



Apex Industries Inc.  
100 Millennium Blvd.  
Moncton, New Brunswick, Canada  
E1E 2G8

No. **QAC 4.6.1**

Title: Purchase Order Quality Assurance Clauses

Issue: 2

Rev. D

Date: 28-Aug-2018

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**Revision:**

This revision incorporates QAC 4.6.1 Issue 2, Rev C, Dated 10-July-2018.

Newly incorporated changes are listed below as well as identified by marginal indicia to the right throughout this document where applicable.

Change Index		
Issue	Revision	Date
1	NR	6-Feb-06
1	A	20-Mar-07
1	B	2-Apr-09
1	C	17-Nov-09
1	D	3-May-10
1	E	11-Apr-12
2	NR	28-July-16
2	A	11-Oct-16
2	B	2-Jan-17
2	C	10-July-18
2	D	28-Aug-18
Section	Description	
A13.	Reworded to provide clarity on when suppliers shall notify Apex of nonconformance & seek permission and approval for actions.	
A15.	Reworded to provide clarity on record retention.	
B3.	Added Arnprior QR001-01 (Q3.4, Q6.1 & Q6.2) flow-down.	

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**1.0 Purpose:**

This document specifies the quality requirements applicable to items purchased from suppliers under the Purchase Order (PO) issued by Apex.

Any deviations from this document, as part of a contractual agreement with the supplier, shall be reviewed and approved in writing by Apex Quality or delegate prior to contract completion & delivery to Apex.

This document is supplemental to any and all contractual agreements with the suppliers. In the event of a conflict, the negotiated contract (PO) shall take precedence over any of the terms contained herein or any other documents.

**2.0 Scope:**

This document is applicable to all suppliers (including the suppliers sub-tier suppliers) of aircraft products and/or services supplied to Apex Industries Inc. Aerospace Group.

Suppliers and supplier personnel shall be aware of their contribution to product or service conformity and their contribution to product safety.

Suppliers are expected to acknowledge and promote the importance of ethical behavior within their organization as well as externally.

Suppliers of consumables (shop supplies, items and/or services) that do not form part of the customer deliverable shall be considered exempt of the requirements herein unless otherwise specified by Apex.

It is the Supplier's responsibility to understand and comply with all clauses, terms and conditions specified within the contract (PO). All applicable requirements, including customer requirements will be flowed down within the contract (PO).

This document makes or gives no representation, warranties or guarantees whatsoever. In particular, it is in no way represented, warranted or guaranteed that the Supplier, by complying with the requirements herein will comply fully with all the requirements of the contract (PO).

Suppliers will not be informed where new revisions of this document are released, unless otherwise noted by Apex. It shall be the responsibility of the supplier to verify, review and ensure compliance with the current version of this document at the time of contract acceptance.

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Suppliers can access Apex Aerospace Purchase Order Quality Assurance Clauses, QAC 4.6.1 via [www.apexindustries.com](http://www.apexindustries.com).

There are two sections specified herein; Section A addresses 'General' Quality Assurance Clauses while Section B addresses 'Specific' Quality Assurance Clauses.

### 3.0 Definitions of Terms:

Customer - This term applies to Apex's direct customer. This may not be the end user of the item. NOTE: Additional requirements from customers of Apex's direct customer may also be flowed down by Apex to the supplier.

Customer Supplied – Apex and/or Apex's customer's property of which is provided to a supplier at no cost to the supplier for the sole use on products, items or deliverables in support of Apex PO.

Deliverable - Production hardware (manufactured parts) that is intended for final installation by Apex Customer.

Distributor – A Supplier that does not manufacture product but instead purchases and distributes product to Apex from other sources. This includes but not limited to: fastener hardware (nuts, bolts, rivets, etc.) chemicals for special processes (paint, sealants, etc.) as well as raw material (sheet metal, bar, plate, etc.)

Foreign Object Debris/Damage (FOD) – The condition where a foreign object has invaded a product or system which may cause damage. Some examples of FOD are: manufacturing by-products, screws, nuts, insert tangs, wire, dust/dirt, finger oils, hair, masking tape/residue/plugs, etc.

Grain (Short Transverse) Direction – For plate, sheet and forging, the direction through the thickness perpendicular to both longitudinal and long transverse directions.

Grain (Long Transverse) Direction - For plate, sheet and forgings, the direction perpendicular to the longitudinal direction which is also at right angles to the thickness of the product.

Grain (Longitudinal Direction) Direction - The principal direction of flow in a worked metal.

Manufacture – The original manufacturing source company, who invents, creates, produces, makes, builds, or fabricates products by hand or by machine.

MRB - Material Review Board - A cross-functional group that reviews production or purchased items on hold due to usability concerns and determines their disposition, which may include use, rework, repair, scrap, or returning to the supplier for further investigation.

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### **3.0 Definitions of Terms, continued**

Product/Item – A contracted physical or non-physical object that forms part of the final deliverable such as but not limited to: chemicals (adhesives, paint, etc.), raw material (metallic, non-metallic, sheet metal, plate, extrusions, rod, bar, plastic, forgings, castings, etc), hardware/catalog items, services, report, kit or other.

Process Specification - A statement of engineering requirements. Process specifications provide a standard for such things as manufacturing procedures, process materials, facility control, tool certification, processing solution make-up and control, quality assurance plans, test methods, qualification requirements or other.

Repair - Action taken to restore non-conformity to a serviceable condition that does not comply with drawing/specification requirements. Repair conditions typically require Customer MRB approval.

Rework - Action taken to bring nonconformance into compliance with the drawing/specification requirements. In many cases rework may be authorized by specifications without requiring prior customer approval; however if disposition is unclear, authorization shall be requested prior to performing any rework.

Service Provider – Suppliers for contracted services that require an elevated level of quality control such as but not limited to: special processes, assembly operations; calibration services; mechanical tests or chemical analysis, etc.

Special Processes – Processes which cannot be verified after the process without destructive testing. Processes which cannot be measured, monitored, or verified prior to delivery and use and are often defined by the customer as requiring prior approval to perform such processes.

NOTE: A process requiring approval by one customer may or may not require approval by all customers. Such processes requiring approval may include, but not limited to, anodizing, painting, non-destructive testing, heat treating, swaging, bonding, electrical bonding, etc.

Subcontractor – A Supplier of machining and/or fabrication services (make-to-print) used by Apex for additional capabilities and capacity.

Sub-Tier Supplier – A Supplier that performs work on Apex products/items without a direct Apex contract (PO). Apex tier-one supplier (contract owner) utilizes services of a lower level supplier (i.e. tier-two) through PO cascade.

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Supplier – Often referred to as ‘Seller’. A company manufacturing and/or distributing product(s) and/or services in accordance with Apex PO that forms an element of the deliverable item to the customer.

**4.0 QAC4.6.1 Section ‘A’ – ‘General’ Purchase Order Quality Clauses**

‘General’ Purchase Order Quality Clauses identified within this section shall be applicable for items which form part of the deliverable as defined within Table 1 section ‘A’ unless otherwise specified.

**5.0 QAC4.6.1 Section ‘B’ – ‘Specific’ Purchase Order Quality Clauses**

‘Specific’ Purchase Order Quality Clauses identified within this section shall be applicable for items which form part of the deliverable as defined within Table 1, section ‘B’ unless otherwise specified.

NOTE: The Customer and/or Program specified on Apex PO shall initiate the applicability of clauses within section ‘B’ herein.

**6.0 Supplier Acceptance**

The Supplier is responsible for reviewing Apex Purchase Order Quality Assurance Clauses herein. In doing so, the Supplier agrees to comply with APEX’s Quality requirements, as applicable to product(s) and/or service(s) provided per contract (PO).

As a Supplier to Apex you accept all responsibility for the accuracy and compliance of information, products and/or services you supply and certify per Apex contract (PO).

It is the Supplier’s responsibility to retain this document of current revision and to ensure relevant personnel within the supplier’s organization are made aware of the requirements specified herein.

Should you have any questions concerning these requirements, please direct your inquiries to Apex Procurement Representative for assistance.

By accepting Apex contract (PO), Apex will consider this to be the Supplier’s acceptance of the Purchase Order Quality Assurance Clauses specified within this document.



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**Table 1**

<b>Purchase Order Quality Clauses, Table 1</b>		
<b>Supplier Class</b>	<b>Section 'A' – 'General' Clause</b>	<b>Section 'B' – 'Specific' Clause</b>
A - Subcontractor (Make to Print)	A1, A2, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, A23, A24, A25	B3, B4, B6, B8
B - Distributor	A2, A3, A4, A5, A5.1, A7, A8, A9, A13, A14, A15, A16, A17, A18, A20, A23, A25	B1, B2, B3, B6, B7
C - Service Provider	A1, A2, A6, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, A23, A25	B3, B4, B5, B6, B7, B8
D - Manufacture	A1, A2, A3, A5, A5.1, A7, A8, A9, A13, A14, A15, A16, A17, A18, A19, A20, A23, A25	B2, B3, B6, B7

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**QAC4.6.1 Section 'A'**  
**'General' Purchase Order Quality Clauses**

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**A1. Quality System**

The Supplier must have an established quality management system (QMS) that complies with the requirements of AS9100, ISO 9001, or equivalent system. This quality system shall be to the extent necessary and appropriate for the product being provided. The Suppliers quality system may be subject to audit by Apex Industries Inc. representative for evidence of compliance.

NOTE: Unless otherwise specified, the suppliers QMS does not require certification, compliance is acceptable.

**A2. Certificate of Compliance (C of C)**

The Supplier shall furnish with each shipment of product a C of C that shall, as a minimum, attest that the materials, parts, and/or processes supplied are in accordance with the requirements and specifications stated on the purchase order. The C of C shall indicate general information such as Apex's purchase order number, part number, part or product name, part and/or drawing revision level, and applicable quantity.

Specific information shall include, but not be limited to, the supplied items traceability reference such as lot/batch/mill number, analysis/test reports, shelf life and serial numbers (if applicable). The Certificate shall be signed and dated by the Supplier's quality representative as evidence that the deliverable product complies with the stated requirements.

NOTE A: Lockheed Martin, F35 Program suppliers of special processes per QCS-001 shall include on the C of C the following:

- Title, specification number (including revision letter) and QCS-001 process code of the process;
- Name and address of the process facility;
- Apex's assigned processor number 'VNS00956';
- Date the C of C was issued;
- Purchase order and purchase order part number;
- Quantity of parts (to include quantity accepted/ rejected);
- Signature and title of authorized quality agent of Process Source;
- Fracture durability classification or serialization per customer PO.



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**A3. Raw Material Certification (C of C)**

Each shipment of metallic or nonmetallic raw material must be accompanied by the manufacturer’s mill inspection/test report. The information must be legible and include the following:

- Name & location of raw material manufacturer or mill;
- Material identification by specification number and material condition;
- Manufacturer or mill lot traceability identification;
- Actual chemical & physical test results as specified in the applicable material specifications;
- Authorized signature of the manufacturer’s quality representative as evidence that the information contained therein complies with the material requirements.

**A4. Distributors**

Distributors supplying product(s) to Apex shall have a Quality Management Systems that complies with either AS/EN/JISQ 9100, “Quality Management Systems – Requirements for Aviation, Space and Defense Operations,” and/or AS/EN 9120, “Quality Management Systems – Requirements for Aviation, Space and Defense Distributors.”

In addition to the Distributor’s certificate of compliance (C of C), the Distributor must also provide full traceability to the manufacturers, including manufacture C of C.

**A5. Raw Material & Specialty Metals Requirements**

Unless otherwise specified all raw materials must be of North American origin, or originate from a qualifying country as established throughout the aerospace community. Specifically, specialty metals and/or items containing specialty metals must be obtained from qualifying country sources as outlined by the Defense Federal Acquisition Regulation Supplement (DFARS) 252.225-7009 (Preference for Domestic Specialty Metals, dated 29-Jul-2009).

The qualifying countries are listed in subsection 225.009 (10) of the DFARS. Any deviation from this requirement must be brought to the attention of Apex Industries Inc. Procurement representative prior to any delivery for appropriate review and disposition.

**NOTE A:** It is the responsibility of the Supplier to ensure that the current version of DFARS 252.225-7009 and subsection 225.009 (10) is being utilized to identify Qualifying Countries.

**NOTE B:** Metallic materials for use in the manufacture of a Bell Helicopter “classified item” (i.e. product designated as “Primary”, “Critical”, or “Flight Safety”) must comply with the requirements of Technical Data Report 299-100-837 (latest revision), Approved Metallic Materials Source List. Where applicable this requirement shall be communicated to the supplier during the procurement process.

**NOTE C:** Materials for use in Bombardier Aerospace programs must comply with the requirements of Bombardier Aerospace Engineering Material Control Manual, EMCM-001 (latest revision). This requirement will be indicated to the supplier upon quote and purchase request by terms such as “Bombardier Approved” or “Must be from Bombardier Approved Source”

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Suppliers providing raw materials (sealants, adhesives, paints, metallic & non-metallic, etc.) for Bombardier deliverables must supply items from approved source per EMCM-001 and/or Bombardier’s Approved Suppliers List @ <http://www.bombardier.com/en/aerospace/suppliers.html>

**NOTE D:** Items must be obtained from a QPL/QPD approved manufacturer wherever (QPL) Qualified Products List <http://quicksearch.dla.mil/> or (QPD) Qualified Products Database <http://qpldocs.dla.mil/default.aspx> requirements apply and where ‘Open Bid’ is specified unless otherwise specified.

**NOTE E:** Suppliers providing raw materials (sealants, adhesives, paints, metallic & non-metallic, etc.) for F35 program deliverables (Lockheed Martin, BAE Systems or Northrop Grumman) must supply items from approved ‘A –Code’ sources per Engineering Materials & Approved Products, EMAP’s.

**A5.1 Grain Direction Requirements per Material Stock Code:**

Material grain direction requirements shall be controlled as indicated below:

- The first numeric digit shall be standard at all times and represent thickness whether thickness ‘ST’ (Short Transverse) grain is specified or not.
- The second & third numeric digits can represent either width LT’ (Long Transverse) or length ‘L’ (Longitudinal) grain. The description will indicate width ‘LT’ and/or length ‘L’ grain as applicable. See example 1) & 3).
- Thickness ‘ST’ (Short Transverse) grain may or may not be indicated; however will always be the first numeric digit in the stock code. See example 1) through 4).
- Where ‘GRAIN’, ‘GR’, and ‘GR DIR’ is solely indicated, the grain indicated shall be ‘L’ (Longitudinal) direction. See example 2).
- Where grain direction is not specified the thickness ‘ST’ shall be respected. The width ‘LT’ and length ‘L’ grain shall be per vendor discretion unless otherwise specified. See example 4).

EXAMPLE:

- 1) A07PL1.25X18.5X64.5T7451  
Desc. 1.25STX18.5LTX64.5L,7050-T7451 AMS7050
- 2) A07PL1.5X5.0T7451  
Desc. 1.5”X5”X6.5” 7050-T7451 AMS4050 **GRAIN DIR 6.5”**
- 3) A07PL1.5X6.0X35.0T7451  
Desc. 1.5”X6”X35” LMA-M7050-T7451 **35” GD. (L), 6” GD. (LT)**
- 4) A07PL.375X1T7451  
Desc. .375”X1.0” 7050-T7451, AMS4050

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**A6. Special Process Control**

Supplier is responsible for ensuring process control compliance with records to evidence compliance. These records must be made available to Apex Industries Inc. and/or Apex Customer(s) upon request.

Where applicable the Supplier shall ensure only qualified personnel perform special processes. Supplier must notify Apex immediately in writing wherever status in process compliance (failure) and/or process approval (loss of) relative to Apex PO changes.

**NOTE A:** Suppliers shall maintain accreditation such as National Aerospace and Defense Contractor Accreditation Program (NADCAP), AS/EN/JISQ 9100, "Quality Management Systems Requirements for Aviation, Space and Defense Operations or other where required by OEM, Government, Industry or other, to sustain process approvals.

**NOTE B:** Boeing D1-4426 Suppliers or other performing processing in accordance with Boeing specifications per Apex PO's are not permitted to use Boeing PSD's (where available) without Apex permission via Apex PO.

**A7. Hardware and Catalog Items**

Suppliers of Hardware and Catalog Items must include full traceability via certificate of compliance and/or test reports from the manufacturer(s).

**NOTE A:** Items for use in the manufacture of Bell Helicopter product may require compliance with Technical Data Report 299-099-900, Approved Source List for manufacturers of performance rated standard parts and materials. Where applicable this requirement shall be communicated to the supplier during the procurement process.

**NOTE B:** Items for use in Bombardier Aerospace programs must be obtained from manufacturers listed in the Bombardier Approved Supplier Listing as provided via the Internet at [www.aerospace.bombardier.com](http://www.aerospace.bombardier.com). Where applicable this requirement shall be communicated to the supplier during the procurement process.

**NOTE C:** Items for use in F-35 program deliverables (Lockheed Martin, BAE Systems or Northrop Grumman) must supply items from approved manufacturers listed in 2GNA00001. Where applicable this requirement shall be communicated to the supplier during the procurement process.

**NOTE D:** Items must be obtained from a QPL/QPD approved manufacturer wherever (QPL) Qualified Products List <http://quicksearch.dla.mil/> or (QPD) Qualified Products Database <http://qpldocs.dla.mil/default.aspx> requirements apply and where 'Open Bid' is specified unless otherwise specified.

**A8. Counterfeit Parts Prevention**

Supplier shall establish and maintain a Counterfeit Parts/Material Prevention and Control Plan using AS5553 and/or AS6174 to ensure that Counterfeit Work is not delivered to Apex. The purpose of Seller's Plan shall be to develop a robust process to prevent the delivery of counterfeit commodities and control commodities identified as counterfeit.

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**A9. Control of Shelf Life Sensitive Product**

Supplier shall clearly identify storage and shelf life expiry of shelf life sensitive items. The manufacture date and expiry date shall be detailed on the certificate of compliance in addition to the item labeling and/or packaging.

Apex requires product(s) to have a minimum of seventy-five percent (75%) shelf life remaining on the product(s) upon receipt unless otherwise specified or agreed upon.

**A10. Customer Supplied Product**

Customer supplied materials, tooling, documents, data and/or other forms of media are authorized for use in the performance of work on Apex purchase orders only.

The Supplier is responsible for strict control and maintenance of customer supplied product and related information while in its possession.

Customer property including unused raw material where applicable must be returned to Apex upon completion of PO unless otherwise specified or agreed upon.

**A11. Supplier Flow Down Requirements**

Apex requires all suppliers to flow down Apex PO requirements as applicable including the quality assurance clauses specified within this document in any event a supplier purchases material and/or services from a Sub-Tier Supplier.

Where used, supplier's sub-tier must retain OEM approval(s) wherever processes performed require OEM approval. Approval must be in good standing at the time of use.

**A12. Calibration System**

Where applicable, the Supplier shall maintain control of monitoring and measuring devices by utilizing a calibration system that complies with the requirements of ISO 10012-1, MIL-STD-45662, ANSI/NCSL Z540-1, or equivalent unless otherwise specified. Calibration must be traceable to the National Institute of Standards and Technology (NIST) or equivalent agency.

**A13. Control of Nonconforming Product and Corrective Action**

Suppliers are responsible for identifying, controlling and immediately notifying Apex of any nonconformity that arises relative to the supply of product(s) & service(s) to Apex.

NOTE: Apex requires the supplier to obtain permission & approval from Apex prior to the supplier acting on supplier NC disposition where such action to resolve nonconformance will not restore design requirements.

Apex expects the supplier to act diligently in an effective manner to correct nonconformance and to prevent recurrences. Where actions prove to be ineffective or incomplete, Apex may request further investigation and action.

**A14. Item Preservation**

Item(s) must be packaged/preserved for protection against loss or damage. Item(s) integrity must be maintained throughout the delivery process. Damaged items may not be accepted by Apex upon delivery. Apex PO will specify special packaging and/or handling requirements where applicable.

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**A15. Records Retention (Documented Information)**

Supplier shall retain on file (electronic or hard copy) all traceability, quality and test records (including special process and personnel qualification records) associated with items sold to Apex per purchase orders requirements.

Supplier shall retain such records for a period of not less than the calendar year plus ten (10) years from the date of final payment under the applicable Purchase Order for all Goods unless otherwise specified on the Purchase Order or in the OEM requirements, whichever is longer.

Exception: Documented information relative to the F35-Program shall be retained for up to 12 yrs after completion of operational life (i.e. 42 yrs).

Note: Where applicable, test specimens used for design approval, inspection/verification, investigation, or auditing shall be supplied by Apex. All documented information relating to the aforementioned shall be retained for required retention period along with any disposition requirements.

**A16. Right of Access**

Supplier and supplier's sub-tier (where applicable) shall agree to allow access to their premises to permit Apex, the end user (Customer), Government and/or regulatory authority to conduct quality audits or surveillance of the item(s), processes and records to verify compliance with Apex PO requirements. At a minimum a notice of three days will be given prior to any access request. Supplier agrees to provide suitable facilities with internet access at no increase in price, cost or fee to Apex the end user (Customer), Government and/or regulatory authority.

**A17. Notice of Change**

Supplier is responsible for notifying Apex Industries Inc. of changes to items or processes that may affect product quality and/or compliance to specified PO requirements. Supplier must also notify Apex in the event any of the following apply:

- Business sale (change in ownership);
- Transfer of Supplier's manufacturing operations;
- Change in Quality Management;
- Company name change;
- Relocation;

\*NOTE: In event of relocation, supplier shall include the following, as a minimum:

1. Purpose of the relocation;
2. Address of the new location(s);
3. Assessment of actual or potential impact to current POs;
4. Risk mitigation plan to ensure compliance to existing requirements;
5. Plan defining identification, storage, protection, retrieval & retention of records;
6. Master schedule and timeline of relocation activities;
7. Relocation Coordinator/Point of Contact.

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**A18. Contract Acceptance**

Supplier shall notify Apex if any of the following conditions exist at time of PO acceptance:

- Technical data in the supplier's possession does not agree with the revision data specified in a Purchase Order;
- Missing technical data,. Apex shall provide missing technical data in a reasonable time after receipt of such request;
- The Purchase Order requirements are unclear. The supplier shall not start execution of the Purchase Order until all requirements are clarified.

**A19. Work Transfer**

Suppliers shall advise Apex in advance of any transfer of operations (e.g. from one supplier facility to another supplier owned facility or from the supplier to a different supplier).

Where the supplier transfers from one supplier facility to another supplier owned facility the supplier's management shall mandate a project manager responsible for the transfer and this individual shall be the focal of any correspondence regarding the transfer between Apex and the supplier's organization.

The supplier's project manager shall report per Apex request and where applicable the following but not limited to:

- Description of the new location;
- A list of parts involved in the transfer;
- Timeline and plan for each step in the transfer including:
- Production stop date at ceding site;
- Equipment movements;
- New location set-up, including re-calibration, re-qualification

**NOTE:** Transfer of work applies to both temporarily and permanently transfer of work from the supplier's organization.

**A20. Revision Control**

Supplier's providing items to meet Customer, Military and/or Industry specifications shall ensure that the most recent revision of applicable specification is applied at the time of contract unless otherwise specified by PO or other. Suppliers shall contact Apex for disposition wherever conflict exists between Specification revisions.

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**A21. Technical Data Secure Technologies**

The following two (2) legends shall support Apex solicitations and purchase orders/contracts, as applicable, that contain export-controlled unclassified technical data or technology (as defined by the International Traffic in Arms Regulations [ITAR] and Export Administration Regulations [EAR], respectively) that has been provided to Apex from Apex Customer.

ITAR – The following statement herein shall be considered your flow-down requirement and be applicable to all purchase order’s where technical data is transferred via Apex’s secure FTP site (with exception of EAR orders).

***“EXPORT CONTROLLED – The technical data or software is subject to the International Traffic in Arms Regulations (22 C.F.R. Parts 120-130). Export, re-export or retransfer contrary to U.S. law is prohibited.”***

EAR – Where applicable the following statement shall be written within Apex purchase order.

“All Engineering Drawing Documents (Technical Info) for this part now fall under a “NLR” (No License Requirement) classification. ITAR classified information has been changed to EAR classification.”

***“EXPORT CONTROLLED – The technology or software is subject to the Export Administration Regulations (15 C.F.R. Parts 730-774). Export, re-export or retransfer contrary to U.S. law is prohibited.”***

**NOTE:** ITAR & EAR technical data will continue to be is transferred via Apex’s secure FTP site.

**A22. Secure FTP Site Data Transfer**

Apex will communicate the transfer of all electronic related ITAR & Controlled Goods media through a secure FTP site. The Supplier is expected to retrieve this media for each purchase order issued to ensure compliance is achieved.

**A23. Foreign Object Damage/ Debris Prevention (FOD)**

Supplier shall maintain a FOD Prevention Program in accordance with NAS412 Foreign Object Damage/Foreign Object Debris (FOD) Prevention for the processes and controls in manufacturing, to prevent introduction of foreign objects into any deliverable item.

Supplier shall employ suitable housekeeping practices to assure timely removal of residue/debris generated during manufacturing and processing operations such as but not limited to tangs, burrs, machine chips, masking tape, masking plugs, masking residue, adhesive, etc.

Supplier shall identify FOD susceptible areas such as those areas where the probability for introduction of foreign objects are most likely to occur. Supplier shall implement controls appropriate for the manufacturing/processing environment to preclude FOD.

**A24. Subcontractor – Apex Supplied Material Return**

Applicable where raw materials (metallic & non-metallic) are supplied by Apex. Such materials are property of Apex or Apex’s customer and shall be used exclusively in the manufacturing of items per Apex PO.

All items regardless of their status (complying, non-complying and scrap) produced from Apex supplied materials shall be returned to Apex unless otherwise specified or agreed in writing. When applicable the Supplier shall clearly identify and segregate non-complying and scrap items from complying items.

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**A25. Method of Communication**

Suppliers shall interact with Apex using various forms of communication such as, but not limited to email, ftp site for secure transfer, phone, fax or mail.

NOTE: Sensitive information shall be handled in accordance with clause A21. & A22.

Regarding supplier performance, Apex will monitor the supplier's on-time and on-quality performance.



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**QAC4.6.1 Section 'B'**  
**'Specific' Purchase Order Quality Clauses**

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**B1. Distributor**

Boeing first tier suppliers shall evaluate and select distributors based upon their ability to comply with this requirement. Note that methods for demonstrating compliance can include, but are not limited to, Quality Management System certification, second party audit, survey, etc.

The requirement to utilize distributors that have Quality Management Systems that comply with either AS/EN/JISQ 9100 and/or AS/EN 9120 will be imposed via purchase contract language. Boeing first tier suppliers with purchase contract language imposing D6-82479, "Boeing Quality Management System Requirements for Suppliers" are affected.

<http://www.boeing.com/companyoffices/doingbiz/supplier/index.html>

Tier one supplier to Boeing must use Distributors with QMS approved to AS/EN 9120; meaning Apex will only purchase Boeing related materials from Distributors approved to AS/EN 9120.

Apex purchases of Boeing related materials from Distributors approved to AS/EN 9120 does not state that these Distributors must also purchase from Distributors approved to AS/EN 9120; however Distributer's with Boeing direct contracts (Tier one) to Boeing will be required to only purchase Boeing related materials from those Distributors approved to AS/EN 9120.

**B2. Purchase Order Protection Clause (NAFTA)**

As applicable, the Exporter (Supplier) accepts all responsibility for the information provided on the NAFTA Certificate of Origin, letter or affidavits. This acceptance includes any liabilities resulting from inaccurate data or failure to comply with NAFTA requirements.

**B3. Customer Contract Requirements (Flow-Down)**

Suppliers of Apex Industries Inc. whom provides product(s) and/or services related to:

**Boeing work** shall comply with the following Boeing clauses:

- H900 (Article: A.1, A.2.a, A.3, A.5, A.12, A.13, A.14, A.24, A.25, A.26, A.27)
- H900 (Article: B Long Beach Article 2 excluding section a, b,)
- M000, Q019, Q091, Q224P, SP3.

Clauses located @ [http://www.boeingsuppliers.com/idscommon/clauses/clause\\_index.htm](http://www.boeingsuppliers.com/idscommon/clauses/clause_index.htm)

**Arnprior work** shall comply with the following Arnprior clauses:

- QR001-01 (Q3.4, Q6.1 & Q6.2) as applicable.

Clauses located @ <http://www.arnprioraerospace.com/Suppliers.shtml>

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**B4. Source Inspection**

Apex may impose on-site source inspection prior to supplier delivery. Source inspection may involve Apex, the end user (Customer), Government and/or other regulatory authority. When applicable per Apex PO, the supplier must notify Apex at least five (5) working days prior to the delivery date.

The Supplier agrees to provide without additional charge all reasonable facilities, tools and assistance for the safety and convenience of the personnel conducting the inspection and/or test. Source inspection shall not constitute product acceptance, nor shall it relieve the Supplier of any liability for full compliance with all requirements of the purchase order.

**B5. Lockheed Martin F35 Program, QCS-001 Approved Source Requirement for**

This clause applies to all QCS-001 suppliers performing special processes on Lockheed Martin, F35 Program deliverables. Apex PO will identify where applicable Lockheed Martin, F35 Program work.

Suppliers shall comply with the minimum quality requirements of Lockheed Martin's Appendix QJ @ <http://www.lockheedmartin.com/us/aeronautics/materialmanagement.html> found under 'Quality Requirements'; Quality Appendices'.

**B6. Lockheed Martin Program Quality Goals**

As a Prime Contractor to Lockheed Martin, the F-35 Lightning II Program, Apex expects the following Program Quality Goals to be embraced in all aspects of the supplier's activities. The goal is to meet PO requirements, ensure processes are capable and stable and support Takt time, and commitment to continuous improvement:

- Producing product designs tolerant to manufacturing process capabilities.
- Supplier products that meet Reference PO and assembly requirements.
- Processes that are capable and stable.
- Supplier shall make continuous improvements to ensure the focus on process yields and waste elimination to reduce cost and maximize product affordability.

**B7. BAE Systems**

Suppliers providing products and/or services for BAE Systems F-35 Lightning II Program shall comply with the requirements of BAES-JSF-QMS-141-03-DV and BAE-AG-QC-SC1 PARTS 1 TO 7 as applicable.

Suppliers must seek Apex approval (in all cases) prior to utilizing Sub Tier suppliers per BAE Systems, Buyer Approved Processes Register (BAPR).

**B8. Key Characteristic (KC)**

Apex may identify on the purchase order a requirement to monitor KC's. A KC may be a specific drawing dimension or special process parameter that requires monitoring and/or reporting on a part-by-part base.

Applicable to Service Provider suppliers, the KC must not be altered (machined or damaged due to handling, testing, racking, etc.) unless otherwise specified by contract.

The following applies to Subcontract suppliers where identified by Apex PO. Variation on KC's must be controlled in such a manner as to reduce the part-to-part variation from nominal. All results (data) on KC's shall be reported and included with the deliverable. Where applicable the supplier shall also monitor KC requirements flowed down to its sub-tier suppliers in the same manner with results provided to Apex.