	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	


Scope- This document applies to all suppliers involved in the delivery of products or services to TRAK TECOM. It covers the inclusion of quality requirements called out on the TRAK TECOM purchase order.

Purpose- This procedure defines the Quality Assurance (QA) provisions to ensure that products and services received from the supplier meet the required specifications, quality standards, and contractual terms flown down from TRAK TECOM.

The requirements of these provisions and any procedure or report executed in implementation thereof, with their terms and conditions, become an integral part of the Purchase Order to the extent specified in the Purchase Order. These requirements supplement, but do not supersede, the presently existing terms and conditions of the Purchase Order. Compliance with the requirements of these provisions does not relieve the supplier of their responsibility for furnishing materials and services, which fully comply with applicable Drawing and Specification Requirements – nor does it guarantee acceptance of material and services by TRAK TECOM.

Applicable provision number(s) shall be designated in the body of the Purchase Order.

- #1A **GSI Inspection Required:** Government Inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify the Government Representative who normally services your plant so that appropriate planning for Government Inspection can be accomplished.
- #1B **Test Data to GSI:** Upon receipt of this order, promptly furnish a copy to the Government Representative who normally services your plant, or, if none, to the nearest Army, Navy, Air Force, or Defense Supply Agency inspection office. In the event the representative or office cannot be located, the TRAK TECOM purchasing agent shall be notified immediately.
- #2 **Quality System Required:** The supplier, and/or sub-tier supplier, shall maintain a Quality and Inspection System in compliance with ISO 9001: latest revision, AS9100: latest revision, or as approved by TRAK TECOM. The Supplier’s, and/or sub-tier supplier’s persons shall be aware of their contribution to product or service conformity, product safety, and the importance of ethical behavior. When a nonconformance is identified, the seller shall report the root cause, key facts, and corrective actions taken to prevent recurrence, **when requested**, at no extra cost to the Buyer.
- #3 **Packaging for Precious Metals:** Items in this order are considered precious metal parts and/or stock and shall be packaged to prevent environmental contamination. Outer packages shall be marked to indicate precious metal parts and/or stock.
- *#4 **Precious Metal Handling Per PRC-SCM-003:** Items on this order are precious metal parts or stock and shall be handled and stored in accordance with PRC-SCM-003. When items from the order are removed from the original manufacturers or suppliers’ packaging, the intermediate packaging shall be of equivalent protection to the original packaging and shall be marked to indicate handling and storage per PRC-SCM-003.

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

#5 **Calibration System Required:** The supplier, and/or sub-tier supplier, shall maintain a Calibration and Control System in compliance with ANSI/NCSL Z540 or as approved by TRAK TECOM.

*#5A **Calibration Equipment:** Forward to Calibration Department upon receipt at TRAK TECOM.

#6 **Shall Comply With DFAR252.225-7009:** Items on this order shall comply with DFAR 252.225.7009 for Specialty Metals listed and shall be made in the US or qualifying countries listed in DFAR 252.225.872.1. Compliance shall be verified on a certificate of compliance.

#6A **Shall Comply With DFAR252.225-7052:** Items on this order shall comply with DFAR 252.225.7052 for Restriction on the Acquisition of Certain Magnets and Tungsten and shall be made in the US or qualifying countries listed in DFAR 252.225.872.1. Compliance shall be verified on a certificate of compliance.

*#7 **Critical Characteristics**


All Critical Characteristics listed in the drawing shall be 100% measured. The supplier shall provide supporting raw data with shipments. Receiving Inspection shall validate all pertaining data.

*#7A **Receiving Inspection Required at TRAK TECOM**

#8A **Pre-Cap Source Inspection Required:** The supplier shall notify the Buyer a minimum of 5 days in advance of when the material will be ready for TRAK TECOM Source inspection. If the material is not ready for TRAK TECOM source inspection on the scheduled date the supplier shall notify the TRAK TECOM Buyer as soon as possible and as a minimum 24 hours before the scheduled inspection. Acceptance by the source inspector in no way relieves the supplier of their responsibility to provide quality materials that are 100% compliant with all technical documents and requirements relevant to the contract, nor does it relieve the supplier of responsibility for any non-conformances after delivery of materials.

#8B **In-Process Source Inspection Required:** The supplier shall notify the Buyer of a minimum of 5 days in advance of when the material will be ready for TRAK TECOM Source inspection. If the material is not ready for TRAK TECOM source inspection on the scheduled date the supplier shall notify the TRAK TECOM Buyer as soon as possible and as a minimum 24 hours before he scheduled inspection. Acceptance by the source inspector in no way relieves the supplier of their responsibility to provide quality materials that are 100% compliant with all technical documents and requirements relevant to the contract, nor does it relieve the supplier of responsibility for any non-conformances after delivery of materials.

#8C **Final Source Inspection Required:** The supplier shall notify the Buyer of a minimum of 5 days in advance of when the material will be ready for TRAK TECOM Source inspection. If the material is not ready for TRAK TECOM source inspection on the scheduled date the supplier shall notify the TRAK TECOM Buyer as soon as possible and as a minimum 24 hours before he scheduled inspection. Acceptance by the source inspector in no way relieves the supplier of their responsibility to provide quality materials that are 100% compliant with all technical documents

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

and requirements relevant to the contract, nor does it relieve the supplier of responsibility for any non-conformances after delivery of materials.

- *#8X **Inspection Plan Required:** An Inspection Plan shall be created and used for inspection of this part or assembly. The Inspection Pan shall be released and associated with the part or assembly being procured and inspected. The Inspection Plan shall provide additional information detailing critical inspection requirements, steps, or methods, the Inspection Plan shall take precedence over internal Receiving Inspection procedures.


- #9 **Certificate of Conformance:** With each shipment of items covered by this Purchase Order, the supplier, and/or any sub-tier supplier, shall submit a certificate of conformance signed by the Manager/Director of Quality or authorized designate, which shall attest that the parts, materials and/or processes used are genuine, in compliance with the Purchase Order and applicable Specifications and Drawings. Specifically, when services are provided by a sub-tier supplier, the sub-tier supplier shall also submit a certificate of conformance stating compliance to their purchase order and all flow requirements and quality clauses. The suppliers, or any sub-tier supplier's certificate of conformance, certificate of conformance, shall include the P.O. #, quantity, TRAK TECOM P/N, S/N (if applicable), applicable drawings with revision number used, and any Process Specifications used.

- #9A **Raw Material C of C:** Material certification for raw material or processed raw material is required in this order. C of C shall contain Lot Date Code information for the material being provided.


- #9B **Original Manufacture C of C:** These parts have been designated as High Reliability parts in a Space application. With each shipment of items covered by this Purchase Order, the Supplier, and/or sub-tier supplier, shall submit a certificate of conformance from the Original Component Manufacturer (OCM) or Original Equipment Manufacturer (OEM) signed by the Manager/Director of Quality or authorized designate, which shall attest that the parts, materials and/or processes used are genuine, in compliance with the Purchase Order and applicable Specifications and Drawings. The certificate shall include the P.O. #, quantity, TRAK TECOM P/N, S/N or Lot/Date Code and when applicable the TRAK TECOM Specification/Drawing number and revision. Each separate lot or date code shall be individually packaged and marked with the lot or date code, the quantity and listed separately on the packing list or C of C.

- #9C **Magnetic Property Raw Material C of C (B-H):** For material having magnetic properties, the magnetic property (B-H) curves also be included with the raw material certification for product delivery.

- #9D **Original Manufacture C of C for Inspection/Test:** These parts have been designated as High Reliability parts in a Space application. The Certificate of Compliance states that 100% visual inspection was performed to manufacturer standards and 100% electrical testing was performed to manufacturer specifications.

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

- #10A **Screening Data for Serialized Item:** The supplier shall provide one copy of the Acceptance Inspection and Test data for each item delivered on this order. Parts shall be individually serialized, or lot/date code applied.
- #10B **Screening Data for Non-serialized Item:** The supplier shall provide one copy of the Acceptance Inspection and Test data for each item delivered on this order.
- #10C **100% Mechanical Variable Data Recorded:** One piece from each lot or date code shall have 100% variable data recorded and provided with the shipment.
- *#10D **Route Test Report to Component Engineer upon receipt**
- #10E **Dimensional inspection reports required:** As a minimum, these reports must contain 100% dimensional characteristics and actual results of the sampled lot, unless otherwise specified. All measured dimensions shall have the min / max range recorded. The min / max range shall reflect the actuals taken from the quantity sampled. Sampling plans must meet ANSI/ASQ Z1.4-2003 (2013), single sampling plan, general inspection level I, AQL 2.5 or equivalent requirements, as a minimum.
- #10F **Key Characteristic Dimensional inspection reports required:** Seller shall determine the appropriate level of management, based on the risk assessment, for each key characteristic, and document it in a Control Plan.
- The Control Plan shall include, at a minimum: Feature/Key Characteristic, Specification and tolerance, Method of evaluation, Measurement device, Frequency of measurement, Sample size, Control method, required process capability (required for KCs only), Action plan for out of specification/out of control conditions, and Assign a Risk Priority Number (RPN) to each KC listed in the Control Plan.
- Variation management activities shall be performed on identified KCs until they are in control, achieving a Cpk of 1.33 or higher unless otherwise specified and approved by TRAK TECOM, and the required process capability has been met. If a Cpk of 1.33 or higher is not met, 100% inspection shall be performed.
- Seller shall submit with each shipment: Quantitative data for each KC for all units shipped, a min/max range is acceptable. If the Cpk for each characteristic meets the 1.33 requirement, and approved by TRAK TECOM, then a statistically significant sample shall be used for this submittal.
- Seller shall maintain, and make available for TRAK TECOM review: Capability for each KC, Root Cause and Corrective Action (RCCA) Plan for each KC not meeting required capability; and Trend data for each KC.
- #11 **Retention of Documented Information (10 Years):** Unless otherwise specified by the Purchase Order, the supplier, and/or sub-tier supplier, shall maintain documented information (records) created by supplier, including inspection and test records for minimum of (10) years from the

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

completion date of this order. After the record retention period has been met, records shall be dispositioned accordingly.

- #11A **Retention of Documented Information (15 Years):** Unless otherwise specified by the Purchase Order, the supplier, and/or sub-tier supplier, shall maintain documented information (records) created by supplier, including inspection and test records for minimum of (15) years from the completion date of this order. After the record retention period has been met, records shall be dispositioned accordingly.

- #11B **Retention of Documented Information (7 Years):** Unless otherwise specified by the Purchase Order, the supplier, and/or sub-tier supplier, shall maintain documented information (records) created by supplier, including inspection and test records for minimum of (7) years from the completion date of this order. After the record retention period has been met, records shall be dispositioned accordingly.

- #11C **Retention of Documented Information (5 Years):** Unless otherwise specified by the Purchase Order, the supplier, and/or sub-tier supplier, shall maintain documented information (records) created by supplier, including inspection and test records for minimum of (5) years from the completion date of this order. After the record retention period has been met, records shall be dispositioned accordingly.


- #12 **Qualified Products List (QPL) Compliant Material:** Materials used for this order must be from sources listed on the QPL. By acceptance of this Purchase Order, and the acknowledgment thereof, the Supplier, and/or sub-tier supplier, certifies that the parts supplied to TRAK TECOM were manufactured by an approved QPL Manufacturer and the manufacturer was listed on the Qualified Products List for the part(s) indicated at the time they were manufactured.

- #13 **Shelf-Life Data Required:** Manufacturing date, shelf life or expiration date required. This may be provided by the Supplier via email, CofC, or other means that include the Supplier name. Material received with more than 20% of its shelf life expired shall be rejected unless it is prior to approval by TRAK TECOM Buyer. If refrigeration or freezing will affect the shelf life of the product, the supplier, and/or sub-tier supplier, shall specify the shelf life at 0 degrees Fahrenheit and 35 degrees Fahrenheit as well as the shelf life at room temperature. In addition, if refrigeration or freezing adversely affects the product, it shall be so specified.


- #14 **Material Rejection w/o 1st Article Inspection:** DELETED

- #15 **Traceability Requirement of Each Item:** Each part, component or material furnished shall be identified by lot or batch number, traceable to the actual manufacturing process.


- #16 **C of C for Calibration Accuracy:** The supplier, and/or sub-tier supplier, shall submit a certification of accuracy of calibration, signed by a responsible representative, which shall attest that the items furnished were calibrated with instruments whose accuracy is traceable to the National Institute for Standards and Technology (NIST).

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

- #17 **RMA Flux per J-STD-004:** Flux shall be type RMA in accordance with J-STD-004.
- #18A **Physical Test Report Required:** Physical test reports are required on this order (i.e. raw material analysis).
- #18B **Mechanical Test Report Required:** Mechanical test reports are required in this order.
- #18C **Chemical Test Report:** Chemical test reports are required on this order (i.e. raw material analysis).
- #18D **Hardware Needing Only a Certification of Conformance:** Hardware shall be supplied with certifications of conformance containing part number.
- #18E **DFAR 252-225-7016: Restriction of Acquisition of Roller and Ball Bearing:** Certification must state the materials supplied meet the requirements of DFAR 252-225-7016.
- *#19 **Class K 100% Inspection:** This Product is Class K Product and must be 100% inspected at Receiving Inspection.
- #20 **Marking per MIL-STD-130:** The material on this purchase order must be permanently identified with the part number and revision letter in accordance with MIL-STD-130. This provision will take precedence over drawing or specification requirements.
- #20A **Marking per MIL-STD-130 and DFAR 252.211-7003:** The material on this purchase order must be marked in accordance MIL-STD-130 and DFAR 252.211-7003 using Format 06 and Construct 2.
- #21 **100 PPM Sulfur Content:** Sulfur content of sponges shall be less than 100 parts per million. Certifications of this requirement shall be provided with each shipment.
- #22 **MIL-S-19500 JAN Certified Parts:** During performance on this order, your control of device lot traceability documentation and your inventory control for MIL-S-19500F JAN branded devices are subject to review, validation and verification by an authorized Government representative. Government release of shipment is not required unless you are otherwise notified.
- #23 **Part Identification:** The supplier is to ensure that all items provided under this Purchase Order are identified with their part information as stated on the TRAK TECOM or customer drawing or document, the Purchase Order, or if not specifically defined, with the items' Part Number (as indicated on the PO) and applicable Revision. Preferred methods for Part Identification other than specified on the controlling document or Purchase Order are 1) bag/box and tag a group of like items and indicate quantity enclosed 2) marking the outer packaging of the individual item 3) string/wire tag on the individual item. Unless specified on the controlling document or Purchase Order, parts manufactured to this Purchase Order shall not have identification markings directly on the item.
- #24 **A Mercury Exclusion Clause:** A Mercury Exclusion Clause is effective on this Purchase order. Supplier, and/or sub-tier supplier, shall provide a certificate for each shipment on this order.


	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

- #24A **Cadmium, Selenium or Zinc Exclusion:** The supplier, and/or sub-tier supplier shall not provide parts or materials that contain pure Cadmium, Selenium or Zinc. Supplier, and/or sub-tier supplier, shall provide a certificate for each shipment on this order.
- *#25 **Possible Sample Testing Required:** The Parts on this order may require sample testing prior to acceptance. See the Buyer and/or Quality Engineer for instructions.
- #26 **IPC-A-610 Acceptability of Electronic Assemblies:** This clause applies to any material in support of deliverable customer product where Electronic Assembly is an integral process of the delivered product. The supplier shall adhere to the requirements of IPC-A-610 for all Electronic Assemblies. IPC-A-610 Class 3 is required unless otherwise specified in the Purchase Order or purchase documentation.
- #27 **Right of Access:** TRAK TECOM, its Customers, the Government, Regulatory Agencies or any designated representative has the right of access to applicable areas of the seller's facilities and/or sub-tier supplier's facilities and applicable inspection or process completion documented information (i.e., records) for all work pertaining to this order.
- #28 **IPC-WHA-A-620 Assembly and Inspection of Cables and Harnesses:** The supplier shall adhere to the requirements of IPC/WHA-A-620 for all Cable/Harness Assemblies. IPC/WHA-A-620 Class 3 is required unless otherwise specified on the Purchase Order or purchase documentation. Supplier will provide proof of capability upon request by TRAK TECOM Quality Assurance Representative or TRAK TECOM Buyer. The Supplier's Certificate of Conformance will serve as evidence of compliance to IPC-WHA-A-620.
- #28A **Electronic Components, Wiring Harnesses and Cables:** Provide test reports, RF plots, voltage or resistance verification, insertion loss, VSWR, gain or other requirements specified in or on the specification or drawing. Actual values must be provided. The term "O.K.", "PASS", "ACCEPTED" or "√" will not be acceptable. The data shall have the serial number of the component test. Lot tests are not acceptable.
- #29 **First Article Inspection (FAI) Report:** A full First Article Inspection Report shall be completed on the first production piece or if a lapse in production greater than 2 years occurred. A Partial (Delta) FAIR shall be completed when design or process changes occur that invalidate or are not represented in the baseline report. The Delta (Partial) FAIR shall address the changes from the baseline part number provided all other characteristics were conforming and produced by the original production processes. The FAIR shall be submitted to TRAK TECOM for approval with shipment of the parts. Upon shipment, the part shall be identified as the First Article unit. The FAIR shall be completed in accordance with AS9102: latest revision.
- #29A **First Article Inspection (FAI) Report:** The supplier will provide a Coordinate Measuring Machine (CMM) Report for all dimensional characteristics that are obtainable on the supplier's Coordinate Measuring Machine demonstrating that the supplier has measured and met each dimensional characteristic of the item(s) being delivered. A Dimensional Inspection Report (AS9102 form) shall


	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

supplement the CMM Report for those items that cannot be obtained with the supplier's CMM. The CMM and Dimensional Inspection Report shall be created for one (1) representative sample of the first lot delivered and must be traceable to the item inspected. The supplier will provide a CMM Report (and supplemental Dimensional Inspection Report if required) with the first delivery of the part unless otherwise specified in the Purchase Order. The supplier is required to supply a Dimensional Inspection Report with a Balloon drawing

- #30 **No Design Change or MRB Authority Granted:** Once a baseline has been established, the supplier does not have the authority to implement design changes prior to receiving written approval from the TRAK TECOM buyer. A design change shall be defined as any physical or functional change by the supplier, to form, fit, or function, including, but not limited to, drawings, bill of materials and specifications. All design change requests shall be submitted on the TRAK TECOM "Supplier Change Request" form. The supplier does not have authority to process "use-as-is" or "repair" dispositions via their material review board (MRB). These dispositions, as well as deviations and request for waivers, shall be submitted to the TRAK TECOM buyer for written approval prior to implementation. All deviation requests shall be submitted on the TRAK TECOM "Supplier Deviation Request" form.
If the purchase order is for Commercial-Off-The-Shelf (COTS) component(s) only, then this QAP does not apply.
- #31 **No Process Change Authority Granted:** Once a baseline has been established, the supplier does not have the authority to implement process changes prior to receiving written approval from the TRAK TECOM buyer. A Process change shall be defined as a change by the supplier to any processing or manufacturing methods, including work instructions, tooling, supplier facilities location, sub-tier supplier facilities location, materials, plating, fabrication/assembly processes, handling, and testing procedures for the manufacturing of products under procurement by this purchase order. The supplier shall provide TRAK TECOM in writing advance notification of any changes to, or deviations from, these processes used to manufacture the products. All deviation requests shall be submitted on the TRAK TECOM "Supplier Deviation Request" form.
If the purchase order is for Commercial-Off-The-Shelf (COTS) component(s) only, then this QAP does not apply.
- #32 **Sub-Tier Flow Down Requirements:** Supplier shall flow down to their sub-tier suppliers all applicable requirements indicated within the purchasing documents, including key characteristics when required.
- #33 **Safety Data Sheet Required:** SDS report on the material specified shall be supplied in this order.
- #34 **ESD Packaging Required:** These parts are electrostatic sensitive and shall be packaged using conductive static-shielding electrostatic protective material. Outer packages shall be plainly marked with an ESD warning notice. Connectors shall be fitted with ESD protective caps and external terminals shall be shorted together or protected with ESD foam.


	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

- *#35 **ESD Parts Handling:** Parts on this order are electrostatic sensitive and shall be handled, processed, and packaged in accordance with WRK-OPS-003.
- #36 **Foreign Object Damage (FOD):** The supplier shall ensure items shipped and the packaging will not be a source of FOD. The supplier shall work within the guidelines and comply with AS9146 - Foreign Object Damage (FOD) Prevention Program - Requirements for Aviation, Space, and Defense Organizations.
- #37 **X-Ray Required:** Radiographic inspection is required on parts covered by this order. The radiographs shall be evaluated and interpreted in accordance with specifications and standards specified by drawings and/or purchase order.
- #38 **Solder IAW J-STD-005 or -006:** Solder shall be in accordance with J-STD-005 (for Pastes) or J-STD-006 (for Solid forms).
- #39 **Inspection Not Required:** No QA provisions apply to this item. *Incoming Inspection is not required.
- #40 **Multiple Lots Shall Be Identified:** If more than one lot is included in this shipment, each lot must be individually identified and packaged separately.
- #40A **Single Lot Requirement:** The items delivered under this order shall be manufactured from a single lot. TRAK TECOM shall approve in writing the use of multiple manufacturing lots to fulfil this order. If approval is obtained, and more than one lot is included in this shipment, each lot must be individually identified and packaged separately.
- #41 **NADCAP Process Required:** Parts on this order require the use of a NADCAP subcontractor certified to specific processes per drawing or PO requirements.
- #42 **Solderability Testing per J-STD-002:** Solderability testing is a requirement on this item. Testing shall be in accordance with J-STD-002 for component leads, terminations, lugs, terminals and wires, and in accordance with J-STD-003 for printed boards. A test certification shall accompany each shipment of parts, and shall include the date the test was performed, the test specification or standard, and the test method number. Parts will not be accepted that have not been tested within a three-month period prior to shipment. Unless specifically stated by the Engineering Detail Specification all leads and other solderable surfaces shall be fused tin/lead plated or hot solder coated to a minimum thickness of 0.0001 inches. All Hole and Lead Dimensions shall be met after plating and fusing operations.
- #42A **No Pure Tin Allowed:** The supplier shall provide a certificate that materials delivered against this order do not contain pure unalloyed tin. The supplier, and/or sub-tier supplier, shall not provide parts with pure tin leads or terminations. If this is the only plating configuration offered, the supplier, and/or sub-tier supplier, shall notify TRAK TECOM that the part being provided has pure tin leads or terminations as soon as possible but not later than the time of order acknowledgement and mark the intermediate level packing or packing slip with the pure tin


	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

warning. Definition of pure tin product is any item that has leads or terminations that have less than 3% of material utilized in the spoiling process (i.e. Bi, Ag, etc...).


- #42B **Corfin Only Approved Solder Tinning:** Lead tinning activity shall only be performed by Corfin Industries.
- *#43 **Clean Room Inspection Only:** Packages must be opened and products inspected in a designated clean room only.
- #44A **Best Commercial Packaging:** Packaging shall be done in accordance with the best commercial practices to preclude movement and/or damage during normal handling and shipping. Bags or containers made of silicone sulfur compounds, polysulfides or processed with these compounds shall not be used. Packaging shall not degrade the long-term solderability of the product.
- #44B **Special Instruction For Direct Shipment:** Special instructions for direct shipments are required.
- #44C **Moisture Sensitive Packaging per J-STD-033:** Manufacture and/or Supplier shall process moisture sensitive product in accordance with IPC/JEDEC J-STD-033.
- #44D **Individual Item Packaging Required:** Product shall be individually wrapped or segregated in partitioned packaging medium to preclude physical contact and possible damage to applied plating/finish during handling, transport and shipping. Silver plated products shall be packaged in anti-tarnish protection paper; the use of rubber bands and tape is prohibited.
- #44E **Tape and Reel Required:** Product shall be supplied on Tape and Reel with a minimum 6" leader and 6" tail unless otherwise instructed by the TRAK TECOM procuring agent for modified packaging requirements.
- #44F **Heavy Product Packaging:** Product is heavy; product shall be packaged adequately to minimize possible movement and physical contact.
- #44G **Packaging in Tube Required:** Items shall be packaged in tubes for product delivery. Tubes should be adequate to prevent the product from falling apart from the stack and should be adequate to minimize movement of the product during shipment to prevent damage.
- #44H **Waffle Packaging Required:** Items shall be packaged in waffle packs for product delivery. Waffle pack selection shall be adequate to minimize movement of product during shipment to prevent damage.
- #44J **Carrier Assembly Packaging:** Product shall be segregated into partitioned packaging medium to preclude physical contact and possible damage.
- #45 **100% Variable Data Required:** Products have been identified for use in HI REL applications. Supplier, and/or sub-tier supplier, shall provide 100% variable data for each part supplied in this order.

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

- *#46 **Engineering Use Only:** Engineering use only. No inspection is required.
- #47 **Plating Thickness Data Required:** When parts are Electro or Electroless plated, the plating supplier, and/or sub-tier supplier, shall provide thickness measurements on a representative sample (5pcs. minimum or AQL of 1.0 sample per Lot size). Each lot shall be individually identified and segregated. Plating thickness samples can come from production lot, however, must be identified accordingly. QAP # 47 is not applicable to Chromate Conversion applications. Strip and re-plate are not authorized unless approved in writing by TRAK TECOM.
- #47A **Metallization Thickness Data Required:** When parts have metallization other than an Electro or Electroless application, the metallization supplier, and/or sub-tier supplier, shall provide thickness measurement data for the representative sample (5pcs. minimum or AQL of 1.0 sample per Lot size). Each lot shall be individually identified and segregated. Metallization thickness samples can come from production lot, however, must be identified accordingly.
- #47B **Paint/Primer thickness data required:** Application and thickness shall be in accordance with the drawing notes and actual thickness on the paint and primer shall be recorded with the paint lot/batch and expiration date on the Certificate of Conformance
- #48 **Packaging for Nonconforming Screened Items:** When Suppliers are contracted to perform electrical testing any devices with known electrical nonconformances that are forwarded to TRAK TECOM shall be segregated and listed as a separate item on the packing slip.
- #49 **Painted Parts:** Painted parts or assemblies shall not be placed in the oven at any time for curing unless specified by the drawing or specification.
- #50 **Plating Adhesion C of C:** When parts have plating, the supplier, and/or sub-tier supplier, shall provide a "Plating Certificate of Compliance" stating that the plating adhesion testing was performed per ASTM-B-571 or as stated otherwise on the TRAK TECOM drawing plating specifications. Plating adhesion test coupon(s) shall be representative of the actual material used in the manufacturing of the product and shall accompany the delivered product and be identified accordingly. Plating adhesion test coupons shall not be considered as part of the Purchase Order quantity. Strip and re-plate are not authorized unless approved in writing by TRAK TECOM.
- #50A **Metallization Certificate and Material Coupon Required:** When product has metallization, the metallization supplier, or any sub-tier supplier, shall state on their Certificate of Compliance identifying the standard and method utilized during metallization adhesion testing. Metallization test coupon(s) shall be representative of the actual material used in the manufacturing of the product and shall accompany the delivered product and be identified accordingly. Plating adhesion/bond pull test coupons shall not be considered as part of the Purchase Order quantity.
- #50B **Process Certifications:** Are to be provided, which identify all processes performed (i.e. paint, plating, braze, etc.). The certification must include purchase order number, part number, revision, serial number (if applicable), quantity, reference to applicable specifications and standards, including revisions, and include an authorized individual signature.

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

- #51 **100% Data Required per AS9102 Hi Rel.:** These parts have been designated as High Reliability parts in a Space application. 100% inspection of all drawing dimensions notes, and any other callouts are required on each part. The inspection results shall be recorded and delivered with the hardware. The supplier may document the inspection in accordance with AS9102, the TRAK TECOM FAI process or the supplier's standard process.
- #52 **Counterfeit Part Plan Required:** The supplier, and/or sub-tier supplier, shall establish and implement a counterfeit item risk mitigation process internally using SAE AS5553, AS6174, AS6081, AS6496 or AS6171; Suppliers that are allowed access to the US Government Industry Data Exchange Program (GIDEP) shall participate in monitoring GIDEP reports and the supplier shall act on GIDEP reports that affect delivered products. When the supplier is considering buying parts from a Broker; the supplier, and/or sub-tier supplier, shall request approval from TRAK TECOM and specify the actions to be taken to assure the parts are genuine. The supplier, and/or sub-tier supplier, shall submit a certificate of conformance from the Original Component Manufacturer (OCM) or Original Equipment Manufacturer (OEM) signed by the Manager/Director of Quality or authorized designate, which shall attest that the parts, materials and/or processes used are genuine, in compliance with the Purchase Order and applicable Specifications and Drawings. The supplier, and/or sub-tier supplier, shall also be required to disclose the source if counterfeit parts are detected. If suspect or confirmed fraudulent/counterfeit parts are detected because of TRAK TECOM or 3rd party inspections and tests per AS5553, AS6174, AS6081, AS6496 or AS6171, the suspect material shall be impounded and not returned to the Broker/supplier. The suspect parts may be turned over to US Government authorities for investigation and the incident should be reported to industry via a GIDEP Alert or other suitable means.
- #53 **Intentionally left blank:**
- *#54 **Certifications Not Required:** For Non-US purchased COTS items, certifications are not required from the supplier. Dimensional, Material and Plating Verification as applicable shall be determined upon receipt at TRAK TECOM. As required third party services may be used for the material and plating verification.
- #55A **Certificate of Conformance for RoHS Materials:** Upon reviewing the requirements of the Purchase Order, build documentation, and reference specifications (may include FAR and DFAR), the supplier is to produce a Certificate for the parts being delivered. A responsible representative of the supplier's organization acknowledging that all requirements of the Restriction of Hazardous Substances (RoHS) per European Parliament Directive have been met shall sign the Certificate. The Certificate shall accompany the delivered items as either a separate document with reference to the packing slip number or it may be included on the packing slip. The Certificate may be worded substantially as follows: This is to certify that all articles delivered under this shipping document conform to all applicable drawing specifications, Purchase Order requirements, and all requirements of the Restriction of Hazardous Substances (RoHS) per European Parliament Directive. Materials/parts provided are obtained directly from the OEM, approved distributors, authorized resell organization or franchised aftermarket suppliers Test Reports, inspection records

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	


or other verifiable documentation of quality are maintained at the point of manufacture and are available for review by Buyer and/or Government/Customer representatives. A RoHS compliance statement on a manufacturer's Technical Data Sheet (TDS) or standalone RoHS compliance certificate for the manufacturer's part number (not specific to the lot being delivered) is an acceptable alternate to a CoC for the delivered product.

- # 55B **RoHS Compliant, Except Lead in Solders:** Items, materials, or processes shall be RoHS compliant per European Parliament Directive, except for lead (Pb) in solders. The supplier shall provide a signed Certificate of Conformance (CoC) stating compliance with RoHS except for Lead (Pb) in solders, the CoC shall reference the packing slip or order number. Supplier shall provide TRAK TECOM/ with a description of any other materials or processes used that are not RoHS compliant as related to the product or process being supplied. A RoHS compliance statement on a manufacturer's Technical Data Sheet (TDS) or standalone RoHS compliance certificate for the manufacturer's part number (not specific to the lot being delivered) is an acceptable alternate to a CoC for the delivered product.


- # 55C **RoHS Compliant, Contains Lead >85% Weight in High Temp Solder:** Items, materials, or processes shall be fully RoHS compliant per European Parliament Directive, and contains lead (Pb) > 85% by weight in high melting temperature solders. The supplier shall provide a signed Certificate of Conformance (CoC) stating compliance with RoHS allowing Lead (Pb) > 85% by weight in high melting temperature solders, the CoC shall reference the packing slip or order number. The supplier shall provide TRAK TECOM with a description of any other materials or processes used that are not RoHS compliant as related to the product or process being supplied. A RoHS compliance statement on a manufacturer's Technical Data Sheet (TDS) or standalone RoHS compliance certificate for the manufacturer's part number (not specific to the lot being delivered) is an acceptable alternate to a CoC for the delivered product.

- #55D **REACH Requirement:** Items, materials, or processes shall be REACH compliant. The supplier shall provide a signed Certificate of Conformance (CoC) stating compliance with REACH. A REACH compliance statement on a manufacturer's Technical Data Sheet (TDS) or standalone REACH compliance certificate for the manufacturer's part number (not specific to the lot being delivered) is an acceptable alternate to a CoC for the delivered product.

- #56 **Conflict Minerals Notification Required:** In effort to comply with US Government Dodd-Frank Financial Reform and Consumer Protection Act (Dodd-Frank Act) Section 1502 that requires publicly traded companies to annually disclose to the US Securities and Exchange Commission (SEC) if their manufactured products contain tin, tantalum, tungsten or gold (termed "conflict minerals"). As such, TRAK TECOM is requiring all suppliers, and/or sub-tier supplier, who supply product that may contain materials defined "conflict minerals" to conduct a reasonable "country of origin" determination (due diligence) for any conflict minerals that may be contained in products supplied and inform TRAK TECOM immediately in writing of any materials that do not conform to the Dodd-Frank Act.

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

- #57 **Fully RoHS Compliant 2011:** Items, materials, or processes shall be fully RoHS compliant per European Parliament Directive 2011/65/EU. The supplier shall provide a signed Certificate of Conformance (CofC) stating compliance to RoHS 2011; the CoC shall reference the packing slip or order number.
- #58A **IPC J-STD-001 Class 2 Soldering:** The parts supplied shall meet all requirements for Class 2 Soldering in accordance with the latest revision of IPC J-STD-001 Requirements for Soldered Electrical and Electronic Assemblies.
- #58B **IPC J-STD-001 Class 3 Soldering:** The parts supplied shall meet all requirements for Class 3 Soldering in accordance with the latest revision of IPC J-STD-001 Requirements for Soldered Electrical and Electronic Assemblies.
- #58C **IPC J-STD-001 Space and Military Addendum:** In addition to the requirements of IPC J-STD-001 Class 3 for soldered assemblies, the parts supplied shall meet all applicable requirements in accordance with the latest revision of IPC J-STD-001 Space and Military Applications Electronic Hardware Addendum to IPC J-STD-001 Requirements for Soldered Electrical and Electronic Assemblies.
- #59 **Approval and Management Requirements for Special Processes:** A special process is defined as when a product undergoes a physical, chemical, or Metallurgical transformation or when inspection and conformance to all specification requirements cannot be readily verified by normal or visual inspection methods. TRAK TECOM must approve in writing the use of any sub-tier contractor that performs a special process required by the TRAK TECOM provided drawing, purchase order, or when deemed critical by TRAK TECOM. Examples of special processes are welding, brazing, soldering, plating, heat treating, magnetic particle and penetrant inspection, etc. TRAK TECOM shall be notified within two business days when any special process being performed is found to be non-compliant to the specification(s). A reference list of TRAK TECOM approved special processors will be provided with purchase order or upon request but does not alleviate the need for TRAK TECOM approval. After approval, any desired changes to approved special processors must be resubmitted to TRAK TECOM for approval.
- *#59A **Customer Special Process Instruction and Verification:** When #59 Approval and Management Requirements for Special Processes is used, TRAK TECOM Quality Engineer will verify that the Sub-tier suppliers used for Special Processes are Customer Approved.
- #59B **Special Processes Control Requirements:** Flow down Raytheon Qnote SL or JY is required on this PO and shall be flowed to all sub tier suppliers. Special processors shall be NADCAP certified or Raytheon approved. This code requires specific controls based on the listed special processes; the details of this code can be found at <https://qnotes.raytheon.com>
- #60 **FAA Approved Drug and Alcohol Program:** Required for all U.S. registered aircraft repair or rework activities. Requirements must be flown down to sub-tier suppliers contracted for repair or rework.

	Name of Policy/Procedure/Guideline	Number
	Purchase Order Quality Assurance Provisions	PRC-QA-014
Owning Department: Quality	Revision: 5.0	

- #61 **CMM, ROP, & MM Required:** All products shall be processed in accordance with the Current Approved: Component Maintenance Manual (CMM), Repair Operation Procedure (ROP), and /or Maintenance Manual (MM), The noted documents if not already available must be provided prior to initiation of work including applicable Acceptance Test Procedures (ATP), etc. outlined within.
- #62 **EEE Parts Age Limitation Under 4 Years:** Identification of EEE parts shall be traceable to manufacturer and lot date code. If due to physical size, the part cannot be identified, manufacturer and lot date code is required on the packaging. Age Limitation: Upon receipt at TRAK TECOM, EEE parts shall be no older than FOUR (4) years from the manufacturer’s lot date code
- #99X **Complex Part Supplier Inspection Plan:** The supplier shall conduct a review prior to the start of services provided to ensure all participants thoroughly understand the documentation, equipment used, and safety aspects. The supplier shall ensure that relevant participants are present at the review and that the review covers such topics as personnel safety and shut down procedures (as appropriate, incorporate independent fail-safe processes for protection of personnel and product), traveler/shop orders, test procedure, warnings and cautionary notes, production setups, work instructions, procedures (including tools or tooling), equipment calibration status, reporting of test anomaly or failure, and any special skills and training required.

When testing or verification requires use of an TRAK TECOM approved or supplied test procedure, a review of the test procedure shall be conducted prior to any testing being performed at the supplier’s or sub-tier supplier’s test facility.

As a result of the above review, the Supplier shall provide TRAK TECOM part specific potential manufacturing/test issues and identified risks, within 3 business days of discovery. Mitigation plans to follow within a time frame agree upon with TRAK TECOM. The record of participants and date the review was performed shall be maintained by the supplier.

The (*) denotes TRAK TECOM INTERNAL USE ONLY.