

Supplier Requirements Manual

This manual describes Maclean-Fogg Company expectations for its suppliers in order to ensure that purchased material and/or service meets Maclean-Fogg Company requirements.

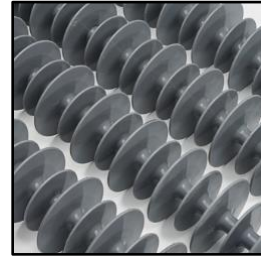
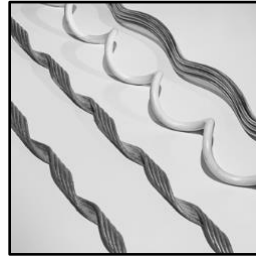
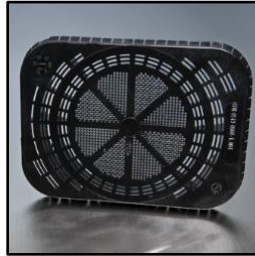
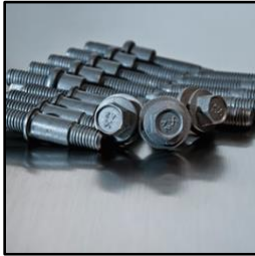


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Revision History Table

Revision	MM/DD/YY	Revision Description
1	08/01/16	Initial Release
2	08/03/16	Formatting Updates. Removal of MIP as child company.
3	04/17/17	Wording updates and compliance to IATF 16949
4	05/05/17	Transfer corporate version to RO version of manual. 3.1 Add language to meet Ford Q1 requirements for Supply Chain Management: •Risk Assessments (<i>includes supply chain processes</i>) • <i>The Global Materials Management Operations Guidelines/Logistics Evaluation (Global MMOG/LE), or an equivalent</i>
5	06/07/17	Add language to meet Ford Q1 capacity verification requirements for Supply Chain Management: 3.2 Ensure that sub-suppliers can meet capacity requirements through capacity verification calculations / capacity verification sheets 4.0 Include capacity verification calculations / sheets to confirm adequate capacity to produce product. 4.5 Include capacity verification calculations / sheets to confirm. Suppliers should manage tooling, equipment and facilities such that during a 7-calendar day week: • Average Production Weekly (APW) capacity requirements are to be met by operating the tooling, equipment and facilities based on a 5-day work week. • Maximum Production Weekly (MPW) capacity requirements are to be met by operating the tooling, equipment and facilities based on a 6-day work week.
6	07/28/19	Add scorecard calculations to section 2.5
7	2/1/2021	<ul style="list-style-type: none"> • Updated supplier scorecard calculations explanation. • Added explanations on point deductions and acronym descriptions. • Updated frequency of distribution on scorecards to suppliers. • Added Productivity and scorecard calculation

1.0 Introduction to Manual

In today's manufacturing environment, product that is found to be non-conforming at receiving or during production, causes serious disruptions of the production and shipping schedules, resulting in high production costs. Even the best Receiving Inspection program cannot detect all defective material. MacLean-Fogg requires suppliers to control the quality of material provided.

This manual applies to all suppliers providing any MacLean-Fogg facility with materials (raw, finished, WIP), products, processing, and services, including intra-company Suppliers, and when applicable, to Supplier sub-tier sources. The general requirements outlined herein do not supersede conflicting requirements in the MacLean-Fogg Terms and Conditions, contract, or drawing, including applicable engineering specifications and process specifications, or applicable long-term agreement(s). In conducting business with MacLean-Fogg, you are acknowledging adherence to this manual. If you have any questions regarding any of these standard procedures, you should discuss them with your supplier quality contact at MacLean-Fogg.

This manual is designed to work in conjunction with the Term and Conditions document. Please refer to that document for any further details or requirements.

2.0 Supplier Qualification and Evaluation Process

All suppliers to MacLean-Fogg shall be qualified suppliers. The extent of the qualification process is dependent upon the criticality of product purchased and other factors determined by MacLean-Fogg. Suppliers are provided a reasonable period to comply with the requirements of this manual.

The qualification process in its most complete form consists of the following:

1. Request to Add a New Supplier Form must be completed.
2. Suppliers may be asked to complete a Supplier Self-Assessment Form.
3. Suppliers shall agree to the terms of the Supplier Requirements Manual (SRM) by completing the SRM Sign-off Form.
4. An on-site audit may be conducted by MacLean-Fogg personnel or their authorized agents, if required. Approved suppliers are added to the Approved Supplier List.
5. Suppliers should supply a copy of relevant certifications

MacLean-Fogg periodically reevaluates suppliers using the Scorecard Procedure.

2.1 Request to Add New Supplier Form

In the early stages of supplier selection process, potential suppliers may be sent the Request to Add New Supplier Form. This form solicits general information about the company such as location(s),

size, capabilities, and financial stability as well as detailed questions regarding the Company's quality management system and quality history.

2.2 Supplier Self-Assessment Form

When a new supplier is being considered, they may be sent a Supplier Self-Assessment Form. Suppliers complete the Self-Assessment Form and return it along with a copy of their valid QMS and other certifications as applicable. MacLean-Fogg will review the assessment to determine if the documented quality system meets MacLean-Fogg's requirements and if any further steps are required.

2.3 SRM Sign-Off Form

Suppliers are to read this manual and return the SRM Sign-off Form (Last page of this document) acknowledging they have read, understand, and will comply with these requirements.

2.4 On-Site Audit

Some suppliers of products or services, where it is determined that the self-assessment is not adequate to qualify a supplier, an on-site audit of the supplier's facility may be performed.

If the audit team determines that the supplier meets MacLean-Fogg's requirements, MacLean-Fogg qualifies the supplier who is then added to the Approved Supplier List and able to bid on new business and supply production materials.

If the assessment finds areas of concern Suppliers will be required to address the concerns to the satisfaction of MacLean-Fogg within an agreed upon time frame.

2.5 Periodic Re-Evaluation

MacLean-Fogg periodically reviews current suppliers using the Scorecard Procedure. If requested, suppliers shall make their facility available for on-site process verification by MacLean-Fogg personnel, with reasonable notice.


Scorecards will be issued a minimum of annually and at a greater frequency as determined by MF location. Suppliers are to respond and address any areas of concern.

Maclean-Fogg evaluates current production suppliers based on the following criteria (Scorecard Procedure):

- Supplier Quality Concerns (SCARs or RMRs)
- Customer Service Discrepancies
- Delivery and Shipping Discrepancies
- Productivity

All suppliers start with 100% for the month and deductions are calculated based on the following**. These metrics may be modified by the local site to meet the requirements of the site or the work being performed **

Scorecard Score

 MACLEAN-FOGG		MacLean-Fogg
Overall Rating for: <input style="width: 150px;" type="text"/>		
Supplier Performance Report for: <input style="width: 200px;" type="text"/>		Date: <input style="width: 100px;" type="text"/>
Supplier Contacts: _____		
Contact Emails: _____		
System Certified to:	<input style="width: 150px;" type="text"/>	Cert Expires On:
Quarterly Score	<input style="width: 150px; height: 30px;" type="text"/>	
G	Total quarterly score greater than 85	
Y	Total quarterly score between 71-84	
R	Formal corrective action plan must be submitted to the MF Materials or Quality Manager. Total quarterly score less than 70.	

By Quarter

QUALITY			
1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
ON TIME DELIVERY (OTD)			
1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
CUSTOMER SERVICE			
1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
PRODUCTIVITY			
1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
COMMENTS: Special status customer notifications related to quality or delivery issues; any dealer returns, warranty, field actions and recalls would be noted here.			

Supplier Detail Metric

METRIC		GOAL	ACTUAL		
Customer Service	BOL / Shipper N/C	0			
	Missing Certification	0			
	Late Response CAR/SCAR	0			
	Premium Freight	0			
	Customer Service Score	10			
Quality	Occurrence	0			
	Quality Score	40			
On Time Delivery	Percentage	100			
	On-Time Delivery Score	40			
Productivity	Cost Reduction	25			
	Improved Lead-Time	25			
	Local Safety Stock	25			
	Value Added Eng.	25			
	Productivity Score	10			
TOTAL	Monthly Overall Score	100			

Supplier Rating Detailed Calculations

SUPPLIER RATING DEDUCTIONS	
Event	Point Impact
Customer Service	
BOL Non-Conformance (<i>late, missing, or incorrect information</i>)	By Incident and different criteria maybe more applicable at specific locations; Total weighted score is 10
Missing Certificate of Authenticity (<i>incorrect or missing COA</i>)	
Tool Return/Rejection Notice (TRN) (<i>incorrect or defective item received</i>)	
Premium Freight	
Late Response to CAR (<i>>48 hours for initial response, extensions may be given under some circumstances</i>)	
Quality	
Corrective Action Request <i>Customer rejection due to supplier related issue or internal rejection due to supplier related issue resulting in RMR (return material report) or SCAR (supplier corrective action report)</i>	By Occurrence; Total weighted score is 40
Delivery	
Late shipment of goods	By Receipt % (-5 Days Early/+0 Days Late); 100% Desired score
Productivity	
Cost Reduction	Weighted score is 10; each area worth 25 points and score is at the discretion of Procurement
Improved Lead-Time	
Local Safety Stock	
Value Added Engineering (Process, Product, Packaging, Planning)	
<i>Point values may be increased or reduced due to severity of incident at the discretion of the MF.</i>	
<i>Supplier disruption may cause significant impact to MF business and will impact severity of score.</i>	

Scorecard final scores are the total score for Customer Service, Quality, Delivery, and Productivity.

Maclean-Fogg may conduct Supplier Improvement Meetings for underperforming suppliers who are required to attend and present containment/corrective actions. Underperforming suppliers are identified on the Supplier Scorecard.

3.0 Business Management System Requirements

Maclean-Fogg recognizes the latest version of internationally recognized Management Systems: ISO 9001; IATF 16949; and ISO 14001 and other Interested Party requirements as they apply to our businesses. Accordingly, all Maclean-Fogg suppliers are required to establish documents and implement effective production, quality and management systems compliant with these requirements, including those specified by the customer.

This manual reinforces the Maclean-Fogg Purchase Order Terms and Conditions.

3.1 Quality Manual / Certification

Suppliers are required to maintain an effective quality management system.

Registration to the latest version of ISO 9001 Quality Management System is a minimum requirement. For Automotive Suppliers, IATF 16949 is recommended and may be required. In addition, suppliers shall meet all other requirements of this manual (a grace period may be provided to newly acquired

MF locations and their suppliers to comply with the requirements of this manual).

Specially designated small suppliers lacking resources to implement ISO 9001 may have certain elements waived by Maclean-Fogg or may be chosen for a supplier development program supported by Maclean-Fogg. Local Sites may be contacted to obtain the written criteria for granting a waiver.

Whenever a supplier receives a quality standard certification for the first time or for renewal, a copy of the certification must be sent to the MacLean-Fogg site Quality Department. Follow the instructions as provided to you by your site contact. If the supplier provides products or services to more than one MacLean-Fogg site, each site must be provided a copy of this document.

If certification is rescinded, suppliers must notify the MacLean-Fogg site Quality Department in writing within five business days.

Maclean-Fogg reserves the right to verify supplier compliance to ISO 9001, IATF 16949, or ISO 14001 on-site for those suppliers identified as having a high impact to safety, fit, form, function, quality and or customer down-time. Any Maclean-Fogg Customer reserves the right to visit supplier's manufacturing site to verify quality of purchased products and review supporting documentation.

Suppliers shall strive to continually improve its products, processes and systems. Suppliers shall conduct regular reviews of:

- Environmental, Health, and Safety (EHS) systems and objectives
- Quality policy and objectives
- Audit results
- Data analysis
- Corrective and Preventive actions
- Risk Assessments (includes supply chain processes)
- The Global Materials Management Operations Guidelines/Logistics Evaluation (Global MMOG/LE), or an equivalent
- Contingency plans (EDI, Transportation, Packaging, Equipment, etc.)

The process of continuous improvement must be included in the goals and objectives of the entire supplier organization. Continuous improvement can reduce potential CAPAS and prevent possible non-conformances.

NOTE: Additional Maclean-Fogg site(s) or Business Units(s) may mandate additional requirements on their Purchase Order or other written supply agreements (e.g. Terms and Conditions).

3.2 Control of Sub-Tier Suppliers

Suppliers are responsible for the quality of materials and components provided by their sub-tier suppliers and sub-contractors. MacLean-Fogg suppliers shall impose controls on their sub-tier suppliers that provide quality results and documentation comparable to the controls applied to suppliers by MacLean-Fogg. The extent of the controls may vary, depending on the nature and complexity of the product and processes, but should normally include:

- Compliance to certifications as applicable
- Evaluation and qualification of sub-tier supplier facilities
- Controls to ensure that raw materials used meet MacLean-Fogg's requirements
- Controls to ensure that the sub-tier suppliers of components used are those approved by MacLean-Fogg, where applicable
- Ensure that sub-tier suppliers have an Electronic Static Discharge (ESD) control program that meets or exceeds the needs of MacLean-Fogg if the parts or materials are ESD sensitive
- Part qualification, including first article inspection and process capability studies as applicable
- Ensure that sub-suppliers can meet capacity requirements through capacity verification calculations and associated documentation
- Control of drawings/revisions
- Control of nonconforming material
- Corrective action and preventive action programs
- A continuous quality improvement program

Where appropriate, MacLean-Fogg may specify the sub-tier suppliers that may be used, evaluate and qualify the sub-tier supplier's facilities, and assist suppliers in controlling the sub-tier supplier. Typically, this occurs when the sub-tier supplier is an essential component of the supply-chain process. MacLean-Fogg reserves the right/judgement to evaluate the quality system and records of such sub-tier suppliers as necessary. In the event of MacLean-Fogg's involvement, it does not absolve suppliers of the ultimate responsibility for the quality performance of their sub-tier suppliers.

3.3 Social Responsibility

Suppliers shall maintain policies for themselves as well as their suppliers to meet the following social requirements:

1. Ethics
 - a. Do not partake in offering, providing, or receiving bribes, gifts, or other benefits with the intent or effect of influencing business or governmental decision-making
 - b. Report any illegal activities and encourage employees to do so
 - c. Practice fairness in all aspects of the business
 - d. Promote good citizenship activities
2. Diversity
 - a. Encourage woman or minority owned suppliers
 - b. Non-discrimination policy based on race, nationality, ethnicity, religion, disability, sex, sexual orientation, or age
3. Human Rights
 - a. Comply with the United Nations Universal Declaration of Human Rights
 - b. Comply with the Conventions of the International Labor Organization
 - c. Competitive pay rates for the area
 - d. Follow local labor laws
 - e. Allow workers to freely assemble and associate
 - f. The use of child, convict, slave, or other forced labor is strictly prohibited
 - g. Compliance with the Conflict Minerals rules is required and accurate and thorough

completion of any and all questionnaires is required of the vendor and its upstream suppliers.

4. Safety
 - a. Require Personal Protective Equipment such as ear plugs, safety glasses, protective clothing, safety shoes, etc.
 - b. Monitor safety occurrences
 - c. Proactively find and eliminate potential hazards
5. Philanthropy
 - a. Donate gifts from suppliers to local charities
 - b. Community involvement
6. Confidentiality
 - a. Information related to MF shall be maintained confidentially.

3.4 Environmental, Health, and Safety Responsibility

All MacLean-Fogg suppliers shall have an effective Environmental Health and Safety (EHS) management program in place. A robust EHS program reduces operational impact on human health and the environment in a sustainable manner

Suppliers are required to maintain policies for themselves as well as their suppliers to meet the following environmental requirements:

1. ISO 14001 and ISO 45001 (when released). Third party Registration to ISO 14001 and ISO 45001 is strongly recommended.
2. All MacLean-Fogg suppliers shall work proactively to reduce the environmental footprint of Maclean-Fogg's products by complying with the environmental requirements of our customers.
3. Suppliers shall work to reduce the impact of packaging waste materials, substances, recyclability, life cycle assessment (LCA) data, etc., are to be reported according to legal requirements and/or those of MacLean-Fogg customers. Suppliers shall comply with all applicable EH&S regulations.
4. Maximize use of renewable resources
5. Integrate environmental management tools into business plans, including life-cycle assessment and costing, environmental management standards, and eco-labelling.

4.0 Product Qualification (APQP)

All suppliers shall produce advanced quality plans to support the development of new products and/or services, in accordance with the guidelines in the AIAG Advanced Product Quality Planning and Control Plan (APQP) Manual.

All suppliers are required to report the status of their APQP activities on a defined agreed upon basis.

All suppliers are required to utilize the MacLean-Fogg prescribed APQP format, when indicated.

All suppliers are required to participate in the MacLean-Fogg APQP process, when asked.

Where required, suppliers are to provide updated Team Feasibility Commitment Form (as per AIAG APQP Manual Appendix D) within seven days of request. Include capacity verification calculations / sheets to confirm adequate capacity to produce product.

The feasibility process for the supplier is critical to ensure the successful launch of a product or service.

Failure to provide Suppliers Team Feasibility Form on a timely basis may result in a Supplier Corrective Action Report (S-CAR).

4.1 New Product/Process Launch Readiness

MacLean-Fogg site Purchasing and Quality both monitor and manage selected suppliers from new product/process release through the start of production. New product/process launch readiness measures are implemented to ensure that suppliers can produce in accordance with the requirements of the Purchase Order. Suppliers are required to stay on launch containment for as long as Maclean-Fogg is on launch containment, or for the prescribed interval set forth between MacLean-Fogg and the supplier. Suppliers must have written approval to exit launch containment. Data showing compliance to requirements may be required before exit is approved.

4.2 Supplier Risk Assessment

MacLean-Fogg site Purchasing, Quality and Program Management may conduct internal Supplier Risk Assessments to determine which supplier's products are to be identified as "selected or critical suppliers" and will be tracked by site Quality. Input from Corporate Quality and Purchasing as well from other sites may be reviewed as needed. Criteria includes, but is not limited to:

- Product / process complexity
- New product / complexity for Maclean-Fogg
- Past product / process concerns
- Supplier launch history
- Impact on final product
- New supplier production location
- Past warranty concerns
- New supplier
- New product / process for supplier
- Product environmental impact
- Mergers, acquisitions or affiliations associated with a supplier

4.3 Component Review Meeting

Component review meetings may be held with selected suppliers to identify key product/process characteristics that must be statistically monitored to ensure stability.

Component review meetings will determine packaging and labeling requirements. Shipping trials must be conducted to evaluate the ability of the packaging to preserve product quality.

4.4 Supplier Document / Process Review

Supplier Document/Process review documents will be used to gage the progress of the suppliers' product quality plan.

4.5 Production Trial Run

All suppliers are required to perform a Production Trial Run (Run at Rate) prior to launch. A Production Trial Run is performed to verify that a supplier's actual production process can meet program volumes at an acceptable quality level. This Production Trial Run shall be performed by suppliers and included with the PPAP and/or APQP documentation, if requested by the MacLean-Fogg site.

Supplier's process must be able to produce 120% of the quoted volume with production tools and equipment, with normal plant staffing, at acceptable quality levels, and in the quoted work patterns. Include capacity verification calculations / sheets to confirm.

Suppliers should manage tooling, equipment and facilities such that during a 7-calendar day week:

- Average Production Weekly (APW) capacity requirements are to be met by operating the tooling, equipment and facilities based on a 5-day work week.
- Maximum Production Weekly (MPW) capacity requirements are to be met by operating the tooling, equipment and facilities based on a 6-day work week.

The MacLean-Fogg site using the ordered materials/services may perform on site Production Trial Runs when indicated. Circumstances that may lead to Production Trial Runs include new supplier to MacLean-Fogg, new process to a current supplier, location shift from one site to another, upgraded tooling, increased production requirements and/or previous history with suppliers or the component. When necessary, site Supplier Quality Assurance will schedule the on-site Production Trial Run with the supplier's senior manager. Site Purchasing may be contacted in case they wish to send a representative as well.

A completed Supplier Process Sign-Off (PSO) may be performed in conjunction with the Production Trial Run. A PSO may be performed when required by an end customer, when the program is high risk to MacLean-Fogg, or if the supplier has been deemed high risk on the program or when initial sample parts indicate potential manufacturing concerns. In addition, a PSO may be performed when the supplier is new to MacLean-Fogg, when the process is new to suppliers, if a process change is made in the production facility or if previous history with the supplier and/or component warrants it.

4.6 Launch Support

During any program launch at MacLean-Fogg or MacLean-Fogg customer's production facility, selected suppliers may be required to provide on-site representation.

Suppliers' launch support representative(s) must be knowledgeable, capable and empowered to make decisions. When launch support is requested, the supplier representative shall stay on location until concerns have been resolved.

4.7 Production Part Approval Process (PPAP) / FAIR

Where required, suppliers must submit request for and obtain full approval from MacLean-Fogg per the latest requirements of the AIAG Production Part Approval Process (PPAP) Manual.

Sample submissions are to be Level 3 unless otherwise specified.

PPAP documents are to be submitted to site Quality in compliance to the Supplier PPAP Checklist (reference SRM Workbook tab) for approval. PPAP documentation must be provided in the latest revision of the AIAG PPAP forms.

Electronic prints utilized for PPAP submission must be sent in PDF format.

Six (6) certified samples (one per tool/cavity) with the dimensional report are to be submitted to each using or manufacturing facility for fit and function approval (unless otherwise specified).

Supplier PPAP documentation must be no more than twelve months old. PPAPs over twelve months old are to be updated prior to their expiry to MacLean-Fogg, regardless of the supplier's business relationship with MacLean-Fogg's customer. Material certifications provided with the PPAP package shall be less than nine months old, unless specifically waived in writing by MacLean-Fogg.

Suppliers must provide evidence of materials, substances, and recyclability data submission International Material Data System (IMDS) with every PPAP submission. PPAP approvals will not be granted for packages that do not contain this information.

Suppliers are responsible for cascading this requirement and collecting data from their respective sub-suppliers.

Suppliers of an incorrect IMDS shall be responsible for any and all costs related to the inaccurate submission, including any warranty from the end use customer due to the use of prohibited and restricted materials, the cost of any testing or re-validation that may be required.

Annual layouts of five (5) pieces per cavity or mold and material testing are required to verify continuing conformance using certified gages and/or equipment. This data is to be kept on file at the supplier location and made available to MacLean-Fogg personnel within the same business day when requested.

If requested by MacLean-Fogg, or MacLean-Fogg's customer, suppliers shall furnish a complete submission, on a yearly basis. At minimum, each supplier shall provide a new warrant, new dimensional and new material certifications as an annual validation, upon request from MacLean-Fogg or the receiving plant. This shall be provided within seven days of the request.

All PPAP documentation, including material certifications and pertinent test data, must be submitted in

English, unless otherwise agreed upon. Any translation costs required will be billed back to suppliers, and a S-CAR issued to cover the translation costs and any pertinent administration fees.

Upon expiration of the second interim approval, MacLean-Fogg may issue a S-CAR to suppliers.

Where applicable Maclean-Fogg owned tooling must have an asset tag attached, showing "Property of MacLean-Fogg Group". Verification of this tag should be provided with the PPAP package.

4.8 Raw Material / Chemical Suppliers

Suppliers are to submit technical information and samples to the using MacLean-Fogg plant via the site Quality contact per agreement with the site.

Suppliers are required to supply Certificates of Authenticity (COA) for each shipment of product. The COA must be faxed or emailed to the receiving facility to be reviewed prior to off-loading of material.

Upon request, copies of this documentation must be made available for MacLean-Fogg personnel review.

Lot tracking information must be submitted for all materials.

All Suppliers shall retain samples of both incoming raw materials as well as finished product for a minimum time equal to the shelf life of the lot, or six months after the production of the lot. Where actual samples are not possible, e.g., unstable or volatile chemicals, suppliers must maintain records of analysis.

All Suppliers must conform to the labeling requirements as described in the Terms and Conditions.

SDS (safety data sheet) must be made accessible or provided for each material provided.

4.9 CQI-9 Heat-Treat System Assessment

For all applicable components, it is a requirement that suppliers use heat-treat sub-suppliers who comply with the CQI-9 Heat-Treat System Assessment or comply themselves. Suppliers must ensure that they or their sub-supplier complete the survey, meet the minimum requirements of the standard, and maintain their compliance. A copy of the finished survey shall be included in the PPAP package. An updated copy must be submitted each year or as agreed upon at the site level. The assessment can be found at www.aiag.org.

4.10 CQI-11 Plating System Assessment

For all applicable components, it is a requirement that suppliers use plating sub-suppliers who comply with the CQI-11 Plating System Assessment or are complying themselves. Suppliers must ensure that they or their sub-supplier(s) complete the survey, meet the minimum requirements of the standard, and maintain their compliance. Plating processes affected by this requirement include, but are not limited to:

- Zinc
- Zinc Alloy Plating
- Surface conditioning of metals for decorative plating
- Surface conditioning of ABS and PCABS plastics for decorative plating
- Decorative plating
- Mechanical plating (all copper silver, gold, passivation, and any and all metal plating addition processes)

A copy of the finished survey shall be included in the PPAP package. An updated copy must be submitted each year or as agreed upon at the site level.

4.11 CQI-12 Coating System Assessment

For all applicable components, it is a requirement that suppliers use coating sub-suppliers who comply with the CQI-12 Coating System Assessment or comply themselves. Suppliers must ensure that they, or their sub-supplier, complete the survey, meet the minimum requirements of the standard, and maintain their compliance. Coating processes affected by this requirement include, but are not limited to:

- Aqueous cleaning
- Mechanical cleaning
- Phosphating
- Powder coating
- Electrocoat
- Spray
- Dip/spin
- Autophoretic dip
- Convective cure

A copy of the finished survey shall be included in the PPAP package. An updated copy must be submitted each year or as agreed upon at the site level.

5.0 Manufacturing/Process Control

Suppliers shall provide appropriate training to ensure that employees are competent and qualified to produce quality deliverables.

Supplier's product or service shall meet all statutory and regulatory requirements for the locations where it is manufactured and used. These requirements shall be properly documented, and records maintained.

Suppliers shall plan and operate a comprehensive maintenance system for the production equipment used to support products.

Suppliers shall monitor the performance of their manufacturing processes to demonstrate compliance with MacLean-Fogg requirements for product quality and efficiency of the process. Adopting Lean

Manufacturing Principals is encouraged.

5.1 Control Plan

MacLean-Fogg suppliers are required to control all manufacturing processes in accordance with the control plan, which is approved during part qualification. Supplier's control plan shall identify all MacLean-Fogg requirements and the method of inspection and when applicable, functional verification shall be performed. MacLean-Fogg may specify certain criteria for inspection methods and functional verification. The control plan establishes the method and frequency of monitoring and measuring the product and processes to ensure conformity to MacLean-Fogg requirements. Suppliers shall establish procedures to control non-conforming product or service. The non-conforming product shall not be released or delivered unless approved by MacLean-Fogg.

5.2 Statistical Process Control (SPC)

Suppliers shall demonstrate process capability through statistical controls for all designated special characteristics and maintain control for all measurement methods used. The target process capability for special characteristics shall be (Cp, Cpk, Pp, Ppk):

- Short-term Cpk – greater than or equal to 1.67
- Long-term Ppk – greater than or equal to 1.33

Characteristics should be mutually agreed upon by MacLean-Fogg and suppliers and chosen during Advance Product Quality Planning (APQP). Characteristics should be based on product function, design intent, fit, manufacturing process or other factors, which may contribute to an out-of-control condition. When key product/control characteristic designation is identified on drawings, specifications, supply agreements, or purchase orders provided by the customer, suppliers are required to maintain statistical data on that characteristic and be capable of providing it to a requesting site Purchasing and/or Quality as requested. MacLean-Fogg Purchasing and Quality must approve the chosen key product/control characteristics affecting manufacturing processes.

Additional statistical information may be requested for assistance during problem solving or for variation reduction initiatives.

5.3 Raw Material / Chemical Supplier Statistical Data

All Suppliers must maintain (as applicable) SPC data on existing COA data and be prepared to provide it when requested by site Quality or a using plant.

Lab evaluation of the supplied product by a MacLean-Fogg "designated lab" or an agreed upon supplier with a current IATF 16949 registration can conduct the evaluation themselves. Other suppliers must utilize a 3rd party lab registered to ISO 17025.

5.4 Gauges

Suppliers shall implement a calibration and verification system or procedure to ensure all gauges, jigs, fixtures, poka-yoke devices, measuring and testing equipment are qualified at defined frequencies.

Records shall be maintained for all gauges, measuring and testing equipment. An MSA shall be conducted on all new or modified measurement systems. Refer to the AIAG MSA manual for additional information.

If calibration and certification is not within the lab scope of the supplier, this process must be performed by a certified 3rd party.

5.5 Control of Nonconforming Product

Suppliers shall properly identify product throughout the realization process. Suppliers shall create a traceability method for unique identification of each part or material lot. Suppliers should utilize an inventory management system to optimize inventory, reduce risk of obsolete product, and ensure first in first out stock rotation.

Suppliers shall identify and control, in a quarantined location, any non-conforming product when product requirements are not met; packaging is incorrect; labeling or marking misidentifies the product and/or when the product status is unknown or suspect.

Suppliers shall implement a procedure to define the controls, related responsibilities and authority to manage non-conforming product. The non-conforming product must be controlled until suppliers can determine and eliminate root cause of non-conformance through process improvements.

Suppliers shall create process work instructions to define and control rework and repair processes. Any rework or repair process, not identified within the approved PPAP documents, must be approved by MacLean-Fogg prior to beginning. Customer approval does not relieve suppliers of any liability regarding product quality. All corrected non-conforming product must be re-verified to demonstrate conformity to the requirements. Suppliers must properly identify each product or package as repaired or reworked.

If shipment of non-conforming or suspected non-conforming product has been detected by suppliers and is in transit or has been delivered to MacLean-Fogg, suppliers must immediately notify, the site Quality and Purchasing representative at the respective MacLean-Fogg receiving location.

5.6 Containment Policy

All suppliers are required to have a containment process to provide additional verification – outside normal processes, prior to shipment. The process must include identifying containment actions, isolating concerns, data collection and implementing corrective actions.

A “green” dot sticker (or as otherwise specified and agreed to) must be placed near each container label, signed by the Plant Manager or a management designee to indicate the product has been inspected/tested to be 100% defect free.

Exit criteria will be determined on an individual basis by the respective MacLean-Fogg site Purchasing and Quality.

Containment is required (as per the defined and approved Control Plan) for new production start-up

and engineering changes to contain any failure modes.

5.7 Controlled Shipping 1

Level I containment requires suppliers to implement extraordinary inspection of product to contain a specific failure. Containment actions must verify that requirements are met and be approved by the MacLean-Fogg production facility. This containment must be performed away from the production process in a designated area. Once assigned, suppliers cannot exit this containment without written authorization from MacLean-Fogg.

5.8 Controlled Shipping 2

Level II containment requires suppliers to use an independent third party approved by MacLean-Fogg Quality and plant to inspect product prior to release for shipment to the MacLean-Fogg production facility. Controlled Shipping 2 (CS2) containment is initiated once supplier fails to contain non-conforming product within his or her own facility. MacLean-Fogg has the right to require third party inspection to be conducted offsite. Once assigned, suppliers cannot exit this containment without written authorization from Maclean-Fogg.

6.0 Change Control

Suppliers are never permitted to knowingly ship product that deviates from the print, specification limits, or design intent without written authorization from MacLean-Fogg. If such a condition exists, the supplier may request MacLean-Fogg to allow shipment of the product. This is accomplished obtaining an approved deviation request.

The supplier must have a documented system for assuring that the latest MacLean-Fogg drawings are available and in use at their facility. The supplier's quality management system must contain a documented procedure that describes the method used for the receipt, review, distribution, and implementation of all changes to drawings and specifications. In addition, the procedure must address control of obsolete drawings and specifications. A documented procedure should also detail the method used to contain new or modified parts until approved by the customer.

MacLean-Fogg site Quality at the respective receiving facilities must approve all changes to product and/or process in advance. Suppliers who make unapproved changes will be liable for all warranty costs, rejection costs incurred by MacLean-Fogg and/or their customers. All changes must have PPAP approval prior to implementation (unless otherwise agreed to in writing).

Samples may be required for review and to evaluate potential impact on MacLean-Fogg's manufacturing processes.

For automotive suppliers, Level 3 PPAP Submission approval is required unless specifically waived in writing by Plant Purchasing and Quality.

Suppliers requesting the change shall be responsible for all validation costs incurred by MacLean-Fogg, including PPAP costs should MacLean-Fogg have to redo their submissions to their customer.

6.1 Product / Process /Location Changes

All production location changes to product and/or process must be requested and approved in writing in advance by MacLean-Fogg site Purchasing and Quality personnel.

The move plan must be submitted to and approved in writing by the respective MacLean-Fogg Quality personnel.

The move plan must include the requirements of a production bank as necessary to ensure MacLean-Fogg's production and service requirements are not affected. MacLean-Fogg Logistics will establish the requirements for this production bank and on-site confirmation of the bank may be required before the move can occur.

For automotive suppliers, Level 3 PPAP submission and approval is required as defined in the latest AIAG PPAP manual prior to the shipment of production material from the new location.

6.2 Extended Shutdown

All MacLean-Fogg receiving facilities must be notified in writing a minimum of 30 business days prior to an extended production shutdown (unless stated otherwise in terms and conditions). Examples of extended shutdown/start-up periods include customer changeover, scheduled preventative maintenance for tooling, machinery or processes or the anticipation of a work stoppage due to Union Contract Negotiations.

6.3 Build Out / Obsolescence

Suppliers shall have established detailed plans in place with defined responsibilities to manage build outs and engineering changes to minimize obsolescence.

MacLean-Fogg may be responsible to purchase raw material and finished goods that the supplier has been authorized to purchase and produce, according to the agreed upon terms and conditions.

Suppliers shall have fifteen days from the end of production to file an obsolescence claim with MacLean-Fogg, unless otherwise indicated by the OEM terms for the final obsolescence claim. Suppliers shall submit their claim a minimum of three days prior to the end customer deadline, in order that MacLean-Fogg have the necessary time to validate the claim and verify the totals prior to submission of the claim to the end customer. It is the responsibility of suppliers to verify the obsolescence claim terms with the appropriate person at the affected MacLean-Fogg site to ensure that their claim is submitted within the appropriate timeline for payment. The affected MacLean-Fogg site may audit the obsolete material at supplier to validate the claim. This material must be put in an area that allows complete access to all containers, so that it can be readily counted. Failure to make the material available for count may negate suppliers' obsolescence claim.

The supplier may receive payment for the obsolescence claim once the affected MacLean-Fogg site has received payment from the end customer.

7.0 Rejected Product and Corrective Action

Suppliers should adopt the “Zero Defects” mindset to reduce and eliminate non-conformances. When a non-conformance occurs, the goal is to quickly and effectively identify the problem, minimize its impact, determine the root cause, implement corrective actions and prevent recurrence.

A robust problem-solving methodology leads to effective root cause identification and elimination. MacLean-Fogg recommends the 8D Problem Solving method. Verification of root cause identification and elimination requires 21 days of verification.

Error-proofing methods are effective corrective actions to eliminate recurrence of a root cause when properly implemented. Suppliers shall use error-proofing methods to identify potential design and/or process improvements and implement when applicable. Refer to the AIAG CQI-20 document for additional information on problem solving. Refer to the AIAG CQI-18 document for additional information on error-proofing

MacLean-Fogg may issue a S-CAR & Chargeback Form in the identification and resolution of non-conformance detected at a MacLean-Fogg facility and/or customer. The S-CAR & Chargeback Form may be issued based upon incoming inspections, in-process rejects, customer rejects, field failures, packaging or labeling issues.

Suppliers are expected to respond to all S-CAR & Chargeback Forms issued in the following;

For example, when a supplier receives a S-CAR & Chargeback Form, MacLean-Fogg’s 24-14-30 policy shall be adhered to. The 24-14-30 Policy is as follows (or as otherwise agreed to).

7.1 Initial Response within 24 hours

1. Acknowledge receipt of S-CAR upon notification
2. Identify all suspect product
3. Notification of quantity of suspect material in route to MacLean-Fogg and/or its customers
4. Immediate containment action taken (including an objective sort to include S-CAR# on certification documentation)
5. Interim plan for supporting MacLean-Fogg production with certified product

7.2 Corrective Action Plan within 14 days (target)

1. Use problem solving techniques to determine the root cause of the non-conformance
2. Detailed plan for implementing corrective actions to control and prevent recurrence
3. Disposition of suspect products

7.3 Final Report within 30 days (target)

1. Implemented corrective actions with supporting data

2. Verify effectiveness of corrective actions

If suppliers fail to respond appropriately, suppliers may be placed on New Business Hold.

There will be no time limit for rejection of production materials. Components and/or raw materials shall remain viable for use throughout the life of a program, regardless of when they were purchased, unless a shelf life period is assigned and agreed to with MacLean-Fogg, prior to a written purchase order being given for the materials. Any material that is found to be discrepant at time of use, will be returned to suppliers, through the issuance of the S-CAR.

MacLean-Fogg will determine freight method while minimizing cost to suppliers but will ensure that the end customer does not suffer material shortages. Suppliers will get shipping instructions from Maclean-Fogg to replace rejected material. This will be based on customer coverage.

8.0 Packaging, Labeling & Delivery

8.1 Packaging

The choice of packaging could have a significant effect on product quality and is to be considered during feasibility evaluation. Shipping trials must be conducted to evaluate the ability of the packaging to preserve product quality. Packaging must be approved, and suppliers shall not make changes without prior approval by the responsible MacLean-Fogg site Logistics and/or Quality contacts.

Containers shall be ergonomically designed to reduce the exposure to injury when handling pallet-sized containers. Containers shall conform to AIAG size standards. For less than pallet-sized containers, total package weight, when full, shall not exceed 30 pounds (13.61 kilograms), unless otherwise approved. Protective wrapping or specified pallets may be required by MacLean-Fogg.

All suppliers shall operate under written packaging and labeling procedures in accordance with AIAG standards as well as the customs laws of the received country.

8.2 Returnable Containers

Expendable packaging will not be accepted unless supplier obtains written authorization from the responsible MacLean-Fogg site Logistics contact prior to initial production shipment.

MacLean-Fogg requires packaging, dunnage, and palletizing product to be returnable, reusable, or recyclable. Reasonable care in use and handling of containers shall be exercised.

Chronic problems with container damage may be escalated for resolution to the responsible MacLean-Fogg site Logistics representative.

If supplier is not in possession of returnable containers or the containers received are in poor condition, supplier is to contact the responsible MacLean-Fogg site Logistics contact for direction and resolution.

8.3 Labeling

Each separate unit of packaged product shall have labels on the adjacent sides of as otherwise agreed to. Failure to comply with MacLean-Fogg and/or customer requirements on labeling is cause for REJECTION. Suppliers are responsible for all labelling issues related to packaging. At a minimum, a carton label must be on every carton and a master label of every pallet.

Any materials that are controlled or that have a specified shelf life must be clearly identified on the label and contain a “Do Not Use After This Date” notation.

Sample materials shall be clearly identified. Each container of sample material shall have a “SAMPLE MATERIAL, ATTN CONTACT NAME” label affixed to each side of the shipping container. The label shall be of a different shade than the standard shipping label, so that it stands out as sample material. Should sample material be mixed on a pallet with normal production material, the pallet must be clearly labeled as “Mixed pallet, sample material enclosed”. The Bill of Lading for a shipment that contains sample material must have the sample material on the shipment clearly identified, and must contain the phrase “SAMPLE MATERIAL, ATTN CONTACT NAME”, clearly identified on the paperwork alongside the part number.

Due to the variety of products purchased and manufactured by MacLean-Fogg, component suppliers shall use barcode shipping labels (reference AIAG Shipping/Parts Identification Label Standard, AIAG-B-3). These labels require all the following information, unless other arrangements have been made with MacLean-Fogg site Purchasing:

- Unit of measure (as specified by MacLean-Fogg P.O.)
- Supplier name and shipping location
- Quantity (net and allowance where applicable)
- Pack date
- Ship date
- Ship to address
- Shipping terms (FOB, CIF, etc.)
- Customer inventory code number
- Shade code (if applicable)
- Latest engineering level
- Serial number
- Purchase order/shop order
- Weight: net, tare, gross
- Product description
- Country of origin
- Customer part number
- Lot number(s)

8.4 Raw Material / Chemical Suppliers

Containers smaller than a tanker/bulk shipment are to be labelled with the following information unless other agreed to with the respective MacLean-Fogg receiving site.

- Date of manufacture
- Net weight
- Lot numbers
- Product identification

Compliance to all legislative and regulatory labeling requirements, including proper identification of all hazards materials and subsequent handling requirements is mandatory.

To prevent mislabeling concerns on returnable containers, it is supplier's responsibility to remove all old labels, or to place new labels over the old labels in such a manner as to completely cover all the information from the old label. Returnable totes must have the control label applied on the release placard between the identification labels.

When multiple lot numbers are being shipped, suppliers shall list the lot numbers on the bill of lading.

8.5 Inventory Control Labels

All materials suppliers must be shipped in date-produced order using a first in, first out (FIFO) inventory management system.

All chemical suppliers must provide a "Use By, date" on each label.

Chemical suppliers must ensure that a minimum of six months shelf life be available for all products shipped into MacLean-Fogg sites, unless specific written authorization is received from the respective MacLean-Fogg using site prior to shipment.

Shelf life requirements shall be from date of manufacture, not date of shipment.

Suppliers shall be responsible for all costs incurred due to shipment of material outside of the usage window.

8.6 Volume Adjustments

Suppliers shall assure, through plant utilization records, that manufacturing can support an increase of 20% within five (5) working days, unless otherwise agreed to.

If a volume reduction occurs due to end customer demand, suppliers should store material on their site, until delivery is called for by MacLean-Fogg, at no charge to MacLean-Fogg.

8.7 Releases

Failure to receive a release does not constitute reason for short shipment. When a supplier does not receive a release on time, suppliers shall notify Maclean-Fogg Purchasing, while using the previous week's release and adhering to the same dates required. Suppliers shall review the new release when received and notify Maclean-Fogg if there is any chance that the release cannot be met.

Suppliers are expected to meet the lead-time CUM (cumulative demand) required. Reduction in CUM required within the lead time will not be accepted by the customer as a valid reason to short ship.

MacLean-Fogg will not be responsible for any storage charges due to decreased releases from our customer and may not accept any over-shipments (unless otherwise agreed to, plus or minus ten percent for actual shipping quantity versus P.O. may be acceptable). MacLean-Fogg will continue to work with the customer and supplier to resolve release volatility issues.

If non-delivery, delayed deliveries or short shipments are anticipated, ALL suppliers must immediately notify the respective MacLean-Fogg site Logistics contact. Supplier concerns regarding meeting volume increases must be communicated to the responsible receiving MacLean-Fogg site **within 24 hours** (or sooner) of receipt of the release.

Suppliers must be able to handle release accounting. Releases will be sent weekly, unless otherwise agreed to, and will go out as far as our customer releases. Releases will show cumulative requirements and must be reconciled jointly between the supplier and customer releases. Suppliers will provide proof of delivery (i.e. shipping documents) to reconcile CUM's. Suppliers are responsible to inform MacLean-Fogg of any known discrepancies.

8.8 Customs

All shipments shall be accompanied by the proper customs documentation to ensure border crossing. Shipping documents (packing slip, bill of lading, commercial invoice) will reference MacLean-Fogg part number and product description. If documentation is missing or incomplete, suppliers shall assume all subsequent costs.

All customs documentation, including commercial invoice, must be emailed or faxed to MacLean-Fogg's Customs Broker when load leaves supplier's dock.

If further information is required, suppliers shall contact the respective MacLean-Fogg site Logistics contact at the receiving location.

Every January the supplier shall supply USMCA Certificate of Origin to the MacLean-Fogg Customs Broker for all materials supplied.

It is a MacLean-Fogg requirement that all suppliers provide accurate documentation with their shipments to any Maclean-Fogg site or subsidiary location.

A consistent paper trail consisting of the invoice, commercial invoice, packing slip and/or bill of lading, and purchase order, shall be maintained in order to avoid penalties.

Any discrepancies in quantity, pricing, or other pertinent information, shall be reported to MacLean-Fogg's Customers Broker within three days of the shipment. Failure to properly report discrepancies shall result in suppliers being charged any and all penalties.

This charge shall be issued to suppliers via S-CAR & Chargeback Form and will be added to Suppliers Rating system. The charge will be deducted from the next payment to the supplier.

MacLean-Fogg receiving sites shall audit all inbound shipments for compliance and will report any discrepancies directly for resolution. Any related charges shall be charged to suppliers via S-CAR & Chargeback Form.

Suppliers must cooperate promptly and fully with MacLean-Fogg in providing any back-up information that may be needed to respond to inquiries from U.S. Customs and Border Protection or other U.S. federal agencies with regard to such issues as country of origin, tariff classification, manufacturer's identification, or eligibility for preferential tariff programs. Back-up information that may be needed can include materials costing and sourcing, production records, and accounting information.

8.9 In-Bound Freight

Suppliers shall have a program in place with their suppliers, which allows, at any time, for carrier assignment and tracking of in-bound products. Suppliers' material control activity shall assure raw material and component availability through documented communication between production, manufacturing, and purchasing activities related to the shipment at all MacLean-Fogg sites.

8.10 Out-Bound Freight

Unless otherwise specified, the customer shall be responsible to coordinate freight carrier and schedule. Suppliers are required to use customer-designated carriers; however, suggestions for improvement may be forwarded to the respective MacLean-Fogg site Logistics representative.

When utilizing the customer freight lines, supplier shall assume all charges associated with truck "wait time" in excess of ½ hour of the appointed arrival time at supplier's facility.

Suppliers receiving load sheets must contact the respective MacLean-Fogg site logistics person if all the requirements on the load sheet cannot be shipped, before the truck is released.

Any charges generated using an unauthorized/unapproved carrier shall be at supplier's expense.

All charges that appear on freight bills that are paid by the supplier must be the actual charges incurred and proof of actual payment of such charges must be made available to any Maclean Fogg facility upon request for a period of up to five (5) years after payment,

8.11 Physical Condition

All trailers are expected to be clean and in good useable condition. Any trailer damage shall be reported to the carrier prior to loading of product.

Damage to the load due to faulty carrier equipment or damage while in transit shall be reported to suppliers by the receiver and addressed through an insurance/damage claim filed by suppliers against the carrier.

8.12 Unloading and Transfer of Materials

All suppliers shall comply with unloading procedures established at each MacLean-Fogg facility. Suppliers shall have appropriate training in the use of the transfer equipment, personal protective equipment (PPE) and chemical hazards.

Supplier is to provide his or her own PPE in accordance with the facility procedure and hazards of the material being transferred.

In the event of an emergency, all suppliers shall follow plant emergency procedures. It is the responsibility of Supplier to become familiar with the procedures at each MacLean-Fogg location they supply.

8.13 C-TPAT (Customs-Trade Partnership Against Terrorism)

All suppliers shall complete the C-TPAT questionnaire when requested by MacLean-Fogg (as applicable or as otherwise agreed to). This questionnaire must be returned within thirty days of the request.

Suppliers may receive an on-site visit to verify C-TPAT compliance.

9.0 Cost of Poor-Quality Recovery Policy

Suppliers are liable for all costs incurred by MacLean-Fogg and end use customers when the cause is deemed to be the supplier's responsibility.

Upon the receipt of a S-CAR Request & Charge Back Form, suppliers will provide authorization for disposition within **1 week**. Failure to make disposition **within 1 week**, will empower the using plant to make disposition at supplier's cost. All materials returned, reworked and/or scrapped may be counted against supplier's quality performance on the supplier scorecard.

If a supplier does not agree with the S-CAR Request & Charge Back Form, an appeal can be made to the respective MacLean-Fogg site Quality contact.

Suppliers shall be debited for any/all product failure costs determined to be the responsibility of suppliers, regardless if failure occurred prior to or after shipment to the end/final customer. Product, logistical and service non-conformances/complaints will be reported using a S-CAR. This form will also be used to inform suppliers of the request for written corrective and preventive action using a S-CAR Request & **Charge Back Form**.

Charges to suppliers will be based on local rates at the affected MacLean-Fogg site(s).

9.1 Other Charges

The following types of charges shall be calculated on the actual time and costs incurred for the associated action:



- Rework, repair, scrap supplier fault
- Positioning of supplier fault scrap
- Premium freight costs including air charter if required
- Overtime to avoid production interruption
- Production down time for Maclean-Fogg and its end customer
- Sorting of suspect material in-house, at customer location or third party and contractor costs
- On-line containment
- Tear-down (Minor, Major, and Complete) and outside lab testing
- Customer returns including hourly charges, transportation and on-site inspection services
- Meeting customer environmental reporting and documentation requirements
- Receiving inspection, material handling and freight associated with scrap and replacement material
- Transportation waiting charges, trailer storage charges

MF Supplier Requirement Manual Sign-off Form

Supplier Name _____

Supplier Address _____

Name (print) _____

Name Signature _____

Date _____