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Contact Weber Metals’ the Supplier Quality Group for any questions, clarifications, or referenced forms / documents at supplierqualitygroup@webermetals.com

The supplier is required to review and comply with relevant clauses. A request for exception to specific clauses can be made using QP 8.4 F006.

QP 8.4 F007 Supplier Quality Alert form will be used to flow down “Advisory information”.

References:

QP 8.4 F001-S	Supplier Evaluation Short Form
QP 8.4 F001-L	Supplier Evaluation Long Form
QP 8.4 F006	Supplier Review Form
QP 8.4 F007	Supplier Quality Alert
QWI 8.7-3 F001	Supplier Deviation Submittal Form
QWI 8.7-3 F002	Supplier Deviation Submitted: Raw Material/Tooling Services
WMQS-001	Supplier Digital Data Requirements
WMPS-001	Aluminum Heat Treat
WMPS-002	Titanium Heat Treat
WMPS-003	Sand Blasting
AS9100	Quality Management Systems – Requirements for Aviation, Space, and Defense Organizations

Definitions:

WMPS	Weber Metals Process Specification
WMMS	Weber Metals Material Specification
WMQS	Weber Metals Quality Specification
FOD	Foreign Object Debris / Damage

1. STANDARD

New 1/19/15

STAN6: (Prohibited Materials – Ozone Depleting Substance) Class 1 Ozone Depleting Substances (ODS) shall not be used in the design, test, manufacture, integration and assembly, handling, transportation, operations, maintenance, or disposal of the hardware / components delivered to this order.

2. DIE SINKING

New 10/5/2005

Revised

1/30/17.

DS1: (Die Impression) The supplier is to provide an inspection report of the finish die impression to Weber Metals Engineering for review and approval (Electronic scan of the die using a type of CMS or GOM type equipment) prior to each finish die shipment. Use AS9102 Format as applicable. Supplier could also be requested to provide a partial plaster cast to verify raised character when a die needs to be re-engraved.

New 1/19/15

DS2: (Part Identification) Unless otherwise specified, when part markings are included in the die design the

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supplier is responsible to include all numbers, symbols, and figures in the part marking.

3. ENGINEERING

New

10/5/2005

Revised 3/6/19

ENG1: (Receipt of Electronic Data) Electronic data supplied by Weber Metals to the supplier is proprietary and cannot be transferred to other parties without the written consent of Weber Metals, Inc.

Weber Metals uses a website for file transfers. It is secure, encrypted, and ITAR compliant. Supplier is required to use FTA for file transfer activities. This is required in order to protect ITAR controlled information. Contact the Supplier Quality Group for a training presentation.

New 10/5/2005

Revised 4/14/2021.

ENG2: (Digital Data Quality Plan) If digital data is supplied for an order (DPD models, etc.) to be used in the tool design, manufacture, or inspection of tooling and or product, the supplier shall comply with the requirements of WMQS-001.

4. HEAT TREAT

New 10/5/2005

Revised 1/19/15

HT3: (Chemical Milling) Unless otherwise specified, 6-4 titanium has a required chemical milling removal amount of 0.016 - 0.018 inches per face. 10-2-3 and 6-6-2 titanium have a required chemical milling removal amount of 0.014 - 0.016 inches per face. A witness pad to verify the removal amount is required on 10% of each Weber Metals Chem Load to ensure compliance. The tolerance for the measurement of a witness pad is (- 0.0, + 0.003") for the removal amounts specified. This tolerance does not broaden the chemical mill range specified and is only to cover variation in measurement from one forging to another.

New 5/30/14

Revised 3/5/19

HT4: (Heat Treatment Guidelines) The heat treatment shall be performed in accordance with the instructions noted on the purchase order/Delivery Note. If the supplier believes that the instructions are incorrect, discontinue work and contact Weber Metals Materials & Processes department or Supplier Quality Group to resolve the issue. Note: Fixed Operations work is to be conducted per fixed practices such as frozen HT plans.

New 5/30/14

HT5: (Beta Transus) The beta transus as provided by Weber Metals shall appear on supplier certifications.

New 2/28/17

Revised 4/14/2021.

HT6: (Heat Treat WMPS) Supplier is required to comply with relevant WMPS.

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5. MACHINING

New 8/21/14

Revised 4/14/21.

MACH8: Expectations of Machine Shop Inspections

A. New production

- All machine shops are required to perform a First Article Inspection (FAI), in accordance with AS9102, for all machined features on the first piece of the production lot at each machine center. The balance of the order must be 100% inspected for all machined features. Records of the inspections must be retained as well as delivered with the shipping documents to Weber Metals. This applies to the following:
 - First run of a particular forging or try-out forging number by a machine supplier.
 - Change in process or fixturing by a machine supplier (new process, new fixturing, computer program or new set-up of a fixture, die or jig on the machine).
- All subsequent orders must be 100% inspected until the FAI has been accepted.

B. Subsequent orders after FAI Accepted.

- 100% inspection must be conducted for the following features/parts. Inspection for each piece must be recorded on an AS9102 form 3 and records of the inspection must be returned to Weber Metals. No sampling inspection is allowed.
 - Critical or Key Characteristics (CC/KC) when CC/KC for machine features is specified on a drawing, machine plan, or purchase order.
 - Flight Safety and critical/major rotating/prime reliable parts (Example: Engine components: disk, rotors, hubs)
 - All machined features with a tolerance of +/- .005" or less
- The supplier may utilize a sampling plan and or statistical methods (SPC) on regular features as an alternative to 100% inspection under the below guidelines.
 - Data in support of 100% inspection, sampling plan and or SPC are to be made available to Weber Metals and its customers upon request. Application of sampling plans and or SPC methods does not invalidate the need to comply with AS9102 requirements.
 - Sampling Plan method: Contains a sample size to be used and the associated acceptance and rejection criteria.
 - All lot inspection plans must have first piece and last piece inspection.
 - The lot must be homogeneous and produced under essentially the same conditions and at the sametime. If not, the items shall be segregated and treated as a separate lot.
 - Sampling Plan of machine characteristics and acceptable quality level:
 - If any piece fails during the inspection, the entire lot is to be 100% inspected.
 - Non-conforming parts shall be segregated, identified as non-conforming, and submitted to Weber Metals as described in Q21.
 - Supplier can inspect more nor less of what is stated in the table below:

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Regular Machining Features	A	B	C
<i>Lot Size</i>	<i>First Piece</i>	<i>Mid Piece</i>	<i>Last Piece</i>
1-10	yes	none	yes
11-20	yes	number 10	yes
21-40	yes	number 10, 20	yes
41-60	yes	number 10, 20, 40	yes
61-100	yes	number 10, 40, 60, 80	yes

- Sampling requirements shall not be construed as permitting defective parts to be sold/delivered to Weber Metals Inc. and or its customers.
 - Sampling plan shall be suspended and replaced by 100% inspection when a previously produced product is found to be nonconforming.
 - The sampling plan can be re-initiated after an effective corrective action is demonstrated and approved by Weber Metals Inc., and the next FAI is acceptable.
 - The lot shall be rejected if a nonconformance is discovered in the sample and inspection of all pieces in the lot is required for out-of-tolerance dimensions.

C. All Sharp Edges resulting from machining forged surfaces are to be broken with a max chamfer or radius 0.3mm (0.012")

New 12/17/19

Revised 10/26/2020

MACH9: (PWA370 Quarterly Self-Audits) Supplier's machining and inspecting Pratt & Whitney forgings are required to conduct quarterly witness self-audits of the processes involved from PO review, receiving, traceability information, traveler operations, machine programs and control of changes, inspection operations and review of certification records per PWA 370 specification. These quarterly audits shall be available for Weber Metals or Pratt & Whitney review.

6. Quality

New 10/5/2005

Revised 1/19/15

Q2: (Mandatory Inspection Points - MIPS) Government inspection is required, prior to shipment, at Seller's facility. Prior to initiating any work on this order, contact Weber Metals' Quality Assurance Department to coordinate the schedule for in-process verification. Evidence of government inspection (DCMA representative signature) shall be shown on the shipping document. Government inspection of goods or services provided hereunder shall be performed at Seller's address shown on this contract or contract change unless a different address is specified.

New 10/5/2005

Revised 3/5/19

Q4: (Source Inspection) Source inspection is required in process and / or prior to shipment from your facility as deemed necessary by Weber Metals. Upon receipt of a Purchase Order / Delivery Note, which contains this clause, contact Weber Metals' Quality Assurance Department to schedule source inspection activity. A

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minimum of 24 hours' notice is required for any local source inspection activity. Any non-local or out-of-state source inspections require a one-week notice. (Local implies Los Angeles County, Orange County, and the Inland Empire.)

New 10/5/2005

Revised 11/11/16

Q5: (Raw material test reports and or certifications)

- A.** For each lot or heat of material supplied on this order, the seller shall furnish a certified material test report showing the material description, the material type or designation, alloy, type, grade or condition, the producer's name, the lot number, heat number, and the material specification(s) including revision number.
- B.** When the material specification requires quantitative limits for chemical, mechanical, or physical properties, the test report will contain the actual test and inspection values obtained.
- C.** For titanium, the charge make-up (scrap or sponge – for example, 100% scrap, or 80% sponge / 20% scrap) and source of sponge shall be identified.
- D.** The providers of extruded Aluminum material, the source of the ingot/billet material, shall be identified on the test report. Weber shall approve the ingot/billet suppliers prior to the extruded Aluminum supplier acquiring the ingot/billet material.

New 10/5/2005

Revised 6/19/2023

Q6: (Heat Treat Certification) With each shipment of forgings the seller shall furnish one copy of the actual time/temperature certifications for each heat-treated lot. Certifications must be clear and legible. Minimum heat treat data to be provided, but not limited to:

- 1) Time Forgings were Loaded.
- 2) Soak Start Time
- 3) Soak End Time
- 4) Total Quench Time
- 5) Quench Medium
- 6) Weight of Load
- 7) Heating Medium
- 8) Load Thermocouple Charts (When requested)
- 9) Quench Bath Temperature Before and After
- 10) Quench Delay

11) Racking Photo

- 12) Forging Serial numbers
- 13) Forging Number
- 14) Temper Received
- 15) Temper Returned
- 16) Packaging (Shipped on Ice or Fresh Quench)
- 17) Signed
- 18) Program
- 19) Program Approval
- 20) Load / Batch (if applicable)
- 21) As received heat treat condition (Ti is received in F condition unless otherwise stated on the PO)

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New 10/30/14

Revised 1/19/15

Q7: (First Article) The supplier is required to comply with AS9102 (current revision) requirements.

New 10/5/2005

Revised 6/14/2021

Q8: (Certificate of Conformance) Seller shall provide complete certification attesting to accurate completion of the procured materials or service in accordance with the description shown on the purchase order and Delivery Note. The Certificate of Conformance shall include, but is not limited to, the Forging number, Job number, Forging name, Weber Metals customer part number, Customer specific info (if available): Forging note, Drawing number, Program, Program customer, Alloy/Temper, Additional Documents, Applicable Specifications, and Flight Safety or Critical Program Planning, FSP/CC/Fixed/Frozen statements (If applicable), serialized Identification (if applicable), and the specific information pertaining to the applicable subcontract operation. Seller shall record the end item part number, drawing level and engineering changes to which the delivered item has been manufactured to on the packing slip. Certifications must be clear and legible.

New 10/5/2005

Revised 4/14/2021

Q9: (Nonconforming Material Control System) The supplier must have a system to identify and control non-conforming material in accordance with AS9100. The supplier is not allowed to use a disposition of "Use-As-Is".

New 10/5/2005

Revised 4/14/2021

Q10: (Quality Records)

- A.** Work performed for Weber Metals, Inc., as well as associated records shall be subjected to inspection, surveillance, test or audit by Weber Metals, Inc., its customers, and/or regulatory agencies at reasonable times.
- B.** Upon request by Weber Metals or its customers, records shall be made available within 2 business days.
- C.** Suppliers are required to retain records for a period of 10 years (commercial program) for non FSP/Critical Rotating and 50 years for FSP/Critical Rotating, or per prime customer/program requirements whichever is later, from the date product was shipped or services were performed.
 - a. Boeing FSP 50 years or the life of the program.
 - b. Sikorsky FSP 40 years or the life of the program
 - c. Pratt FSP/Critical Rotating 40 years or the life of the program.
- D.** Electronic imaging/microfilming of records in lieu of storing actual inspection records is permissible. All electronic records must be controlled, retained, and retrievable per the same requirements identified for hard copy records. For electronic records that are transferred from computer files, the storage media must be capable of maintaining the data integrity for the full retention period.
- E.** Examples of Quality Records to be retained are, but not limited to:
 - First article inspection reports
 - In process / final inspection & test records
 - Training records
 - Manufacturing / fabrication records (e.g., planning sheets, routers, etc.)
 - Nonconforming material disposition
 - Procurement documents (supplier placed orders)
 - Process control records (used as acceptance criteria)

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- Technique sheets and related acceptance reports
- Receiving inspection Records (e.g., test reports and material certifications, etc.)

F. Upon completion of the record retention period, suppliers may destroy the applicable documents.

New 10/5/2005

Revised 3/5/19

Q11: (Right of Entry) Seller shall allow Weber Metals Inc., its customers, and/or regulatory agencies the right of entry to review or verify work performed on Weber Metals purchase orders / Delivery Note.

New 10/5/2005

Revised 1/25/17

Q13: (Special Processors/Nadcap) Approval is required for all special processes (heat treaters, NDT, Chem, Pre-Etch PT, and destructive testing labs). Any subcontracting or work off-loading by special processors must both be approved by Weber Metals and be a Nadcap certified source.

Nadcap Measurement and Inspection: It is recommended that suppliers recognize the Nadcap M&I and comply to the Nadcap M&I audit checklist criteria. This applies to suppliers providing final dimensional inspection using CMM and or portable inspection equipment.

New 10/5/2005

Revised 4/14/2021

Q14: (Quality System) Supplier shall have a Quality System that is certified to AS9100 or ISO 9001 unless alternate approvals are granted by Weber Metals through QP 8.4 F001-S or QP 8.4 F001-L. Metal distributors shall be certified to AS9100 or AS9120. Special Process and calibration suppliers shall meet the required certifications for their process.

New 10/5/2005

Revised 4/14/2021

Q15: (Revisions) For any listed specification, supplier is to use the revision noted on the purchase order/delivery note.

New 10/5/2005

Revised 9/06/16

Q16: (Approval Status) Prior to performing any work, the supplier shall verify if approvals are required from the prime contractor. The Supplier shall notify Weber Metals immediately if supplier does not hold the required approvals and do not perform any work. The supplier shall verify the Prime portals for proper approvals including specific references to processing specifications. (e.g., Boeing D1-4426, Sikorsky SS7777, Lockheed Martin QCS-001, etc.).

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New 5/30/14

Revised 3/6/19

Q17: (Notification) All suppliers are required to inform Weber Metals, within the indicated timeframe, if there is:

A change in management and/or quality management process <ul style="list-style-type: none"> • Ownership/Senior Management/NDT L3/QA/Materials & Processes • Major audit findings related to ISO9001/AS9100/Nadcap/other 3rd party registrations. • Poor Quality and Delivery performance • QMS- processes or procedures that are known to affect or could potentially affect conformity to product. • Counterfeit material/parts • Bankruptcy, Fire, floods, Environmental restrictions. 	48 hours
A change in manufacturing location	48 hours
Suspected nonconforming product that has been shipped to Weber Metals	24 hours
A process change: The change must be submitted for approval before instituting the change (That could affect form, fit or function of the forgings).	-----
Any change in their approval status from Aerospace prime contractors, NADCAP, or to their certification status for ISO-9001, AS-9100, A2LA, etc. <ul style="list-style-type: none"> • Changes in registration/accreditation (suspensions, withdrawn, scope of accreditation) 	48 hours
The supplier will notify Weber Metals, Inc. within 48 hours or 2 business days of any changes affecting the integrity of the digital data system to the documented digital data plan, major changes to CAD/CAM/CAI/CNC software or measurement equipment.	48 hours

New 5/30/14

Revised 1/19/15

Q18: (Counterfeit Materials Prevention Program) In order to preclude the introduction of counterfeit materials, all suppliers are required to implement and maintain a Counterfeit Materials Prevention Program. Refer to AS 6174 for guidelines on counterfeit materials prevention.

- A. Unauthorized Material Substitution (General) - Unauthorized material substitutions are not permitted on Buyer's Goods. Unauthorized material substitution includes any deviation from the engineering definition of a raw material. Engineering definition includes Buyer design drawing and applicable specifications, product specification, form, size, shape, chemistry, melt method, origin, temper/condition, product testing or surface finish. Alternate materials specified in the engineering definition (and often described as approved material substitutions therein) do not constitute unauthorized material substitution.
- B. Temper or Condition Conversion - Unless specifically authorized by the engineering definition, conversion of a raw material (i.e., heat treat to change the temper or condition of the material) constitutes material substitution of the condition provided by the manufacturer.
- C. Specification Supersession - For government specifications and standards canceled after June 1994, Seller and subcontractors at all tiers shall use the last active revision of the canceled specification and standard until an acceptable replacement is included in the requirements of this Contract. Contact the Buyer's Authorized Procurement Representative in the event of any inconsistency in applicable specification or standard.

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- D. Reports (Full Pedigree from melt to final product) - Raw material certifications shall show clear traceability to the manufacturer(s) of the raw material including ingot source, all thermo-mechanical processing (i.e., forging, rolling, drawing, etc.), heat treatment, chemical processing, and inspections as required by applicable raw material specification requirements.
- E. Chain of Custody (Disguising intermediate ownership) – Suppliers shall not disguise the pedigree of material or chain of ownership by removal of a previous supplier’s name, nomenclature, or identification.
- F. The substance of this clause shall be flowed in all subcontracts at every tier.

New 5/30/14

Revised 3/5/19

Q19: (Eye Exams) All suppliers that perform calibration, in-process inspection, NDT, or inspection services must have on file evidence that personnel have received an acceptable annual eye exam by a qualified medical professional (Ref. Snellen 14/18, (20/25), Jaeger 2 at not less than 12 inches, NAS 410). A review of the results shall be conducted by the supplier as part of the procurement process. Per ISO and AS9100 section 8.4. Any restrictions shall be resolved with their employees.

New 5/30/14

Revised 3/5/19

Q20: (Traceability) The supplier is required to maintain traceability of all products in their possession and through their production processes. Traceability is required between the Purchase order/Delivery Note, job number, serial numbers, part number, piece count, etc.

Machine shops must have a system in place to maintain and transfer all serial numbers and traceability markings.

Identification shall be performed using those same methods and materials identified within the applicable part mark specifications referenced on the associated Models/prints/drawings.

- ✓ Verify marking requirements.
- ✓ No-stress steel stamps shall be used to mark the forgings.
- ✓ Vibro engrave shall meet PO and or drawing requirements.
- ✓ Depth requirements shall be verified prior to marking.

Contact supplierqualitygroup@webermetals.com if any discrepancy is found. All identifications are to be legible.

New 12/17/14

Revised 3/5/19

Q21: (Nonconforming Material Submittals) When a supplier has not produced a product or service in conformance with contractual requirements or has detected a product or service that is not in conformance, the supplier is required to submit the nonconformance for concession to Weber Metals. The submittal will be reviewed and dispositioned by Weber Metals’ Material Review Board. The supplier is not allowed to ship to or alter the product until the supplier receives a disposition from the Weber Metals’ Review Board. Supplier should use of supplier deviation form unless they have their own form.

The supplier is to contact Weber Metals by using the email address vendorNCR@Webermetals.com with the following information:

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- 1) Forging #, job #, Purchase order/Delivery note information, Company name, forging #, job #, PO/Delivery Note #, brief description of nonconformance, direct contact information of person managing the NC (Phone # and email address).

Note:

The PO the job number is the “assignment.”

The Delivery Note the job number is the “production order.”

- 2) Attachments (photos, sketch of problem) to be included as necessary (highly recommended).

Raw Material & Tooling Suppliers

The supplier is to contact Weber Metals by using the email address vendorNCR@Webermetals.com and or with the following information:

- 1) Email subject line: Purchase Order #, Company Name,
- 2) Body of email: Company name, Purchase Order number, Material Code / Identification, Vendorjob/lot number, brief description of nonconformance, direct contact information of person managing the NC (Phone # and email address).
- 3) Attachments (photos, sketch of problem) to be included as necessary (highly recommended).

Weber can provide the supplier deviation form **QWI 8.7-3 F001 Supplier Deviation Submittal Form & QWI 8.7-3F002 Supplier Deviation Submitted Form: Raw Material/Tooling Services** for raw material (Aluminum & Titanium) suppliers or supplier can submit their own form. See the sample attachments at the end of the document.

Non-conforming product must be clearly tagged and identified when returned to Weber Metals. The supplier is not authorized to ship the product to Weber Metals unless explicit written direction has been provided by Weber Metals.

New 5/30/14

Revised 10/26/20

Q23: (Subcontracting/Work transfer) All suppliers must have written approval from Weber Metals Materials & Processes and Quality Department before subcontracting, transferring, or off-loading any work received from Weber Metals. Relevant quality clauses and documents shall be flowed down to any subcontractor.

New 5/30/14

Revised 3/5/19

Q24: (FOD) Supplier shall maintain an FOD (Foreign Object Debris / Damage) prevention program. Refer to NAS 412 and AS9146 for guidance.

Specific attention should be given, where applicable, to items such as:

- Housekeeping and cleanliness
- Food and beverage control
- Tool and small part accountability
- Loose objects
- Material handling and parts protection
- External cleaning following evidence of external contamination

The supplier shall ensure that Foreign Objects and subsequent Foreign Object Damage (FOD) are eliminated from all parts prior to shipment. All suppliers must maintain a FOD free environment during machining,

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manufacturing, assembly, maintenance, inspection, storage, packaging, and shipping.

- Potential FOD includes but is not limited to burrs, chips, dirt, corrosion, and contamination resulting from manufacturing, assembly, maintenance, processing, cleaning, storage, and subsequent packaging of parts
- Suppliers must ensure all passageways – are clear of chips, core material, dirt, breakout of cast walls, etc.
- Suppliers must ensure all parts are clear and FOD free prior to shipment.

Supplier is to verify cutting tools when broken that any material is not embedded in our forgings, this includes Titanium forgings. Forgings are to be returned free of chips and FOD.

Supplier shall ensure that the responsibility for the FOD prevention program is clearly defined, and appropriate personnel have received FOD awareness training.

Suppliers are responsible for flow down of these requirements to their sub-tier suppliers to ensure FOD free products. Weber Metals can provide a training power point presentation, contact the Supplier Quality Group.

New 5/30/14

Revised 1/26/17

Q25: (Conformance) The supplier is responsible to produce conforming parts, services, or raw materials. The material is to be manufactured and inspected in accordance with all applicable drawing revisions and/or specifications/standards, including functional testing requirements.

New 5/30/14

Q26: (Calibration) Calibrations must be performed, at a minimum, in accordance with ISO 10012, ISO 17025 or ANSI/NCSL Z540.3. All measurement and test standards must be NIST traceable. The seller shall provide qualified personnel and equipment to conduct calibration.

New 5/30/14

Revised 1/26/2017

Q27: (Commingling) The supplier is not allowed to commingle forging parts/tooling from different jobs when returning forgings/tooling to Weber Metals. Each job must be separated, labeled, & identified clearly.

New 8/21/14

Revised 1/26/2017

Q28: (On-Site First Article Review) The supplier could be required to successfully pass an on-site verification of its First Article part as well as an audit of applicable production part process/systems including processes and systems designed to ensure serialization and traceability for critical parts as applicable.

New 8/21/14

Revised 3/5/19

Q29: (Flight Safety or Critical Parts (Product Safety)) is applicable when the purchase order/Delivery Note contains requirements for Flight Safety or critical parts. Prior to commencement of work, Seller will assure that its Flight Safety Program Plan (which it shall include re-occurring training of personnel involved with the FSP) and Production Planning Packages, as approved by the Prime Customer and or Weber Metals, are in accordance with the requirements of the purchase order. The Seller is not allowed to deviate from the approved Production Plan; including changes to sub-contractors who produce key characteristics. Approval of the Supplier's Flight

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Safety Program and Production Plan does not waive the Supplier’s obligation to supply parts that meet drawing or specification requirements. Supplier must certify that all Flight Safety Parts conform to its approved Production Plan Packages. The Supplier shall provide and maintain a system of traceability from raw material to purchase order end item. Contact Weber Metals for a training presentation.

Note: Raw material (Casting, Billet, Ingot, outside conversion) suppliers:

the FSP is for awareness only (this applies when the raw material PO does not specify that it would be used for a specific FSP program). Traceability and changes to frozen plan requirements are applicable.

Note: Fixed Operations work is to be conducted per fixed practices such as frozen HT plans, Machine plans, or NDT inspection plans.

New 1/19/15

Q31: (Key Characteristics) When Key Characteristics are specified on the drawing or purchase contract, the Seller shall utilize 100% inspection for these characteristics or employ control per SAE AS9103 (preapproval is required from Weber Metals) – Variation Management of Key Characteristics. Data in support of either 100% inspection or control per AS9103 are to be made available to Weber Metals and its customers upon request. Application of AS9103 does not invalidate the need to establish and document compliance with all requirements for First Article Inspection per AS9102.

New 1/19/15

Revised 10/26/20

Q32: (Corrective Action) Supplier shall provide Weber Metals with documented Root Cause and Corrective Action (RCCA) for any/all supplier corrective action requests initiated by Weber Metals Supplier Quality Group and or procurement representatives. Supplier may be required to provide RCCA if the supplier delivers non-conforming material, does not meet On Time Delivery KPI (≥85%), does not meet Quality KPI (≥80%) or any other issue deemed suitable by Quality Management. Supplier shall respond using the appropriate Weber Metals Supplier Corrective Action Response Form (QP8.4 F008) (see attachment at the end of document) as supplied by Weber Metals and/or any applicable Weber Metals Customer response forms. Failure to provide timely and comprehensive corrective/preventive action responses in a timely manner may result in negative impact to the supplier’s Weber Metals Supplier Performance Indicator rating.

New 5/30/14

Revised 3/5/19

Q33: (Supplier Quality System Requirements) The Seller is responsible for implementing the Quality Assurance Requirements defined by each prime/customer in the performance of this purchase agreement. the QA clauses cover the topics listed in the QMS defined by our prime/customer manufactures (See a list of several prime/customer QMS specifications). By complying with our QA clauses, the supplier also complies with the QMS specs listed below.

The supplier shall be aware and is also and responsible for implementing the requirements of AS9100 (latest revision).

Awareness- Suppliers are required to assure their entire workforce is aware of an individual’s contribution to the product or service conformity. This extends to product safety and ethical behavior.

(Code of Ethics) Supplier shall comply with the highest standards of Ethics and Business conduct as stated in our

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Code of Ethics program. Supplier shall also comply and implement our Quality Cardinal Rules to everyone involved with the processing/manufacturing of our forgings. Contact Weber Metals for an Ethics and Quality Cardinal Rules training presentations.

Prime Airframe Manufacturer	Supplier Quality Assurance Specification Examples: Supplier is to verify the current naming and rev level.
Boeing Commercial Airplanes	D6-82479
United Technologies Corporation (UTC) (Includes Pratt & Whitney, and Hamilton Sundstrand)	ASQR-01 UTC Quality Cardinal Rules UTC Code of Ethics
Sikorsky	SSQR-01 Main text
Collins -Rockwell (UTAS Formerly Goodrich LG/WB)	ASQR-01
Embraer	Embraer Quality Requirements for Suppliers
GKN	GKN Supplier Quality Assurance Manual
Honeywell	Honeywell SPOC Manual
Gulfstream	SQAR-001
Lockheed	Appendix QX
Bell Helicopter	SQRM-001

New 7/14/16

Q34: (Flight Safety Program Awareness): Suppliers are advised that their product may be used in forgings with Flight Safety applications. The Supplier shall provide and maintain a system of product traceability to ensure FSP requirements can be met.

New 7/14/16

Revised 3/5/19

Q35: (Design Authority Data) Authority data is identified in the Forging and Specifications sections in the Purchase contract or Delivery Note. Work is to be certified only to this authority. Dimensional or process deviations may only be certified if specifically allowed by an additional document referenced in those sections of the Delivery Note document.

Processing or certification to informal deviations, verbal, or e-mail instructions is prohibited.

New 1/23/17

Q36: (Corrections) Corrections to work instructions or documents shall be recorded, dated, and traceable to the person making the change (e.g., signature, stamp, initials) in ink or other permanent marking method with the original data being legible and retrievable after the change. This includes corrections made to in-process paperwork & inspection data.

New 1/23/17

Q37: (Language) Unless otherwise specified, all written communication, documents, and records shall be in English.

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New 1/23/17**Q38:** (Measuring & Monitoring Equipment)

- A.** Measuring equipment should have resolution of 10:1 for the feature being measured, i.e., a tolerance of 0.001" should be measured with an instrument with resolution of 0.0001". Ratios as low as 4:1 may be acceptable but require documented approval from Weber Metals Supplier Quality.
- B.** Measuring equipment shall be capable of measuring the tolerance features.
- C.** A list of calibrated tools shall be maintained and shall list the accuracy/discrimination needed (Gage R&R is the best method) to help the inspector/operator select the correct measuring instrument based on the tolerance range.
- D.** Measuring equipment used for product acceptance or process control impacting product quality (such as furnace thermocouples) shall be calibrated per the requirements of Weber Metals Quality Clause Q26.
- E.** Measuring Equipment includes, but is not limited to:
 - Dimensional inspection tools, including hand tools.
 - Temperature measuring / monitoring equipment
 - Mechanical testing equipment

New 2/16/17

Q39: (Informal request/ Verbal order) **Processing or certification to informal request, verbal orders, informal purchase request, or e-mail instructions is prohibited.**

New 3/29/21

Q40: (Delegated Inspection Authority) In the case that a supplier dropship completed services to another supplier of Weber Metals, the initial supplier must have delegated inspection authority approved by Weber Metals. This authority grants the supplier liability to verify conformance of services prior to shipping goods to the next supplier. It is the responsibility of the supplier to verify that they have delegated inspection authority on the Weber Metals key supplier list.

New 6/14/2021

Q41: (Calibration Certification) With each completion of calibration services, the seller shall provide a certification certifying the completion of the work. Certifications must be clear and legible. Minimum provided data on the certification includes but is not limited to:

1. The "as found" and "as left" conditions, including measurement data.
2. Type, model, and serial number for the calibrated instrument
3. Date of calibration
4. Reference standard used for calibration.
5. Uncertainty and Accuracy information
6. All available data to support the M&TE measurement reliability.
7. Purchase order number
8. Next calibration due date

8. SHIPPING & MATERIAL HANDLING/PRESERVATIONS/STORAGE**New 10/5/2005****Revised 3/5/19.**

SMH1: (Preservation) All Weber Metals' product must be protected from damage and environmental degradation. See PO/Delivery Note and purchase order notes for required packaging and preservation requirements.

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New 9/06/16

SMH3: (Oil preservation- Extruded Aluminum Stock) All Weber Metals extruded stock must be oil protected. California suppliers use oil compliant to rule 1144 per SCAQMD. (Use Protecsool 427 or equivalent). Out of State suppliers use oil compliant to your local regulations and MIL-PRF-16173 Grade3 (latest revision)-Use LPS3, Protecsool 512, or equivalent. Oil application methods: Spray, dip, or brush.

New 9/06/16

SMH4: (Oil preservation- Cast Aluminum Ingot Stock) – Diameters 11.2 and smaller must be oil protected. California suppliers use oil compliant to rule 1144 per SCAQMD. (Use Protecsool 427 or equivalent). Out of State suppliers use oil compliant to your local regulations and MIL-PRF-16173 Grade 3 latest revision (Use LPS3, Protecsool 512, or equivalent). Oil application methods: Spray, dip, or brush.

New 6/7/2016

SMH5: (Oil preservation of WIP Forgings) – Weber Metals products must be oil protected. California suppliers use oil compliant to rule 1144 per SCAQMD. (Use Protecsool 427 or equivalent). Out of State suppliers use oil compliant to your local regulations and MIL-PRF-16173 Grade 3 latest revision (Use LPS3, Protecsool 512, or equivalent). Oil application methods: Spray, dip, or brush. See PO/Delivery Note and purchase order notes for required packaging and preservation requirements.

9. TESTING

New 10/5/2005

Revised 3/13/18

TEST3: (Test Records) Identify all paperwork and metallography, including photographs, with forging number, job number (PO job number is now the “assignment” in SAP and “production order” in Delivery note), PO/Delivery Note number, serial numbers, drawing revisions, and all applicable specifications. For titanium include heat number and heat treat lot number. Records must be clear and legible.

New 5/30/14

TEST4: (Test Remnants) Aluminum Stress Corrosion Cracking remnants to be maintained by the vendor for a minimum of six months and should be available for review by WM Materials & Processes, upon request.

New 5/30/14

TEST5: (Remnant Identification) All test remnants shall be indelibly marked with lab number, job number, and orientation / location. All remnants, macro slices, broken bars, mounts, and chemical analysis samples shall be returned to Weber Metals within 48 hours of testing completion.

New 5/30/14

TEST6: (Hydrogen Test) For titanium testing, the hydrogen shall be tested first; all other tests to be conducted after acceptable hydrogen analysis.

New 5/30/14

TEST7: (Testing Sequence) If both tensile and fracture toughness testing is required, perform the tensile testing prior to fracture toughness testing. If only the toughness test has been subcontracted, the applicable yield strength will be supplied by Weber Metals Test Laboratory personnel.

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New 5/30/14

TEST8: (Testing Failure) If a failure occurs in any test on a given Weber Metals Job, immediately discontinue all testing from the same Job and contact Weber Metals Materials & Processes for further instructions.

10. RAW MATERIAL**New 5/30/14**

RM1: (Material Certifications) Certifications for all material shall be sent material@webermetals.com for all material.

New 5/30/14**Revises 1/19/15**

RM2: (Material Length) Weber Metals requires the shipping length of material to be listed on all mill certificate paperwork.

New 5/30/14**Revised 3/16/18**

RM3: (Raw Material Specification) Weber Metals' Material Specification (WMMS) applies to this order. Contact Weber Metals' Purchasing buyer Amy Koga at amykoga@webermetals.com for latest revision of these documents.

11. MISCELLANEOUS**New 3/16/2018**

MISC4: (Environmental and Safety rules) Weber Metals Inc. and our customer require all suppliers to follow environmental and safety rules and regulations.

New 3/16/2018

MISC5: (Material contamination and prohibited materials/chemicals) Weber metals Inc. and our customer require from our raw material suppliers that the titanium and other alloys are to be free of any radiation, and mercury. Supplier shall comply with Reach requirements.

New 6/8/2018

MISC6: (Acceptance Authority Media –AAM) The supplier shall comply with the AS9100 requirements and 14CFR part 21.1 regarding the application of the AAM and ensure that the use of AAM is clearly defined within its QMS. The supplier shall maintain compliance to the AAM by assessing its process as part of its internal audit process. The areas of focus shall include but not limited to:

- Application errors (i.e., Omission, typos, legibility)
- Misrepresentation (i.e., Uncertified personnel, falsification of documentation, work not performed asplanned).
- Training deficiencies (i.e., Ethics, code of conduct, culture awareness, proper use of electronic or stamp buy-off).
- 14CFR part 21.1- falsification of reports or records, fraudulent false statements, false or altered certifications,
- Stamp Control/electronic buyoff (password/signatures/initials) Log with re-occurring verification.

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New 8/26/2022

MISC7: (Chem Mill Work Instruction) When performing Chem Milling the supplier shall comply with the latest revision of QWI 8.5-76 Appendix A. Please reach out to your Weber Metals Representative if this document is not on file.

New 8/26/2022

MISC8: (Sikorsky End Use) Product designated for "Sikorsky End Use" per the purchase order shall comply with the latest revision of SSQR-01. In addition, if it is designated a Sikorsky "Flight Safety Part" per the purchase order, then it shall comply with the latest revision of SS9211.

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Q Clause	Chem Mill	RM Ti	Sandblast	Testing	RM - Al Extruded Stock	RM - Cast Al Ingot	Calibration Services	NDT Level 3 Services	Coating	Die Sinking	Forge- Includes: Conversion/ Tooling	Heat Treat	Dimensional Inspection Service	Machining	Macro etch	NDT
DS1										X						
DS2										X						
ENG1**	X			X				X	X	X	X	X	X	X	X	X
ENG2										X			X	X		
ENG3				X									X	X		
HT3	X															
HT4												X				
HT5												X				
HT6												X				
MACH3										X*						
MACH8														X		
MACH9														X		
MISC4	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
MISC5		X			X	X										
MISC6	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
MISC7	X															
MISC8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Q2				X*							X*	X*		X*		X*
Q4	X		X*						X*		X*	X*	X*	X*	X*	X*
Q5		X			X	X										
Q6												X				
Q7										X*			X	X		
Q8	X		X*	X			X		X	X	X	X	X	X	X	X
Q9	X	X	X	X	X	X			X	X	X	X	X	X	X	X

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Q10	x	x	x*	x	x	x	x		x	x	x	x	x*	x	x	x
Q11	x	x	x	x	x	x			x	x	x	x	x	x	x	x
Q13	x*			x					x			x	x*		x	x
Q14	x	x	x	x	x	x	x*	x*	x	x	x	x	x	x	x	x
Q15	x		x	x			x		x	x	x	x	x	x	x	x
Q16	x*		x*	x				x	x		x*	x	x*	x*	x	x
Q17	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Q18	x	x	x	x	x	x			x		x	x	x	x	x	x
Q19		x*		x	x	x	x	x					x	x	x	x
Q20	x		x	x					x		x	x	x	x	x	x
Q21	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Q23	x	x	x	x	x	x			x	x	x	x	x	x	x	x
Q24	x	x	x		x	x			x	x	x	x	x	x	x	x
Q25	x	x	x	x	x	x			x	x	x	x	x	x	x	x
Q26	x	x*		x	x*	x*	x		x	x	x	x	x	x	x	x
Q27	x		x	x*					x		x	x	x	x	x	x
Q28											x*			x*		
Q29				x								x		x*	x	x
Q31				x*					x*		x	x	x	x*	x*	x
Q32	x	x	x	x	x	x			x	x	x	x	x	x	x	x
Q33	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Q34	x	x	x		x	x		x	x		x		x			
Q35	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Q36	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Q37	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Q38	x*	x*		x*	x*	x*			x*	x*		x*	x*	x*	x*	x*
Q39	x	x	x	x	x	x			x	x	x	x	x	x	x	x

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Q Clause	Chem Mill	RM Ti	Sandblast	Testing	RM - Al Extruded Stock	RM - Cast Al Ingot	Calibration Services	NDT Level 3 Services	Coating	Die Sinking	Forge-Includes: Conversion/Tooling	Heat Treat	Dimensional Inspection Service	Machining	Macro etch	NDT
Q40	x															
Q40			x*									x*				
Q41							x									
RM1		x			x	x										
RM2		x			x	x										
RM3		x			x	x										
SMH1	x	x	x*	x	x	x			x	x	x	x	x	x*	x	x
SMH3					x											
SMH4						x*										
SMH5														x		x*
STAN6	x	x	x	x*	x*	x			x	x	x	x		x	x	x
TEST3				x												
TEST4				x												
TEST5				x												
TEST6				x												
TEST7				x												
TEST8				x												

The above tables summarize the applicable clauses by process or service being procured.

*As applicable

**Includes ITAR controlled data

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Revision History Log

Rev	Date	Revision
New	5/30/14	Contact supplierqualitygroup@webermetals.com for detailed revision history
A	8/1/14	Contact supplierqualitygroup@webermetals.com for detailed revision history
B	8/21/14	Contact supplierqualitygroup@webermetals.com for detailed revision history
C	1/19/15	Contact supplierqualitygroup@webermetals.com for detailed revision history
D	9/6/16	Contact supplierqualitygroup@webermetals.com for detailed revision history
E	1/23/17	Contact supplierqualitygroup@webermetals.com for detailed revision history
F	3/16/18	Contact supplierqualitygroup@webermetals.com for detailed revision history
G	2/7/2019	Contact supplierqualitygroup@webermetals.com for detailed revision history
H	2/26/2019	Contact supplierqualitygroup@webermetals.com for detailed revision history
Transition to QP 8.4 F002 from QP 7.4 F005		
New	3/5/2019	Contact supplierqualitygroup@webermetals.com for detailed revision history
A	12/17/2019	Contact supplierqualitygroup@webermetals.com for detailed revision history
B	8/5/2020	Added "preferred" for quality clauses review form
C	10/26/2020	<p>MACH9: Removed requirement to submit quarterly audits to Weber Metals.</p> <p>Forms and Quality Clauses Matrix replaced "QWI 8.3-4 F001 Supplier Deviation Form for WIP, HT, NDT, Coating, Machining" with "QWI 8.7-3 F001 Supplier Deviation Submittal Form" Replaced "QWI 8.3-4 F002 Supplier Deviation form for Raw material Aluminum, Titanium billet/ingot, tooling" with "QWI 8.7-3F002 Supplier Deviation Submitted Form: Raw Material/Tooling Services"</p> <p>Raw Material & Tooling Suppliers Replaced "QWI-8.3-4 F001 and F002" with "QWI 8.7-3 F001 Supplier Deviation Submittal Form & QWI 8.7-3 F002 Supplier Deviation Submitted Form: Raw Material/Tooling Services"</p> <p>Q23 -Added "and documents" after "Relevant quality clauses "</p> <p>Q32 - Added "Supplier can be required to provide Corrective Action/Preventive action if the supplier delivers non-conforming material, does not meet On Time Delivery KPI (≥85%), does not meet Quality KPI (≥80%) or any other issue deemed suitable by Quality Management "</p> <p>Supplier Deviation Submittal Forms Replaced QWI-8.3-4 F001 with QWI 8.7-3 F001 and QWI-8.3-4 F002 with QWI 8.7-3 F002</p>
D	4/14/2021	<p>Added "...or referenced forms."</p> <p>Replaced "The supplier is required to review relevant clauses. It is preferred that the supplier submit the review form to the email above. The form is QP 8.4 F006. See attachment at the end of this document." with "The supplier is required to review and comply with relevant clauses. A request for exception to specific clauses can be made using QP 8.4 F006."</p> <p>Rewrote and clarified MACH8.</p> <p>Q10 - Added section F "Upon completion of the record retention period, suppliers may destroy the applicable documents." Added Q40. Table 1: Added Q40</p>

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		<p>Table 5: Added Q40 Table 11: Added Q40 Deleted "Quick Reference of Quality Clauses by Supplier Type" table Deleted examples of QP 8.4 F006, QWI 8.7-3 F001, QWI 8.7-3 F002 Deleted: "www.webermetals.com can be used to download supplier documents. Ref. Supplier portal." since this information is flowed down through all purchase orders. Standardized References and Definitions Revised ENG2 to reference WMQS-001 only Deleted ENG3 since it is covered in ENG2. Deleted Obsolete Clauses Deleted Index Deleted MACH2. Deleted MACH3. Deleted MACH7. HT6 – Clarified. Deleted Supplier Aids for Training Revised Q9 to delete "The supplier's disposition authority of nonconformances is limited to 'rework to specification' without affecting fit, form, or function. See Q21 for notification process." Q14 – Revised to remove: Contact supplierqualitygroup@webermetals.com for the form. The evaluation is done for new suppliers and then again after for re-certification of suppliers at specified time intervals. QP15 – Deleted "If there is any conflict, contact the Supplier Quality Group and the Purchasing team." Deleted "Clause Application Guide" Added "Contact supplierqualitygroup@webermetals.com for detailed revision history" to all revision history before 2020</p>
E	Q6	Added item 20
	Q8	Added "Weber Metals customer part number"
	Q41	New
	Table 15	Added Q41
F	Table 1	Table 1 -16 was consolidated to table 1
	Table 1	Added MISC7 to "Chem mill"
	Section 11	Added MISC7 and MISC8
G	All	Replaced "Metallurgy" and "Product Metallurgy" with "Materials & Processes"
	Q6	Added item 21) As Received Heat Treat Condition
	Table 1	Separated table 1 into 3 parts Added Q21 to all vendors