

# Wyman Gordon Pennsylvania, LLC

## Purchase Order Addendum

### Quality Standard Remarks, Terms & Provisions

The following Standard Remarks and Quality Terms & Provisions form an integral part of the Wyman Gordon Pennsylvania, LLC purchase order for material procurement, machining and special processing. Supplier shall request written authorization for any conflicts between the requirements set forth in this purchase order and current industry standards or prime customer revision indices prior to performing work on Wyman Gordon Pennsylvania property.

1. **Definitions:** "Buyer" means Wyman Gordon Pennsylvania. "Seller" means the business entity to which this purchase order is addressed, including Seller's principal if Seller is acting as a broker or agent. "Order" means this purchase order, including all terms and conditions on the face and reverse side and all specifications, quality requirements and drawings referenced herein or issued hereunder. "Goods" means those parts, articles, materials, drawings, data, or other property or services that are the subject of this Order.
2. **Melt/Billet/Forging Stock requirements:** Unless otherwise specified billet used to produce preform forgings and flash welded ring stock is to be sonic inspected for soundness at an intermediate stage and macro cleared for any indication of melt imperfections. Certifications are to reflect that this has been accomplished and material found sound.
3. **Certificate of Test Requirements:** The following certification requirements are required for all Wyman Gordon Pennsylvania, LLC orders.
  - a. The original signed copy of the certified mechanical and chemical tests results is to be retained at your facility to be available as needed for review by Wyman Gordon Pennsylvania LLC, its customers, or regulatory agencies;
  - b. A copy of the certificate of test is to be forwarded each shipment showing the actual melt methods used, the heat-treat condition, time, temperature and cooling rates used for condition of supply and for any capability tests performed. The certificate shall indicate the quantity represented in the shipment; c. Full specification chemistry is required on each heat of material shipped.
4. **Heat Utilization-Bars and Rings:**
  - a. **Seamless Rings:** are to be furnished from full heat quantities. If multiple heats are required, Buyer will require one (1) additional full ring free of charge per heat for test purposes. Failure to furnish the additional full ring per heat will result in Seller assuming liability for all additional test and/or product destruction costs incurred as a result of multiple heat(s);
  - b. **Long Bars:** when "Long Bars" are ordered; each delivery requirement requires 2 long bars. Deliveries are to be furnished from full heat quantities. If multiple heats are required, Buyer will require one (1) additional long bar from each additional heat supplied. This bar is to be considered part of the delivery requirement and not an addition to the required quantity. Failure to furnish the additional long bar per heat will result in Seller assuming liability for all additional test and/or product destruction costs (includes cost of regular length bar) incurred for testing as a result of multiple heat(s).
5. **End User Requirements:** An end-use customer requirement is specified on the purchase order. Applicable specifications shown on the Purchase Order are to be incorporated in the Order. The latest customer and SAE specification revision index shall be in effect at the time of purchase order placement.
6. **Dimensions/Drawing Requirements:** Any non-conformance to specified dimensional or drawing requirements requires written approval from the Buyer prior to shipment. Parts not meeting all requirements may not be shipped unless authorized in writing by the Buyer's QA or Engineering Departments. Such acceptance is to be stated on the certification for metallurgical deviations and on the packing slips for dimensional deviations. Approved deviant material is to be bundled separately for shipment and identified as such. Bar lengths on Purchase order supersede lengths called out on the drawings.
7. **Heat Traceability:**
  - a. **Bars:** To provide the required traceability, all bars are to be individually identified with a heat code or heat number traceable to the original melt. The Wyman Gordon Pennsylvania LLC Purchase Order number is to appear on each bundle of shipped bars.
  - b. **Seamless Rings:** Each ring is to be paint or ink stamped with the heat number or code traceable back to the original melt. Metal stamping is prohibited. The Wyman Gordon Pennsylvania LLC Purchase Order number is to appear on each bundle of shipped rings.
8. **Subcontracting:**
  - a. Any work subcontracted as a result of a Wyman Gordon Pennsylvania LLC Engine Purchase order shall have the appropriate end use and controlling quality specifications flowed down to the subcontractor and any key characteristics identified in the SAC PO. SAC purchasing is to be notified of any subcontracting.
  - b. **Verification of Subcontracted Product:** Buyer's customer, regulatory agency or representative shall be afforded the right to verify at the subcontractor's and seller's premises that the subcontracted product conforms to specified requirements. Verification is not evidence of effective subcontractor Quality Control and does not release the Seller from subsequent inspections and possible rejection.
9. **Test Pieces-Bar Orders Only:** One (1) twelve (12) inch test piece per heat is required with each shipment.
10. **Hardness Testing:**
  - a. As bars will be bent, surface ductility is critical for the intended use as stock for flash welded rings.
  - b. Hardness testing is required on all production runs of bars in the as shipped condition per AMS2371 and ASTM E10. A minimum of (2) bars or representative samples, per heat treat load are to be hardness tested to verify they meet the as shipped hardness requirement per the Wyman Gordon Purchase Order.
  - c. For Waspaloy and Rene 41' alloy bars: the surface hardness is to be tested and reported in the "as shipped" condition at least 12" in from the ends of the (2) bars after all straightening work has been completed.
  - d. Center hardness may be tested on slices from bar ends. Center hardness need not be taken if surface hardness of these alloys conforms to the purchase order requirements for maximum hardness.
  - e. Surface hardness in excess of stated maximum due to work hardening during straightening may be shipped above maximum as noted below. Hardness Specified:
    - 331 HBW Max-Surface hardness may go to 352 HBW max
    - 363 HBW Max-Surface hardness may go to 385 HBW max
11. **Additional Quality Terms & Provisions:**
  - a. Supplier shall have an AS9100 accredited quality management system or equivalent or completed the Wyman Gordon Self-Assessment survey.
  - b. Latest customer specification and SAE revision index shall be in effect at time of purchase order placement.
  - c. **Certificates of Conformance:** Shall be traceable to Wyman Gordon's purchase order, work order and/or serial numbers when referenced on packing slip. End-use customer fixed or significant process approvals (dates and plan number) shall appear on Certificates of Conformance, as applicable. A

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statement of conformity and compliance to all applicable purchase order specifications and requirements shall be provided.

- d. **Fixed or Significant Process Approvals:** Only end-use customer approved sources are authorized to provide material and/or perform services herein referenced on this purchase order unless otherwise authorized by the Wyman Gordon. Supplier shall notify Wyman Gordon Pennsylvania of any process change(s) impacting the customer fixed or significant process approval(s) including technical and product acceptance plans. Supplier shall notify Wyman Gordon Pennsylvania of any change(s) of manufacturing facility locations or points of contact associated with Purchasing and Quality Assurance functions.
- e. Material and heat treat certifications, specification testing and applicable quality documentation are required with each shipment of raw material. Supplier shall maintain test specimens at their facility unless otherwise requested by Wyman Gordon Pennsylvania, LLC. Test specimens shall be provided within (72) hours of request. Testing shall be performed by a certified testing facility for parts requiring engineering source substantiation.
- f. **Special Processing:** Special process testing, and certifications are required for each shipment of product. Supplier shall maintain test records and specimens at their facility unless otherwise requested by Wyman Gordon Pennsylvania. Testing shall be performed by a certified testing facility for parts requiring source substantiation and must follow requirements from prime end user.
- g. **Record Retention:** Melting, Forging and Processing Records related to the product supplied are to be maintained for the minimum number of years required by the end-use called out on the Wyman Gordon Pennsylvania LLC Purchase Order. Record retention periods shall be in accordance with end-use customer requirements. Where no end-use is called out, all records are to be maintained for (5) years after the order is closed. Contact Wyman Gordon Pennsylvania's regarding record retention requirements.
- h. **Inspection Delegation:** Wyman Gordon Pennsylvania, LLC may delegate inspection authority to the supplier in accordance with drawing, specification and requirements flowed down on this purchase order. Reference Page 1 of this purchase order for delegation of inspection requirements. Quality records shall be furnished upon request and retained in accordance with the end-use customer specification requirements. From time to time, Periodic receiving inspections will be performed by Wyman Gordon – PA. If non-conformances are found the supplier will be notified in writing. The material will be placed on-hold pending disposition by Wyman Gordon-PA. With the first notification of return due to receiving inspection non-conformance, the supplier will be placed on FAI-2 status. FAI-2 status will require the supplier: 1. FAI required for each lot of (subject p/n) material from notification date forward. 2. Supplier to be removed from FAI-2 status when two(2) lots (subject p/n) have been successfully processed at Wyman Gordon-PA. 3. Removal from FAI-2 status removes FAI requirement on future lots (subject p/n).
- i. **First Article Inspection Reports:** First article inspection report is required with initial shipment. All characteristics and features generated by the supplier shall be accounted for and verified on product associated with the defined scope of this purchase order. No changes shall be made to approved
- quality and product acceptance plans without the written authorization of Wyman Gordon Pennsylvania's Quality Assurance department. All processes are fixed and are tied to the first article documentation.
- j. **Counterfeit Parts & Prevention Provision:** Supplier shall have a counterfeit parts prevention and awareness program in effect to aid in the identification and abatement of counterfeit or suspect counterfeit goods to prevent delivery of such product into the supply-chain.
- k. **Foreign Object Damage Control Provision:** Foreign object prevention and damage control shall be accordance with the applicable end-use customer specification requirements. Special attention needs to be paid to: (1) proper cleaning, especially of cavities; (2) tool and small part accountability; (3) loose objects and chips; (4) food and beverage control and (5) part and handling protection. Goods must be free of Foreign Object Debris.
- l. **Identification, Packaging & Preservation of Product:**
- Bars and seamless rings shall be adequately palletized, banded and stacked to prevent damage during transit and subsequent handling. Raw material shall be adequately and legibly identified (at minimum, part number and mill heat number) to prevent the loss of traceability during handling and transit.
  - Finished or rough machined rings shall be adequately packaged and preserved to guard against handling and metal-to-metal contact during transit.
- m. **Human Factors:**
- Supplier shall ensure that personnel performing processing of material, special or conversion processes on Wyman Gordon Pennsylvania property have been properly qualified and trained in accordance with specification, technical plan and internal quality management system requirements.
  - Supplier shall ensure that personnel processing parts understand and are aware of their contribution to product or service conformity, product safety and ethical behavior in executing work and reporting malicious or non-compliant behavior on Wyman Gordon Pennsylvania owned product or assets.
- n. **Right of Access:** Wyman Gordon Pennsylvania LLC, its' customers, and regulatory agencies reserve the right of entry to verify the quality of subcontracted work, processes, quality and production records and material represented by this purchase order. Such verification does not abrogate the supplier's obligation to supply product conforming to all requirements and may be subjected to later verification and inspection.
- o. **Control of Nonconforming Product:** Written permission or disposition from Wyman Gordon Pennsylvania Quality Assurance Department shall be obtained prior to the shipment of nonconforming or noncompliant product from the supplier's facility. Product shall be properly identified noting the nonconformance or noncompliance.
- p. **Workmanship:** Machined rings shall comply with customer specific specification requirements for workmanship and machined feature controls.
- q. **ITAR/EAR Provisions:** Supplier shall have provisions in place to ensure that all ITAR/EAR controlled technical data including equipment and technology, is not disclosed, both in written and/or visual form to any foreign persons ("foreign

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nationals”) within its facility. This requirement includes any subcontracted materials performed by the supplier subtier within their facility. Additionally, ITAR/EAR controlled information must remain within the united states and may not be disclosed to any foreign countries.

- r. **DPAS (Defense Priority Allocation System):** Ratings may apply to this order. Wyman Gordon shall formally notify supplier if rating applies. Supplier shall familiarize

themselves with the requirements of the Defense Priority Allocation System.

- s. **Return to Vendor (RTV):** Product returns are subject to credit for material, value added costs incurred by Wyman Gordon-PA, supplier need to supply corrective action within 30 days of notice to such RTV event, and supplier put on FAI-2 status.