

Supplier Quality Requirements

1.0 Scope

1.1 The requirements of this document apply to all suppliers, when noted on a Midstate Machine Purchase Order, that furnish manufacturing services, special processes, or job-related goods and services regardless of Supplier's industry, regulatory accreditation, or certification status. Each supplier shall be responsible for ensuring that all members of its supply chain comply with requirements if supplier services are needed and approved by MSM.

2.0 Inputs

2.1 This document is created utilizing the current revision of the following documents

2.1.1 AS9100; Quality Management System – Requirements for Aviation, Space, and Defense Organization

2.1.2 ISO9001; Quality Management Systems - Requirements

2.1.3 ASQR-01; Supplier Quality System Requirements

2.1.4 S-1000; GE Aviation Quality System Requirements for Suppliers

3.0 Supplier Status/Category

3.1 MSM has 4 different approval status levels, status levels are

3.1.1 Conditionally Approved status will be used for new suppliers being onboarded. Conditionally Approved suppliers will be limited to the Workscope noted on the ASL. The supplier will remain Conditionally Approved until they have performed at least 3 complete orders without quality issues with paperwork or product and provided all documentation required by the Supplier Quality Survey.

3.1.2 Approved status will be used for suppliers that have proven to meet the quality and on time delivery standards that have been set by MSM. Approved status may be reduced back to Conditionally Approved in the event the supplier drops below the standards set by MSM.

3.1.3 Suspended status will be used for the suppliers that prove to continuously not meet the Quality or On-Time Delivery standards set by MSM. If Suspended status is used, a Corrective Action must be issued in accordance with Procedure MSM-6253. Upon receipt of complete corrective action and corrective action effectiveness can be verified, status may be returned to Conditionally Approved.

3.2 The following are the categories that suppliers will be rated based on an assessment of the services each supplier can provide and what associated qualifications they hold. Rated suppliers are those that may provide manufacturing, special processes, and/or

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provide goods/services that have the potential to affect the planned output of products and/or services MSM provides for its customers. (Job Related) All other Suppliers that provide goods and services that have no potential effect on the planned output of products that MSM manufactures, (Non-Job Related) shall be non-rated (NR)

3.2.1 Categories

3.2.1.1 Manufacturing Supplier

3.2.1.1.1 Category IA – AS9100, ISO9001, Nadcap Manufacturing

3.2.1.1.2 Category IB – No third-party certification

3.2.1.2 Special Process Supplier

3.2.1.2.1 Category IIA – Nadcap Accredited

3.2.1.2.2 Category IIB – No Nadcap Accreditation

3.2.1.3 Goods/Services Supplier

3.2.1.3.1 Category IIIA – OEM Approved, AS9100, ISO9001

3.2.1.3.2 Category IIIB – No documented approval/certification

4.0 All Suppliers; General Requirements

4.1 Changes in Process

4.1.1 It is the responsibility of the supplier to notify MSM of changes to the processes, products, and/or services. Changes also can include, changes to their suppliers, changes in equipment (including location), and location of manufacture.

4.1.1.1 If change affects a submitted first article inspection submitted to MSM, the supplier will be responsible to complete another first article inspection after completion of change.

4.2 Control of Digital Product Definition (When invoked on MSM Purchase Order)

4.2.1 Suppliers receiving Midstate Machine and/or their customer produced DPD/Models, shall have a process to ensure media security, traceability, software control/validation, control of Data Exchanges, User Training, Problem Reporting, and Corrective Actions that are compliant with Boeing Standard (D6-51991). DPD will be required to submit their DPD process to MSM for approval prior to Digital Product Definition being supplied.

4.3 Corrective Actions

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- 4.3.1 When requested by Midstate Machine suppliers shall complete formal corrective actions within requested timeframes. At minimum, Corrective Actions shall include comprehensive root cause analysis, detailed action/correction plans, applicable preventive measures, and verification of effectiveness.
- 4.4 Counterfeit Material
 - 4.4.1 The supplier shall be responsible to implement and maintain a Counterfeit Material Avoidance process. If material suspected to be counterfeit, the supplier shall report the suspect or detected counterfeit parts. Production on suspect material shall stop until further direction is given by MSM.
- 4.5 Drawing/Specification Control
 - 4.5.1 The supplier shall have a process that ensures that drawings and specifications are the relevant revision status specified on the MSM Purchase Order. Also, the supplier shall ensure that any special requirements are addressed when applicable (ITAR and/or EAR compliance)
- 4.6 Escapes; Supplier Identified
 - 4.6.1 Escapes - The supplier shall provide prompt notification to Midstate if nonconforming product or process escapes are identified after shipment. The notification shall include part numbers, traceability (lot, serial, and manufacturer numbers), ship dates, quantities, and a description of the nonconformances. This applies to any nonconformance that departs from the drawing, specifications, purchase order requirements, etc. The supplier shall initiate a formal corrective action process.
 - 4.6.2 Containment – When a nonconformance is discovered or the Supplier is notified of a discrepancy, the Supplier shall take immediate action to determine if the condition exists on any other work in process, in storage at the Supplier’s facility, or in prior shipments. Containment action shall be taken and documented prior to the next shipment of the part number(s) involved. The supplier shall not wait for the discrepant product to be returned to begin investigation.
- 4.7 Ethical Behavior
 - 4.7.1 The supplier is encouraged to implement a code of conduct that encourages their employees to make ethical value driven choices. The supplier’s employees must not act fraudulently, deceiving people, or making false claims, or allow anyone else to do so. This includes defrauding or stealing from MSM, MSM’s customer, any third party, and any kind of misappropriation of property.
- 4.8 Foreign Object Debris (F.O.D.)

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- 4.8.1 Supplier is responsible to have a Foreign Object Debris program. Supplier is responsible for prevention of any foreign object damage related to Midstate supplied product.
- 4.9 Identification and Traceability
 - 4.9.1 The Midstate Machine Job Number and serial number (when applicable) must be maintained throughout all processing unless otherwise specified on the drawing or processing instructions supplied with shipment. It is the responsibility of the supplier to verify the availability of traceability information prior to processing.
 - 4.9.1.1 If traceability has been lost at any point, the supplier shall stop processing product immediately and notify MSM for further direction.
- 4.10 Inspection and Verification
 - 4.10.1 Inspection and Verification documentation may be provided with the purchase order. It will be the supplier's responsibility to complete all applicable documentation of inspection and verification, then forward the applicable documentation with the products. When inspection and verification documentation is not provided, it will be the responsibility for the supplier to create an inspection plan to ensure all attributes are inspected to ensure conformance of product. Supplier generated inspection plan shall be forward with product.
- 4.11 Limited Shelf Life
 - 4.11.1 Materials with limited shelf life that are to be used for MSM products shall indicate the date of manufacture, lot number, and applicable specification on the container. Expired material shall not be used.
 - 4.11.1.1 If material with limited shelf life is used on/in MSM product, the material certs (as applicable) must be forwarded with final documentation package.
- 4.12 Non-Conforming Product
 - 4.12.1 All deviations in product or process shall be submitted to MSM and the supplier shall discontinue processing that product. Processes include those designated on a purchase order, drawing, or specification. Even if the deviation is determined by the supplier to be a reworkable condition, the deviation shall be submitted to MSM for rework approval unless the purchase order, drawing, or specification specifically allows rework. In the event the supplier has material that is non-conforming and not re-workable to the applicable requirements a

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request for permission to ship must be approved by MSM’s Quality department prior to shipment. The supplier shall be responsible to respond to MSM’s “Discrepant Material Report (DMR)”.

4.12.1.1 Exceptions and/or deviations to specified requirements must be approved, in writing, by MSM prior to shipment of affected product or service to MSM.

4.12.1.1.1 Discrepant Material must be identified with temporary marking prior to shipment to MSM.

4.12.1.1.1.1 Tags (Use of Wire Tie is not acceptable)

4.12.1.1.1.2 MSM approved markers (Dykem Hi-Purity 44)

4.12.2 When discrepant product and/or paperwork is received by MSM, MSM will notify the supplier and give the supplier the opportunity to rework the product and/or paperwork provided. When the discrepancy is paperwork related, the supplier will need to correct paperwork and return it to MSM within 1 business day. MSM will use a Discrepant Material Report (DMR) process when nonconformances are initiated. This will stop payment on order until it is resolved to a satisfactory standard. Non-Conformance charges can be as follows

4.12.2.1 Non-Conformance Administrative charge – A minimum \$250.00 charge may be invoked for nonconformances that require an in-depth evaluation or if nonconformance must be submitted to MSM’s customer.

4.12.2.2 Supplier Performing Rework - if supplier is able to rework product/paperwork, the rework costs will be the responsibility of the supplier.

4.12.2.3 MSM Performs Rework - When rework is performed at MSM, MSM will work with the supplier to back charge them an amount for the rework

4.12.2.3.1 MSM reserves the right to perform rework of supplier products when necessary do to delivery constraints.

4.13 Offloading

4.13.1 All manufacturing, critical processing, inspection, and testing used in performance of Midstate Machine purchase order must be accomplished by

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sources approved by Midstate Machine and/or Midstate Machine's customer as applicable. Use of sub-contractors requires notification to, and prior approval of, Midstate Machine

4.14 Product Safety

4.14.1 When conditions of product safety have been identified, it is the responsibility of the supplier to address these conditions and train applicable personnel of the potential impact on product. Product Safety conditions can be, but not limited to, the following

- 4.14.1.1 Product temporary marking (Use of Specific Markers)
- 4.14.1.2 Limitations of handwork (Limitation of approved tools)
- 4.14.1.3 Potential product material contamination
- 4.14.1.4 Bruise Sensitive Material

4.15 Packaging and Handling

4.15.1 As a minimum the supplier shall package all material in a manner that will ensure protection against corrosion, oxidation, deterioration, and physical damage during shipment. In addition, when materials are delivered are "lot" controlled and multiple "lots" are shipped, each "lot" shall be separately packaged.

4.16 Record Retention

4.16.1 It is the responsibility of the supplier to retain documented information that ensures that processes have been carried out as planned. Documented information shall be retained for an indefinite period.

4.16.1.1 In this case, indefinite does not mean forever. MSM must be contacted to determine if documentation has met its retention time and whether it can be destroyed or not.

4.16.2 Midstate Machine, Midstate Machine's Customers, and applicable statutory and regulatory agencies reserve the right of access to supplier's facility to review quality records at any time during the specified retention period. Records shall be maintained in an appropriate environment and shall be available upon request within two business days.

4.17 Storage; Product

4.17.1 While MSM product is onsite, the supplier must ensure that they are stored and handled in a manner to prevent corrosion, oxidation, deterioration, and physical damage.

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4.18 Supplier Facility Access

4.18.1 Midstate Machine, Midstate Machine's Customers, and applicable statutory and regulatory authorities reserve the right of access and entry to supplier's facility and/or supplier's subcontractor facility to verify the quality of Midstate Machine purchased material/service at any point of manufacturing, inspection, and/or test facilities shall be subject to review. Suppliers shall provide equipment, facility, and necessary personnel for all on-site verifications of contract/purchase order compliance.

4.19 Training

4.19.1 Supplier will need to have a documented training program for its employees who perform any work on MSM product. Employees shall be trained to ensure continued quality of product being reproduced for MSM.

5.0 Manufacturing Suppliers

5.1 Statistical Techniques

5.1.1 When required by purchase order, statistical analysis will be required. CPK's greater than 1.33 must be acted upon to ensure continued quality of product

5.2 Critical or Key Characteristics

5.2.1 All Critical or key Characteristics shall be verified 100% and/or process determined statistically capable.

5.3 Calibration

5.3.1 All gages used to inspect product must be calibrated and calibration traceable back to NIST.

5.3.1.1 MSM highly encourages, but does not require, gage calibration on tooling/fixtures related MSM Purchase Orders.

5.3.2 Supplier must have a system in place to control, maintain record of calibration, and where the gage was used.

5.4 Measuring Resources

5.4.1 All monitoring and measuring resources shall be adequate for the planned inspection to be performed. An uncertainty no less than a 4 to 1 ratio shall be maintained for characteristic to be verified. For devices that are being used for inspection activities, the device identification shall be documented on the inspection documents for the characteristic being verified.

5.5 Manufacturing Plan

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5.5.1 If required by MSM Purchase Order, A controlled manufacturing process must be submitted to MSM. Once the plan is approved, the supplier is not allowed to deviate or make any changes from the plan without authorization from MSM Quality.

6.0 Special Process Suppliers

6.1 If required, the supplier must use customer designated or approved external suppliers including process sources (ex. casting processes, special process)

6.2 For category IIB Non-Destructive Testing Suppliers, all personnel performing Non-Destructive testing to an MSM Purchase Order must be qualified in accordance to applicable Industry Standards.

6.2.1 Evidence of certification for all NDT personnel who performed work on product must be supplied with the required Certificate of Conformance. Evidence of certification must include the inspector's current employer or third-party certification and their current vision examination (eye exam).

6.3 Welding Suppliers, as part of their final documentation package, must supply Certificates of Conformance for all filler metals used on product welded per MSM PO.

7.0 Goods/Service Suppliers

7.1 Conflict Minerals

7.1.1 Material suppliers that are providing materials to MSM shall ensure that all materials shall be in accordance with the Dodd-Frank 1502 conflict minerals regulation. Materials that contain Tungsten, Tantalum, Tin, and/or Gold (3TG) are applicable and shall be provided by approved smelters and/or revert.

7.1.1.1 If material is supplied to MSM with the above 3TG minerals, the C of C for the material must include the smelter of the material.



7.2 Material Substitution

7.2.1 Unauthorized material substitutions are not permitted without MSM's consent.



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Revision Table

| Revision Number | Revision Description | | Revision Date | Revised By |
|------------------|---|----------------------------|---|------------|
| 3 | Appendix completely rewritten. Template of document changed | | 6/23/2019 | WHI100 |
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