

**ADVANCED
VEHICLE
ASSEMBLIES**

SUPPLIER MANUAL


Form the Future™



AVA Supplier Manual

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1. Purpose

The purpose of this manual is to define the minimum requirements for doing business with Advanced Vehicle Assembles, LLC (AVA) and all affiliates. Customer satisfaction with the quality we offer in all aspects of our activities is the crucial factor determining success. This manual outlines processes to ensure AVA supply base is continually improving to prevent quality or delivery disruptions and provide the optimal cost as well as top-level service. Implementation of the processes outlined in this manual will not only reduce the risk of supply chain disruptions but will also help AVA and its suppliers to increase our competitive industry position and ensure our continued mutual success.

The quality and delivery requirements defined in this document are to be considered an addendum to the contracts, purchase order, and terms and conditions issued to all suppliers of direct material, spare parts, packaging materials and services and do not replace or alter the terms and conditions covered.

AVA expects suppliers to manage their own sub-suppliers of products or services to ensure compliance with the requirements defined in this manual, latest automotive industry standards and any additional customer or local specific requirements.

For more information about AVA and access to policies, certificates, and applicable forms, please visit www.AVAbuilt.com


2. Scope

The requirements of this manual apply to worldwide suppliers of finished goods, production materials (raw or parts), as well as outside processes and services. This common global manual allows AVA to evaluate all suppliers across all product groups based on common expectations and performance standards. Any questions regarding the applicability of the requirements contained in this manual should be directed to your AVA contact for resolution. This manual supersedes all other prior versions, and this version is the only officially recognized release of this document.

3. Responsibility

It is the responsibility of the supplier to review, understand, and satisfy the requirements of this manual and any other applicable requirements as part of the acceptance of purchase orders from AVA. The supplier should obtain any referenced documents to ensure full compliance with all applicable requirements. AVA will maintain and document changes in the general supplier quality requirements included in this manual. Revisions to the AVA Supplier Quality Manual will be available online or can be obtained through the AVA Procurement department.

Suppliers shall comply with all applicable legal obligations. These regulations relate to the health and safety of the workers, environmental protection, toxic and hazardous materials, and free trade. Suppliers should recognize that the applicable government regulations might include those in the country of manufacture, as well as the country of sale.

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4. Supplier Selection

All new suppliers must be qualified prior to the awarding of new business. Suppliers are qualified based on their ability to meet AVA requirements for technical specifications, quality, delivery, price, and service.

4.1. Supplier Self-Audit

A self-audit is required to be completed and returned, along with relevant information to evaluate the supplier’s ability to meet AVA requirements.

This information will be reviewed by AVA representative to verify the existence of quality systems and practices necessary to meet AVA requirements.

Supplier will be required to develop and complete countermeasures according with all the gaps detected during the AVA assessment process as a part of the requirements to becoming an approved supplier.

After the new business assessment is performed, a countermeasure may be required if:

- EHS and Sustainability Assessment – 70 % or Less
- Business Assessment – High Risk
- QMS Assessment – 70 % or Less

The corrective actions are required to have root cause analysis with countermeasures identified within 15 calendar days and closure with AVA approval within 90 calendar days. Any deviation from this plan must be approved by AVA. For action closure, validation on site as needed (according to the type of discrepancy).

4.2. Management Systems Requirements

Automotive suppliers should be certified to IATF 16949 quality management system (the latest version). Certification to the latest version of ISO 9001 is the minimum requirement with the intention to obtain the IATF 16949 certificate.

Having an internal environmental management system based on the latest version of ISO 14001 is recommended. This will be considered as a plus prior to assigning new business to our suppliers. Also, our suppliers must be aligned to the AVA environmental and sustainability policy.

4.3. Other Requirements

New suppliers must agree to:

- Financial health and Sustainability Assessment



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- Supplier Performance (in the case of current suppliers)
- Any additional situation that could generate a disruption in AVA Operations (i.e., Child labor, use of minerals in conflict, dumping, etc.)
- AVA Supplier Manual, and Terms and Conditions signed

5. Supplier Monitoring

Once per month, AVA will review the results from the criteria set in and communicate to suppliers which are considered high risk based upon the risk rating defined below. KPI's measured to evaluate each supplier performance will be related to quality, delivery, sustainability, and financial metrics (includes project management, corrective action response on time, as well as other quality metrics and it depends on the requirement by facility).


When a supplier sustains high risk for more than 12 months, this may result in an on-site audit of operations, or a self-audit followed up by corrective actions. High Risk suppliers will be closely monitored, and other activities may result if the supplier risk level cannot be reduced within a specified time that will be provided by AVA representative. All submitted corrective actions will be evaluated for effectiveness.

QUALITY						
CRITERIA						
FREQUENCY IN ONE MONTH	Issue Resulted In Line Stop, Yard Hold, Major Disruption at Customer or AVA	Critical Quality Issues	Supplier Quality Issues Found by AVA's Customer or End User	Safe Launch Issue Resulting in Non-Conforming Material	Downtime	Repeat Issue
0	LOW	LOW	LOW	LOW	LOW	LOW
1	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
2 or More	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH

DELIVERY				
CRITERIA				
FREQUENCY IN ONE MONTH	Customer Disruptions at Receiving Plant including Yard Hold & Stop Ships	On Time Delivery	Premium Freight Occurrence	Special Status Customer Notifications Related Delivery Issues
0 Occurrence	LOW - 1 -	LOW - 1 -	LOW - 1 -	LOW - 1 -
1 or More Occurrences	HIGH - 9 -	MEDIUM - 4 -	MEDIUM - 4 -	MEDIUM - 4 -
		HIGH - 9 -	HIGH - 9 -	HIGH - 9 -

SUSTAINABILITY						
SECTION						
Human Rights	Environment	Compliance & Ethics	Diversity	Health & Safety	General	Quality Certificate
LOW	LOW	LOW	LOW	LOW	LOW	LOW Supplied
MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	
HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH Not Supplied

FINANCIAL		
Experian		
SCORE	Stability Risk	Business Credit
LOW	LOW	LOW
MEDIUM	MEDIUM	MEDIUM
HIGH	HIGH	HIGH

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6. Communication

In commercial relationships between AVA and our suppliers it is critical we have an open, effective, and proactive communication. If the supplier became aware of any non-conforming products and /or any unauthorized changes related to the supply chain that could put AVA and/or its customers at risk, the supplier must immediately notify relevant AVA representative. The communication between Tier II and AVA includes all sub-tier suppliers that comprise the overall supply chain.

To manage this risk effectively, all suppliers must communicate as early as possible the following:

- Any open or potential quality or delivery issue which the supplier has identified,
- All proposed material and/or process changes (including any change in production process, product safety, or critical characteristics), including but not limited to:
 - Manufacturing location change.
 - Tooling capacity change
 - Re-commissioning of any inactive tooling for one year
 - Tooling refurbishment or replacement
 - Proposed use of new equipment (production process)
 - Tooling transfer (re-source)
 - Changes to information technology systems
 - Any potential manufacturing/quality issues
 - Any potential supply/or capacity issues
 - Changes of sub-suppliers of raw material, component, or services
 - Information Technology that might impact production or shipment to Advanced Vehicle Assemblies
 - Organizational changes that could impact the production or supply of parts to Advanced Vehicle Assemblies
 - Changes of ownership, plant/site manager, or quality manager.

In addition, suppliers will provide all tests, validations, approvals, and submissions required because of product/process changes as requested by AVA.

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7. Supplier EDI or Supplier Portal Requirements

All suppliers shall comply with AVA’s Supplier EDI standards or with AVA’s Supplier Portal, to automate the exchange of material releases and ship notices. All supporting documentation for supplier EDI and the supplier portal is located on our website at [Documents – AVA \(avabuilt.com\)](https://www.avabuilt.com/Documents-AVA)

8. Business Continuity

The supplier must have a business contingency process to identify and manage potential risks to ensure proper supply of parts and materials to AVA in any event of disruption to their operations and/or supply materials because of man-made events, natural disasters, pandemic, logistics, cyber-security attacks, equipment, utility, labor disruptions, or any interruption. These contingency plans shall be reviewed on a regular basis for effectiveness.

Suppliers shall immediately notify AVA when they become aware of any potential supply disruption.


The supplier must include the risk assessment for new / re-source tooling to ensure lessons learned from previous projects are considered.

9. Product and Process Development

Suppliers must implement a documented product and process development process and fully comply with all requirements of the latest version of the AIAG APQP manual. APQP fulfillment and follow up is the supplier’s responsibility and must be available upon request at any stages of the new program launch or after SOP.

The following quality planning and documentation are required as part of the APQP:

- Process Flow Chart,
- Design/Process Failure Mode and Effects Analysis (D/PFMEA),
- Control Plans (Prototype, Pre-launch, and Production)
- Measurement System Analysis for all applicable equipment specified in the control plan.
- Manufacturing Feasibility Reviews.
- Key product/process characteristics.
- Packaging Plans.
- PTR’s (Production Line Trials)
- R@R (Line Speed Demonstration Trials), and
- PPAP submission with a (PPAP Part Specification Warrant)

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- Program timing plan
- Results of applicable AIAG CQI audits (coating, plating, painting, welding, etc.)

AVA tracks supplier PPAP readiness and suppliers must submit AVA-FO-017 (PPAP SPPAP Requirements) form.

When the supplier populates the document or comparable document, it is the tool that focuses on key components of supply activity from the start initiation of commercial activity through the submission of the PPAP documentation to AVA.

AVA reviews these documents at scheduled intervals throughout the APQP process when submitted for review or during on site evaluations with the suppliers.

Documented APQP and PPAP activity through effective management of the supplier is the key to a successful launch.

Before making a shipment to an AVA facility, the supplier must meet all the purchase order requirements and must ensure that all parts conform to AVA specifications. This includes the submission of a PPAP with PSW, unless it is waived in writing. Conditions requiring submission can be found in the AIAG PPAP Manual.


10. PPAP

For production parts and approval of components from sub-tier suppliers, the supplier must comply with the AIAG Production Part Approval Process (PPAP) and Control Plan manuals and must be submitted to AVA for the following reasons:

- A new part or product.
- Product changes: design, materials, supply, and function.
- Process changes: method, tools, location, and inspection criteria.
- Inactive tooling for more than one year.

Suppliers are responsible for retaining a complete record of all PPAP submissions for one year after the end of the program life, service or warranty period, unless otherwise determined by AVA. The records shall show conformance to all dimensional, chemical, metallurgical, physical, performance and other specifications. The following will be kept on file:

- Inspection results accompanied by customer’s engineering approved design record for all dimensional requirements.

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- Laboratory test reports covering all chemical, metallurgical, physical and performance tests along with the laboratory scope
- Preliminary process performance results for all critical and significant characteristics
- Measurement systems analysis (Gage R&R) results
- Process flow diagrams
- Design/Process failure mode and effects analysis
- Control plans
- Design or process verification plan
- Design or process validation report
- Subcontracted supplier warrants and supporting documentation
- Appearance approvals report
- Master samples.

11. Tooling and Gage Management

Suppliers shall develop or obtain gauges, standards, and instrumentation to control their processes and to determine product conformance to specifications and establish a system to calibrate or verify (or both) all measurement tooling and gages traceable to applicable national and international standards. Established calibration intervals shall be documented, and each instrument shall be traceable to its last calibration date. Documentation shall include the actual quantitative measurements taken during the calibration, to monitor long term performance.


Employees involved in using calibration equipment should have documented training on the instruments they use. Documentation of training records shall be retained for verification purposes.

The supplier shall perform Measurement System Analysis (MSA) of all measurement systems identified in the control plan, as applicable.

Supplier must implement a process to maintain production tooling and equipment and notify AVA if the supplier becomes aware of any damage, loss, or changes. Suppliers must utilize an inventory management system to keep records of tools, dies, or other equipment dedicated to AVA or AVA customers products, throughout the life of program, service, and warranty period.

12. Materials Management

Supplier must ensure that the product supplied to AVA is following all material specifications on the product drawing and/or purchase order and are encouraged to use the AIAG's Materials Management

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Operations Guideline (MMOG/LE) as the basis for a robust materials management system. The MMOG/LE is a collaborative effort between automotive companies and the supplier community to establish the essential components of a materials management system and drive continuous improvement activity within the materials management process.

Suppliers must ensure compliance with all governmental and safety requirements on restricted, toxic, and hazardous substances used in the manufacture of products delivered to us. Our suppliers are required to have proper chemical storage to assure a safety environment as well as a compatibility chart required to identify which chemicals can be stored in the same room.

When applicable, Material Safety Data Sheets (MSDS) are to be sent to the attention of the user plant prior to the first production shipment and upon request.

Suppliers are required to report any hazardous materials contained in any part of the product shipped (including coatings, etc.) to Advanced Vehicle Assemblies.

It is the responsibility of all suppliers to submit the necessary information into the IMDS database (www.mdssystem.com). As a result, the supplier must require their sub suppliers to submit IMDS to their appropriate recipient code. The supplier is required to review their sub supplier IMDS submission for compliance.

All solid wood packaging/pallets and crates must comply with the International Standards for Phytosanitary Measures No. 15 (ISPM 15) developed by the International Plant Protection Convention (IPPC).

13. Statistical Process Control


The supplier must develop a system which documents responsibilities, involvement, plans and criteria for implementing statistical and analytical methods. (AIAG Statistical Process Control Manual)

The supplier is responsible for ensuring that tooling, equipment, and processes are used to demonstrate the capability to consistently produce quality parts with minimum variation. The special characteristics identified on customer prints and/or AVA process data sheet documents will require a minimum of C_{pk} 1.67 for PPAP approval and C_{pk} 1.33 for serial production. AVA manufacturing facilities may request additional requirements for statistical control and process capability. For specific requirements of each facility, refer to specific requirements annex depending on the AVA facility involved.

All dimensions on the drawing must demonstrate statistical process control at time of PPAP, unless otherwise agreed upon by Advanced Vehicle Assemblies.

14. Control of Nonconforming Material

All nonconforming material must be segregated and placed in the quarantine area, designated for that purpose only. An effective system is required for proper identification and timely disposition of

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nonconforming material. The supplier is responsible for maintaining and analyzing data for those nonconformances.

AVA shall be notified immediately if suspect material has been shipped to our facility. The initial response to a notification failure must be received within 2 hours (start the inspection of suspicious material). It will show action when certified stock arrives and how it will be labeled. Failure to comply will result in a deduction on your monthly Production Performance Scorecard.

Disposition decisions to “use as is” or “repair” will require technical justification, AVA approval, and documentation of the actual condition to ensure product performance will not be adversely affected.

In cases where AVA has determined that it has received nonconforming material, the supplier will be contacted to secure a return authorization or other possible remedy. Replacement of nonconforming material must occur in a timely manner to ensure the continued supply of the product.

AVA reserves the right to require the use of an independent third-party inspector to ensure that the organization only ships compliant products.

Supplier must initiate a problem-solving process and implement effective corrective actions to address nonconforming material based on 8D methodology.

The containment must start within 4 hours of the quality issue occurrence. All parts at the supplier’s premises must be 100% inspected prior to ship to AVA.

The root cause analysis must be done within three business days using a 3-legged 5 Why method.

All corrective actions must be implemented within 15 days. Supplier must provide the verification of the effectiveness of those actions in 30 days including the preventive actions and read across. Corrective action requiring more than 15 calendar days requires written approval by the appropriate facility quality contact.


The supplier’s system shall contain a mechanism for escalating unresolved problems to the supplier’s executive management to ensure action is taken and to enable an understanding of any strategic implications.

The supplier shall develop a method for assessing the responsiveness and effectiveness of their problem resolution process.

15. Chargebacks

The following charges will apply for all non-conforming material. The supplier will receive a formal notification describing the non-confirming material. An administration fee could be charged per each notification issued. The charges include, but not limited to, the following:

- Sorting internally and externally
- Customer disruptions (Downtime and Delivery)

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- Scrap
- Rework
- Containment and sorting
- AVA Downtime
- Supervision (administration fee for activities related to manage all document administration)
- Premium Freight
- Labeling or EDI-related issues

16. Delivery and Inventory

For production and prototype orders, 100% on-time (zero tolerance) delivery performance, which includes correct quantity shipped to release or order, is mandatory. Ensure that no obsolete material is shipped to AVA using first in/first out (FIFO) inventory management practices, as applicable.

AVA will monitor supplier delivery performance. Suppliers not meeting the performance level must submit a corrective action response. Failing to meet the delivery requirements may result in a charge-back to the supplier with the associated premium freight and any out-of-pocket cost. Advanced Vehicle Assemblies monitors premium freight. Examples of delivery non-conformances resulting in premium freight are listed below.


- Supplier is behind schedule (past due)
- Supplier missed designated ship date, or excessive carrier waiting time.
- More than authorized number of shipments per week or month
- Extra shipment due to rejects or supplier discrepancy or returns
- Incorrect quantity shipped to release or order.

Suppliers should refer to AVA purchase order and/or release, for quantities, dates, shipping method, engineering specification, revision level, etc.

Suppliers must provide inventory information for AVA products, including finished products, raw material, in transit, and WIP.

17. Packaging/Labeling

All suppliers shall comply with Advanced Vehicle Assemblies' supplier packaging/labeling standard, including bar code labeling requirements. Unless otherwise agreed to, the supplier shall have a process

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and maintain the ability to trace the product from the lot identification as shipped to AVA back through their manufacturing system to the raw material source.

The supplier will obtain packaging standard specifications and receive approval for supplier proposed packaging concepts (as required) from AVA and must be part of the sample submission package. The AVA Label Standard is on the AVA website at [AVA Supplier Label Standard \(avabuilt.com\)](http://avabuilt.com) , under the Company and Documents section.

Suppliers must ensure that all returnable packaging utilized is maintained clean, free of contamination/debris and the effects of the environment (i.e., snow, ice, water), including free of effluence, and infectivity, to sustain product quality for the supply of materials, and the health and safety of people who may encounter them.

Suppliers should look for alternatives to reduce the packaging materials, increase the reusage of it or substitute nonbiodegradable materials for degradable ones.