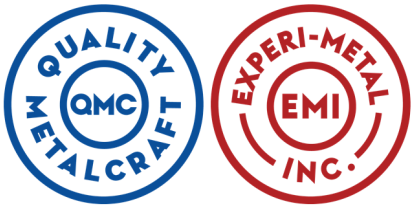

QMC-EMI Corporate Supplier Quality Manual

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1.0 Introduction

Scope / Purpose

The **Quality Metalcraft & Experi-Metal Inc. (QMC-EMI), Corporate Supplier Quality Manual** has been developed to communicate the operating principles, general expectations, requirements, and procedures required of all suppliers of products and services to QMC-EMI. The guidelines described in this manual are expected and required of all suppliers. Acceptance of any purchase orders constitutes acceptance and commitment on behalf of the supplier to comply with this manual's content. These guidelines are provided as supplement to any purchase agreement terms or conditions. This manual describes the minimum requirements for which the supplier is responsible. However, system improvements that exceed the requirements specified within this manual are always encouraged.

Policies

Environmental Health and Safety Policy

We are dedicated to environmental protection, employee health and safety, regulatory compliance with prevention of pollution through continual improvement, and a team based approach. Achieving our commitment is based upon:
•Setting environmental, health, and safety objectives for the prevention of pollution and elimination of health and safety hazards within our workplace.
•Evaluating our performance through periodic management reviews to achieve compliance with applicable environmental, health, and safety requirements.
•Continual improvement in the manufacturing of competitive products utilizing sustainable and efficient production processes within product life cycle process including design, manufacture, use, and end-of-life management, if applicable.
•Ensuring employees are aware of their role and responsibility to fulfill and sustain environmental, health, and safety management programs.

Quality Policy

We provide world-class stampings and joined assemblies that enable our customers to rapidly change the mobility industry and create a sustainable future.

All of our team members are responsible for and empowered to take action to help achieve our goals:

- Maintain a safe and healthy work environment
- Manufacture defect free parts as defined by our customers
- Provide industry leading service
- Continually improve the effectiveness of our processes
- Achieve on-time delivery of our products every time
- Satisfy all stakeholder requirements

We will accomplish this through building mutually beneficial relationships with all stakeholders, including our customers, team members, shareholders, and suppliers while demonstrating the behaviors outlined in our Company Values and Strategy.

Application

The expectations and requirements described in this manual apply to all suppliers of production, aerospace, prototype, and specialty products and/or services. Suppliers must meet all applicable requirements specified herein.

Systems

Suppliers are responsible for development, documentation, implementation, and maintenance of a management system that complies with IATF-16949, Nadcap or AS9100 as required by their specific commodity. As a minimum, all product suppliers and distributors must be certified to ISO-9001 or AS9100 depending on end Customer Specific Requirements. Suppliers are also encouraged to pursue ISO-14001 certification or have an environmental management system in place that complies with the requirements of ISO-14001. Suppliers of inspection or calibration services must be registered ANSI/NCSL-Z540.3 , IEC/ISO17025 or be Nadcap accredited for the type of testing/measurement performed.

Please contact our Supplier Quality Department if you would like to participate in benchmarking activities for the improvement of your business management systems. A Certification Waiver may be issued for some suppliers if they are the only available source for some technologies or are too small of an organization to warrant formal certification.

The Supplier shall notify QMC-EMI regarding any change of certification status within 48 hours (including failing an audit).

Changes in the supplier's management, ownership, location/address, and/or quality system may require QMC-EMI quality re-approval. It is the responsibility of the Supplier to provide to supply a written statement of any of these changes within (30) days of change.

Special Processors

Any of the processes listed below that are performed in accordance with an applicable specification (Military, AMS, ESS, etc.) are defined as special processes and requires NADCAP accreditation when performed for the Aerospace division of EMI except where noted:

- Welding (fusion welding, electron beam welding, laser welding, resistance welding, torch and induction brazing, and furnace brazing)
- Laser Beam Machining
- Soldering (NADCAP accreditation is not required, EMI approved only)
- Chemical Processing (etching, chemical milling, chemical film, passivation, plating, and anodizing)
- Heat Treating (normalizing, solution heat treating, nitriding, annealing, stress relieving, hardening, tempering, and carburizing)
- Non-Destructive Testing (i.e., penetrant, magnetic particle, ultrasonic, or radiographic)
- Testing (metallurgical, chemical or be certified to ISO17025)
- Surface Enhancement (shot peen)
- Electrical Discharge Machining (NADCAP accreditation is not required for tooling, EMI approval only).

2.0 Purchasing Expectations

Terms and Conditions

Please reference the latest supplier terms and conditions that are available on our corporate website.

Engineering / Technical Support

QMC-EMI is dedicated to manufacturing products of the highest quality. To achieve this objective; all suppliers should offer engineering and technical support when requested.

Customer Support

The Supplier is required to maintain a (QMC & EMI) plant contact that is readily available to assist in the timely resolution of problems relating to poor quality, delivery and other issues that may arise. The supplier's main focus should be on continual improvement.

Communication

Open, effective, and proactive communication is key to maintaining a healthy and productive relationship with our supply base. Issues with product quality, delivery, and changes made to product and processes present a risk when not communicated. Suppliers are responsible to communicate as early as possible the following:

- Organizational changes that could affect the supply, quality, or manufacture of product.
- Any potential supply or capacity issues.
- All changes or proposed changes affecting manufacturing method, manufacturing location, tooling issues, tooling transfers, or possible outsourcing.
- All proposed material or process changes.
- All other potential issues the supplier has identified.
- Any changes or expiration of labor agreements that may affect product supply or quality.

The Environment

Suppliers shall have processes in place to ensure they comply with all environmental rules and regulations applicable to their processes. We expect our suppliers to show commitment to the environment and we encourage our suppliers to pursue registration to ISO-14001 for Environmental Management Systems

Resources

Suppliers are expected to have the resources necessary (property, facilities, equipment, personnel, and materials) to supply the products and/or services required to accommodate QMC & EMI Operations schedule. The supplier should plan for fluctuations in requirements due to scheduling changes.

Pricing

It is expected that all suppliers to remain competitively priced in their respective industries. Cost reduction plans shall be forwarded to QMC's & EMI's Purchasing and Corporate Supplier Quality representative for review upon request.

Consistent Quality

100% defect free product is required from all suppliers. Any deviation from this may result in rejection and return of product to the supplier with subsequent charges attached. Shipments received are subject to inspection. Payment shall not constitute acceptance of material or services provided. Even after acceptance of a shipment, we reserve the right to return any material that proves to be defective for full credit. Defective material shall be returned at the supplier's expense and their account debited accordingly.

On-Time Delivery

It is expected that all suppliers provide 100% on-time delivery performance with the exact product and/or services promised and correct quantity and pricing agreed upon. Monitoring of performance levels in this area will be ongoing**.** To further clarify this, we consider unauthorized early or late deliveries and partial or over shipments to be unacceptable. The quantity shipped per order or release cannot vary from the specified quantity without prior written consent.

If the supplier shuts down Plant Operations due to poor quality, late delivery, or incorrect quantity on any shipment, the supplier will be responsible for any costs incurred, including but not limited to down time, expediting shipments, sort charges, or charges from customers.

Transportation Costs

Unless otherwise instructed, a supplier shall forward all materials in the manner and by the route providing the lowest transportation rate. Any excess transportation costs incurred will be deducted from invoice payment.

Right of Access

The supplier shall grant QMC-EMI, its customers, and regulatory authorities the right of access to applicable areas of all facilities at any level of the supply chain involved in the order and to all applicable records. The supplier shall flow down this right of access clause to all sub-tier and raw material suppliers through the supplier's purchasing system**.**

No Change Clause

Seller shall make no change in design, materials, manufacturing location, manufacturing processes, or sources of supply, after buyer's acceptance of the first production test item or after acceptance of the first completed end item, without the written approval.

3.0 Supplier Selection and Performance

Supplier Evaluation and Selection

QMC-EMI has implemented controlled methods through which suppliers are evaluated, selected, developed and monitored.

Criteria for evaluation and selection of supplier approval is based on the suppliers' abilities to consistently deliver defect-free products and/or services, maintain appropriate certifications, meet our delivery requirements, be cost competitive, and be responsive to business needs.

Supplier Monitoring

Approved Suppliers' performance will be measured per the supplier rating formula on a quarterly basis. Suppliers should have a goal of maintaining a 100% rating in each category of the Supplier Rating Report. Failure to do so will require the supplier to submit a corrective action or plan for improvement, subject to overall rating falling within Red status. The supplier may be contacted to discuss development goals to help aid in improving their performance.

Supplier performance shall be measured on the ability to meet quality expectations and requirements. To remain Approved, suppliers must meet minimum requirements defined for product quality, delivery, overall responsiveness, and required Certification.

The organization requires its suppliers to have a risk assessment process in place to identify areas within the supply chain process that could affect the ability to meet the organization's requirements in the event of a deviation from the normal business process.

Rating Categories

RED (Probationary) Status Suppliers:

The Supplier is required to submit a corrective action or improvement plan for systemic improvement within 30 days of rating publication. The plan shall be submitted to corporate personnel for approval. On site presentation of the plan may be necessary when justified by circumstances. To fall to a Red Overall status, you must fall in Red status rating in one of the following Delivery (Less than 74% quarterly), Quality (3 or more Issues quarterly), Response (No Response), or Registration.

YELLOW Status Suppliers:

To fall to a Yellow status, you must fall in yellow rating in one or more of the following, Delivery (Between 75%-90% quarterly), Quality (1-2 Issues quarterly) or Response (Slow Responsiveness). Supplier status will be updated to Green upon demonstration of a positive trend in the related rating category.

GREEN (Certified) Status Suppliers:

The Supplier is required to continue with current quality performance and strive towards continual improvement. To maintain a Green or "Certified" status, you must maintain Green status in each rating category Delivery (Greater or equal to 91% quarterly) Quality (0 Issues quarterly) Response (Consistent communication).

Certifications

Copies of all third party certificates for registration to Quality or Environmental Systems must be forwarded to and be kept on file at at QMC-EMI. If you have a current certificate, please email updated copies to: luis.arredondo@qualitymetalcraft.com .

Where applicable per their supplied commodity; suppliers must also maintain annual documented evaluations to the latest editions of CQI-9, CQI-11, CQI-12, CQI-15 and CQI-17. These must be available upon request.

Probation Criteria

Approved Suppliers who fall in Red Overcall rating will be put on a probationary status. At this time a request of improvements will be issued to the probationary supplier to submit a formal Corrective Action Plan for approval. The formal Corrective Action Plan must be submitted to QMC-EMI Supplier Quality contact in a timely fashion. The Purchasing Manager, Supplier Quality Engineer, or plant designate will review the submitted action plans. Acceptable plans will be acknowledged and the supplier will need to submit progress reports until next quarterly review performance removes supplier from red. Suppliers who show minimal improvement or deterioration in product Quality in the following quarter will be subject to:

- On-Site Survey
- Removal from Approved Supplier Status

Unacceptable Corrective Action Plans shall be critiqued, and reviewed with the Supplier until a satisfactory Corrective Action Plan can be developed or the Supplier shall be removed from Approved Supplier status. Suppliers shall not be awarded new contracts if they have been removed from the Approved supplier List. If a supplier is determined to be unacceptable, the Corporate Quality and Purchasing team will initiate the appropriate actions to resource the product prior to the removal of the Supplier from the Approved Supplier List. In the event a Supplier is a mandated source by a corporate customer, said customer's approval to resource may be required.

4.0 Quality Requirements

Product/Service Quality

Suppliers are fully responsible for their products/services including any subcontracted content. They are responsible for providing products/services that meet all requirements, specifications, and drawings as identified on their purchase order. A PPAP may be required for production part/service related suppliers as required by Customer Standards unless otherwise specified by QMC-EMI.

Containment of Non-Conforming Product

If a supplier's parts are found to be defective in receiving inspection or during assembly at QMC-EMI or if a customer complaint is confirmed to be a supplier quality problem; the supplier will be requested to provide immediate containment and support to resolve the problem. Any defective product found at QMC-EMI will be scrapped or returned to the supplier depending severity of issue, and a debit will be issued to recover any costs incurred by QMC-EMI. When requested, replacement shipments must be sent "Freight Prepaid". **The supplier is responsible for any expediting charges, if required to assure timely product delivery.**

A most serious concern is when a supplier product/service shuts down a production process. Any condition causing process shutdown or late shipment warrants the supplier's immediate action to eliminate the condition. The supplier is responsible to address containment of the problem at their facility, and parts in transit and at QMC or EMI facilities. A supplier may send in a 3rd party sort team to support any on site activities at QMC-EMI.

The supplier will be responsible for all costs incurred at the time of the sort. If QMC-EMI must sort supplier parts in order to keep production supplied with defect free components, the supplier will be charged per our debit structure. This charge may be applied to both components and finished assemblies in which the components are used**. If a supplier defect causes finished product to be reworked or scrapped, all charges incurred will be the responsibility of the supplier**. Other charge-back costs may include material, shipping or handling, direct and indirect labor, contracted services, living and travel expenses, production downtime and costs incurred by our customer.

If a supplier cannot implement a permanent corrective action to supply zero defects to the corporation and problems continue, we will implement Controlled Shipping/ Certified stock requirement – Level 1 Containment for a pre-determined period by our Quality or Purchasing corporate team, not to exceed 90 days. If another defect is discovered within the pre-determined period, Controlled Shipping – Level 2 containment will be implemented at the supplier expense. This process will be enforced to ensure problems do not occur in production. This may continue until the supplier has demonstrated the ability to ship defect-free material on a continual basis.

If a supplier detects non-conforming product prior to shipment to QMC or EMI, the supplier must immediately determine the extent of the problem and take action to correct the problem. If suspect material has been released to ship, the supplier must notify QMC-EMI supplier quality and identify the material and the suspect condition.

The supplier's Quality System must provide for the effective isolation of all suspect materials or product within their facility. A specific area should be utilized which allows for the segregation of suspect materials for normal approved production product. Specific details of the defects must be clearly identified and attached to the suspect product.

Any rework or repairs to suspect material must be conducted in a controlled manner that assures reworked or repaired product meets specifications and customers' requirements. Written instructions should detail the rework or repair, the re-inspection of reworked product and the return of this product to normal production flow.

In the event that a supplier finds a defect on incoming product or during the processing of parts received from QMC- EMI we ask that an e-mail is sent to document the issue with pictures and a description of the issue.

Foreign Object Damage/Debris, Counterfeit Parts Avoidance, Awareness requirements

The Supplier shall establish and maintain a Foreign Object Damage (FOD) and Counterfeit Parts Avoidance programs that meets the requirements for aerospace applications when supplying aerospace product.

Suppliers must ensure that their employees are aware of:
- Their contribution to product or service conformity
- Their contribution to product safety
- The importance of ethical behavior

Supplier Corrective Action Request (SCAR)

A Supplier Corrective Action Request (SCAR) will be issued for any non-conforming condition. The supplier is responsible to identify the root cause of problem and implement corrective action in order to prevent recurrence.

A copy of the SCAR will be emailed to the supplier, and must be completed through the **containment stage within 24 hours and fully implemented within 15 days** unless QMC requests a different response time or the supplier requests (and is granted) an extension. A supplier's corrective action format will be acceptable as long as all of the information requested by the SCAR is contained therein. The supplier will be notified if any aspect of the SCAR is not acceptable.

Failure to respond to a SCAR in a timely manner will adversely affect the response portion of your overall supplier score.

A SCAR may also be issued when it is deemed necessary for other occurrence including, however not limited to:

- Repeated early or late delivery, or late delivery without prior notification.
- Repeated over/under shipments
- Incorrect items sent.
- Inadequate or incorrect containers/packaging received.
- Damaged Packaging/ potential of safety incident or damaged parts.
- Lack of shipping and/or certification paperwork.
- Lack of timely response to concerns.

Example of the SCAR form can be found in the Appendix.

Advanced Quality Planning/ Process Documentation

Prior to production of any product, the supplier should utilize Advanced Quality Planning techniques to ensure successful launches of these products. Use of the Advanced Product Quality Planning and Control Plan (APQP) reference manual published by the Automotive Industry Action Group (AIAG) should be used as a guide when developing these processes. In addition to documented processes, the vendor shall also have persons/ authorities responsible for those processes documented.

Production Part Approval Process (PPAP)

When required by customer(s), the supplier shall maintain a Production Part Approval Process (PPAP) process to ensure parts submitted meet all requirements. This system should utilize the AIAG standard documentation found in the Production Part Approval Process (PPAP) reference manual. A level 3 PPAP is the default requirement for all submissions, unless otherwise specified on purchase order or directed by Supplier Quality Engineer.

Any mechanical and chemical testing must be accompanied by a lab scope and accreditation for the work being performed by an accredited lab.

Continual Improvements and Statistical Process Control (SPC)

Continual improvement in the Quality of products and/or services is encouraged to remain a supplier. The supplier, for review by our Quality or Purchasing Departments upon request, should maintain documented evidence of continual improvement. One portion of any continual improvement program should be the proper use of statistical methodologies. Statistical data shall be provided as identified by the respective engineering drawing, applicable specifications or standards, and/or purchase order. We recommend the use of the Statistical Process Control (SPC) reference manual published by AIAG.

Supplier Request for Engineering Approval (SREA)

SREA's are used to document an agreement from the Corporation's personnel on process, material and design changes prior to implementation. The supplier will submit the SREA to the Purchasing and Quality team. An internal Engineering Change Procedure will then be followed with the supplier being issued a new drawing if the change is approved. Resubmissions will be required as stated above. A SREA form is attached in the Appendix.

Product Traceability

All suppliers must have a lot identification system that distinguishes one lot from another when shipping finished product. Each lot of material should be clearly identified on the product (where applicable) and/or on the product packaging. All material lots should be traceable to raw or component material lots as identified by supplier's vendor. Barcode labeling practices should be implemented by all suppliers of production material and purchased parts.

Age Sensitive, Life-limited Materials

Parts shall be segregated by manufacturing lot/cure date when shipped to QMC-EMI. Suppliers must provide product to with at least 25% remaining shelf life or as directed in PO.

Each container shall be labeled with part-number, revision, part name, quantity, manufacturer name, manufacture date code, lot or batch number, cure/mix date and expiration date.

Suppliers shall ensure that there is a FIFO system and a procedure in place to control and document the temperature storage conditions and shelf life requirements for applicable materials.

Packaging and Shipping Requirements

The supplier shall package and ship product in a manner that provides protection against damage, rust, corrosion, contamination, and anything that would render the product unfit for its intended use as well as safe hazards. **The use of commercial carriers does not relieve the supplier of the responsibility for properly packaging products to ensure acceptance at the point of delivery.** Product should be packaged so that the product weight or size does not adversely impact the type of transportation chosen. The agreed upon shipping specifications must be adhered to in all instances. Failure to comply with packaging requirements may result in the supplier receiving a downgrade in status, and a debit for excess handling charges.

Invoices, Packing Lists, Identification

Suppliers are to forward invoices to QMC-EMI Accounts Payable for each shipment. Shipments should be accompanied by a bill of lading or other receipt from the carrier. Invoices must state correct PO number, shipping point, route, and whether freight is prepaid or collect. Separate invoices are to be issued for each shipment. Itemized packing lists including the PO number must accompany all shipments, and the packing list container must be plainly marked to indicate its shipping and receiving locations. In the case of steel suppliers, the corporation requires that every coil/pallet of steel has its own label and that the labels are marked correctly with the correct part number and weight.

Control of Records

Records shall be established to provide evidence of conformity to requirements and of the effective operation of the quality management system shall be controlled. The supplier shall establish a documented procedure to define the controls needed for the identification, storage, protection, retrieval, retention and disposition of records. The documented procedure shall define the method for controlling records that are created by and/or retained by suppliers. Records shall remain legible, readily identifiable and retrievable. Record retention times must be documented and include as a minimum:

- Quality records are retained for a minimum of 15 years for automotive and 40 years for space/flight safety, critical/major rotor parts after product shipment (unless otherwise specified on the PO).
- All test records shall be maintained for a minimum of 20 years.
- These record requirements must flow down to sub-tier suppliers.

Inspection and Test Equipment

The supplier must have a system in place to control, maintain, calibrate and ensure proper repeatability of all inspection and test equipment used to verify product quality. It is the responsibility of the supplier to calibrate and maintain this equipment regardless of ownership. Personnel using this equipment must be able to demonstrate effectiveness in the use of the equipment. Any calibration frequency longer than 12 months must be agreed to in writing by QMC-EMI Supplier Quality Personnel.

Non-deliverable Software

The supplier shall provide for records and procedures which control configuration and accuracy of software used to manufacture, test, or inspect product. Software may include, but is not limited to, machine control data, CAD/CAM models, N/C tapes or other computer-aided software to control production, test, or inspection related processes. The supplier shall maintain records of test or inspection data verifying accuracy of software, revision control, and appropriate software security.

Customer Owned Tooling

The suppler shall exercise care with property belonging to QMC-EMI or their customers while it is under their control. Property shall be stored in a method to avoid damage. Property must be maintained in a clean condition to promote longevity and continued suitability. When this property is lost, damaged, or otherwise found to be unsuitable for use, the supplier shall report this to QMC-EMI Supplier Quality Team immediately and retain documentation on what has occurred.

The supplier is responsible for performing preventive maintenance and calibration on all tooling and inspection equipment under their control.

Supplier Signature Acknowledgment

I, _____, of _____ (company) have read the Corporate (QMC & EMI) Supplier Quality Manual on _____ (today's date) and agree to the terms set forth herein.

Signature

Title

_____

Date

Signature

Title

_____

Date

Revision history :

Revision date	Revision explanation	Approved by:
May 13, 2019	Revised EHS and quality policy, PPAP section	B. Payne
June 5, 2019	**Reworded scope and merged with Aerospace version throughout. Removed redundant sections, added Right of Access Section, added No Change Clause, added Record Retention Requirements, added Age Sensitive section,**	**B. Payne**
July 3, 2019	**Finalized Corporate Manual incorporating feedback from Operations teams.**	**B. Payne, M. Brown**