Supplier Quality Requirements

1.0 Purpose

The purpose of this manual is to communicate BATTLE MOTORS quality requirements and expectations to suppliers. Suppliers can find this document located on Battlemotors.com, and it is the responsibility of the supplier to check on a frequent basis to ensure acknowledgement of the latest revision. It is the intent of BATTLE MOTORS to do business with suppliers who are able to provide parts, materials, processes and services consistently to specifications, at a competitive price and in accordance with the defined delivery schedule. The manual is intended to assist suppliers in their understanding of the requirements regarding specific management, communication and reporting processes.

2.0 Scope

Contents of this manual apply to all BATTLE MOTORS suppliers of production materials and services.

3.0 Quality System Requirements

BATTLE MOTORS encourages suppliers to develop a fundamental quality system that provides for continuous improvement and emphasizes defect prevention while reducing variation and waste.

At this time BATTLE MOTORS does not require suppliers to obtain certification to ISO 9001 or IATF16949; however, suppliers with no certification must have or be in the process of creating a roadmap that leads to minimum of ISO 9001 certification and open to a facility audit from Battle personnel.

4.0 Approved Supplier List

Production parts, materials, processes and services will only be purchased from suppliers on the BATTLE MOTORS “Approved Supplier” list. BATTLE MOTORS evaluates and selects suppliers based on their ability to supply products and services in accordance with specified requirements.

5.0 Supplier Assessments

With prior notification BATTLE MOTORS may conduct Quality System audits at the supplier’s facility. The goal of the audit is to understand the supplier’s

capabilities, quality systems and to identify continuous improvement opportunities. Audits can be performed but are not limited to:

- New Suppliers
- Quality Audits
- Reinstatement

Following the audit BATTLE MOTORS will forward the results and any needed corrective actions needing addressed by the supplier. Results of the audit will be used in the sourcing decision of potential suppliers.

6.0 Advanced Product Quality Planning, APQP

BATTLE MOTORS may begin formal APQP activities with Suppliers once they have been selected to supply product. APQP is designed to communicate product quality expectations and verify that suppliers have adequate processes in place to assure smooth start-ups.

If an APQP is required, timing will be established and communicated during the source selection process. BATTLE MOTORS will determine which elements of the APQP process are required.

BATTLE MOTORS may conduct a Launch Readiness Review at the supplier's facility. This review would include inspections of the supplier's documentation and processes associated with the production of parts.

7.0 Production Part Approval Process, PPAP

BATTLE MOTORS Shall require suppliers to obtain approval for production parts prior to shipment through the most current edition of the AIAG Production Part Approval Process, PPAP. The default Level PPAP is 3 however, BATTLE MOTORS reserves the right to assign PPAP levels. The purpose of the PPAP is to verify that a supplier's production process is capable of producing parts to meet BATTLE MOTORS specifications.

Suppliers shall conduct a PPAP run and produce parts utilizing normal production equipment, tooling and processes that would be used as in mass production. The supplier will then submit the PPAP samples for approval.

Suppliers shall submit PPAP samples for new parts or changes to existing parts, processes, drawings, manufacturing locations, sub-contractors or materials.

A new PPAP form must be submitted and approved if any of the following occur.

- Changes in the manufacturing process and or tooling
- Additional tooling or added cavities to tooling currently approved for mass production
- Manufacturing location changes
- Sub-supplier changes

NONE OF THE ABOVE CHANGES CAN OCCUR WITHOUT A PPAP BEING SUBMITTED AND APPROVED PRIOR TO PRODUCTION BASED SHIPMENTS ARRIVING AT BATTLE MOTORS.

A PPAP can be waived at the discretion of the appropriate Battle Motors Supplier Quality Engineer if the supplier is unable to perform PPAP. Objective evidence is to be shared as to why the requirements cannot be met and a PPAP Requirement Waiver is to be submitted and approved prior to shipment.

Appearance Approval Report

- Supplier Sourcing
- Texture Evaluation
- Color

Dimensional Results

- Dimensional layout is required for each mold, cavity, die and production line that produces a part.
- Dimensional results must be provided for all dimensions, notes and other specifications on the part drawing.
- The dimensional layout must correspond to the ballooned drawing.

Material Certifications

- Suppliers must provide evidence of compliance to material specifications through material and performance test results.
- Each First Article submission must be accompanied by a Material Certification report.

Performance Test

- Process Capability Study should be completed for all special characteristic dimensions as determined by BATTLE MOTORS.
- All special characteristics must have Cpk>1.33 or Ppk>1.67

Part Submission Warrant

- No PPAP should be submitted to BATTLE MOTORS if any dimensions or test results do not meet part drawing requirements.
- Supplier shall make every attempt to implement corrective action for any out of spec condition.
- Suppliers shall contact BATTLE MOTORS if they are unable to meet part drawing.
- BATTLE MOTORS will then inform suppliers on required course of action.

8.0 Deviation, Temporary

If a supplier manufacturers product that does not conform to BATTLE MOTORS specifications and lead-time does not allow permanent corrective actions due to BATTLE MOTORS production requirements a temporary deviation request must be submitted to BATTLE MOTORS for approval prior to shipping non-confirming material.

BATTLE MOTORS approval will be based on how the deviation might impact the form, fit and function of the parts.

Deviation requests must include details of the non-conformance and the number of parts affected. BATTLE MOTORS's Temporary Deviation Request form must be used.

9.0 Engineering Change Request, ECR

If a supplier has a need to make a permanent change to a part or drawing a Permanent Deviation Request must be submitted to BATTLE MOTORS for approval and approved prior to any change being made.

Unapproved changes are considered by BATTLE MOTORS to be extremely serious and raise very significant risks to the Supplier, BATTLE MOTORS and our customers. The conditions which require the resubmission and approval are clearly stated in the AIAG - PPAP manual. To ensure there is no misunderstanding of these conditions, BATTLE MOTORS feels compelled to restate that the changes to a previously approved manufacturing process, including changes of sub-Suppliers, require the Supplier to contact the Battle Motors Supplier Quality Engineer. Revalidation testing and its associated costs may be required. Failure to comply with these requirements shall make the Supplier fully responsible for the absorption of all costs relating to customer acceptance of the changed component and any failures (including field failures) attributed to the change. BATTLE MOTORS may choose to inform the Supplier's third-party registrar of these violations. If there is any doubt on the part of a Supplier regarding the need to resubmit PPAP of a previously approved component They should refer to the AIAG PPAP manual or BATTLE MOTORS Supplier Quality is to be consulted. Please see table 3.1 from AIAG Fourth Edition PPAP Manual concerning PPAP resubmission.

Examples of changes requiring notification	Clarifications
1. Use of other construction or material than was used in the previously approved part or product	For example, other construction as documented on a deviation (permit) or included as a note on the design record and not covered by an engineering change as described in Table 3.2, #3.
2. Production from new or modified tools (except perishable tools), dies, molds patterns, etc. including additional or replacement tooling	This requirement only applies to tools, which due to their unique form or function, can be expected to influence the integrity of the final product. It is not meant to describe standard tools (new or repaired), such as standard measuring devices, drivers (manual or power), etc.
3. Production following upgrade or rearrangement of existing tooling or equipment.	Upgrade means the reconstruction and/or modification of a tool or machine or to increase the capacity, performance, or change its existing function. This is not meant to be confused with normal maintenance, repair or replacement of parts, etc., for which no change in performance is to be expected and post repair verification methods have been established. Rearrangement is defined as activity that changes the sequence of product/process flow from that documented in the process flow diagram (including the addition of a new process). Minor adjustments of production equipment may be required to meet safety requirements such as, installation of protective covers, elimination of potential ESD risks, etc.
4. Production from tooling and equipment transferred to a different plant site or from an additional plant site.	Production process tooling and /or equipment transferred between buildings or facilities at one or more sites.
5. Change of supplier for parts, non-equivalent materials, or services (e.g., heat-treating, plating).	The organization is responsible for approval of supplier provided material and services.

6. Product produced after the tooling has been inactive for volume production for twelve months or more.	For product that has been produced after tooling has been inactive for twelve months or more: Notification is required when the part has had no change in active purchase order and the existing tooling has been inactive for volume production for twelve months or more. The only exception is when the part has low volume, e.g., service or specialty vehicles. However a customer may specify certain **PPAP** requirements for service parts.
7. Product and process changes related to components of the production product manufactured internally or manufactured by suppliers.	Any changes, including changes at the suppliers to the organization and their suppliers, that affect customer requirements, e.g., fit, form, function, performance, durability.
8. Change in test/inspection method – new technique (no effect on acceptance criteria)	For change in test method, the organization should have evidence that the new method has measurement capability equivalent to the old method.
Additionally, for bulk materials: 9. New source of raw material from new or existing supplier. 10. Change in product appearance attributes	These changes would normally be expected to have an effect on the performance of the product.

Note: The above applies to prototype material as well where changes are expected.

Problem Resolution

10.1 8D-CAR Process

Upon receipt of nonconforming material BATTLE MOTORS may issue a Corrective Action Request, 8D-CAR report. Nonconforming material can be found during incoming inspection, audit, assembly, or warranty returns. All Nonconformance findings are subject to a $250 processing fee to cover Battle Motors employee time loss.

If a nonconformance issue causes a Line Down event and is found to be the fault of the supplier a $1000 fee will be billed to the supplier on a per day basis.

If problems are found during pre-production fitting trials or are considered minor issues BATTLE MOTORS will issue Quality Alerts to the supplier describing the problem.

Return Material Authorization (RMA) must be provided for material that is defective or considered suspect and needs to be returned to the supplier.

BATTLE MOTORS reserves the right to sort suspect material to avoid shutdown of its production lines.

Within 24 hours of notification of defective parts, irrespective of any outstanding payment owed to the supplier, suppliers must:

- Implement requirements of Normal Containment
- Inform BATTLE MOTORS of the plan to replace suspect material
- Identify short term corrective actions
- Send initial 8D-CAR responses

Within 10 business days of notification of defects, irrespective of any outstanding payments owed to supplier, suppliers must:

- Define and verify Root Cause of defect and escape
- Determine and Implement permanent corrective actions for Root Cause and escape
- Verify and Validate permanent corrective actions

BATTLE MOTORS will analyze the final 8D-CAR responses and provide the supplier with a decision on closure of the 8D-CAR. For unapproved 8D-CAR's resubmission of the 8D-CAR response with discrepancies corrected is required within 5 days.

10.2 Problem Solving Expectations

When BATTLE MOTORS issues a Corrective Action Request (8D-CAR) suppliers are required to submit a formal response within 10 business days. 8D-CAR responses must be in the format supplied by BATTLE MOTORS. Below is a list of information that is required to be included in the 8D-CAR response.

Problem Statement

- Define problems in detail
- Identify "what is wrong with what"
- List BATTLE MOTORS requirements concerning defect
- Identify when the problem started
- List manufacturing dates of defective material

Interim Containment Action

- Define and verify Interim Containment Actions
- Provide daily sort results
- All stock locations should be purged of suspect stock
- Describe method of sorting
- Validate effectiveness of Interim Containment Action

Root Cause Analysis

- Define in detail the “True” root cause
- Verify the “True” root cause
- Address the Escape Point (Place in the process where the effect of the root cause should have been detected and contained)
- Use the 5 Why approach

Permanent Corrective Action

- Must address the root cause and the Escape Point
- Must be very detailed. Describe who will do what and how it will be implemented and when.
- Verify and validate the corrective actions. Describe in detail method of verification.
- Corrective actions must not cause any other problems.

Prevent Recurrence

- Modify necessary policies and procedures to prevent reoccurring problem.
- Evaluate whether corrective actions can be implemented on similar products or processes.

Approval and closure of 8D-CAR responses will be at the discretion of BATTLE MOTORS Quality Department. All 8D-CAR will remain open until problem-solving requirements are met.

10.3 Containment

Suppliers are responsible for developing a process to protect BATTLE MOTORS from receiving material that does not meet the quality requirements and specifications set by BATTLE MOTORS. Suppliers must include at minimum elements of the following process of containment.

10.3.1 Controlled Containment:

Suppliers will be placed into Controlled Containment as a result of BATTLE MOTORS or BATTLE MOTORS’s customer receipt of defective material.

Suppliers will be required to take immediate actions to cease shipping defective material. These actions include:

- Sending 100% certified parts for all shipments to BATTLE MOTORS

- Marking certified parts as according to specifications set by BATTLE MOTORS
- Sending certified replacement parts to replace suspect parts in-transit and in BATTLE MOTORS inventory.
- Utilizing a Certified Part identification label to identify certified shipments.
- Collecting daily sort data and reporting findings to BATTLE MOTORS.

Suppliers will be released from Controlled Containment once the 8D-CAR response has been approved.

10.3.2 Controlled Shipping

Based on continued poor quality and/or delivery performance a Supplier may be notified by BATTLE MOTORS that controlled shipping is required to protect BATTLE MOTORS and their customer from further problems. BATTLE MOTORS Supplier Quality and/or plant Quality Manager shall identify specific defect or concern to be controlled.
Note: Not applicable to prototype material.

Controlled shipping (CS) has two levels:
Level CS-1 – The Supplier must identify specific personnel to monitor, measure, inspect and certify all product(s) shipped to BATTLE MOTORS and identify all product that was inspected. A report must be generated that identifies the type and quantity of defects or problems that were found by the CS-1 inspection. BATTLE MOTORS may request to review the rejected material and/or any report pertaining to the concern. The additional inspection must be separate and distinct from production operations.
Level CS-2 – Supplier must employ an independent third party to monitor, measure, inspect, and certify all products. All certified products must be marked and identified. A report must be generated that identifies the type and quantity of defects or problems that were found by the CS-2 inspection and sent to the responsible BATTLE MOTORS Supplier Quality Engineer and/or plant Quality Manager. The Supplier must identify the CS-2 organization responsible to BATTLE MOTORS Supplier Quality personnel. If Supplier refuses to comply with CS-2 request, then BATTLE MOTORS at our discretion may set-up CS-2 at their facility and charge back the cost to the Supplier. CS-1 operations are required to continue while CS-2 is in effect. Once CS-2 is terminated, defect free days begin to accumulate toward exit from CS-1. CS-2 is initiated by letter from the Supplier Industrialization Manager and the affected Plant Quality Manager.

A Supplier will be removed from controlled shipping when inspection data shows a stable defect free process for a minimum of twenty consecutive production days for the specific defect or concern. BATTLE MOTORS Supplier Quality and/or plant Quality Manager will review the data and current issues and if acceptable will remove the Supplier from controlled shipping.

10.4 Supplier Scorecards

Selected suppliers will be graded using the Battle Motors company scorecard. This scorecard evaluates suppliers based on three metrics.

- Quality
- Delivery
- Project Management

These three metrics are then compiled into a supplier composite score. Scorecards will be reviewed with the supplier on a quarterly basis unless a more frequent meeting schedule is deemed necessary by the Battle Motors Supplier Quality Engineer.

A Supplier can contest a scorecard within 30 days of the review meeting. In this time frame the scorecard can be amended by the Battle Motors Supplier Quality Engineer if evidence can be provided that contradicts the scorecard.

For a more detailed view of how the Battle Motors scorecard is designed and how scores are compiled please refer to WI-SQ 001 Supplier Scorecard Scoring

10.5 Supplier Quality Meetings

Poor performance suppliers will be required to attend Quality Alignment Meetings when their performance drops below acceptable levels. Meetings are mandatory and will be held at either BATTLE MOTORS or by conference call.

The purpose of the alignment meetings is for Suppliers to present containment and corrective actions to improve their performance in the deficient areas identified by BATTLE MOTORS. Suppliers can be called to attend alignment meetings for:

- Poor Quality
- Repetitive issues
- Responsiveness to concerns raised by BATTLE MOTORS
- Severe quality rejections
- Delivery problems

- Scorecard Review

Suppliers will be notified of meetings in advance and will be required to have attendees from Plant Management and Quality Management. Other personnel may also be required to attend.

10.6 Business Hold

Suppliers may be placed on BATTLE MOTORS business hold list if the supplier has severe quality or delivery problems that are unresolved. The supplier will be notified upon being placed on the Business Hold list.

The following may occur if a supplier is placed on the Business Hold list

- Formal meeting with BATTLE MOTORS
- Removal from the Approved Supplier list
- No longer allowed to quote on any future business
- Supplier Development efforts by BATTLE MOTORS

To be removed from the Business Hold list the supplier must implement corrective actions for the cause of their deficiencies and address preventative actions to prevent reoccurrence. A plan for implementation must be provided to BATTLE MOTORS for approval. Once a supplier has satisfied the requirements of BATTLE MOTORS they will return to the Approved Supplier list.

10.7 Cost Recovery

Suppliers will be responsible for all costs associated with BATTLE MOTORS or BATTLE MOTORS's customers receiving defective material. Costs may include, but are not limited to:

- Administrative
- Processing Fee
- Sorting of suspect material
- Rework
- Customer charges
- Premium freight
- Production downtime
- Third party containment
- Line Down Fee
- Scrap
- First Article rejection
- Overtime
- Laboratory Testing
- Travel

All costs will be debited from the supplier's account. The supplier will be notified via email, upon notification of the item to debit, suppliers will have 10 days to appeal the charges. If there is no response from the supplier BATTLE MOTORS will consider this lack of response as acceptance of the charges.

In the event of appeal, the supplier and BATTLE MOTORS will jointly analyze the cause of failure and cost ownership.

If additional time is required for the supplier to appeal for charges, the supplier shall submit a written communication to request more time or a meeting to discuss the rationale for the appeal.

11.0 Delivery Requirements

Suppliers are required to achieve 100% on time delivery. If a supplier will be unable to deliver product by the required due date it is the supplier's responsibility to notify BATTLE MOTORS as soon as they are aware of it. AIAG Packaging Standards apply.

Notification to BATTLE MOTORS must occur anytime suspect material has been shipped. Suppliers are to notify the BATTLE MOTORS Quality Department.

12.0 Evaluation of approved suppliers

Performance Monitoring and Reporting

Ongoing performance to key parameters is monitored and reported utilizing the BATTLE MOTORS Supplier Scorecard System. This system is used to determine the Supplier's performance to requirements, efforts on improvement and is a key tool in determining new business awards. It is reported to the Supply Base regularly via electronic media. When Supplier contact information changes (example; new contact for Quality at the Supplier's location) the Supplier should report the changes to BATTLE MOTORS, this will enable BATTLE MOTORS to update databases to ensure continued uninterrupted performance feedback to Suppliers.

Revision History

Revision	Date	Responsible Person	Description of Change
[0]	2/10/22	B McPeek	Original Issue
[1]	4/12/22	B McPeek	10.6 added appeal criteria, 11.0 added packaging standards
[2]	6/28/22	J Medellin	9.0 added criteria, 10.3.1 added controlled shipping criteria, 12.0 added evaluation of suppliers
[3]	3/6/24	B McPeek	Added Jeffery Hart Removed Julio Medellin
[4]	5-15-24	J Hart	Revised Sections (3,4,5,7,9,10.1,10.2,10.3.2, 10.4,10.5,10.6,10.7) Supplier Acknowledgement added
[5]	3-10-25	J Hart	Supplier Acknowledgment Removed, Added public document location www.Battlemotors.com, Revised Section 5