provide the current short term study and indicate the expected date long term capability results will be available.

Drawing characteristics with the designation of "MKC" – Level "A" should be treated as "C2" CTQ.

Drawing characteristics with the designation of "MKC" – Level "B" or "C" should be treated as "CPC" CTQ.

Drawing characteristics with the designation of "KCC" should be treated as "C1" CTQ.

Pass Thru Characteristics (PTC) that are not already designated as a CTQ (see CTQ section) and identified during activities from the APQP process shall be indicated as such on the appropriate PFMEA and Control Plan and be considered as CTQ (CPC).

- **Error proofing**

Error Proofing (Poke-Yoke) is desired for customer touch point CTQ (TP) and safety CTQ (▽) characteristics. If error proofing is not feasible for implementation then controls to verify compliance of all parts is required. These must be identified on the appropriate PFMEA and Control Plan.

Error Proofing (TP) requirements are to be implemented for Zero Mile Product Defects (ZMPD) or quality Spills. These must be identified on the appropriate PFMEA and Control Plan as applicable.

- **Supplier Performance Management**

Suppliers that do not meet the quality requirements of Eaton may be subject to required participation in a number of supplier performance improvement processes that may include Eaton on-site support or validation and/or supplier review at an Eaton location such as:

- Focus Supplier (previously Focus Five) – Requires supplier participation in systemic process improvement focused activities to be completed in a defined time period
- Controlled Shipping – Level 2 – Requires supplier to contract third party for implementation of 200% containment for a specific non-conformance
- Process Audits – Requires supplier participation in an on-site process review with identified corrective actions monitored through closure. This audit may also be utilized as a proactive or reactive tool.

Suppliers that do not achieve acceptable implementation of corrective actions within these processes or refuse to participate may be required to meet with Eaton Truck Senior Leadership, be subject to Eaton implemented containment actions at the suppliers expense, and/or placed on “No New Business” status

- **Supplier Continuous Improvement Activities**

Suppliers are expected to utilize continuous improvement tools (Lean, Six Sigma, Value Stream Mapping) and partner with Eaton Truck North America on capturing potential process improvements, design improvements, and pricing. Partner events may include special VA/VE, Process Value Stream Mapping, Kaizen, etc.

- **WISPER Interaction**

As indicated in the Eaton Supplier Excellence Manual, suppliers are required to use the Eaton WISPER system. Training on specific WISPER modules are available on the WISPER system toolbar. Suppliers are expected to regularly access the system and manage their supplier contact information, upload current certifications, and respond to open DMRs

- **Proactive Metrics Management (PMM)**

Selected suppliers will receive a quarterly communication from the PMM (supplierpmm@eaton.com) evaluation team requesting supplier completion of the Proactive Metric Management evaluation form. The supplier is expected to return the response form within 10 working days to the evaluation team. Suppliers may then be contacted by their supply chain representative to discuss any necessary corrective actions.

- **Eaton Supplier Excellence Manual**

Quality expectations apply to parts, packaging, and services. The latest EATON Supplier Excellence Manual can be found through the Eaton home website (www.eaton.com)

08-Jun-15 Revisions/Updates to these requirements are effective immediately.

Revision Date	Description
15-Aug-14	<p>Updated Sections: ISO/TS16949 APQP/PPAP DMR/24-3-10 Policy Change Notification CTQ Characteristics Error-Proofing</p>
08-Jun-15	<p>Added Sections: Special Sourcing Evaluations Special Processes Supplier Performance Management Supplier Continuous Improvement Activities WISPER-Supplier Interaction Proactive Metrics Management</p> <p>Updated Sections: APQP/PPAP DMR/24-3-10 Policy Parts Protection Change Notification CTQ Characteristics Error-Proofing</p>