

Purchase Order Supplement

Note: To access the supplier web page, go to <http://www.lord.com/suppliers>.

Standard Purchase Order Terms and Conditions

Standard Terms and Conditions of Purchase: LORD Corporation, Form 0602-03, applies -- see <http://www.lord.com/suppliers> for text.

Standard Quality Requirements

To be a supplier to LORD Corporation you must meet our requirements for Quality. Our Standard Quality Requirements are:	
A.	Quality System: You must have a documented quality system and agree to on-site assessments. You are required to have a quality system in place that conforms to AS9100, ISO 9001 or Nadcap AC7004. Manufacturers of material used in production manufacturing at LORD are required to maintain third-party certification of your quality system to one of these standards, or have a goal to achieve third-party certification, unless exempted by LORD in writing.
B.	Right of Access: You must allow review, analysis, and verification (on-site if necessary) of your quality management and inspection system, manufacturing process, and product by LORD, our customer, our customer's representative, or the government (FAA, DoD, etc.), if requested.
C.	Advanced Product Quality Planning (APQP): As requested, you must have resources available and capable of participating in APQP, including such efforts as Value Engineering/Value Analysis, Feasibility Reviews, FMEAs, Design Reviews, Prototype Production, and Initial Sample Approval/Production Part Approval Process. If you receive a purchase order for a new part, please contact your Lord Buyer immediately to schedule an APQP review prior to proceeding with the order.
D.	Material and Process Specifications: You must produce LORD product to the specific material and process specifications referenced on the drawing or purchase order. You must work to the specification revision in effect at the time the purchase order was issued as determined from the specification indexes listed on www.lord.com/suppliers . If parts were manufactured to a prior drawing or spec revision, yet still meet all the requirements of the revised drawing or spec, you must update certs per clause W to indicate such and ship as conforming product. Suppliers may only use alternate materials after submission and approval by LORD of a new first article (see clause H. First Article Inspection Report Approval).
E.	Conflicting Technical Requirements: In the event of conflicting technical requirements, the order of priority you should follow is the purchase order, the drawing, then the specification. You must bring all conflicting requirements to the attention of your Buyer as soon as possible.
F.	Supply Chain Management: You must be willing to identify and manage your entire supply chain, which includes ongoing monitoring of sub-contractor quality and delivery performance. It is your responsibility to ensure that LORD requirements are met by all your subcontractors used in the entire manufacturing process.
G.	Approved Sources: Some special processes such as heat treatment, plating, NDT, etc. must be performed by a LORD approved processor, Nadcap approved processor, or processor approved by LORD's Customer. This applies when clauses 010, 011, 012, or 013 appear on the purchase order.

H.	<p>First Article Inspection Report Approval: For products manufactured to LORD engineering drawing requirements (not applicable to metallic raw materials, non-metallic raw materials, and industry standard hardware), you must perform First Article Inspection (FAI) of all drawing and specification requirements on a sample representative of the first production lot. Unless otherwise specified by clause 195 on the purchase order, the FAI must be completed and submitted in accordance with the requirements of LORD Standard Operating Procedure SOP 10-10 with results recorded on Form 1010-01, 1010-03, or equivalent. Both the SOP and form 1010-01 are available at www.lord.com/suppliers. You must complete and submit a new or updated FAI, including all certifications, if:</p> <ul style="list-style-type: none"> • this is a first time manufacture • the part has not been manufactured in 2 years • there is a revision to the LORD engineering drawing (per LORD purchase order) • there is a change in raw material used (use of an alternate material listed on the drawing) • there is a change in tooling (new, replacement, or major modification) • there is a change in manufacturing process which may affect form, fit, or function of the part • there is a change in the plant of manufacture • there is a change in source of manufacture. <p>Suppliers must submit the initial or updated FAI regardless if Special Quality Clause 069 is specified on the purchase order. In addition to the SOP 10-10 requirements, the FAI must include the following (as a minimum):</p> <ul style="list-style-type: none"> • All drawing notes • All drawing title block requirements • Actual high and low measurement values for each individual characteristic • For a drawing feature that indicates more than one location (i.e. "TYP" or "4X"), a measurement reading for each of the individual feature locations. Example: Drawing states "4X R .28/.23", the FAI must show a measurement for each of the four feature locations. • Actual measured value for all basic dimensions used in any Geometric Dimensioning and Tolerancing (GD&T) requirement. • For a True Position requirement of a multi-hole pattern, the measured position of each hole including the measured value of each basic dimension for each hole. • The LORD TS-026 measurement method used. • For any process accepted by certification, the process supplier name and reference to the certification number.
I.	<p>Managing Change: You must notify the LORD buyer of any intended significant changes to your process, methods, material, or product and obtain our approval prior to implementation. You must also make this a condition to your entire supply chain. Samples and documentation may be required as part of the approval process.</p>
J.	<p>Material Obsolescence: You must notify LORD 6 months prior to obsolescence of any material purchased by LORD within the last three years.</p>
K.	<p>LORD Approved Coolants: If you use coolants, protectants or mold release agents in the fabrication or surface protection of products supplied to LORD, you must use materials that have been qualified and approved by LORD. When specified on the LORD engineering drawing, refer to LORD specification MTL-S-0136 (available at www.lord.com/suppliers) for a listing of approved materials.</p> <ul style="list-style-type: none"> ▪ Manufacturers of Powdered Metal must refer to PRC-S-0226 and must only use materials approved specifically for use with powdered metals. For a listing of approved materials for use with powdered metals, refer to appendix MTL-S-0136-004 and MTL-S-0136-005.
L.	<p>Electric Discharge Machining, Laser Cutting and Laser Marking: Unless already explicitly allowed via the LORD drawing or the LORD purchase order, you must obtain written approval via an approved Supplier Request from LORD (reference clause P) before using any of these processes in the manufacture of LORD parts.</p>
M.	<p>Mercury Contamination: Material furnished must not contain functional mercury in any form and must be free from contamination by presence of mercury.</p>
N.	<p>Traceability and Serialization: Product traceability is a requirement. You must provide unique identification of product batch number, lot number, or, if required by the drawing, serial number. The batch, lot, or serial number must be traceable to all raw material, manufacturing, and inspection records.</p> <ul style="list-style-type: none"> ▪ If raw material is supplied by LORD, you must assure that parts supplied are traceable by lot number or serial number to the raw material heat code or LORD assigned traceability number. ▪ If items supplied by LORD are serialized, you must assure that traceability is maintained during processing. ▪ If parts are serialized, you must provide with each shipment a list of the serial numbers in the shipment (either on the packing slip or on an attached sheet).

O.	Inspection: You must inspect product to the degree necessary to ensure compliance to all requirements. Unless otherwise specified by the drawing or by clause 052 on the purchase order, you must perform 100% inspection and/or use a recognized sampling plan (i.e. ANSI/ASQ Z1.4) at a 1.0 AQL with zero defectives permitted in the sample. You must use the inspection methods specified in LORD technical standard TS-026 "Standard Measuring Methods". TS-026 is available at www.lord.com/suppliers . Unless otherwise specified by the engineering drawing, dimensional limits apply after the application of specified inorganic coatings (e.g., plating and chemical treatments), but before the application of specified organic coatings (primers, paint, solid film lubricants, corrosion preventative compounds, etc.). Chemical treatments include chromic acid anodize, sulfuric acid anodize, hard anodize, chemical conversion coating (chemical film), and passivation.
P.	Supplier Requests: You must submit all Supplier Requests (SR) to LORD using the electronic Supplier Request Form No. 655 located in Supplier Workplace (www.lord.com/suppliers). Supplier Requests shall be submitted for the following (but are not limited too): <ul style="list-style-type: none"> • Technical clarification of LORD drawings or LORD customer drawings. • Requests for engineering changes (i.e., drawings, specifications). • Non-conformance waiver. • Permission to borrow LORD measurement and test equipment. • Submission of frozen and rework planning. • Requests for repair. • Use of electric discharge machining (EDM), laser cutting or laser marking. • Approval of process specific techniques, plans, or procedures. • An SR is not required if parts were manufactured to a prior drawing or spec revision, yet still meet all the requirements of the revised drawing or spec. You must update certs to indicate such and ship as conforming product (for example, "Parts manufactured to rev A and meets all requirements of rev B").
Q.	LORD Supplied Measurement and Test Equipment: You must return any borrowed equipment to LORD at least one week prior to the calibration due date. You are not authorized to perform calibration on LORD-owned equipment. Return all equipment to the attention of the "Gage Lab". Standard Gages, such as thread gages, plug gages, dial bores, thread indicating gages (i.e.: tri-rolls), should be purchased and maintained by the supplier. Supplier must review and address these needs before accepting a LORD Purchase Order.
R.	Non-Conforming Product: You must only ship product that meets all requirements, or obtain a written deviation via a Supplier Request (SR – reference clause P) prior to shipment of any non-conforming product. If a Supplier Request is approved, reference the Supplier Request number on the shipping documents and attach a copy of the approved Supplier Request. Final material acceptance will depend on the actual verification of the non-conformance and product approval at LORD. If you have reason to believe non-conforming material may have been inadvertently shipped, contact your Buyer immediately. Any and all exceptions to LORD purchase order requirements must be formally resolved prior to the supplier's acceptance of the contract.
S.	Corrective Action: In the event of a non-conformance related to your product, you must develop a written corrective action report addressing the problem definition, containment action, root cause determination, corrective action plan/contingency actions, implementation timing, and system/practice/procedure changes to prevent recurrence.

T.	<p>Shipment and Packaging Requirements: You must comply with all requirements for shipping, packaging and labeling. In the absence of specific requirements, suitable protection from corrosion, contamination and handling damage during transit and while in storage at LORD shall be provided. Examples of protected surfaces are those surfaces which are completely anodized, chromate treat (alodize), plated, passivated, or painted.</p> <ol style="list-style-type: none"> (1) The corrosion resistant 2000 & 6000 aluminums, 200, 300, and PH stainless steels, and all titanium alloys may be packaged without special provisions for corrosion protection (does not apply to 303Se or other free machining varieties – package according to (2) below). (2) All other components/assemblies with any unprotected surfaces must be packaged within a volatile corrosion inhibitor (VCI) bag. <u>Do not</u> oil parts prior to placing them in VCI bags, as this combination appears to assist in the initiation of surface corrosion. Do not use VCI bags on Zn-plated parts. (3) For the more corrosion-prone metals, such as 4XXX alloy steels and 7XXX aluminum alloys; application of a non-volatile, corrosion protecting oil followed by packaging in non-porous plastic bags may be performed in lieu of packaging in VCI bags. This provides additional corrosion protection as compared to packing in VCI bags alone, and is recommended, especially when time in transit or storage is expected to be long. Only use LORD approved surface protectants identified in MTL-S-0136-002 (per Clause K). For powdered metals see section (6) below. (4) For overseas shipments, only <u>passivated</u> 200, 300 and PH stainless steels, and all titanium alloys may be packaged without special provisions for corrosion protection. All other metals must be packaged according to (2) or (3). (5) Regardless of the packing technique, do not allow water-soluble cutting fluid residue to accumulate and dry on any metal (especially aluminum alloys) at any stage of the manufacturing process, in packaging, and so forth. This is a known cause of corrosion and should always be avoided. (6) For powdered metals, use only LORD approved surface protectants identified in MTL-S-0136-004.
U.	<p>ESD Sensitive Items: When packaging materials that are sensitive to damage from electrostatic discharge (ESD), you must use ESD protective containers or bags. Identify each container or bag with an ESD warning label and label the external shipping package "Contains Static Susceptible Item" or equivalent. Parts classified as ESD parts on the LORD drawing or specification, must be handled in accordance with SOP 15-05, "<i>Electrostatic Sensitive Devices (ESD)</i>", available at www.lord.com/suppliers.</p>
V.	<p>Age Control: You must assure that any items provided which have shelf life limitations, have at least 5/6 of the shelf life remaining at time of shipment.</p>
W.	<p>Certification: Unless otherwise specified by clause 069 on the purchase order, you shall submit all applicable certifications (raw material, special process, etc.) and certified test reports for each shipment. Certifications must be in English, or translated to English. Translations must include the name, title, and signature of the authorized representative of the company making the translation. Certifications and certified test reports must include the following information:</p> <ul style="list-style-type: none"> ▪ Name/address of facility that manufactured the material, or performed the process or test ▪ LORD Purchase Order Number ▪ LORD Part Number ▪ LORD Customer Part Number, revision and contract number, when it appears on the purchase order or LORD Drawing ▪ LORD Drawing Number and Revision ▪ Process performed or material provided, including type/class/grade, as applicable ▪ Specification number and revision, if applicable ▪ Quantity accepted/rejected (for Certified Test Reports) ▪ Quantity shipped ▪ Date shipped ▪ Name and/or title of authorized representative from the company that manufactured the material, or performed the process or test. For suppliers who utilize electronic signatures, the Quality Manager title is sufficient. ▪ Unique traceability number (certification number, heat code number, batch number, melt number, etc.) ▪ Part serial numbers, if applicable. ▪ Statement certifying that articles covered by the certification are in compliance with the applicable purchase order, drawing and specification requirements. ▪ If parts were manufactured to a prior drawing or spec revision, yet still meet all the requirements of the revised drawing or spec, you must update certs to indicate such and ship as conforming product (for example, "Parts manufactured to rev A and meets all requirements of rev B"). <p>When special process certifications are required (clauses 070, 090, 100, 101, 102, 105, 106, 107, 108, 109, 111, 120, 140, 250, 252), complete LORD Form 460-001 "Certification Requirements Sheet" (available at www.lord.com/suppliers) and attach this cover sheet to the certification package. Note: If clause 069 is</p>

	invoked on the purchase order (and this is not a First Article Inspection (FAI) shipment), then LORD Form 460-001 form is not required). The preferred method for submitting quality related documentation, such as certifications, test reports, and inspection reports, is electronically via LORD's Receiving Inspection mailboxes. See the LORD Supplier Webpage at www.lord.com/suppliers for e-mail addresses and direct links to receiving inspection mailboxes at our LORD facilities.
X.	Records: You must maintain production and quality-related records for a minimum of ten years from date of shipment, unless a longer period is specified by a clause on the purchase order.
Y.	<p>Rework and Repair: Rework and Repair are distinctly different processes.</p> <ul style="list-style-type: none"> • Rework: A process where a non-conformance to the drawing, specification, or contract requirement can be made to conform using processes equivalent to those originally used in the manufacturing of the product. Suppliers are not required to obtain approval to rework product unless Special Quality Clause 021 is specified on the Purchase Order, which requires rework approval. Per Special Clause 171, any violations of the Frozen Planning process always require approval for rework. • Repair: A process that reduces but does not completely eliminate a non-conformance, or when a process is used that is NOT equivalent to those originally used in the manufacturing of the product. Suppliers must obtain prior approval from LORD via a Supplier Request to perform repair work and to ship repaired product, due to the still nonconforming condition and/or the repair method used. • Reworked/repared parts shall be re-inspected using the same methods and equipment that originally identified the non-conformance, as well as re-inspection of any other features that may have been affected by the rework. • For electronic items that require Acceptance Testing as part of their original quality requirements, the same Acceptance Testing will be required after rework/repair of the Items. • When returning reworked/repared parts to LORD, the shipping paperwork must identify that rework or repair was performed and reference the approved Supplier Request (if applicable). If outside processes were required to be re-processed, the process certifications must also reflect the rework/repair status of the parts. • In some instances, LORD may decide to rework or repair supplied product, in which case LORD will contact the supplier to discuss the costs of the rework and potential chargeback to the supplier.

Special Quality Clauses

In addition to our Standard Purchase Order Terms and Conditions and Standard Quality Requirements, Special Quality Clauses may be invoked on individual Purchase Orders. Our Special Quality Clauses are:

- 001 PO Supplement Applies (Form 460):** This clause is listed on every purchase order for the sole purpose of invoking the requirements of this document, "Purchase Order Supplement, Form 460". All Standard Purchase Order Terms and Conditions and Standard Quality Requirements listed above apply. Special Quality Clauses enlisted below apply only if listed on individual purchase orders.
- 002 Form 460- see www.lord.com/suppliers:** This clause is listed on every purchase order for the sole purpose of communicating the website address to obtain the current released version of this document, "Purchase Order Supplement, Form 460".
- 010 LORD Approved Processors:** When a special process specification is listed in the "Process Table" section of the LORD engineering drawing and "LORD" is indicated under "Source Control", you must use only LORD approved processors. The approved processors are listed in LORD specification MP-APS-001, "Approved Process Sources". If the particular specification is not listed in MP-APS-001, the process does not require the use of a LORD approved processor.
- 011 LORD Customer Approved Processors:** When a special process specification is listed in the "Process Table" section of the LORD engineering drawing and a LORD customer name is indicated under "Source Control", you must only use a processor approved by the LORD customer. Contact your Buyer if you cannot locate a special process source approved by the applicable LORD customer or if you do not have access to a LORD customer's secure site.
- For Bell Helicopter, use sources listed in QPS 101.
 - For Boeing, use sources listed in D1-4426, which can be found at www.boeing.com
 - For Sikorsky Aircraft, use sources listed in the Sikorsky Approved Supplier Listing (ASL).
 - For Lockheed-Martin, use sources listed in http://supplier.external.lmco.com/supplier/specproc_certs/specification_list.html
- 012 LORD Classified Part Approved Processor:** This purchase order is for a special process that is to be performed on a part that is classified as Critical, Vital, or Flight Safety. This special process generates or affects a critical characteristic. As such, you must be approved as a LORD Classified Part Approved Processor and be listed in LORD specification MP-APS-001, "Approved Process Sources" for the process to be performed. LORD Classified part approval is indicated in MP-APS-001 by the symbol {CP}.
- 013 Bell Helicopter Classified Part Approved Processor:** This purchase order is for a special process that is to be performed on a Bell Helicopter QPS 100 or QPS 102 part that is classified as Primary, Critical, or Flight Safety. As such, the following requirements apply:
- Bell BPS Specification Process. For a special process performed to a Bell Process Specification (BPS) that requires facility approval, you must be listed in QPS 101 for the process to be performed and have the classified level approval of the part or higher. Your quality system must be in compliance with AS9100 or Nadcap AC7004.
- Non-BPS Specification Process. For a special process performed to a specification other than a Bell Process Specification (BPS), such as a Military or Industry specification, involving a Significant "<V>" or Critical "<C>" characteristic, you must be approved per the following:
- For QPS-100 Product, you must be BHTI approved for the process to be performed and have the classified level approval of the part or higher.
 - For QPS-102 Product, you must be approved as a LORD classified part processor and be listed in LORD specification MP-APS-001, "Approved Process Sources" for the process to be performed. Classified part approval is indicated in MP-APS-001 by the symbol {CP}.
- Your quality system must be in compliance with AS9100 or Nadcap AC7004.
- 014 Bell Helicopter Approved Source List (Report No. 299-099-900):** Part to be procured from an approved manufacturer or value added distributor listed in Bell Helicopter Report No. 299-099-900 (Approved Source List). Certification and identification in accordance with Report No. 299-099-900 is to accompany each shipment. Part may be procured from any distributor provided the required certification from the approved manufacturer accompanies the shipment and the exterior of each package is marked in accordance with Report No. 299-099-900. Instructions to reference the Bell purchase order in report No. 299-099-900 should actually reference the LORD purchase order.

- 015 Bell Helicopter Approved Metallic Material Source List (Report No. 299-100-837):** The metallic material used to make the part is to be produced from an approved manufacturer listed in Bell Helicopter Report No. 299-100-837 (Approved Metallic Material Source List). The metallic material may be procured from any distributor provided the required material certification from the approved manufacturer accompanies the shipment.
- 016 Nadcap Accredited Special Processor:** When the use of an approved special processor is required per clauses 010 or 011, you must only use a processor who is Nadcap accredited for that process.
- 021 Approval Req'd – Rework Method:** You must submit your rework method for any reworkable non-conformances occurring on product against this purchase order to LORD for review and approval prior to starting rework. The technique sheet is to be electronically submitted with a Supplier Request (SR) Form No. 655, available via the Supplier Workplace link found at www.lord.com/suppliers. You must not make any changes to rework method after LORD approval has been granted without the prior written approval of LORD Quality.
- 030 LORD Source Inspection:** LORD source inspection is required prior to shipment of any item on this purchase order. Contact the LORD Buyer a minimum of 5 days prior to the time the items will be ready for inspection.
- 031 LORD Witness of Test:** LORD witness of functional testing of the items on this purchase order is required. Contact the LORD Buyer a minimum of 5 days prior to the time the items will be ready for testing.
- 032 Customer Source Inspection:** First article inspection by LORD's customer is required prior to shipment from your plant to LORD. Contact your LORD buyer prior to the scheduled shipment date to arrange the customer inspection. Evidence of customer inspection approval must accompany the initial shipment to LORD.
- 040 Government Source Inspection:** Government source inspection is required prior to shipment of any item on this purchase order. Upon receipt of this purchase order, promptly furnish a copy of this purchase order to the Government Representative that normally services your facility and arrange for the source inspection. Contact the LORD Buyer immediately if you cannot locate a government representative. Evidence of GSI (acceptance stamp or signature on shipping documentation) shall accompany shipment.
- 043 Non-U.S. Sources:** The part on this order is an FAA Parts Manufacturer Approval (PMA) part (or component thereof) and must not be manufactured outside the United States without prior approval of LORD Quality. If the part ordered is an assembly, then all components in the assembly shall not be manufactured outside the US. For FAA-PMA parts, a supplier in any jurisdiction outside the United States which would inhibit the FAA from evaluating the supplier shall not be used. This requirement does not apply to standard parts manufactured in compliance to an established U.S. Government or industry-accepted specification containing all necessary information to produce and conform the part. Examples include, but are not limited to National Aerospace (NAS), Air Force-Navy Aeronautical Standard (AN), Society of Automotive Engineers (SAE), SAE Aerospace Standard (AS), Military Standard (MS), etc. This requirement does not apply to the raw material used to manufacture the FAA-PMA parts.
- 044 Drop Shipment:** LORD furnished material (i.e.: castings, forgings, or raw stock) will be drop shipped to you under this purchase order. Upon receipt of the material, you must assure that all test reports and certifications required by the applicable specifications have been received and that all requirements have been met. When shipping finished items to LORD, include these test reports and certifications with the shipment.
- 045 FAA Anti-Drug and Alcohol Misuse Prevention Program:** You are required to maintain an anti-drug and alcohol misuse prevention program in accordance with 14 CFR Part 120. All employees who perform a safety-sensitive function (i.e., maintenance) must be tested under a FAA regulated drug and alcohol testing program. If you are a certificated repair station under Federal Aviation Regulation (FAR) Part 145, your Operations Specification paragraph A449 must state that you have implemented a FAA regulated anti-drug and alcohol misuse prevention program. If you are a non-certificated maintenance source, you must have a document that registered your FAA regulated anti-drug and alcohol misuse prevention program with the Drug Abatement Division of the FAA. Each shipment of parts on which maintenance has been performed shall be accompanied by evidence that you have a FAA regulated anti-drug and alcohol misuse prevention program. This evidence can be provided by one of the following:
- Listing your FAA Drug Abatement Division assigned plan identification number on your certificate of conformance for the work performed
 - Including a copy of your FAA Part 145 Operations Specification paragraph A449
 - Including a copy of your document that registered your FAA regulated anti-drug and alcohol misuse prevention program with the Drug Abatement Division of the FAA
- 046 Authorized Release Certificate:** You are required to provide a completed and signed original FAA Authorized Release Certificate FAA Form 8130-3 or EASA Authorized Release Certificate Form 1 with each shipment of parts. The FAA Form 8130-3 or EASA Form 1 is required with each shipment even if clause 069 is specified on the purchase order.

- 047 Repair Station Duty Time Limitations:** This part is supplied to LORD's Outsource Maintenance Program which requires you to have a verifiable procedure, policy or program that relieves each person performing maintenance or preventative maintenance from duty for at least 24 consecutive hours during any seven consecutive days or the equivalent thereof in any one calendar month, Ref. 14 CFR 121.377.
- 050 Submit Supplier Inspection Checklist:** You must complete and submit your inspection checklist with each shipment. For each characteristic inspected, the inspection checklist shall indicate the characteristic, the quantity inspected, and the quantity accepted/rejected. Report the actual inspection results if required by the LORD drawing or purchase order.
- 051 Capability Study and Gage R&R:** You must provide results of the Capability Study and the Gage Repeatability and Reproducibility (R&R) performed on the measurement for KEY Characteristics identified on the drawing. The results must be submitted with the initial FAI/PPAP submittal or re-submittals. On-going results are to be provided with each shipment unless clause 069 is specified on the purchase order.
- 052 100% Inspection Req'd:** You must perform 100% inspection of all parts and of all drawing characteristics and drawing notes.
- 054 Serialization (Bell Helicopter):** You must issue and control part serialization in accordance with Bell specification BPS 4050. When assigning and applying serial numbers, use your Bell Helicopter assigned alpha code (prefix) designation.
- 057 Assembly Contains Classified Part(s):** This purchase order is for a Bell Helicopter QPS 100 or QPS 102 assembly that contains a part (or parts) classified as Primary, Critical, or Flight Safety.
- 058 Manufacture/Subcontracting of Classified Parts (Bell Helicopter):** This purchase order is for a Bell Helicopter QPS 100 or QPS 102 part that is classified as Primary, Critical or Flight Safety and shall meet the requirements of QPS 300. In order to manufacture this part or perform a manufacturing operation involving a Significant "<V>" or Critical "<C>" characteristic, you must be approved by Bell or LORD to manufacture classified parts at the designated classified level of this part. The hierarchy for Bell classified parts manufacturing/processing approval is as follows:

Flight Safety - Approved to manufacture/process Flight Safety, Critical, Primary and non-classified parts.

Critical - Approved to manufacture/process Critical, Primary and non-classified parts.

Primary - Approved to manufacture/process Primary and non-classified parts.

Subcontracted Process (BPS Specification). All subcontracted special processes performed to a Bell Process Specification (BPS) that requires facility approval must be performed by a processor listed in QPS 101 having the classified level of the part or higher. The processor shall have a quality system in compliance with AS9100 or Nadcap AC7004.

Subcontracted Process (Non-BPS Specification). All subcontracted special processes performed to a specification other than a Bell Process Specification (BPS), such as a Military or Industry specification, involving a Significant "<V>" or Critical "<C>" characteristic shall require the following:

- For QPS-100 Product, you must be BHTI approved for the process to be performed and have the classified level approval of the part or higher.
- For QPS-102 Product, you must be approved as a LORD classified part processor and be listed in LORD specification MP-APS-001, "Approved Process Sources" for the process to be performed. Classified part approval is indicated in MP-APS-001 by the symbol {CP}.

The processor shall have a quality system in compliance with AS9100 or Nadcap AC7004. Contact your Buyer if you cannot locate a special process source approved by LORD or Bell Helicopter.

Inspection Check Sheet. You must prepare and use an Inspection Check Sheet to document the inspections performed on the part. The Inspection Check Sheet must provide a listing of all drawing attributes (including notes), quantity of parts in the lot and serial numbers of the parts in lot (if applicable). For each attribute listed on the Inspection Check Sheet, the quantity of parts inspected, inspection level (i.e., 100% or specific sampling plan), method of inspection, quantity accepted, quantity rejected and inspection stamp shall be listed/documentated. Actual recording of dimensions (by serial number) is not required unless specifically required by the LORD or Bell engineering drawing. Significant "<V>" or Critical "<C>" characteristics require 100% inspection and shall be annotated by the applicable symbol. The Inspection Check Sheet shall have the part classification listed on each page.

Thread Inspection. Threaded features must be 100% inspected for the major diameter (external threads), minor diameter (internal threads), Go/No-Go gauging and visual inspection. External threads produced by single point tooling also require a 10% comparator evaluation of the thread form. Internal threads produced by single point tooling also require a 10% thread cast and comparator evaluation of thread form.

- 059 Bell QPS 100 Marking Required.** Per Bell Helicopter QPS 100, parts are to be identified with the Bell part number, physical change (when applicable), calendar date of manufacture (MM/DD/YYYY) and final inspection acceptance stamp. The date of manufacture is to be the date of final acceptance. Marking methods are to be in accordance with BPS 4050. The final inspection stamp application, part number, physical change and date markings are to be legible and permanent.
- 060 Bell Helicopter Hardness Testing:** Hardness testing is to be performed per Bell Specification BPS 4467. If BPS 4467 is not listed on the LORD engineering drawing, Bell facility approval of the site performing the hardness testing is not required. If BPS 4467 is listed on the engineering drawing, then the site performing the hardness testing is to be approved by Bell Helicopter to the requirements of BPS 4467.
- 069 Certifications - Maintain at Supplier:** When certification clauses are specified on the purchase order, certifications are to be submitted with the First Article Inspection (FAI) report only. After FAI approval, and unless otherwise specified, you must maintain all applicable certifications for subsequent shipments at your facility for the entire record retention period. Certifications shall be maintained so that they can be retrieved and submitted to LORD within the time frame requested.
- 070 Certification Req'd - NDT:** Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-070 or your equivalent certification. If radiography is required, the radiographs shall be furnished with each shipment unless supplier personnel are certified by LORD as Radiographic Interpreters. For FPI, the use of a higher sensitivity level than that required by the drawing is acceptable except that sensitivity level 4 shall not be used without LORD approval. Where 200% magnetic particle inspection or penetrant inspection is required by the engineering drawing, two different inspectors are to each perform the process and evaluation. The two-person inspection must be clearly indicated on the submitted certification. Unless otherwise specified by the engineering drawing, for 200% inspection an acceptance symbol is to be marked on the part for each 100% inspection by the method and in the location specified by the drawing.
- 071 Approval Req'd – NDT Technique:** You must submit your part-specific NDT technique sheet to LORD for approval, prior to testing. The technique sheet is to be electronically submitted with a Supplier Request (SR) Form No. 655, available via the Supplier Workplace link found at www.lord.com/suppliers. You must not make any changes to the technique after LORD approval has been granted without the prior written approval of LORD Quality. Evidence of personnel qualification shall be available upon request when such qualification is a requirement.
- 080 Visual Inspection:** Visual inspection of parts must be performed in accordance with LORD technical specification PRC-T-0010 "Requirements for Visual Inspection of Aerospace Products". PRC-T-0010 is available at www.lord.com/suppliers.
- 090 Certification Req'd – Certificate of Conformance (C of C):** Requires submission of Certificate of Conformance (C of C) to material specification and/or verification of material part number, as supplied by LORD. Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-090 or your equivalent certification.
- 100 Certification Req'd – Plating:** Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-100 or your equivalent certification.
- 101 Certification Req'd – Heat Treat:** Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-101 or your equivalent certification. Certificate must include mechanical properties.
- 102 Certified Test Report – Hardness Testing:** Submit test report with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-102 or your equivalent documentation. The test report must include the hardness test specification, high and low hardness values, and sample size. If the part hardness is designated by the drawing as a Significant "<V>" or Critical "<C>" characteristic, documentation of the actual hardness reading for each part is required on the test report. Unless clause 060 is invoked or if no hardness test specification is listed on the engineering drawing, the hardness testing is to be performed per ASTM E10, ASTM E18 or ASTM E92 as applicable.
- 105 Certification Req'd – Chemical Process:** Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-100 or your equivalent certification.
- 106 Certification Req'd – Anodize:** Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-100 or your equivalent certification.
- 107 Certification Req'd – Shot Peen:** Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-100 or your equivalent certification.
- 108 Certification Req'd – Painting/Coating:** Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-100 or your equivalent certification.
- 109 Certification Req'd – Welding:** Submit certification with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-100 or your equivalent certification.
- 111 Certification Req'd – Other:** Submit certification, as required per in the purchase order comments or drawing notes, with each shipment unless clause 069 is specified on the purchase order. Use LORD Form 460-100 or your equivalent certification.

- 120 Certified Test Report – Chem/Mech Prop:** Submit material test report with each shipment unless clause 069 is specified on the purchase order. Include actual results of all chemical analyses, mechanical property tests, and mechanical testing, as required by the applicable specification for each heat or lot of material.
- Limit certifications for chemical properties are acceptable for aluminum only.
 - You must submit test reports from the original producer of the material, unless re-melting or re-rolling occurred, in which case you must submit test reports from the producer of the re-melted or re-rolled material. If the material receives subsequent processing (i.e. heat treat, etc.), you must also submit test reports for the material in its final condition. A chain of custody (traceability) of material, including original certification from the last re-melt or re-roll supplier, to each time the material was sold, up to delivery to LORD must be maintained and this information is to be included with shipment to LORD on Form 460-001 (or equivalent).
 - For Raw Material supplied by LORD (i.e. forgings and castings), supplier need only provide Certificate of Conformance (C of C) per clause 090.
 - If more than one lot of raw material is packaged together, raw material suppliers are required to physically segregate and identify raw material lots and to specify quantities of each lot of raw material on the certified test reports.
- 122 Yield Strength -** For materials where the Yield Strength is specified to be determined by the "Offset" method, a stress-strain (load/elongation) recorder and curve is required. The Yield Strength shall be determined as defined by material specification and in ASTM E8, A370, B557 or F606 as applicable. The Supplier shall include a statement on his certification to the effect that Yield Strength was determined using a stress-strain curve.
- 140 Certified Test Report - NonMetallic Mat'l:** Submit material test report with each shipment unless clause 069 is specified on the purchase order. Include actual results of all testing required by specification for each lot of material furnished. Suppliers of chemical materials must include expiration date and storage conditions (production date is optional).
- 171 Supplier Planning Approval Req'd:** Prior to the first shipment, you must submit your manufacturing and inspection planning and that of any subcontract source to the LORD Buyer for review and approval (freezing) by the LORD Planning Review Board (LPRB) and LORD customer (if applicable). The planning is to be electronically submitted with a Supplier Request (SR) Form No. 655, available via the Supplier Workplace link found at www.lord.com/suppliers. The SR is to have "Frozen Planning" chosen as the "Reason for Request" and the SR Item Description block completed with a statement that planning is being submitted for approval along with a listing (index) of the planning (with revision status) that is being submitted. Planning shall be prepared in accordance with the requirements of the applicable specification stated on the LORD engineering drawing. All submitted planning is to be in English. As a minimum, the planning shall contain the following information:
- a. Supplier name and address.
 - b. Revision History Record Sheet.
 - c. A revision identifier (letter and/or date) for the planning.
 - d. The LORD part number and LORD drawing revision letter.
 - e. Reference to the customer part number (if applicable).
 - f. The applicable classification for the part (i.e., PRIMARY, CRITICAL, VITAL, FLIGHT SAFETY, etc.) on each page of the planning.
 - g. The material used including the applicable specification number.
 - h. Sequential manufacturing, processing, test and inspection operations (including any sketches) for fabrication or processing of the part. Operations for outside processes must include the name and address of each supplier used.

Your planning and that of any subcontract source is to be re-submitted as identified above for LORD Planning Review Board (LPRB) and LORD customer (if applicable) for re-approval (freezing) prior to making any changes to the previously approved planning.

The Part Number, Frozen Planning Number (if different than part number) and Planning Revision (Letter/Number or Date) of your and any subcontract supplier planning must be identified on the certification and/or Form 460-001 submitted to LORD with each shipment certifying the planning revision level the parts were manufactured to (Example: Part Number: Y-35027-1-1, Company ABC Planning Number: FP 83, Planning Revision B, 3/31/00).

- 191 Approval Req'd – Control Plan:** You must submit your control plan to LORD for review and approval prior to starting production. The Control Plan is to be electronically submitted to the quality engineer who reviewed the requirements of the Supplier Quality Plan (Form 0400-01) with you. You must not make any changes to the control plan after LORD approval has been granted without the prior written approval of LORD Quality. The control plan must identify in chronological order, each step in your manufacturing process, including the items checked, and the method, frequency, acceptance standard, responsibility and documentation for each check. The control plan should also include a process flow chart keyed to the control plan.

- 192 Approval Req'd – PFMEA:** You must submit your Process Failure Mode and Effect Analysis to LORD for review and approval prior to starting production. The PFMEA is to be electronically submitted to the quality engineer who reviewed the requirements of the Supplier Quality Plan (Form 0400-01) with you. The PFMEA must identify potential failure modes and address their associated causes. It shall take into account all manufacturing operations, including individual components and assemblies. The PFMEA should also include a process flow chart keyed to the PFMEA.
- 193 Submit PPAP:** You must submit a PPAP (Production Part Approval Process) in accordance with the AIAG PPAP Manual, or as otherwise specified by Lord, prior to shipment of production parts. Contact your LORD Sourcing Agent for submittal requirements and/or required submission level.
- 194 Quality System Registration Req'd:** You must maintain third party registration of your quality system to ISO 9001 certification with the eventual goal of TS16949 certification by an accredited registrar, or meet LORD's eligibility requirements for Specially Designated Small Suppliers.
- 195 Submit First Article per AS/EN/SJAC 9102:** You must submit a first article inspection (FAI) report and any subsequent update/partial inspection reports in accordance with the requirements of AS/EN/SJAC 9102 prior to shipment of parts. All forms of the AS/EN/SJAC 9102 are required to be submitted. The LORD Form 3 shall be used in lieu of the Form 3 in AS/EN/SJAC 9102. A copy of the LORD Form 3 is available on the Supplier Community web.
- 230 Approval Req'd – Test Plan:** You must submit your functional test and acceptance plan to LORD for review and approval prior to starting testing. The test plan is to be electronically submitted with a Supplier Request (SR) Form No. 655, available via the Supplier Workplace link found at www.lord.com/suppliers. You must not make any changes to the test plan after LORD approval has been granted without the prior written approval of LORD Quality. Evidence of personnel qualification shall be available upon request when such qualification is a requirement (e.g., NDT).
- 241 Approval Req'd – Welding Procedure:** You must submit your welding procedure to LORD for review and approval prior to start of any welding. The welding procedure is to be electronically submitted with a Supplier Request (SR) Form No. 655, available via the Supplier Workplace link found at www.lord.com/suppliers. You must not make any changes to the procedure after LORD approval has been granted without the prior written approval of LORD Quality. Welding must be performed by certified welders. Evidence of personnel qualification shall be available upon request.
- 250 Certified Test Report – Performance Test:** Submit test report with each shipment unless clause 069 is specified on the purchase order. Include results for all testing required by the drawing or specification. Report actual values of quantitative test results. Test reports must be traceable to the articles submitted.
- 252 Certified Test Report – Performance Test:** Submit test report with each shipment. Include results for all testing required by the drawing or specification. Report actual values of quantitative test results. Test reports must be traceable to the articles submitted. Note: Submittal of test data required even though clause 069 may be invoked.
- 260 Age Control – Cure Date:** You must maintain cure date control for elastomeric products in accordance with the following (unless otherwise specified by the LORD engineering drawing):
- All articles must be marked with the cure date in the format of "MM/YYYY".
 - Marking shall be ink stamp, legible, and located on a surface not detrimental to the operation of the part. If necessary, contact LORD supplier quality for further clarification for the appropriate marking surface.
 - Parts too small to be marked with 1/16" characters may be bagged and a tag or label (marked with the cure date) inserted into the bag.
 - Assemblies which contain elastomeric parts shall have the cure date of the oldest part marked on the assembly.
 - No articles shipped to LORD shall have a cure date over 1 year old at the time of receipt.
- 349 Record Retention - 15 Years:** You must retain all production and quality-related records for a period of 15 years from date of shipment.
- 350 Record Retention - 20 Years:** You must retain all production and quality-related records for a period of 20 years from date of shipment.
- 351 Record Retention - 30 Years:** You must retain all production and quality-related records for a period of 30 years from date of shipment.
- 352 Record Retention - 25 Years:** You must retain all production and quality-related records for a period of 25 years from date of shipment.
- 354 Record Retention - 40 Years:** You must retain all production and quality-related records for a period of 40 years from date of shipment.
- 355 Record Retention - 50 Years:** You must retain all production and quality-related records for a period of 50 years from date of shipment.

- 400 Boeing PSD/SSD:** Boeing PSD or SSD documents may be applicable to this part number. You must review the PSD:Part Number cross reference list for the applicable Boeing specification and part number to determine if PSD or SSD documents apply. If the PSD or SSD applies to a process which requires a process certification, the PSD or SSD must also be referenced on the certification. The applicable PSD/SSD for each Boeing specification is available at www.lord.com/suppliers.
- 401 For Pratt & Whitney End Use:** This purchase order is for products or services intended for Pratt & Whitney, a United Technologies Company (UTC), end use. Compliance with UTC Specification ASQR-01 is required.
- 402 For Sikorsky End Use:** Parts are for Sikorsky Aircraft. This purchase order is for products or services intended for Sikorsky, a United Technologies Company (UTC), end use. Compliance with UTC Specification ASQR-01 is required.
- 403 For Hamilton Sundstrand End Use:** This purchase order is for products or services intended for Hamilton Sundstrand, a United Technologies Company (UTC), end use. Compliance with UTC Specification ASQR-01 is required. Inspection sampling is required per Hamilton Sundstrand sampling plan ASQR20.1, as a minimum. ASQR20.1 does not override any drawing notes that require 100% inspection.
- 404 Mfr/Subco Flight Safety – Boeing Mesa:** This purchase order is for a Flight Safety Part. Boeing Helicopter Mesa, AZ Flight Safety Parts Program Specification EPB17-119 applies. The complete manufacture of this part or a manufacturing operation involving a critical characteristic can only be performed by (or subcontracted to) a Boeing Helicopter Mesa, AZ approved supplier.
- 405 Hamilton Sundstrand Flight Safety Part:** This purchase order is for a product or service that involves a Flight Safety Part intended for Hamilton Sundstrand end use. Compliance with HS Specification HS15000, Flight Safety Parts, Requirements For, is made a contractual requirement of this purchase order. All supplier documents, including Packing List, Certificate of Conformity, etc., must contain the following text: "FLIGHT SAFETY PART. HANDLE AND PACKAGE WITH CARE."

410 Preference for Domestic Specialty Metals (DFARS 252.225-7014 ALTERNATE I):

(a) *Definitions.* As used in this clause—

- (1) "Qualifying country" means any country listed in subsection 225.872-1 of the Defense Federal Acquisition Regulation Supplement.
- (2) "Specialty metals" means—
 - (i) Steel—
 - (A) With a maximum alloy content exceeding one or more of the following limits: manganese, 1.65 percent; silicon, 0.60 percent; or copper, 0.60 percent; or
 - (B) Containing more than 0.25 percent of any of the following elements: aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, or vanadium;
 - (ii) Metal alloys consisting of nickel, iron-nickel, and cobalt base alloys containing a total of other alloying metals (except iron) in excess of 10 percent;
 - (iii) Titanium and titanium alloys; or
 - (iv) Zirconium and zirconium base alloys.
- (b) Any specialty metals incorporated in articles delivered under this contract shall be melted in the United States, its possessions, or Puerto Rico.
- (c) This clause does not apply to specialty metals melted in a qualifying country or incorporated in an article manufactured in a qualifying country.
- (d) The Contractor shall insert the substance of this clause, including this paragraph (d), in all subcontracts for items containing specialty metals.
- (e) The addition of this clause 410 requires Material certifications (clause 120) to specify country of origin of the material or any country where re-melting occurred, if the article was manufactured in the U.S. or was manufactured in a non-qualifying country.

Qualifying Countries (DFARS 225.872-1):

- (a) As a result of memoranda of understanding and other international agreements, DoD has determined it inconsistent with the public interest to apply restrictions of the Buy American Act or the Balance of Payments Program to the acquisition of qualifying country end products from the following qualifying countries:
 - Australia
 - Belgium
 - Canada
 - Denmark
 - Egypt
 - Federal Republic of Germany
 - France
 - Greece
 - Israel
 - Italy
 - Luxembourg
 - Netherlands
 - Norway
 - Portugal
 - Spain
 - Sweden
 - Switzerland
 - Turkey
 - United Kingdom of Great Britain and Northern Ireland
- (b) Individual acquisitions of qualifying country end products from the following qualifying countries may, on a purchase-by-purchase basis (see 225.872-4), be exempted from application of the Buy American Act and the Balance of Payments Program as inconsistent with the public interest:
 - Austria
 - Finland
- (c) The determination in paragraph (a) of this subsection does not limit the authority of the Secretary concerned to restrict acquisitions to domestic sources or reject an otherwise acceptable offer from a qualifying country source when considered necessary for national defense reasons.

- 411 FAR/DFARS Flow Down:** LORD Corporation FAR / DFARS Flowdown for Commercial Items or LORD Corporation FAR / DFARS Flowdown for Non-Commercial Items apply to this order. See www.lord.com/suppliers for text.
- 420 ITAR Controlled:** Warning: This document and documents specified herein contain technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S. C. Sec 2751, Et seq) and ITAR 22 CFR 120-130 and is subject to the export restrictions provided therein. Violations of these export laws are subject to severe criminal penalties. Export of this document and documents specified herein are subject to U.S. export control laws and regulations. Recipients of this document and documents specified herein should abide by such laws and regulations, including country specific controls, and control on use.
- 425 BUY AMERICA - US Material Only:** Purchase Order is for parts that are covered by 49 CFR Part 661 and 49 U.S.C. 5323(j), BUY AMERICA REQUIREMENTS_SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982, AS AMMENDED. As such, all iron, steel and manufactured products used in the parts which are the subject of this Purchase Order must be produced in the United States. The term "United States" includes the several states, the Commonwealth of Puerto Rico, the District of Columbia, Guam, American Samoa, the Virgin Islands and the Commonwealth of the Northern Mariana Islands. The addition of this clause 425 requires Material certifications (clause 120) to specify country of origin of the material or any country where re-melting occurred.

Revision (10/16/2009)

- Modified Clause H to clarify the requirements for First Article Inspection (FAI) reports.
- Modified Clause L to reference SR clause P and to add reference to Lord drawings and Purchase Orders.
- Modified Clause O to add requirements for application of dimensional limits for organic and inorganic coatings.
- Modified Clause R to require exceptions to be formally resolved prior to contract acceptance.
- Modified Clause W to reference LROD receiving inspection mailboxes.
- Modified Clause 013 to clarify Non-BPS Specification Process requirements.
- Modified Clause 045 to change 14 CFR Part 121, Appendices I and J to instead reference 14 CFR Part 120.
- Modified Clause 058 to clarify Subcontracted Process (Non-BPS Specification) requirements.
- Modified Clause 070 to add exception for sensitivity level 4.
- Added New Clause 080 – Visual Inspection
- Modified Clause 171 to add planning to be prepared in accordance with customer specification.
- Modified Clause 193 to remove level 3 requirement, so clause can be applied to any level of PPAP.
- Modified Clause 195 to add requirement to use LORD form 3 in lieu of AS9102 Form 3.

Revision (04/30/09)

- Modified Clause A to add Nadcap AC7004 requirement
- Modified Clause B to incorporate Clause 042
- Modified Clause C to add requirement to notify Lord for APQP review when new part PO is received
- Modified Clause D to clarify requirements when drawings or specs are revised but material was manufactured to a prior drawing or spec, yet still meets the revised drawings and specs.
- Modified Clause H to clarify requirement when clause 195 is specified on the purchase order
- Modified Clause O to remove reference to clause 190
- Modified Clause P to eliminate the need to submit an SR when drawings or specs are revised but material was manufactured to a prior drawing or spec, yet still meets the revised drawings and specs.
- Modified Clause W to clarify requirement for Form 460-001 when clause 069 is specified. Also modified to incorporate cert requirements when drawings or specs are revised but material was manufactured to a prior drawing or spec, yet still meets the revised drawings and specs.
- Modified Clause 011 to add customer specific approved source lists
- Modified Clauses 012 and 013 to incorporate requirements from Bell QPS 300
- Added new Clause 015 – Bell Helicopter Approved Metallic Material Source List
- Added new Clause 016 – Nadcap Accredited Special Processor
- Deleted Clause 042 for “FAA Inspection”
- Modified Clause 050 to clarify the requirement
- Modified Clause 052 to remove reference to clause 190
- Modified Clause 057 to clarify the Bell Helicopter QPS designations
- Modified Clause 058 to incorporate requirements from Bell QPS 300
- Added new Clause 060 – Bell Helicopter Hardness Testing
- Modified Clause 070 to clarify 200% inspection requirements
- Modified Clause 102 to clarify the requirement
- Deleted Clause 190 for “Submit LORD Inspection Checklist”
- Modified Clause 195 to specify AS/EN/SJAC 9102 requirements
- Modified Clause 260 to add the “bag and tag” requirement