



Purchase Order Quality Requirement Clauses

Section I: Administrative.

1. Scope. This document lists the quality purchase requirements (QPRs) that JEM Engineering uses in business agreements such as purchase orders or contracts with Sellers doing business with JEM Engineering. JEM Engineering may specify all, any, or none of these QPRs at its discretion.

2. Definitions.

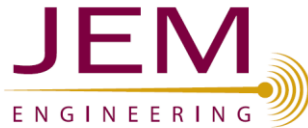
- a. A Seller is any person or company that agrees to supply or provide a product, material, assembly, or service to JEM Engineering, for a monetary price to be paid by JEM Engineering.
- b. A Customer is a party that agrees to purchase from JEM Engineering delivery of a product or a service.
- c. A Buyer is JEM Engineering and/or its Customer.
- d. A contract is a purchase order, or statement of work or other legal contract vehicle obligating delivery of some product or service by the Seller to JEM Engineering.

Section II: Mandatory QPRs. QPR clauses 1-20 typically apply to all purchase orders issued by JEM Engineering. The Seller must meet all requirements that apply to their products or services in order to do business with JEM Engineering.

1. Quality Standards – Seller shall manage and maintain standard quality and calibration systems such as: AS9100, D6/82479 Addendum 1, MIL-STD-45662, NADCAP, ISO 10012-1, or ISO 9001. The Seller shall maintain an inspection system acceptable to the Buyer and shall tender for acceptance only supplies that have been inspected in accordance with the inspection system and have been found by the Seller to be in conformity with all drawings, specifications, and other purchase requirements. Seller must complete a Supplier Survey Form (JEM Engineering quality document #714-0013-000) indicating Seller's current quality system and submit it to JEM Engineering prior to delivery of product.

2. Quality Records – Seller must maintain quality records for a minimum of seven (7) years (unless otherwise specified by terms of the Purchase Order) and readily retrievable upon request.

3. Flow-down to Subcontractors – The Seller's Quality System shall assure all relevant purchase order requirements are flowed down to the Seller's sub-tier suppliers and subcontractors. Sub-tier sources are responsible to the Seller to comply with the same specifications in this contract or purchase order. JEM Engineering will consider the failure of any sub-tier sources to comply with terms of this contract or purchase order as the responsibility of the Seller. Seller shall require sub-tier suppliers to record and maintain the same details as applicable to this order, including acknowledgement of requirements for which they are responsible. JEM Engineering reserves the right to approve subcontractors based on requirements and resources.



4. Special Process Conformance – The Seller and any sub-tier supplier engaged in special processes (Examples: cleaning, magnetic particle and penetrant inspection, heat treatment, molding, painting, plating, soldering, welding, x-ray, etc.) shall be controlled, and subject to Buyer review and inspection.

5. Materials Receiving Inspection – Seller certifies that it has performed receiving inspection on purchased materials to ensure compliance with all drawings and specifications, and has test reports and/or raw material certifications on file available for review upon request.

6. Manufacturing Routings – Seller certifies that shop travelers/manufacturing work orders will reflect and indicate work requirements, including non-destructive inspection, as evidence by the Seller's quality assurance signature or acceptance stamp, and are on file available for review upon request.

7. Latest Revisions – At no time will other revisions be used other than what is indicated on the drawings or purchase orders without the express, written permission of an authorized representative of the Buyer. Seller shall make no change in design, manufacturing or assembly processes or source of supply, after approval of the first production test item or after acceptance of the first completed end item, without the written approval of the buyer.

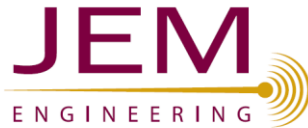
8. Right of Entry (RoE-JEM) – The Seller shall permit JEM Engineering the right of entry to determine and verify the quality of work, records and material at any place, including the plant of any subcontractors. This conducting audits of Seller at Seller's facilities.

9. Control of JEM-supplied Materials – All materials and parts supplied by JEM Engineering remain the property of JEM Engineering or its Customer. The Seller will properly track and segregate all JEM Engineering-supplied property used in this Purchase Order, including serial or part number tags. The Seller shall not discard any JEM-supplied materials or parts without the written approval of JEM Engineering.

10. Control of Non-Conforming Product – The Seller will not knowingly send nonconforming product to JEM Engineering without explicit permission from JEM Engineering. If JEM Engineering detects nonconforming product, it shall segregate, identify, and determine disposition of said product. Disposition may include return of nonconforming product to the Seller via Return Material Authorization (RMA), and a Corrective Action Report or Nonconforming Product Report provided by JEM Engineering. The Seller shall complete the Corrective Action Report by documenting the cause and corrective action taken.

11. Product Certification – Seller shall certify that all supplied parts conform to purchase order requirements, applicable specifications, finishes, dimensions, etc. Seller shall make records on file available to examination by the Buyer.

12. Handling, Packaging, Preservation and Delivery – The Seller shall use appropriate methods of handling, packaging and preservation to prevent damage of product in process and during delivery. The Buyer may specify packaging instructions for specific deliverables. All ESD items shall be handled, packaged and identified in accordance with MIL-STD-1686 and MIL-STD-129, or best commercial practices, as applicable.



13. Lot Traceability Shipment Requirements – Seller may not commingle lots. Shipments may consist of no more than two (2) manufacturer's lots for each part number included in an order. No quantity of a single manufacturer's lot may consist of less than 20 percent of the total quantity per shipment unless otherwise specified on the purchase order.

- A production lot shall consist of parts that are all the same configuration fabricated under same conditions, from the same material, processed together and produced as one continuous run.
- A molded lot consists of the same part number, of one combination of plastics or composite raw materials, produced using one or more basic molds.
- A casting, forging, machined or welded part, or stamping lot consists of the same part number, of one alloy, produced using the same processing parameters (including heat treat) and contains a homogeneous heat pour, or same basic material.
- A pre-treatment lot (such as chemical washes) shall consist of treated articles on the same order, treated under the same conditions, with the same chemical compositions, from the same tanks.
- A plating lot (cadmium, anodize, chemical milling, etc.) shall consist of treated articles on the same order, treated under the same conditions, with the same chemical composition, from the same tank.
- A coating lot (paint, dry film lube, etc.) shall be processed as one batch, on the same part, on the same order. A batch is defined as the end product of all of the raw materials mixed or blended in a single or continuous operation.

14. Acceptance At Destination – All articles delivered under this Purchase Order/Sub-Contract are subject to Buyer acceptance at destination. Failure to comply fully with all requirements indicated on this Purchase Order/Sub-Contract may be cause for rejection of shipments and delay payment of Seller's invoice.

15. Product Verification – Verification, inspection, or acceptance by the Buyer shall not absolve the Seller of the responsibility to provide acceptable product, nor shall it preclude subsequent rejections of said product by the Buyer.

16. Warranty – The Seller shall maintain a guarantee that warrants every item delivered under this contract shall be free from all defects in materials and workmanship. The Seller further agrees to regrade, repair, rework, or replace the item(s) if defective in material or workmanship, if damaged in shipping to Buyer, or if item fails within the warranty period. If the Seller does not specify a warranty period in their Terms & Conditions of sale, then JEM Engineering shall regard the warranty period as within 18 months of Buyer acceptance.

17. Rework/Repair – The Seller agrees to accept all cost, associated with rework, to include removal and replacement of the part, unless such work is necessary as a result of errant documentation supplied by the Buyer or an Engineering Change Request/Order (ECR/ECO).



18. Suspect/Counterfeit Items – The Seller shall deliver product made only from new and authentic materials. The delivered product shall contain no counterfeit or suspect counterfeit parts. Seller shall purchase Parts and materials directly from the OEM (the original equipment or component manufacturer), or through a distributor authorized by the OEM, not from independent brokers. Seller must authenticate traceability of materials to the applicable OEM. Buyer will report incidents of suspect parts to the United States Government.

a. If the Seller delivers reused, counterfeit, or suspect products for a United States Government customer, the Buyer will impound these products, and turn them over to the government Customer. At Buyer's request, Seller shall return any unused counterfeit parts to Buyer for turn-in to the Customer. Buyer shall hold Seller fully liable for any and all indirect, special, or consequential costs arising from delivery of counterfeit parts, including shipping, storage, testing, and replacement costs. Buyer and Seller agree that any Government or quasi-Government directive, such as a GIDEP alert indicating that such parts are counterfeit, shall be acceptable evidence that Seller's product contains counterfeit parts. Seller has no liability if parts are determined to be authentic.

19. and 20. (Not used)

Section III: Optional QPRs. The following Quality Clauses (QPRs #21-45) apply if specifically referenced in the terms or notes of the contract between the Buyer and Seller.

21. Material Suppliers – Material supplied by the Seller against this contract must be purchased from sources approved by JEM Engineering or its Customer.

22. Evidence of Inspection – A qualified representative of the Seller's quality department shall sign and document acceptance status for each shipment as evidence of 100% inspection. Sampling inspection shall not be performed without prior written approval from JEM Engineering and its customer. [Expand this to include mandating sampling]

23. First Article Inspection (FAI) – Seller shall provide a completed inspection report/record with the first shipment, as evidence of 100% inspection of all inspect-able features of one unit from the first shipment. Seller shall segregate the First Article unit from any other units in the initial shipment. The Seller shall submit FAI report for Buyer review prior to the complete production of the contract. The Seller shall fabricate the First Article unit using the same production equipment, procedures, and processes that will be used in filling the contract. Seller shall record all inspection measurements and/or test data on a document normally used by the Seller, or the Buyer, to record inspection test results. The FAI documentation submitted shall reference the JEM Engineering Purchase Order/Contract number thereon and must accompany the delivery of each First Article unit delivered. Documentation for each First Article item shall include:

- a. Inspection Report(s), with actual dimensions recorded.
- b. Mill report(s) or certifications of material for all raw materials, as specified.
- c. Certifications of heat treatments, as specified.
- d. Certifications of finishes and pre-treatments, as specified.
- e. Test Report(s), including material hardness or strength testing, with actual test results recorded.
- f. A Certificate of Conformance referencing the Part Number, Revision, and Purchase Order Number.



24. First Piece Inspection (FPI _____) – A First Piece Inspection is required under this purchase order. It is the Seller's responsibility to conduct a FPI on some number (pre-determined by JEM Engineering) of the first pieces delivered under this order, to verify conformance of all physical, chemical, and test requirements specified by this order. Upon completion of the inspection, the Seller shall notify the Buyer. The Buyer shall verify objective evidence of this requirement prior to Seller commencing shipments on this order. A five (5) day notice shall be required for scheduling verification.

25. Key Characteristics (KCs) – Seller shall inspect all key characteristics referenced on purchase order or print, for 100% of the shipment. All components with key characteristics referenced on the model/drawing shall be serialized. Items that cannot be serialized due to size/shape shall be bagged and tagged individually and reference the inspection report number for that item. The serial number should ideally be located next to the part number and shall be legible after finish (coating, paint) requirements are complete.

26. Configuration Control (CM) – Seller shall ensure configuration control by verifying that the drawings/documents received from the Buyer are the latest version.

27. Certificate of Compliance (CofC) – A certificate of compliance shall accompany all shipments. The certificate of compliance must be signed by an authorized representative and reflect all information necessary to identify the product, quantity, current revisions, and whatever services or processes you have performed.

28. Test Reports – The Seller shall submit a copy of actual physical and/or chemical test reports for all units shipped, and each test report must be traceable to the unit/pieces shipped. Any reprocessed raw material must be traceable to the original test report and must include objective evidence of compliance (e.g., mechanical tests) to the reprocessed condition of the material. Seller shall submit copies of the test reports with each shipment, referencing each lot, batch, or heat used to fill the shipment order. When JEM Engineering provides material, the Seller must ensure that a statement is included on the shipment certification and/or shipper identifying that JEM Engineering supplied the material. Functional and/or qualification test results listing all parameters tested and actual readings taken during these test are required with the delivery of the material covered by this Purchase Order/Sub-Contract. These reports shall reference the part number, revision level, serial number (if required) and Purchase Order/Sub-Contract number.

29. Shelf Life & MSDS – When the product or service from the Seller includes hazardous materials or materials with a limited shelf life, the Seller shall include the expiration date of the materials used and batch identification on the required certifications. Identification shall include the start date, (date of manufacture or manufacturer's recommended start date) and the expiration date for the use of the controlled materials. Seller shall identify any special storage conditions. MSDS sheets are required with each shipment.

30. Electrical & Electronic Assemblies Workmanship (IPC) – When the product or service from the Seller includes electronic or electrical components or assemblies, including printed circuit boards or printed wiring assemblies, the Seller shall use and maintain proven fabrication procedures and manufacturing processes for producing quality electronic products IAW IPC/EIA J-STD-001 and IPC A-610, for classification indicated by the Buyer (Class 1, 2, or 3).



31. Raw Material Test Specimens (RM) – Items delivered under this order shall be accompanied by raw material test specimens. Specimens shall be submitted with the initial shipment from each lot or processing batch of items to be delivered under this order.

32. Foreign Object Elimination (FOE) – The material that is supplied on this purchase order shall be manufactured in an environment that is free of foreign objects. Material supplied shall be free of foreign objects. The intent of this quality note is not to necessarily change manufacturing processes but to maintain continual awareness of the need to eliminate foreign objects for all supplied material.

33. MRB Authority (MRB Level _____) – Material Review Board is designated for a specific authorization level (as described). The Seller must receive approval from the Buyer prior to disposition of nonconforming material or product purchased under this Purchase Order/Sub-Contract.

34. Nondisclosure Agreement (NDA) – Seller shall not provide drawings, models, prototypes, or JEM-supplied parts or services to any person or agency outside their own company, unless with the express permission of JEM Engineering. Parties shall execute a NDA for the purpose of limiting liability.

35. Product and Data Export Restrictions (EAR, ITAR) – Seller shall not provide any drawings, models, prototypes, or JEM-supplied parts or services associated with this Purchase Order to any person or agency outside of the United States, including foreign employees or contractors working in the United States without the express permission of JEM Engineering and the Customer.

36. Right of Entry (ROE-All) – The Seller shall permit JEM Engineering, its Customer, government agencies that represent the intended users, and applicable regulatory agencies shall be allowed the right of entry to determine and verify the quality of work, records and material at any place, including the facilities of any subcontractors on this contract. This includes Buyer conducting audits at Seller's facilities.

37. Source Inspection (SI) – Source inspection is required prior to shipment from your facility. Upon request, Seller shall provide personnel and equipment to assist Buyer's representative during inspection of items. On site product acceptance by JEM Engineering and/or customer representatives does not absolve the Seller of the responsibility to provide acceptable product, nor shall it preclude subsequent rejections by the Buyer.

38. Buyer Control of Special Processes (SP) – The Seller shall identify all special processes and any sub-tier providers of special processes, and obtain approval of the Buyer to control these special processes and his sub-tier's special processes. After approval, the Seller and sub-tier suppliers and their special processes are subject to re-audit or recertification at the discretion of the Buyer.

39. Suspect/Counterfeit Item Mitigation (SCIM) – The Seller shall maintain a counterfeit parts control plan complying with the requirements of AS5553 Counterfeit Electronic Parts, Avoidance, Detection, Mitigation and Disposition. If Seller incorporates parts that come from distributors not authorized by the OEM (original equipment or component manufacturer), then prior to delivery Seller must request pre-approval of such material from Buyer in accordance with Customer requirements.



40. Exception Authority (XA _____) – Upon receiving notice of contract acceptance from the Buyer, Seller shall indicate within one business day any QPR that it cannot meet. The Buyer may submit a modified contract, specifying the Seller as exempt from one or more QPRs from the original quote or contract, by using this clause and specifying the exempted requirement(s).

41 through 45. (Not used)

46. Acceptance of Sub-Contract agreement – All articles sub-contracted under this Purchase Order/Sub-Contract are subject to JEM acceptance. Failure to comply fully with all requirements indicated on this Purchase Order/Sub-Contract may be cause for rejection of shipments and delay payment of Sub-contractor's invoice. All subcontractors are subject to meeting and agreeing with JEM Certificate of Conformances per purchase order requirement clause indicated. This is including, but not limited to –

A production lot that shall consist of parts that are all the same configuration fabricated under same conditions, from the same material, processed together and produced as one continuous run.

- A molded lot consists of the same part number, of one combination of plastics or composite raw materials, produced using one or more basic molds.

- A casting, forging, machined or welded part, or stamping lot consists of the same part number, of one alloy, produced using the same processing parameters (including heat treat) and contains a homogeneous heat pour, or same basic material.

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- A coating lot (paint, dry film lube, etc.) shall be processed as one batch, on the same part, on the same order. A batch is defined as the end product of all of the raw materials mixed or blended in a single or continuous operation.

All parts may be received in full or partial shipments, but said parts shall pass JEM quality control standards (IPC-A-610 Class2 unless specifically notified otherwise).



Section IV. Acknowledgement. The Seller shall validate that it intends to meet all mandatory QPRs (Section II) and optional QPRs (Section III) called out in specific purchase orders, that apply to the Seller's products or services, by signing and faxing this page to JEM Engineering. If Seller cannot meet every one of these requirements applicable to their products, then the Seller shall inform JEM Engineering prior to agreeing to sell those products.

Seller acknowledges receipt, acceptance, and understanding of the above JEM Engineering Purchase Order Quality Clauses. JEM Engineering may consider this acknowledgement a requirement for doing business with the Seller. Please complete the fields below and fax (this page only) to JEM Engineering at 301-371-8683.

Company: _____

Name: _____ **Title:** _____

Signature: _____ **Date:** _____