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American Axle & Manufacturing, Inc. (AAM)

Supplier Requirements Manual

Publication Information

Publication Source and Support Organizations

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AAM Global Procurement Administration

Supporting Organizations:

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Environmental, Health and Safety
Information Technology
Legal
Quality
Supply Chain Management
Corporate Sustainability
Human Resources

Publication and Revision Date

Date	Notes
14-June-2016	Initial Release
15-July-2016	Incorporated Legal changes for Compliance with Code of Business Conduct.
25-Oct-2019	Amended standards for basic requirements (1.1), Replaced TS 16949 with IATF 16949 throughout, Added requirement for the online sustainability training for all suppliers (1.6), Added requirements for sustainability as well as information about AAM's Human Rights policy (1.9), Updated all contact information for the Business Ethics Line (1.9), Added specific Metal Forming Division EDI requirements (6.2.2), Expanded Capacity Planning Section (6.6), Updated Premium Freight Authorization (PTA) to Authorized Excess Transportation Costs (AETC), Updated Country of Origin Marking (6.8), Updated U.S. Export Controls (6.8), Updated
11-Jun-2021	Updated hyperlinks to AAM sites; enhanced Social Responsibility Section (1.9) by adding requirements for Air Quality, Privacy and Data Protection, and updating Human Rights requirements. Added inventory control expectations section 6.5. Added Local Warehousing Requirements with DAP and DDP Incoterms (section 6.8). Also added Importer Security Filing (ISF) requirements to section 6.8.

11-Aug-2022	Updated Privacy and Data Protection (Cyber Security) section to adapt to the changing threat and regulatory landscape. Added Ethics Hotline number for Romania. Enhanced Supplier Diversity Policy language. Enhanced Sustainability alignment requirements. Added Reference to AAM Supplier Quality Procedures: AAM-9-341, AAM-9-239 & AAM-9-237. Clarified service material is within scope of this Global Supply Chain Requirements section. Updated Sections 6.1, 6.2, 6.3, 6.4, 6.5, 6.8 and language updates in related Appendices.
03-Apr-2023	Updated references to new AAM Supplier Code of Conduct
30-Jun-2023	Updated section 6.8 Customs and Global Trade Compliance in following areas. Opening section added a paragraph clarifying Supplier's responsibility to notify AAM GTC through FOCUS Business Solutions of any changes to their Customs/Trade Compliance contacts and information. Documentation Requirements - updated the commercial invoice portion to include new European Union data elements on the import shipment invoice for the ICS2 reporting. Added clarification under the Special Program documents portion of AAM's expectation of timely Supplier responses to AAM requests made by FOCUS Business Solutions. Export Control - updated expectations of AAM's US Suppliers to be the USPPI requirement for export shipment EEI transactions regardless of Incoterm. Added supplier requirements regarding IMDS compliance to section 2.4, added reference to compliance requirements with AIAG Advanced Quality Planning and Control Plan manual, updated reference documents in section 2.2, updated expectations in section 2.3, updated requirements and reference documents in section 2.4, 2.5, 2.8, 3.3, 4.1, 4.4, 6.6. Updated sections 1.9 to clearly reference the Supplier Code of Conduct and its requirements and removed duplicate language.
06-Dec-2023	Updated Verification of Customer Interface Points note in section 2.3. Updated Six Sigma Statistical Control Chart with the addition of the Standard column in section 2.8.
31 May 2024	Updated section 1.2 countries that AAM currently has facilities in. Updated section 1.9 stating suppliers must have an environmental management system. Updated section 2.1 requiring Supplier Quality Certificates to be uploaded into one of the AAM Quality Systems. Added AAM-9-239 Supplier Launch Manual to referenced documents list. Added in labeling and requirements standards in section 2.3 and hyperlink to find them on AAM.com. Added in AAM policy on repair/rework and annual auditing in section 2.6. Update 6.7 Transportation Requirements. Updated Local Warehousing Requirement with DAP Incoterms in section 6.8 and revised Routed Transaction section. Struck out Tier 2 or OSP Shipment Destination

	Shipments from section 6.7. Updated Incoterms to Incoterms 2020 and language in Incoterms in section 6.8.
16 May 2025	Updated general language throughout section 6.1. Updated general language throughout section 6.2. Restructured Labeling Specifications and Label Certifications in section 6.3. Added guidance on where to find wood packaging materials requirements and guidelines one shipments refused in the U.S. by CBP in section 6.4. Updated general language and information on obsolete material with the FAB and MAT authorizations. Updated general language in section 6.7. Updated section 6.8, Customs and Global Trade Compliance, in the following areas. Updated and added Restricted Party List Screening & Importer Security Filing (ISF) sections. Updated general language in AAM Preferred Incoterms and Supplier Obligations, Commercial Invoice requirements & Packing List requirements. Restructured paragraphs for Global AAM Free Trade Agreement and Special Program Matrix. Added Invoice Requirements, Price Adjustment & Additional Payments, Repairs / Alterations, Assembly on Consignment, & Free of Charge Shipments.
01 May 2026	Updated section 1.9 Corporate Sustainability (Environmental, Social, Governance) Raising Concerns Hotline table. The following updates have been made in section 6.8 Customs and Global Trade Compliance. Removed the following sections: Restricted Party List Screening, Importer Security Filing (ISF), Supplier Requirements, AAM Preferred Incoterms and Supplier Obligations, Documentation Requirement, AAM Customs Broker Matrix, Global AAM Free Trade Agreement and Special Program Matrix, Commercial Invoice Requirements, Price Adjustments & Additional Payments, Repairs / Alterations, Assembly on Consignment, Free of Charge Shipments, Change in Manufacturing Site or Shipping Location, Country of Origin Marking (COO), Supplier Obligations for AAM Returnable Dunnage / international Border Crossing, Supply Chain Security Program Requirements. Added in suppliers must ensure full compliance with the global and country-specific requirements outlined in the Supplier Customs and Trade Compliance Manual. Also added the following sections: Global Documentation & Country Specific Requirements.

Contents

1. Introduction and Basic Requirements

1.1. Introduction

In AAM's constant pursuit of operational excellence, ethics and integrity are integral to our daily responsibilities. AAM's reputation for excellence can be damaged due to unethical or illegal business conducted. Such conduct destroys trust, incurs legal liability and can result in potential financial implications. There is no place for such conduct at AAM, or by Third Parties acting on AAM's behalf. This manual consists of expectations, requirements, and standards applicable to all current or prospective AAM Suppliers globally. All suppliers are required to meet the same standards of business conduct and ethics that every AAM location and employee follows. The requirements as detailed in this manual define basic requirements and are supplemental to specific requirements as communicated by AAM. Our policies are available at AAM.com that further delineate these requirements.

1.2. Company Background

AAM is a leading, global Tier-One automotive supplier of driveline and drivetrain systems and related components for light trucks, SUVs, passenger cars, crossover vehicles and commercial vehicles with a regionally cost competitive and operationally flexible global manufacturing, engineering and sourcing footprint. In addition to locations in the United States, AAM also has offices or manufacturing facilities in Brazil, China, Czechia, England, Germany, India, Japan, Luxembourg, Mexico, Poland, Romania, Scotland, South Korea, Sweden and Thailand. Through highly engineered, advanced technology products, processes and systems and industry leading operating performance, the AAM team provides a competitive advantage to our customers.

Operational Excellence

AAM strives to provide exceptional value to our customers with an intense focus on quality, warranty, reliability, delivery, and launch support. This provides a foundation for AAM's profitable global growth.

Global Market Cost Competitiveness

AAM has aligned its global manufacturing, engineering and sourcing footprint to increase exposure to global growth markets, support global product development initiatives and establish regional market cost competitiveness.

Technology Leadership

AAM's innovative product, processes and systems technology, positions AAM as a leader in providing industry-first, cutting edge driveline technology to the global market for passenger car, crossover vehicle and light truck applications.

1.3. Purpose

The purpose of this American Axle & Manufacturing, Inc. (AAM) Supplier Requirements Manual is to communicate AAM's requirements to all current and potential future suppliers. As a global manufacturer of driveline and drivetrain systems and related components, AAM must meet the requirements established by the current ISO 9001 / IATF 16949 Quality System. Therefore, it is the expectation of AAM that all suppliers comply with the requirements and expectations documented in this manual, in addition to all OEM Customer Specific requirements.

1.4. Scope

Consistent with AAM's values and Supplier Code of Conduct, AAM has adopted this **Supplier Requirements Manual** to explain how the Supplier Code of Conduct specifically relates to those who perform services for and on behalf of AAM. The **Supplier Requirements Manual** applies to all third-party businesses and individuals that act on AAM's behalf, including but not limited to suppliers, agents, consultants, distributors accountants, lawyers, customs brokers, etc.

This **Supplier Requirements Manual** does not replace AAM's Supplier Code of Conduct. It provides an overview of its requirements for Suppliers working with AAM and applies to every Supplier working on AAM's behalf. AAM considers the Supplier Code of Conduct and **Supplier Requirements Manual** in all sourcing processes and expects all Suppliers to adhere to the requirements of both. In the case that a Supplier violates AAM's Supplier Code of Conduct, **Supplier Requirements Manual**, and applicable laws or industry codes of conduct, AAM will review the business relationship and take appropriate action, such as terminating the relationship within AAM's contract rights and applicable law.

AAM expects all suppliers to conduct business done on AAM's behalf in an ethical manner that is compliant with all applicable laws and industry codes of conduct. AAM's specific expectations for suppliers, listed below, are based on the requirements in the Supplier Code of Conduct. These expectations should be considered before a decision is made or any action is taken on AAM's behalf. Suppliers should seek guidance from their AAM contact before any action is taken that can violate AAM's Supplier Code of Conduct, applicable laws, or industry codes. Suppliers are expected to ensure that all individuals involved in providing services to AAM also understand and comply with these expectations.

The requirements set forth in this manual define basic requirements that are supplemental to AAM's Standard Terms & Conditions (found here) and any other specific requirements communicated by AAM's regional procurement teams. The online version of this Requirements Manual is the only controlled copy for reference.

It is important to note that the latest version of AAM's Standard Terms & Conditions supersede any conflicting requirements defined in this manual. This manual includes both functional requirements (quality, engineering, purchasing, etc.) and AAM regional requirements (North America, Asia, Europe, etc.).

1.5. AAM-Supplier Relationship

AAM Global Procurement Vision

To be a world-class procurement organization that promotes global standards, collaborates cross-functionally, leverages technology, and delivers operational efficiency to maximize value for its stakeholders through preferred supplier relationships.

Preferred Supplier Relationships

AAM is committed to establishing strategic, long-term relationships with our supplier partners. AAM desires mutually beneficial supplier partnerships based on trust, transparency, integrity, accountability, empathy, advocacy, and communication. AAM is embracing and initiating change within the automotive industry with the expectation that our supply base does the same.

AAM business must be earned by our suppliers every day – there are no entitlements. The **Supplier Expectations** below and **Requirements** set forth in this manual provide a roadmap to maintaining current business and winning AAM's new business.

Supplier Expectations

- Financially Strong
- Early Engagement / Collaboration
- Market Competitive Total Landed Cost
- Flawless Quality
- Perfect Delivery
- Best-in-Class Designs
- Industry-Leading Technology
- Business Process Adherence
- Long-Term Commitment
- Adherence to Supplier Code of Conduct and Human Rights Policy
- Alignment with AAM's Environmental, Social and Governance Policies and Requirements

1.6. General Expectations

- Suppliers agree to abide by applicable international, national, state, and local laws and regulations.
- Suppliers agree to provide documentation to demonstrate financial solvency, as required.
- Suppliers agree to submit to reasonable background screen procedures, as applicable.
- Suppliers shall agree to reasonable use of technology solutions in use by AAM.
- Suppliers agree to participate in sustainability-related assessments that may be required by AAM and possibly conducted by third parties on AAM's behalf.
- Suppliers agree that a management representative from their company, with authority to influence their organization, will complete free AIAG online sustainability training or equivalent sustainability training provided by the suppliers' company, and provide documentation asserting such requirements were completed.

1.7. Supplier Onboarding and Qualifications

In order to receive a Purchase Order or participate in any bidding process, all suppliers must complete a Prospective Supplier Registration (PSR) in AAM's Supplier Lifecycle Management (SLM) database, which may be accessed through the iSupplier Portal. Suppliers are expected to provide responses to all required fields in their initial PSR, as well as additional category-specific data as requested by the Buyer or other AAM team members.

All suppliers must register a Site Security Coordinator (SSC) responsible for regularly updating and maintaining information within AAM's database as well as granting individual access on an as-needed basis to associates within their supplier organization. The SSC will work with AAM on a recurring basis to ensure the accuracy of shared information and should be a champion of data integrity within their organization. The SSC form may be found here. Only existing suppliers will be granted access to AAM's systems.

1.8. Communication – Notification of Change

As noted above, open and effective communication is critical to the relationship between AAM and supplier partners. Unauthorized changes or related supply chain issues and non-confirming product present a risk to AAM and its customers. As such, changes or issues must be communicated to AAM proactively and managed effectively. To manage these risks effectively, suppliers must communicate all issues/changes in writing **prior** to implementation, including but not limited to:

- Changes to Product Design, Process, or Service
- Manufacturing Location Change
- Tooling
    - Capacity Change
    - Transfer
    - Refurbishment / Replacement
- Potential Manufacturing / Quality Issues
- Potential Supply and/or Capacity Issues
- System of Information Technology (IT) that may impact production, scheduling, or shipment of product to AAM.

1.9. Corporate Sustainability (Environmental, Social, Governance)

AAM considers Environmental, Social and Governance (ESG) to include, but not be limited to, issues associated with:

- Environmental issues such as energy, greenhouse gas emissions, waste, and water management
- Social issues such as labor, human rights and associate health and safety.
- Governance issues such as bribery and corruption, gifts and entertainment, business records, conflicts of interest, fair business practices, privacy and data protection, diversity sourcing and conflict minerals

All AAM Supplier Partners and their sub-suppliers are required to conduct business in accordance with AAM's Supplier Code of Conduct, which outlines guidance and expectations on the following topics:

- Human Rights and Working Conditions
- Environmental Sustainability
- Responsible Sourcing & Due Diligence
- Product Integrity
- Business Ethics

AAM Supplier Partners are subject to ESG performance and risk assessments through third party rating agencies and/or platforms.

Environmental

Suppliers must have an environmental management system in place that is focused on environmental compliance and continuous improvement. AAM encourages ISO 14001 certification, as it is seen as a positive approach. Visible management support, viable EHS committees, a comprehensive audit and observation process and a positive learning environment all help build a strong environmental program.

Privacy and Data Protection

AAM is committed to safeguarding the confidentiality, integrity, and availability of our data and critical systems through continuously evaluating and improving our Information Security program.

We have built an Information Security Management System (ISMS) that is integrated into the risk management framework to identify evolving risks and build a comprehensive strategy to address them. The ISMS leverages strong governance frameworks such as NIST, CIS, TISAX and ISO 27001

AAM expects our suppliers and other business partners to uphold these principles and to adopt similar policies within their own businesses.

As cyber-attacks continue to increase in frequency and sophistication, the risk to AAM and it's partners also grows. As such, suppliers are expected to provide transparency by notifying, as soon as reasonable, the AAM Information Security team of any security event that could impact AAM Confidential Information and/or operations. All details relating to the event will be held in confidence.

AAM Information Security Contact Info:

AAMInfoSec@aam.com
+1 877 226-0929

To better understand cyber risk exposure and our supplier's ability to protect Confidential Information and systems, AAM may survey suppliers regarding their ISMS annually. Suppliers

are expected to provide their responses in a timely manner. The AAM Information Security Team will provide feedback to the supplier to help them better protect their environment.

Associate Health and Safety

AAM believes that the safety of our associates is our number one responsibility. We strive to achieve zero incidents in the workplace and in activities outside of work. Safety requires a 24/7 mentality and the involvement of all associates. We encourage all AAM suppliers to develop safety systems to protect associates and to be proactive to reduce and eliminate injuries. We believe that a positive safety culture must include both a system to discover unsafe conditions, and one to go deeper into assessing and counseling those associates who commit unsafe acts. A system designed to minimize unsafe conditions and unsafe acts can be successful in creating a safer workplace.

AAM provides a safe workplace for all our associates and strongly believes that our suppliers should take this position as well. Suppliers should conduct risk assessments to identify and reduce hazardous conditions. They should further adopt procedures to identify and standardize safe working procedures for all jobs and tasks. Suppliers must include a focus on identifying and modifying unsafe behaviors to promote a positive safety culture.

Suppliers must have a safety management system in place that is focused on accident/incident prevention as well as permanent corrective action. AAM encourages ISO 45001 certification, as it is seen as a positive approach. Visible management support, viable safety committees, a comprehensive audit and observation process and a positive learning environment all help build a strong safety program.

Supplier Diversity Sourcing

It is a policy and practice within AAM to build sustainable relationships with supplier partners who are owned and operated by certified members of the following diverse business groups, including but not limited to:

- Minority Owned Businesses (MBE)
- Woman Owned Businesses (WBE)
- Veteran Owned Business (VBE)
- Service-Disabled Veteran Owned Businesses (SDVBE)
- LGBTQ Owned Business
- Small Businesses (as designated by the SBA)
- Historically Underutilized Business Regions (HUB Zone)
- Disabled Owned Business Enterprise (DOBE)

Diverse Supplier Network Objectives

- Engagement with certified diverse suppliers who will provide quality materials and services at competitive prices.
- Ensuring that diverse suppliers are included as a part of AAM's strategic sourcing and procurement processes.

- Communicating the value of AAM's Diverse Supplier Network both internally and externally to all stakeholders.
- Continuous improvement of AAM's supplier diversity results to meet our own and our customers' supplier diversity requirements.

Diverse suppliers are required to report diversity status at the time of onboarding with AAM and to maintain current diversity certificates within AAM's iSupplier Portal (Supplier Lifecycle Management Module) in accordance with AAM's Supplier Diversity Certification Requirements which are outlined during onboarding.

AAM is committed to building a qualified and competitive Supplier Diversity Network and strongly encourages its tiered suppliers to implement their own supplier diversity policies and sourcing strategies to reflect the diverse make-up of our ultimate customer base.

Conflict Minerals

It is the policy of AAM to comply with the SEC disclosure and reporting requirements of Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. As part of our policy, AAM requires direct material suppliers to engage in due diligence of their supply chain to understand and report the tin, tantalum, tungsten, and gold (3TG) content of their parts supplied to AAM.

"Materials of Concern" are minerals that are not specifically identified in the Frank-Dodd Act as conflict minerals but do represent a threat to social or environmental systems. As such, from time-to-time specific information related to "Materials of Concern" may be requested and compliance with requests is expected.

Direct material suppliers are further required to adhere to AAM's annual Conflict Minerals Reporting Requirements. This includes but is not limited to AAM Suppliers surveying their own tiered supply base, responding to AAM's annual conflict minerals surveys, and providing a complete and accurate smelter listing and disclosing the location of mines for all 3TG necessary to the functionality or production of components or assemblies supplied to AAM.

Raising Concerns

Given that AAM operates on a global basis, AAM relies on its associates, suppliers and customers to raise concerns about potentially improper business practices or conduct by any employee or other party conducting business on behalf of AAM. Please use the following methods to contact us via our Business Ethics Line about potentially improper business practices or conduct that AAM should be aware of. AAM promises to take appropriate action as situations arise. Reports may be made anonymously where permitted by local law. AAM's Supplier Code of Conduct prohibits retaliation against anyone who reports a suspected issue in good faith.

HAVE A CONCERN! SPEAK UP!	
REPORT CONCERNS ONLINE	
aam.ethicspoint.com	
REPORT CONCERNS BY PHONE	
Asia	
China	4001205061
India	022 5097 2725
Japan	0800-300-9291
South Korea	0074-4878
Thailand	1-800-0182-11
Europe	
Czech Republic	800 404 142
France	0800 90 99 31
Germany	0800 1822873
Poland	800005414
Spain	900-75-1975
United Kingdom	0808 196 2134
North America	
Mexico	800 872-1124
United States	877-846-8912
South America	
Brazil	21203-82727

2. Quality Requirements

2.1. Supplier Quality Base Requirements

AAM's Standard Terms & Conditions require Suppliers to agree to participate in AAM's supplier quality and development program(s) and to comply with all quality requirements and procedures specified by AAM, as revised from time to time, including those applicable to Suppliers as set forth in Quality System Requirements IATF 16949. In addition, AAM shall have the right to enter a Supplier's facility at reasonable times to inspect the facility, goods, materials and any property of AAM covered by a contract / Purchase Order. AAM's inspection of the goods

whether during manufacture, prior to delivery or within a reasonable time after delivery, shall not constitute acceptance of any work-in-process or finished goods.

All suppliers are expected to supply parts to AAM with zero defects. All parts shall meet all engineering specifications with no functional failures due to parts that are received out of specification or due to applied processes that are out of control with reference to the AAM / Supplier agreed Control Plan.

Funding shall be identified in the initial quote and subsequent quotes to reflect error occurrence detection (poka yoke, error proofing devices, etc.) and defect outflow prevention to customers, including capital and fixtures to perform any functional testing AAM requires. Controls implemented later are the financial responsibility of the supplier.

- AAM expects suppliers to comply with the current version of IATF 16949. Suppliers that are not certified to IATF 16949 shall be certified to the current version of ISO-9001 unless they meet the criteria for exemption, and it is approved by both AAM and the end customer.

Based on Risk Assessment, AAM may require suppliers certified to ISO9001 to move through the QMS development progression steps, such as:

- Proving compliance to Minimum Automotive Quality Management System requirements for Sub-Tier Suppliers (MAQMSR) or equivalent through second-party audits.
- Compliance to IATF16949 through second-party audits.
- Ultimately, certification to IATF16949 through third party audits.

IATF Sanctioned Interpretations must be followed regarding supplier certification requirements.

Based on current performance and the potential risk to the customer, the objective is to move suppliers through the following QMS development progression: with the ultimate objective of becoming certified to the IATF Automotive QMS Standard. Unless otherwise specified by the customer, the following sequence should be applied to achieve this requirement:

a) compliance to ISO 9001 through second-party audits;

b) certification to ISO 9001 through third-party audits; unless otherwise specified by the customer, suppliers to the organization shall demonstrate conformity to ISO 9001 by maintaining a third-party certification issued by a certification body bearing the accreditation mark of a recognized IAF MLA member and where the accreditation body's main scope includes management system certification to ISO/IEC 17021;

c) certification to ISO 9001 with compliance to other customer-defined QMS requirements (such as Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers [MAQMSR] or equivalent) through second-party audits;

d) certification to ISO 9001 with compliance to IATF 16949 through second-party audits;

e) certification to IATF 16949 through third-party audits (valid third-party certification of the supplier to IATF 16949 by an IATF-recognized certification body).

NOTE: The minimum acceptable level of QMS development may be compliance to ISO 9001 through second-party audits, if authorized by the customer.

Supplier Quality Certificates must be uploaded into the AAM Quality Systems (Oracle, Plex). Certificates must be current with expiration dates in the system.

AAM requires all suppliers to be in full compliance of requirements stated in the AIAG Advanced Quality Planning and Control Plan manual.

Suppliers will ensure that sufficient resources are available and dedicated to ensuring successful completion of all requirements to meet defined program timing. Suppliers will also ensure that all sub-tier suppliers for which they are responsible have sufficient resources assigned and follow all AIAG Advanced Quality Planning and Control Plan requirements.

Suppliers will develop timing plans in a format as defined by AAM Program Management and will maintain and review timelines on a regular basis.

2.2. AAM Procedures and Reference Documents

Suppliers are to adhere to the current revision of the requirements contained in the following documents:

PROCEDURE / REFERENCE DOCUMENT
Advanced Product Quality Planning & Control Plan (APQP) Reference Manual (AIAG)
Potential Failure Mode and Effects Analysis (FMEA) Reference Manual (AIAG)
Fundamental Statistical Process Control (SPC) Reference Manual (AIAG)
Measurement Systems Analysis (MSA) Reference Manual (AIAG)
Production Part Approval Process (PPAP) Manual (AIAG)
AIAG Special Process Assessments (for example, CQI Series of Assessments)
AAM Supplier Assessment AAM-9-341 SQ4
SP-5 Processes and Measurements Procedure (See SP-1)
SP-8 Continuous Improvement (See SP-1)
SP-9 Tooled Capacity Review (Run @ Rate) (See SP-1)
SP-11 General Procedure for Pre-Prototype and Prototype Material
SP-12 Early Production Containment (See SP-1)
SP-13 Error Proofing (See SP-1)

PROCEDURE / REFERENCE DOCUMENT
AAM-9-239 Supplier Launch Manual (SLM) and Global Supplier Quality Manual (GSQM)

2.3. Quality Planning

APQP

Suppliers shall use an advanced product quality planning process consistent with the AIAG guidelines and containing any additional elements required by AAM in the AAM PPAP Process.

Operator Training

Supplier shall have documented training and certification plans to ensure that all operators are trained and credentialed per industry standards, as applicable, for each operation and/or machine type. Training plans shall address new operators and current operators performing new functions. Training status should be displayed around the manufacturing process.

Error- Proofing

Supplier shall prepare PFMEA in accordance with AIAG standards. For any failure mode exhibiting a Severity ranking of 7 or higher, automated error-proofing techniques shall be implemented. PFMEA and associated error-proofing plan shall be reviewed with and approved by AAM Supplier Quality. All error-proofing devices shall be checked for function (failure or simulated failure) at the beginning of each shift, or according to AAM-approved Process Control Plan.

Suppliers will work closely with AAM to ensure that all processes are in control. Process controls must control failure modes identified in the Process Failure Mode Effects Analysis (PFMEA).

Traceability

A Traceability scheme shall be developed in accordance with global requirements. Traceability scheme shall include manufacturing date code and lot control. Items to be traced shall be determined during the APQP process.

Shipping labels with traceability lot numbers must be used per the GPTL Labeling and Requirements Standard, found on AAM.com - Doing business with suppliers. If identified on the print, the part traceability Bar Code must be used and approved by the AAM SQE.

Verification of Customer Interface Points

Part features identified as Customer Interface Points (CIP) shall be incorporated in the PFMEA, process control plan, layered audits, and error-proofing. Additional items to be checked shall be defined during the APQP process. These features shall be verified at a frequency of 100%.

Inspection Fixtures and Gauges

- Gauges shall locate the part in vehicle position unless AAM Supplier Quality approves a deviation as requested using the Agree / Disagree matrix and the Tech Review.
- All customer monitored APQP parts shall have gauge designs approved by the Supplier Quality Engineer or the appropriate customer gauge approval group prior to the start of fixture construction (for your regional requirements, contact Supplier Quality Engineering). Gauge designs shall incorporate approved GD&T datum schemes and gauges/fixtures shall be capable to dimensionally evaluate parts.
- Supplier shall have the ability to perform any functional tests as specified on AAM Product Engineering blueprints.
- Supplier shall ensure that fixtures are procured in a timely manner to meet major program benchmarks (i.e. first shots, SP-11 events, functional evaluations, and PPAP.) Supplier shall design, construct, and make available a tabletop holding fixture for CMM (Coordinate Measurement Machine) inspection of first parts off prototype and production tooling. Said inspection may take place at the Supplier, at AAM, or both. Inspection procedure and location to be agreed between Supplier and AAM Supplier Quality prior to Supplier acceptance of prototype PO from AAM.
- A checking gauge and/or Coordinate Measuring Machine (CMM) holding fixture is required for all parts and assemblies which are assigned an AAM part number. Unless otherwise specified by the AAM, the supplier is responsible for ensuring gauges and fixtures are auditable, complete, certified, repeatable and reproducible.

2.4. Quality Control

Quality Performance Metrics

Each Supplier's Senior Management shall commit to maintain and continuously improve quality. AAM monitors supplier performance data for PPM, PRRs, number of occurrences of premium freight, Controlled Shipping Level I and II, Major Assembly Plant Disruptions, and ISO/IATF 16949.

- Suppliers shall monitor their quality performance through iSupplier Portal.
- Poor performing suppliers may be required to attend Corporate or Plant Supplier Quality Performance Review (SPR) meetings to review their quality systems and corrective actions.

Containment

All non-conforming and suspect material shall be controlled. Method shall be clearly defined. Visual controls should be implemented. All non-conforming material shall be segregated and identified. SP-12 shall be implemented during launch. Upon request of AAM Supplier Quality, additional levels of proactive containment may be required. Should a problem occur, suppliers are required to implement effective and immediate spill containment and comply fully with SP-5 requirements for controlled shipping.

Quality Systems
Suppliers shall have effective Quality Systems as defined and measured in the AAM Supplier Assessment form (AAM-9-341 SQ4). Documented layered audit plan shall exist with a minimum frequency of once per shift. Non-conformities shall be addressed immediately, and corrective action shall be documented. Audit plan shall include multiple levels of management. Site leadership shall verify compliance to the documented plan.

Sub-Tier Suppliers

Suppliers are responsible for adhering to AIAG Special Process Assessment CQI-19, Sub-Supplier Management Process Guideline, and any additional AAM requirements (see section 3) for all components of the assembly (including Directed Buy components) unless otherwise specified by AAM Supplier Quality. AAM may, at their discretion, assign an SQE or designee to work with a Supplier's SQE or designee for the purposes of learning, inputting, and concurring on quality reporting and/or quality issues related to purchased components.

IMDS Requirements

The AAM APQP process requires Direct Material Suppliers to attach their IMDS files in the Supplier Response Workbook in the appropriate PPAP. The applicable IMDS number is a required field on the Supplier Response page and is in addition to the actual file attachment being required. This is a mandatory submission for the suppliers and the AAM Oracle system will provide a reminder to the supplier if the requirement is not met.

2.5. Prototype Quality

Prototype parts are to be manufactured under the following conditions:

- Material shall be from the production source and in the same production state as is intended for regular production. Any exceptions shall be noted in the prototype quote and AAM Prototype Purchase Order.
- Production-intent process sequence to be used under production conditions wherever possible. Any exceptions shall be noted in the prototype quote and AAM Prototype Purchase Order.
- Production-intent tooling is strongly preferred. At a minimum, any work-holding setup shall locate and clamp the part in the same manner as is intended for production.
- Picture documentation is required for prototype tooling which is owned by AAM or AAM's Customer to support the evidence submission to AAM's Customer. Authorization for disposal must be given by AAM Prototype Procurement Representative prior to destruction/disposal.
- Production gauging is not required but is recommended.
- For each heat treat lot (if applicable), the supplier shall provide a material certification, including chemistry, source & heat lot identification, and microstructure inspection. Records are to be maintained for the life of the contract.
- Parts to be 100% inspected for visual flaws.
- Parts shall be marked for traceability to batch and date.
- Parts are to be suitably cleaned and free of contamination.

- If production packaging is not yet available, disposable packaging (with layer separation) may be used. Components shall be packaged so as not to incur damage from adjacent parts (dings, dents, scratches, etc.) while in transit. Packaging must have rust inhibiting qualities to ensure the parts stay free from rust for 6 months in a controlled inventory environment.

- Submission of prototype parts (inspection data and part identification) shall be per the SP-11 procedure. The SP-11 requirements will be as noted on the AAM Purchase Order. The SP-11 Warrant Number (from the electronic system) shall be listed on the packing slip and material tag upon delivery.

PLEASE BE AWARE: AAM considers changing the source of raw material and/or the source of heat treatment (including normalizing) a major process change. This is expressly prohibited without prior approval from AAM. This requires complete validation of the new source including PPAP requirements.

2.6. Production Support

On-site Support During Pre-Production and Launch

Upon request of AAM SQE or AAM Plant, Supplier will provide on-site support during all pre-production build phases and production launch activities.

Supplier Contacts for All Shifts

Supplier shall designate a specific supplier representative that will support each of the AAM Plant's shifts. At a minimum the supplier designate should have the responsibility and authority to:

- Implement immediate countermeasures to contain discrepant parts and to confirm that defective parts are not shipped to AAM Plant.
- Approve AAM Plant's/SQA's requests for rework and sorting of parts.
- Coordinate and provide resources to conduct rework and sorting of parts.
- Provide sub-assemblies / components for required repair, related to quality issues.
- Provide clear information regarding any defective parts that are en route to AAM Plant (how to identify defect, disposition guidelines).
- Coordinate special delivery of certified OK parts.

Quality Data

Supplier shall provide quality-related data (e.g., historic inspection, first time quality, and reject data) to AAM upon request. This data may be required to determine trends and to root cause quality problems at AAM manufacturing or assembly operations.

Problem Resolution

Supplier shall resolve problems in a timely fashion using appropriate techniques such as 8-D, 5-Why, Shainin®, etc. Responses to all issues raised in the online system shall be responded within that system.

Repair / Rework – AAM policy is to NOT repair any product – Rework must be pre-approved by AAM executive leadership.

Annual Audit – All suppliers are required to submit the Global Supplier Annual Auditthe first quarter of every calendar year. Suppliers should contact their Global Supplier Quality Engineers for further information.

2.7. Systems and Procedures Access

- Suppliers are required to maintain access to the AAM iSupplier Portal (https://r12supplier.aam.com/) to effectively communicate with AAM. AAM Supplier Quality procedures and systems can be accessed through the AAM iSupplier Portal.
- Initial access (or access if your Supplier Security Coordinator leaves) is attained through the AAM Procurement Department; the Request form is found here. Note that only current suppliers will be granted access to iSupplier Portal.
- Suppliers shall use the AAM iSupplier Portal to communicate/collaborate with AAM SQE on PPAP (including APQP) and PRR.
- Supplier organization changes should be managed by the Supplier Security Coordinator (SSC) to maintain the correct levels of access to the portal.
- Automotive Industry Action Group (AIAG) documents can be obtained by contacting AIAG at www.aiag.org. To obtain these documents in Europe, contact Carwin Ltd. at 44-1708-861333. In Brazil, contact IQA at 5511-5533-4545 or www.iqa.org.br.

2.8. Additional Requirements

Six Sigma Statistical Control

For product characteristics identified on AAM product drawings as AC, CC, or SC, the following Inspection Cadence and Process Capability requirements apply:

Note: These requirements apply to all print dimensions unless otherwise noted on the drawing.				
AAM Symbol	AC	CC	SC	Standard
Symbol Name	Attribute Characteristic	Controlled Characteristic	Safety Characteristic	Not labeled
Inspection Cadence	100%	Stated Regular Interval	Stated Regular Interval	Control Plan Interval
Initial Process Capability Target	None	Ppk >= 1.33	Ppk >= 1.67	Ppk >= 1.00
Ongoing Process Capability Target	None	Cpk >= 1.33	Cpk >= 1.67	Cpk >= 1.00
Deviation requirements if not capable	None	100% inspection required	100% inspection required	100% inspection required

If during Product / Process development, Supplier believes there will be difficulty meeting the above capability, the Supplier shall immediately notify their Supplier Quality Engineer and develop a plan to assure compliance and/or obtain formal written approval to deviate from the capability requirements.

Process Failure Mode and Effects Analysis (PFMEA)

Top 5 RPNs shall be tracked as continuous improvement activities.

Cleanliness

Part and process cleanliness shall be considered during the development of the PFMEA. Appropriate actions shall be taken during the APQP process as driven by the PFMEA RPN's.

On-Site Supplier Audit

As part of the monitoring and continuous improvement, Supplier shall provide access to AAM Supplier Quality personnel to allow for various inspections and audits, including but not limited to on-site process audits, heat treat audits, Supplier Assessment, Annual Audit (includes layout), and corrective action confirmations.

Changes to Process or Supply Chain

Supplier shall notify AAM of, and AAM shall approve, any planned changes to supplier or sub-supplier process or packaging. This includes any changes to nominal control parameters other than adjustments made to re-center a process and includes any plans to source purchased materials from two or more suppliers (dual or multiple sourcing strategy).

Capacity

Supplier shall prove that sufficient capacity is in place by performing Tooled Capacity Review and run-at-rate analysis per AAM SP-9.

- Annual volume is based on Lean Capacity Rate (LCR) unless otherwise stated. Suppliers are also responsible to support the Maximum Capacity Rate (MCR) which is 15% greater than the LCR (i.e., LCR multiplied by 1.15).
- Suppliers are required to demonstrate LCR capacity on a 5-day work week and achieve MCR capacity in no more than 6 days. Deviations to this requirement require written approval from AAM purchasing and must be documented in an approved Run @ Rate.
- MCR may be required on a sustained basis. Unless maximum capacity rate duration limits are explicitly defined in the AAM RFQ, Suppliers must be able to achieve MCR on a sustained basis with no additional investment, capital, or premiums from Buyer.

3. Engineering

3.1. Pilot Builds Support

Suppliers should be prepared to provide additional parts prior to the pilots to support AAM plants and development activities in preparation for the builds. These build events, including

timing and quantities of parts can be found in AAM's Requests for Quotation. Where specific part quantities are not defined, these will be communicated by the appropriate AAM organization. An Interim Authorization Approval is required for all parts that do not meet the minimum Pilot Build requirements.

3.2. Engineering Support

Suppliers must provide engineering support throughout the program, including pilot build and launch. This support includes, without limitation, design studies necessary to meet all packaging, performance, reliability and assembly requirements for the component(s). The quote must include names, titles and phone numbers of each such engineer, and a plan/proposal for implementing the required support.

3.3. Failure Mode and Effect Analysis & Design Verification Plan & Report

Supplier must develop (with AAM assistance) and make available for review to AAM a detailed Design Failure Mode and Effect Analysis (DFMEA), Process Failure Mode and Effect Analysis (PFMEA), and a Design Verification Plan & Report (DVP&R) (to use without restriction). DFMEA, PFMEA, and DVP&R will be reviewed during the Technical Review or other means with AAM Engineering.

Supplier must identify in the DVP&R the responsible party for running all tests (supplier, AAM, third party, etc.). Additionally, the supplier must identify the financially responsible party for each test parameter which will be subject to AAM written approval.

The DFMEA and DVP&R are living documents that must be developed and completed by the Supplier with AAM Engineering assistance as required. It is the Supplier's responsibility to identify and document all potential failure modes and develop appropriate testing where applicable.

4. Product / Process Development & Part Approval

4.1. Defining the Scope

AAM Product Engineering is responsible for the design, development, test, and validation of all AAM products. AAM Suppliers are required to adhere to applicable AAM Engineering procedures and policies to ensure a quality product that meets or exceeds our customer's requirements.

4.2. Planning and Definition of Requirements

Suppliers will conduct all necessary and required activities to ensure completion of all OEM and AAM expectations defined in all relevant documents such as Purchase Orders, Subsystem Technical Requirements and Statements of Work.

Suppliers will work with AAM Engineering as well as other AAM departments to ensure understanding of key program deliverables, including:

- All Customer (both OEM and AAM) expectations, functional and performance requirements.
- All statutory, regulatory and legal requirements (i.e., FMVSS).

Suppliers shall identify and review product design input requirements. These may include but are not limited to special characteristics, identification, traceability, and packaging as well as product quality, life, reliability, durability, maintainability, serviceability, timing and cost. Suppliers shall maintain records as evidence to support requirements.

Early in the design and development process, suppliers will:

- Review past warranty for similar products. The warranty analysis shall include all sub-tier suppliers.
- Review Lessons Learned for similar products.
- Perform benchmarking of competitors' designs where applicable.
- Review any recall campaign or government recall data if applicable.

For suppliers that are design-responsible, from the OEM and AAM requirements, a Design Validation Plan and Report (DVPR) shall be created to perform analytical (CAE) and physical test verification of the design. This DVPR shall be reviewed and approved by AAM Engineering.

The supplier and AAM Engineering will establish performance requirements that align with each phase of AAM's Product Engineering - Product Development Process (PE-PDP). During the Technical Review process the supplier and AAM Engineering will review how their design conforms to requirements.

4.3. Product Design and Development

Suppliers that are design responsible must adhere to AAM CAD specifications and data transfer requirements as well as the data creation standards of the OEM. These standards are available for review at the AAM iSupplier Portal.

All suppliers with design responsibility must complete a Design Failure Modes Effects Analysis (DFMEA) in compliance with the latest AIAG standards. The DFMEA must be available for review and approval by AAM.

During the design and development process, appropriate analytical and physical testing shall be conducted in accordance with the established DVPR. Results shall be reviewed with AAM Engineering on a regular basis. Test samples shall simulate the product manufacturing process as close as possible.

4.4. Product and Process Validation

Final product validation samples must come from the approved manufacturing process unless specifically authorized in writing.

All suppliers to AAM must receive AAM approval for initial product submission and use in production. All Technical Review open items should be closed.

Special (critical) Product Characteristics will be identified and communicated by AAM. As part of the supplier product and process validation, suppliers will establish, validate and maintain acceptable capability on all critical dimensions.

5. Regular Production

5.1. Engineering Changes and Deviations

To ensure product integrity, all changes to product or process must receive AAM Engineering approval in writing before implementation.

After an approved deviation is granted in writing, initial shipment of all modified product must be clearly identified as directed.

Supplier must ensure that all supporting documentation is updated; a PPAP submission may be required.

6. Global Supply Chain Requirements

This section documents the requirements for production and service material for AAM facilities. Service material is also referred to as spare parts in some regions and will be referred to as service parts in this document.

AAM production suppliers are an extension of our supply chain which requires flexibility and capability in meeting our needs.

6.1. Supply Chain Management Expectations

General Information / Key Requirements

- Communicate electronically - EDI and/or an AAM Portal.
- 100% accurate and on-time delivery.
- Transmit the advanced shipping notification (ASN) immediately upon shipment.
- Analyze and understand DELFOR (830) and DELJIT (862) schedules and react to schedule variations.
- Communicate proactively.
- Follow FIFO methodology and ensure 100% traceability in the full supply chain.
- Ship according to packaging and transportation routing instructions.
- Respond timely to problem reporting and resolutions (PRR's) with corrective actions that focus on root cause analysis.
- Implement robust, repeatable processes using MMOG as a reference.
- Identify and measure KPIs, with emphasis on root causes and corrective action.
- Reconcile the CUMs upon each EDI submission.
- Shelf-life items must have a minimum of 80% residual shelf-life upon shipment.

- Defined process for the identification and management of potential risks to ensure uninterrupted material supply.
- Collaborate to secure a stable supply chain.

Global Material Management Operations Guidelines / Logistics Evaluation (MMOG/LE)

The global MMOG/LE is a self-assessment and continuous improvement tool that provides the means to enhance supply chain efficiency and accuracy while reducing costs from errors and waste. MMOG/LE is a global standard of industry best practices for supply chain management processes.

AAM recommends that all direct material suppliers complete an annual MMOG/LE self-assessment using the latest AIAG version.

The expectation of AAM is that direct material suppliers actively use this tool to:

- Drive continuous improvement by identifying and eliminating waste in the supply chain.
- Identify risks and mitigate with active contingency plans.
- Document the gap analysis and prepare action plans to address deficiencies in the supply chain.

Increase supplier delivery performance.

Shipment Identification Number (SID)

Every shipment shall have a unique SID number that shall be referenced on all shipping documents, the ASN and the supplier invoice.

Delivery Performance

Suppliers are required to ship On-Time in Full (OTIF) and performance will be measured against the date / window time. Suppliers are expected to maintain a 100% OTIF rating.

All suppliers can view their AAM performance reports in the iSupplier portal with the exception of those shipping to plants denoted as ERP Plex only. If you are not able to locate your performance reports, please contact your buyer for support.

Supplier shall identify and proactively communicate any delivery deviation to the AAM shipping schedules to the affected AAM location, prior to shipment. Reasons for communication include, but are not limited to the following:

- Product not available on the scheduled ship date
- Part shortage
- Carrier or freight forwarder issue
- Returnable container shortage
- Shipment in alternate containers

Supplier shall communicate to the plant SCM team any issue that affects meeting AAM's shipping schedules, such as machine breakdowns, quality holds, capacity problems, force majeure, and any other extenuating circumstances.

If a supplier does not meet the 100% OTIF target, the supplier may be requested to provide corrective action plans to address the issues. Any potential plant disruptions shall be communicated in advance to the AAM plant SCM team. If the supplier is behind schedule, transportation must be secured to protect the supply.

An ASN must be submitted at the time of shipment to provide visibility of in-transit material. Suppliers are expected to have trained associates available to send ASNs on all shifts of operation.

Suppliers with union contracts expiring within 60 days shall communicate in writing the contract expiration date. An agreed upon bank protection plan must be in place to secure supply. Suppliers shall communicate immediately upon ratification of a new contract to trigger the depletion of the protection bank.

AAM will monitor delivery performance and may generate a PRR for recurring issues within the supply chain, such as incorrect packaging or labeling, ASN violations, early, late or missed shipments, routing violations, etc.

PRR Response Expectations:

- It is the responsibility of the supplier to make sure that all delivery PRRs are responded to timely and reported against, until closed.
- Upon receipt of the PRR, the supplier is required to submit a corrective action with an initial response within 24 hours.
- The root cause analysis must be submitted within 15 days of the PRR.

If the supplier does not agree that the PRR is valid, the supplier may dispute the issue.

The Protection of Supply to AAM

Suppliers shall communicate potential issues as soon as a risk is identified.

AAM requires suppliers to establish a standard method of assessing and mitigating risk and ensure that contingency plans exist. These contingency plans should be validated and tested on a scheduled cadence.

Contact Information

Suppliers must provide contact information including names and positions, email addresses, phone numbers and 24-hour emergency contacts.

Supplier Cumulative (CUM) Reconciliation

The reconciliation of CUMs is a standard requirement in the automotive industry, including AAM. AAM requires suppliers to reconcile CUMs upon receipt of each EDI transmission.

AAM responsibility:

- Provide the supplier with the CUM start date or CUM reset date.
- Provide latest CUM quantity and last receipt / date at AAM.

Supplier's responsibility:

- Resolve any CUM discrepancies with the appropriate AAM SCM scheduler immediately.
- Participate in CUM shipment reconciliations as required by the AAM plant SCM team.

6.2. Electronic Data Communication (EDI)

AAM requires EDI or an AAM Portal to be utilized by all suppliers. AAM's portals may be used for viewing forecasts, standard purchase orders, label creation, and ASN transmission.

Suppliers requiring EDI must be certified. Suppliers changing VAN or EDI software must be recertified. The Supplier Entry Form (AAM-7F-200), found on the AAM portal, should be completed and submitted to the AAM buyer.

AAM IT will communicate with the EDI contact identified in the Supplier Entry form with further instructions.

For questions related to AAM EDI transactions, refer to the AAM Global EDI specifications.

6.2.1 Electronic Data Communication (EDI) – Driveline Business Unit

Required Transactions

The Driveline Business Unit uses AIAG EDIFACT EDI messages for supplier EDI communication. VDA 4985 standard templates may be implemented if agreed upon by AAM and the supplier.

- Forecast (DELFOR)
  - Includes both forecast dates and open firm orders. The forecast date should be used by the supplier for their material planning. Suppliers should be clear on the material authorizations provided in each release.

- Ship Requirement (DELJIT)
  - The EDI DELJITS are ship dates. This is the date that the carrier will pick up the product at the location.

- ASN (**DESADV**)
  - ASNs are required to be sent immediately upon shipment conveyance**.**
  -
  - Failure to submit a valid ASN will result in shipments being considered past due.
  - Payments are scheduled based on ASN ship date and incoterms.
  - ASN numbers must be the same as the Shipment Identification Number.

- Receiving Advice (**RECADV**)

- RECADV is not transmitted. The ASN is considered accepted unless the supplier receives an APERAK electronically with the error messages.

- Application Advise (APERAK)
  - Notification of a failed ASN, including error messages, will be sent electronically. It is expected that the supplier cancel, correct and resubmit the corrected ASN before the shipment arrives at AAM.

Trading Partner Identification

DUNS numbers are specific to a physical address. Therefore, each AAM facility is designated with one unique DUNS number.

6.2.2 Electronic Data Communication (EDI) – Metal Forming Business Unit

Required Transactions

The Metal Forming Business Unit uses AIAG ANSI X.12 messages for supplier EDI communication. EDIFACT standard templates may be implemented if agreed upon by AAM and the supplier.

- Forecast (**830**)
  - All dates contained within the 830 are forecast dates. Material authorizations are provided in each release.

- Ship Requirement (**862**)
  - The EDI 862 are ship dates. This is the date that the carrier will pick up the product at the agreed upon location.

- ASN (**856**)
  - ASNs are required to be sent immediately **upon shipment conveyance**.
  - Failure to submit a valid ASN will result in shipments being considered past due.
  - Payments are scheduled based on the ASN ship date and incoterms.
  - ASN number must be the same as the Shipment Identification Number.

- Receiving Advice (**861**)
  - The 861 Receiving Advice/Acceptance Certificate is not transmitted. The ASN is considered accepted unless the supplier receives an 824 electronically with the error messages.

- Application Advise **(**824**)**
  - Notification of a failed ASN, including error messages, will be sent electronically. It is expected that the supplier cancel, correct and resubmit the ASN before the shipment arrives at AAM.

Trading Partner Identification

DUNS numbers are specific to a physical address. Therefore, each AAM facility is designated with one unique DUNS number.

6.3. Labeling and Lot Traceability

- Suppliers must ship against the DELJIT (862) using the AAM Global Transport Partner Label Specification (GTBL) for the Driveline Business Unit. The AAM MFBU Barcode Label Specification must be used for the Metal Forming Business Unit.
- Two B16 barcode labels must be positioned properly with readable barcodes.
- Master and mixed Labels are required and should be placed outside the shrink wrap.
- Ensure all old labels are removed prior to shipment.
- AAM uses the supplier labels in multiple scanning applications.
- AAM may generate a PRR for recurring barcode label compliance issues.

Labeling Specifications

The label specifications can be found on the iSupplier portal. Suppliers shall use the AAM label formats required when shipping to all AAM facilities. The lot number is created by the supplier and *must be traceable* to the date and shift of manufacture. Heat numbers are required on labels under heat lot control mandates by AAM.

Label Certification

Label certification is required for all new suppliers to AAM or suppliers converting from the AAM portal generated labels to supplier produced labels.

6.4. Packaging Specifications and Requirements

Suppliers for production parts are required to adhere to the Packaging Guidelines that are stated in the AAM Packaging and Material Handling Manual on the iSupplier Portal under the Materials portion of Requirements & Specifications. Suppliers must work with the AAM receiving plant as well as the AAM Material Handling and Packaging Group to develop safe, secure, and efficient packaging to be presented to all manufacturing processes.

Wood Packaging Materials Used in International Shipments

Suppliers using wood packaging materials (WPM) in international shipments to AAM facilities must comply with the ISPM 15 WPM Requirements (International Standards for Phytosanitary Measures No. 15 (ISPM 15) regulation), which can be found on the iSupplier portal under Global Trade Compliance. Any supplier shipments refused U.S. entry by CBP and the Department of Agriculture will be responsible for the return shipment expense and potential fines, as well as any costs incurred by AAM through the PRR process.

Packaging Samples

Suppliers should provide part samples to AAM for primary packaging design and development. All packaging approval must be obtained from AAM Material Handling and Packaging prior to product launch as part of the Production Part Approval Process (PPAP). The packaging submission must be done through the Packaging Approval Data Form.

Packaging Approval and Data Form

A completed Packaging Approval and Data Form (PADF) is required for all packaging designs, and must be submitted to AAM for approval. This form will be used for all new packaging designs as well as all proposed changes to existing packaging. No packaging will be developed without approval of this form.

Secondary / Back-Up Packaging Requirement

Returnable packaging is preferred, with few exceptions. All production shipments are to be made in the approved primary packaging unit loads detailed on the packaging specification, except when a deviation has been provided in advance and approved by the AAM production facility.

The supplier is responsible for developing back-up expendable packaging for all production parts provided to AAM. All expendable wood packaging must be 100% recyclable and comply with the International Plant Protection Convention Standard ISPM #15. Supplier's failure to conform to this requirement may result in a PRR.

AAM Owned Packaging and Labeling

Suppliers should use AAM owned packaging for finished goods only and are not permitted to use this packaging for their work in process inventory. While AAM owned packaging is in a supplier's facility, the supplier must keep the packaging in a debris-free state. The supplier must notify the appropriate AAM contact if any packaging has become damaged or creates an issue.

Inventory Control of Packaging

Suppliers are required to maintain inventory tracking on all AAM packaging. AAM may conduct cycle counts which will require suppliers to count when requested and provide last container shipped/received information.

6.5. Supplier Responsibility

Material Authorizations, Obsolescence, and Outside Service Provider (OSP)

AAM provides a forecast for supplier planning purposes and firm releases as the supplier's authorization to ship. The supplier is expected to ship according to the AAM SCM plant direction. Suppliers can expect over shipments to be returned by AAM at the supplier's expense.

Suppliers should maintain a safety stock of components and finished goods to ensure timely delivery of AAM ship requirements.

Suppliers are expected to ship up to a 20% increase in schedule variation and work to cover 20% over MCR.

Fabrication (FAB) and raw material (MAT) authorizations are transmitted as part of our DELFOR and 830 forecast schedules. AAM shall not be liable for any excess inventory over the FAB and MAT authorizations, unless there are firm releases extended beyond those authorizations.

Suppliers are expected to manage build out dates and quantities. The supplier should align with the AAM schedules, reconcile CUMs, and perform cycle counts to minimize the risk of obsolescence.

For obsolete material that falls within the FAB and MAT authorizations, the supplier should reference the Material Obsolescence Claim Process instruction and the Supplier Obsolescence Claim Form. These documents can be found on the iSupplier portal under the Materials Portion of the Requirements & Specification section. The form should be submitted to the plant SCM material planner to initiate the claim process. The obsolete material should be retained and segregated until the claim has been completed. If an audit is required, the plant SCM material planner will contact the supplier to schedule the audit.

Obsolescence claims must be submitted within 6 months of product cancellation.

OSP

Copies of documents must be provided to AAM and originals filed at the OSP.

All scrap material must be dispositioned per AAM direction.

The OSP must participate in a monthly reconciliation and the plant's annual physical inventory. The count may be audited by an AAM associate on site.

6.6. Capacity Management

Each supplier is responsible for managing their supply chain to support uninterrupted flow of components up to contracted capacities. Suppliers shall identify and work to mitigate any potential disruptions. Known issues shall be communicated to the AAM plant SCM material planner and detailed action plans shall be made available to AAM upon request. AAM will determine if the action plan protects AAM production requirements and may request changes.

6.7. Shipping Requirements and Transportation

Responsibility for transportation arrangement and costs can be found on AAM's Purchase Order under Delivery Terms. It is critical the supplier follow all delivery requirements and incoterms to avoid delays in the supply chain.

Frequency of shipment is determined by AAM, and suppliers must ship as requested.

Routing Instructions

When AAM is responsible for arranging transportation, the supplier will be contacted with routing details. Whenever possible, regular routes will be established for production components. Infrequent shipments may require notification be sent to AAM for initiation of shipment.

All premium transportation expenses outside of the normal routing delivery must be pre-approved by AAM SCM.

Routing noncompliance may result in transportation chargeback to the supplier.

Shipping Documentation Requirements

All shipments must be accompanied by the appropriate documentation including, but not limited to bills of lading, waybills, customs documents, SDS (safety data sheet), mill certificates, etc.

Transportation Requirements

Based on the incoterm, AAM will provide routing instructions with the assigned carrier information and mode of transportation. The supplier must ensure the shipment is available at time of pick up. Failure to meet the shipping schedule may result in a PRR, and the supplier would be responsible for charges incurred.

If a truck load is underutilized, contact the supplier scheduler at the AAM plant for directions.

The supplier must track the shipment and ensure on-time delivery when transportation is their responsibility.

Excess Transportation Costs - Premium Transportation

The supplier will be held responsible for any additional freight costs incurred due to supplier's quality and/or delivery performance. This requirement is stated in AAM's Terms and Conditions attached to every purchase order. Excess transportation costs will be accumulated in the PRR and charged to the supplier. All premium transportation expenses outside of the normal routing must be preapproved by AAM SCM and have an assigned Authorized Excess Transportation Costs (AETC) number.

Notification of Location Changes

The supplier must give written notice to AAM SCM of any changes that affect logistics and accompanied by a timing plan.

Changing the shipping location may affect transportation, packaging costs and availability. If the supplier is making the request to change locations, all extra costs may be the responsibility of the supplier.

6.8. Customs and Global Trade Compliance

Suppliers must ensure full compliance with the global and country-specific requirements outlined in the Supplier Customs and Trade Compliance Manual. This manual serves as a guide to ensure that the customs and trade activities of American Axle & Manufacturing, Inc. (AAM) are conducted in compliance with global customs regulations. Failure to comply with any customs regulations listed in this manual may result in chargebacks to the supplier and may constitute a breach of supplier's contracts with AAM.

Global Documentation

Suppliers must provide the following documents with their shipment to the appropriate contacts:

- Commercial Invoice
- Packing List
- Material Safety Datasheet (SDS) / Dangerous Goods Declaration (DGD) for Haz Mat material
- COO affidavit
- FTA certificate (e.g. USMCA certificate, EUR.1 movement form, KORUS FTA certificate, etc.)
- Mill certificate
- Waybill

Additional requirements include:
- COO Markings
- Wood Packaging
- Packing of fixed assets/machinery

Country Specific Requirements

For country-specific requirements, please refer to the Supplier Customs and Trade Compliance Manual which can be found on the iSupplier portal.

7. Commercial Requirements

7.1. General Terms and Conditions

Suppliers must read, understand, and accept AAM's Standard Terms & Conditions prior to submitting responses to Requests for Quote (RFQs). All quotations (covered below) are based upon acceptance of AAM Standard Terms & Conditions and by responding to any RFQ, the supplier acknowledges acceptance of AAM's Standard Terms & Conditions.

7.2. Non-Disclosure Agreements

Non-Disclosure Agreements (NDAs) are often referred to as confidentiality agreements. In its simplest form, an NDA is drafted to establish the obligations, requirements, and restrictions upon a Supplier receiving confidential information from AAM. Suppliers are therefore required to engage in an NDA with AAM to protect all confidential information shared between the two parties prior to conducting any business with AAM.

Suppliers are expected to collaborate with their AAM Buyer to identify all specific pieces of confidential information that AAM intends to share with the supplier. For example, parts with part numbers, drawings with drawing numbers, specifications with spec title and numbers, test reports with report titles, computer files with file names, etc.

Upon the termination or expiration of the mutually-agreed-upon NDA, Suppliers must also confirm the return and/or destruction of all AAM confidential information.

7.3. Request for Quotation (RFQ)

Quoting Requirements may vary based on the type of business being sourced (direct material, capital, indirect material, services, prototype, etc.); however, suppliers must complete ALL required sections of the Quoting Documents sent by the respective AAM Buyer during a sourcing event. Refusal to provide the required documentation may result in a "no-quote" for the current sourcing event or disqualification of the supplier from future sourcing events.

The sections/documents that may be included in each sourcing event include but are not limited to:

- Quoting Document
- Instructions to the Supplier
- Cost Breakdown
- Process Flow Diagram
- Packaging Specification Form (See Packaging Section)
- Detailed Tooling Breakdown

All quotations are subject to evaluation by AAM Procurement. Suppliers will provide any additional supporting documents for the analysis, as required.

7.4. Technical Reviews

Supplier representatives are expected to collaborate with AAM Buyers to schedule and attend technical reviews. The typical period given to suppliers to prepare for a Technical Review is one (1) week. Prior to the Tech Review date, the AAM Buyer will send to the supplier the Agree/Disagree Matrix form and the Technical Review Conference Checklist for the supplier to complete prior to conducting the Technical Review. The expectation is that the supplier will complete and return both documents to the AAM Buyer at least two days prior to the actual Technical Review date.

7.5. Commercial Negotiation and Discussion

Suppliers must communicate all commercial discussions, negotiations, sourcing events, and business awards through AAM's Procurement Department. Procurement approval authority resides with Purchasing Agents at AAM within the Procurement Department. All agreements made outside of AAM's Procurement Department shall be considered void until a commercial agreement is reached between Suppler and the appropriate AAM Purchasing representative.

7.6. Supplier Tooling

General Requirements

Suppliers must follow AAM's Global Supplier Tooling Guidelines in order to be reimbursed for tooling.

Quotation

Suppliers must complete the applicable tooling quoting sheet depending on the type of tooling being quoted. Suppliers should contact their AAM Buyer to obtain the correct quoting

document. The applicable tooling quote sheet must be completely filled out and returned to AAM as part of the supplier quote (see Request for Quotation section above).

7.7. Capacity Studies

Expectation is that the supplier plans capacity in coordination with AAM and fully participates in capacity studies. AAM's customers frequently request changes in capacity and/or mix and it is essential that all suppliers respond timely and accurately when asked to verify capacity. Suppliers are required to do the following when requested to verify capacity:

- Supplier must provide feedback within 2 weeks of receiving the capacity study request. If Supplier is unable to provide feedback within 2 weeks, Supplier must notify the requesting AAM Buyer on a commitment date as to when feedback will be provided.
- Supplier must provide the feedback to the capacity studies in the form of a formal quote (i.e. AAM's standard cost breakdown & tooling form). Quote should be accompanied by detailed explanation as to what capital/tooling is driving any cost impact.
- Annual volume is based on Lean Capacity Rate (LCR) unless otherwise stated. Suppliers are also responsible to support the Maximum Capacity Rate (MCR) which is 15% greater than the LCR (i.e., LCR multiplied by 1.15).
- To determine the weekly capacity requirement from the annual volume, suppliers should be using the appropriate number of weeks per year for the using facility(ies) to calculate the weekly volume. Supplier is expected to support the weekly volume and should be quoting/capacitating accordingly. If unsure of the appropriate number of weeks per year for the using facility, Supplier should contact the requesting AAM Buyer for clarification.

7.8. Change Management

Suppliers will be required to provide tooling and piece price quotations for design changes via AAM's standard RFQ documents, including cost breakdown for part and tooling using the RFQ Document. Following the business award, any changes required by the supplier to meet original design characteristics, requirements, and/or objectives will be at zero cost to AAM.