

SUPPLIER QUALITY REQUIREMENTS

1. QUALITY SYSTEM REQUIREMENTS

- a. The Suppliers Quality Management System must be accredited to ISO 9001, AS 9100, AS9120 (distributor), or have been approved by APCD by exception.
- b. The supplier is required to notify APCD immediately if non-conforming product was inadvertently shipped to APCD.
- c. The supplier is not allowed to ship non-conforming product dispositioned as USE AS IS or repaired without prior approval from APCD.
- d. The supplier is required to flow down to all sub-tier suppliers all applicable quality and technical requirements including customer requirements in the purchasing documents.
- e. The supplier is required to promptly notify APCD of any changes in the Quality Management Representative with assigned responsibility and authority for the quality system.
- f. Verification of Purchased material by the supplier at a sub-tier supplier's facility does not absolve them from providing acceptable material. Such material must be submitted and accepted to standard inspections and testing by APCD.

2. CERTIFICATIONS AND TEST REPORTS

The supplier shall provide with each shipment a Certificate of Compliance signed with an original signature and title of signer. Certifications must show total quantity in the shipment, lot codes or date codes and revisions for each part number.

Manufacturer: shall provide with each shipment a Certificate of Compliance stating all materials, parts, processes and services used in the manufacture meet the purchase order requirements and that substantiating certificates are on file and will be made available to APCD upon request.

Distributor: shall provide with each shipment a legible Certificate of Compliance stating that the product ordered fully complies with the requirements of the APCD purchase order; and shall be accompanied with a Certificate of Compliance from the Original Manufacturer of the product being procured. The distributor must be able to provide objective evidence of a distribution agreement with the manufacturer and be made available for review upon request by APCD.

Raw material supplier: shall provide with each shipment a Certificate of Compliance and copy of the material certification; stating material fully complies with the requirements of the APCD purchase order, or drawing specification.

Note: the supplier must certify to all applicable requirements of A through f.

- a. If special processes are required (heat treat, plating, etc.), the certification must reflect the applicable specification met and the elements.
- b. Chemical and or mechanical properties when shipping raw materials such as resin, ferrous and non-ferrous metals, aluminum castings, rubber and adhesives are required (1) The certification must reflect chemical analysis and/or results of the testing for mechanical properties or (2) The information must be on a separate report accompanying the certification.
- c. Country of origin and Harmonized Tariff Schedule (HTS) Codes must be provided for all shipments regardless of ship destinations.
- d. The supplier shall furnish certification for the materials used in the specific process used to fulfill the order and shall provide positive traceability upon request by APCD. In addition, supplier's Certificate of Compliance will reflect products were manufactured/processed using this material.
- e. The supplier may be responsible for annual submittal of material test data completed by an Independent Lab to verify materials are compliant to the Certificate of Compliance as specified on the purchase order.
- f. Supplier must be willing and able to respond to reasonable requests for process and material disclosures in response to APCD request related to REACH or RoHS on a part number basis.

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3. RIGHT TO ACCESS

All material covered by this purchase order is subject to surveillance inspection by APCD, GOVERNMENT, CUSTOMER, REGULATORY AUTHORITIES. This requirement may include surveillance of the product or the supplier's Quality System, manufacturing processes, and facilities. The supplier shall provide access to all facilities and equipment, supply data and perform test as required by the applicable drawings, specifications and inspection instructions under the surveillance of APCD Quality Assurance Representative, GOVERNMENT/CUSTOMER and REGULATORY AUTHORITIES, as requested. The surveillance inspection will be requested in advance in writing by APCD, whenever possible.

4. FIRST ARTICLE INSPECTION

If supplier is producing the part for the very first time, a First Article Inspection (FAI) is required on the first lot produced against this Purchase Order. This inspection will be performed by the supplier in accordance with AS9102 or EN9102 current revision. All supporting documentation including raw material certification and scored drawing must be supplied with the first shipment. Also includes the First Article Inspection results of all sub-tier builds and materials, if applicable.

The FAI must meet all the requirements of the purchase order. Once the first lot is accepted the supplier shall make NO CHANGES to the process or material used without written authorization from APCD.

An FAI will need to be resubmitted if any of the following events occur:

- a. There is a change in design affecting form, fit, or function.
- b. There is a change in manufacturing source(s), process(es), inspection method(s), location of manufacture, tooling materials, that can potentially affect form, fit, or function.
- c. There is a change in numerical control program or translation to another media that can affect form, fit, or function.
- d. After a natural or man-made event which may adversely affect the manufacturing process.
- e. After a lapse in production for two years, or as specified by the customer.

5. DIMENSIONAL/WELD SAMPLES

- a. Dimensional sample of the material produced against this purchase order is required prior to production. Inspection of this sample will be arranged by the APCD buyer.
- b. Forgings, castings or molding: A sample from each cavity (unless otherwise specified) will be produced and inspected by the supplier. The dimensional report, along with the sample(s) will be submitted to APCD Quality Assurance for inspection and approval. The production run will not commence until approval has been given by APCD.

6. RECORD RETENTION

The supplier and its sub-tier suppliers shall retain on file all inspection, test, design and certification records for a minimum of ten (10) years after completion of this purchase order. Said records shall be available for review by APCD, GOVERNMENT, CUSTOMER, and REGULATORY AUTHORITIES upon request. Disposal of records shall be done in a manner that shall prevent reconstruction. When specifically requested by APCD or its customer, the supplier shall make records available in English.

7. NO CHANGE CLAUSE

- a. Supplier shall make no change to any design, material, part, process, procedure, tooling or test equipment, sub-tier suppliers, manufacturing location, regardless of design being controlled by APCD or the Supplier, without the prior written approval of APCD. This excludes items that are considered Commercial of the Shelf (COTS). A supplier change notice will need to be submitted to APCD for approval. This Supplier Change Notification (SCN) form, F-903, can be found on the APCD website under resources or utilize their own form as long as it is consistent with the APCD change notice requirements. The provided section of the F-903 form must be completely filled and submit to APCD in MS Excel file for review and approval. A scanned copy of the approved form will then be sent back to the supplier. Signed form should accompany first production shipment that incorporates the change. Supplier to keep track of traceability for any changes.

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- b. Supplier is never permitted to knowingly ship product that deviates from the print, specification limits, or design intent without prior written authorization of APCD. If such a condition exists, the supplier may petition to allow shipment of the product under a signed written deviation or waiver. The form, F-866 "Supplier/Customer Deviation Waiver Request Form" can be found on the APCD website under resources or utilize their own deviation/waiver form. If directed by APCD, the supplier must send samples of all nonconforming for evaluation and the cost of any testing required in determining the acceptability of the product will be charged to the supplier. Approval of a deviation or waiver is specific to the products for which it has been submitted and approved and shall not be construed as permanent engineering change. Approved deviation or waiver has a validity of 30 days unless APCD approved an extension period.

8. SHELF LIFE MATERIALS

The Date of Manufacture and Shelf Life Expiration Date shall be clearly marked on the item and/or packaging adjacent to batch/lot number identification. The item or material must have 80% shelf life remaining as a minimum, unless otherwise specified by APCD.

9. LOT/DATE CODE CONTROL

Components must be supplied in one lot. Components being supplied with multiple date codes must have a date code within a 12 month period. The date code shall be recorded on the certificate of conformance and shall be clearly marked on the actual package label.

10. PACKAGING AND LABELING

Unless specified in the purchase order, the supplier shall package material in a manner that will ensure protection against corrosion, oxidation, deterioration and physical damage during shipment. Bulk packaging may only be used if and when component lead integrity is maintained and material is protected against damage.

The Amphenol part number, date/lot code and quantity should be labeled on the outside of the box or outside the plastic bag, whichever is used to store the product.

Here are the documents that should be included with any delivery:

- a. Certificate of Compliance
- b. Material Test Reports
- c. Packing List – should include APCD PO Number, APCD Part Number, Quantity Shipped, Quantity Remaining and Date/Lot Code
- d. Commercial Invoice
- e. Inspection Records

11. OBSOLESCENCE/END OF LIFE

The supplier of the product delivered on this purchase order shall notify APCD if one or any combinations of the following conditions exist: a) Products delivered are known to have Obsolescence or End of Life Issues. b) The product delivered is currently no longer in production. c) Products delivered are nearing the end of their life cycle and are to be discontinued from manufacturing/processing within the next five (5) years.

12. COUNTERFEIT PARTS

The supplier is required to maintain a counterfeit material risk mitigation program using AS5553 or SAE AS6174 (Counterfeit Material; Assuring Acquisition of Authentic and Conforming Material) or AS6496 (Fraudulent/Counterfeit Electronic parts: Avoidance, Detection, Mitigation, and Disposition – Authorized/Franchised Distributor) as a guide. Supplier is not allowed to use brokers to source parts.

13. FOREIGN OBJECT DEBRIS (FOD) PREVENTION

The supplier, where applicable, is required to maintain a FOD prevention program in accordance with AS9100 Section 7.5 and NAS 412. The supplier shall demonstrate an active and ongoing FOD prevention program supported by objective evidence.

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14. CONFLICT MINERALS

Products supplied to APCD shall not contain Tin, Tantalum, Tungsten or Gold which originates from the Democratic Republic of Congo and surrounding areas. *Reference Conflict Minerals as found in section 1502 of the Security and Exchange Commission: Dodd-Frank Wall Street Reform and Consumer Protection Act.* Supplier must agree that it shall require all of its sub-tier suppliers to comply with the CMRT requirement and to provide a CMRT certificate upon request by APCD or their authorized agent.

15. SAMPLE INSPECTION

All sample inspection must be done in accordance with ANSI/ASQ Z1.4, Level II inspection minimum with $c=0$, $r=1$ as the acceptance criteria.

16. DFAR MATERIAL COMPLIANCE

DFARS 252.225-7008, Preference for Domestic Specialty Metals is applicable to all parts delivered on any PO to APCD. Any specialty metals used in deliverable product must be smelted in the United States or a qualifying country.

17. ITAR COMPLIANCE

- a. Documents included with this PO may be stamped "ITAR Notice" and contain technical data as defined in the U.S. International Traffic in Arms Regulations (ITAR) section 22 C.F.R 120.10. The technical data may not be exported, disclosed or transferred to any foreign person (including employees, consultants or agents) corporation or business associations, as defined in the ITAR section 22 C.F.R 120.16, whether in the United States or abroad without the prior written approval of the U.S. Department of State.
- b. APCD must immediately be notified if any Foreign Person has been employed, if any Foreign Subcontractor has been added or if the company has been purchased by a Foreign Person, Corporation or Country after being approved to supply product which may have been covered by Export Control restrictions.
- c. Supplier is required to sign QP-721-F Supplier Certification and Compliance Agreement prior to release of ITAR sensitive information. This document must be signed annually.

18. CLEAN AIR ACT COMPLIANCE

The use of Ozone Depleting Chemicals (ODC's) in the processing of materials, or products delivered for this order is not allowed. If the product requires the use of ODC's, the APCD buyer must be notified prior to the initiation of work on the order.

19. PROHIBITION OF PURE TIN

Any product delivered under this Purchase order, or to an APCD drawing must contain NO LESS than 3 percent LEAD composition, and that the use of Pure Tin Plated finishes are strictly PROHIBITED, unless specifically authorized in writing by APCD. These restrictions apply for all types and levels of procurement. Supplier must flow this requirement to all of its sub-tier suppliers that provide any articles used to manufacture articles delivered under this Purchase Order.

20. DISCREPANT MATERIAL REPORT (DMR)

Supplier will have five (5) days after notification of non-conformance to provide a Return Material Authorization (RMA). If the RMA number is not provided within five (5) days, the product will be sent back to the supplier at the supplier's cost and a debit memo will be placed with the supplier.

21. CORRECTIVE ACTION

Supplier may be required to complete SCAR report should non-conforming material be identified by APCD or their Customer(s).

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- a. Initial SCAR response will be due within one working week and will identify Containment and Immediate Corrective actions taken to prevent recurring events or escapements.
- b. Root Cause analysis must be performed and once root cause has been identified, a final response must be submitted within ten (10) days that identifies "Corrective Actions" and Verification that the issue has been corrected.
- c. Supplier may use APCD 8D form F-852 found on the APCD website under resources or utilize their own form as long as it utilizes an 8D format consistent with AS13000.

22. FOR BOEING PARTS

Supplier's inspection options (for Boeing parts only): Supplier shall perform 100% inspection for in-process and final inspection or supplier shall conform to requirements of document D1-8007 "Approval Guide for Supplier Statistical Plans." The APCD inspection procedure, QP-721 Boeing Inspections, SHALL be used by the supplier to meet these requirements.

Approved Process and Sources D1-4426 (for Boeing parts only): The supplier is required to maintain compliance with D1-4426. This document defines the approved sources for special processing, composite raw materials, composite products, designated fasteners and metallic raw materials.

23. AMPHENOL PCD PROPERTY

Inventory: The supplier shall control all inventory made for APCD and/or its customer. Any material /product that is in excess of contract quantity shall be protected, treated as proprietary and kept from being sold or provided to any third party without prior written authorization from APCD or its customer. The supplier shall not restock product into its Authorized Inventory that was not purchased from APCD or its Authorized Distribution Channel.

Tooling /Fixtures:

- a. Tooling must be stored and protected from damage at all times.
- b. Preventative maintenance should be performed regularly and records should be kept for two (2) years.
- c. Each tooling or fixture should be marked APCD.
- d. No changes shall be made to the tool or fixtures without prior written authorization.

24. MEASURING & TEST EQUIPMENT

It is the supplier's responsibility to ensure all equipment used to test and inspect APCD supplied parts are maintained and traceable to the National Institute of Standards and Technology (NIST) requirements. A calibration system in accordance with ISO 10012-1, ANSI/NCSL Z540-3, or equivalent will be used by the supplier. If a measuring instrument is found out of calibration and repaired, both before and after measurements must appear on the calibration certificate.

25. RETURNED MATERIAL PROCESS

Items returned to the supplier that reference this clause are believed to have caused or contributed to test or performance failures. Upon receipt, the supplier is to perform the actions necessary to:

- a. Investigate the returned unit.
 - i. Parts returned shall be inspected for any evidence of alteration, mishandling, improper packaging or repackaging.
 - ii. Verification shall require validation of the returned parts against the traceability records, including the date/lot code of parts returned when available.
- b. Confirm the failure mode.

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- c. Plan and (when authorized by the purchase order), perform the rework necessary to restore the product to working condition.
- d. If the supplier chooses not to verify a return based on economic considerations, the returned material shall not be restock or return to the supply chain.

The supplier must provide APCD with a written report(s) that details by purchase order, part number and lot code/date code/serial number the rework performed and result of the rework (i.e. pass/fail, accept/reject, etc.). If a failure was not confirmed, the report shall so state and identify the investigations performed.

26. SAFEGARDING COVERED DEFENSE INFORMATION AND CYBER INCIDENT REPORTING (DFARS 252.204-7012)

If ITAR or CUI technical information is shared with Seller, Seller is responsible for full compliance to the DFAR regulations related to safeguarding covered defense information and cyber incident reporting. The seller shall conduct activities under this clause in accordance with applicable laws and regulations on the interception, monitoring, access, use and disclosure of electronic communications and data. The safeguarding and cyber incident reporting required by this clause in no way abrogates the seller's responsibility for other safeguarding and cyber incident reporting pertaining to any unclassified systems required by other applicable clauses of this contract, or as a result of other applicable U.S. Government statutory or regulatory requirements. The Contractor shall include this clause, including this paragraph, in subcontracts, or similar contractual instruments, for operationally critical support, or for which subcontract performance will involve covered defense information, including subcontracts for commercial items, without alteration, except to identify the parties. The Contractor shall determine if the information required for subcontractor performance retains its identify as covered defense information and will require protection under this clause, and, if necessary, consult with the Contracting Officer; and

Require subcontractors to:

- a. Notify the prime Contractor (or next higher-tier subcontractor) when submitting a request to vary from a NIST SP 800-171 security requirement to the Contracting Officer, in accordance with paragraph (24)(2)(ii)(B) of this clause; and
- b. Provide the incident report number, automatically assigned by DoD, to the prime Contractor (or next higher-tier subcontractor) as soon as practicable, when reporting a cyber-incident to DoD as required in paragraph (c) of this clause.

27. ORGANIZATIONAL AWARENESS

Suppliers must ensure that all supplier personnel, sub-tiers, and other employees are aware of:

- a. their contribution to product or service conformity
- b. their contribution to product safety
- c. the importance of ethical behavior
while producing any product sold to Amphenol Pcd.

28. CABLE ASSEMBLY PRODUCTION AND QUALITY REQUIREMENTS

In addition to the standard quality clauses, cable assembly suppliers are required to comply with the following requirements.

- a. Assembly workmanship shall be in compliance with IPC-A-620 Class 3.
- b. Soldering workmanship shall be in compliance with J-STD-001.
- c. Supplier to submit Control Plan (CP), Failure Mode and Effects Analysis (FMEA), and Process Flow Plan for every new cable built unless otherwise specified on the PO.
- d. PO will specify if submission of Production Part Approval Process (PPAP) is required.
- e. Supplier shall perform the following tests on 100% of the cables:

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- Continuity Test
- Insulation Resistance (IR) Test
- Dielectric Withstanding Voltage (DWV) Test AKA Hi POT (High Potential Testing)
- Voltage test values shall follow IPC-620 electrical test parameters unless an APCD drawing is supplied in which case the latter shall govern.
- Other tests as specified on purchase order or product drawing

Revision History

Revision	Date/DCN No.	Reason	Signatures
A	3/2/17 DCN 362	Initial Release	Ritchie Lacson
B	6/5/17 DCN 382	A. Add note regarding calibration standards on measuring and test equipment used by suppliers on components we purchase. B. Changed supplier response time on SCAR to ten (10) to (30).	Ritchie Lacson
C	10/27/17 DCN 425	Update to include DFARS cyber security clause.	Rick White
D	12/15/17 DCN443	Add note 27 to comply with AS9100 changes.	Rick White
E	9/20/19 DCN626	Update shelf life requirement, lot/date code control, CMRT requirement, corrective action note and from F-852, SCN from F-903, Deviation form F-866, return material process, measuring and test equipment Add distributor requirement, EN9102, AS6496, and ROHS requirement Add Cable Assembly Production and Quality Requirements	Rey Zarate
F	10/11/2019 DCN636	Initiated a minor revision to clear the internal communication during the document revision process. There is no change to the document	Rey Zarate