
Supplier Quality Requirement Clauses (SQRC)

WARNING: Please Read

- Only electronically accessed documents from Transicoil Intranet are considered controlled.
- It is the responsibility of the user to verify the printed copy to the controlled document on Transicoil Intranet prior to use.

1 Purpose

- To assure that the product purchased meet quality requirements of Transicoil and its Customers' Scope
- To establish standard Supplier requirements to be referenced on the Transicoil purchase orders

2 Responsibility

- The Quality Group is responsible for assigning the required SQRC to purchased parts. This information will be flowed down to the supplier by listing the codes on the purchase order.
- The Materials function is responsible for ensuring that the SQRC are listed on purchase orders when it has been printed.
- The supplier is responsible for verifying the current revision of this document and compliance to the specified clauses.
- Latest version of this document is available at WWW.TCOIL.COM Tab "Support Center", "Quality", "Supplier Quality Clauses"
- Non-compliance will result in rejection of the shipment at Transicoil's discretion.

3 Related Materials

3.1 Related Documents

- 10-023 Control of Records Procedure
- 10-041 Purchase Order Approval Procedure
- 10-042 Supplier Approval Procedure
- 10-043 Supplier Rating Procedure
- 10-045 Incoming Inspection Procedure

4 Work Instruction

This work instruction describes the requirements pertaining to the Supplier Quality Requirement Clauses. The Alpha notation (A, B C, etc.) are used to identify the SQRC that apply to the purchase order.

A- Inspection System: The seller shall comply with provisions of "Inspection System Requirement" of MIL-I-45208A or ISO9001:/AS9100. When Quality Assurance requirements other than those itemized herein are required they will be specified on the purchase order.

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B-Quality Standards of Workmanship: The supplier is responsible for maintaining a written and thoroughly descriptive standard of workmanship directly applicable to the nature and level of work to be performed under the purchase order. A copy shall be supplied to Transicoil's Quality Assurance Department upon request. Workmanship standards must satisfy, at a minimum, the requirements of MIL-STD-454, IPC-A-610, ANSI/J-STD-001, or any specification applicable to the purchase order.

C-Special Processes/Requirements: Special Processes are applicable and will be detailed on the face of the purchase order. An example of a special requirement is: "This purchase order has D1-4426 Boeing Approved Process Source requirement. The supplier must comply with the latest revision of this specification and be a Boeing approved source". The supplier must be listed on the customer's Approved Process List if the customer is listed on the Transicoil purchase order.

D-Inspection and Test: The seller is responsible for the performance of documented inspections and tests necessary to ensure that only conforming articles are delivered to Transicoil.

E-Data: The seller's data for each lot delivered shall show conformance to all inspections and tests specified by the applicable drawings, specification, or seller's Acceptance Test Procedure. All shipments made against this purchase and/or work order must include copies of final inspection and/or test reports.

F-Traceability: Items supplied on this order shall be identified and traceable to their origin; i.e., manufacturer, manufacturing date, date purchased, lot, inspection, test data or other pertinent information relating to control of processes and/or parts.

G-Government Source Inspection (GSI): 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.

H-Source Inspection: Inspection by Transicoil and/or authorized representative(s) is required at seller's facility prior to initial shipment of product. Additional source inspection shall be performed as deemed necessary. Source Inspection Acceptance does not constitute final acceptance. The supplier shall provide at minimum (5) business days advance notice for source inspection. By this requirement, clause (N) is automatically invoked.

I-Certificate of Compliance: The seller shall supply a Certificate of Compliance/Conformance certifying that all materials, parts and processes used in the manufacture of the procured items meets the Transicoil purchase order requirements and specifications, and that substantiating evidence/data is on file and available to Transicoil upon request.

Required to be listed on the Certification:

- 1) Supplier Name and Address
- 2) Statement that parts conform to the purchase order. ("To the best of our knowledge statement" is not acceptable)
- 3) Purchase order number, line item number, Traceability Information (Lot Number or Serial Number or Packing Slip Number)
- 4) Part number and revision as listed on the purchase order. Certification must be to the part number listed on the purchase order not the supplier's part number even if Transicoil's specification/print lists the supplier's part number.
- 5) Special process suppliers must list the revision of process being performed if it is specified on the purchase order or controlling Transicoil print the special process will be assumed to be have been performed to the latest revision unless specified otherwise by the supplier.

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- 6) Quantity being certified
- 7) Date and Identity of the Quality representative (Either Hand signature or Electronic Signature are acceptable)
- 8) Date of shipment.
- 9) Shelf Life Limited parts (Additional Requirements):
 - Manufacture/Cure date
 - Lot number/Batch Number
 - Expiration Date
- 10) A statement of adherence to flow down of customer requirements if specified on the purchase order or controlling Transicoil print.

J-Chemical Analysis: On all raw material orders, seller shall supply chemical test reports identifiable to the product delivered, demonstrating compliance with applicable material specifications. A copy of the test report to each lot, batch, or heat treat lot shall accompany each shipment. Performance of the Purchase Order will not be complete, and payment may be delayed, until all reports are received. The supplier shall maintain this data for minimum of (10) years.

K-Physical Analysis: On all raw material orders, seller shall supply physical test reports identifiable to the product delivered, demonstrating compliance with applicable material specifications. A copy of the test report to each lot, batch, or heat treat lot shall accompany each shipment. Performance of the Purchase Order will not be complete, and payment may be delayed, until all reports are received. The supplier shall maintain this data for minimum of (10) years.

L-Age Control: Materials or articles having a definite characteristic of quality degradation with age shall be marked in a manner to indicate the date at which the critical life was initiated and when the useful life will be exhausted. Seventy-five (75) percent of shelf life for the batch should be remaining upon receipt at Transicoil. The supplier's batch or lot number shall be provided with each shipment.

M-Static Sensitive Material: Manufacturers and/or vendors shall maintain an ESD program per DOD-STD-1686 or ANSI/ESD S20.20 and clearly mark containers of all ESD sensitive parts. Markings shall comply with MIL-STD-129. Conductive (static dissipating) carriers/containers shall be used for transporting, storing, and shipping static sensitive parts.

N-Transicoil – Right of Entry/Audit Right Reserved: All phases of this procurement may be subject to surveillance by Transicoil Quality Assurance and/or its customers, including the FAA. Seller's facility and Quality System are subject to this surveillance. The seller shall provide all reasonable facilities and assistance to authorized survey/surveillance personnel.

O-Foreign Object Debris/Damage Prevention (FOD): Seller shall maintain a FOD prevention program. Seller's FOD Prevention Program shall include the review of design and manufacturing processes to identify and eliminate foreign objects, entrapment areas and paths through which foreign objects can migrate. Buyer shall have the right to perform inspections, verification and FOD Prevention Program audits at seller's facility to ensure program documentation and effectiveness.

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P-Statistical Process Control (SPC): Statistical Process Control shall be implemented and utilized by the Seller in the manufacture of all products identified on this purchase order. The SPC concepts and tools used will conform to Boeing's D6-82479 and/or Lockheed Martin Appendix "Y" guidelines.

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Q-First Article Inspection (FAI): An FAI per AS9102 is required for item(s) supplied to the purchase order.

R-Calibration System: The seller shall comply with provisions of "Calibration General Requirements ANSI/Z540-1 (MIL-STD-45662A) or equivalent.

S- Transicoil Drawings-Specifications: Any use of Transicoil drawing/specifications other than for manufacture of the ordered items is expressly prohibited.

T-Suspect Material: When a nonconformance is discovered or the supplier is notified of a possible nonconformance that has escaped the supplier's quality system. The supplier shall take immediate action to contain the suspect material and determine if any suspect material has been delivered to Transicoil. Transicoil must be informed of any suspect material within 3 days.

U-Substitution: The supplier shall not substitute "equivalent" items in place of items as listed on Purchase Order. If an equivalent item to a specified material is to be supplied, it is offered to Transicoil with supporting documentation prior to the shipment. All changes relating to the part number, drawing specification, delivery or price must be agreed to by Transicoil Purchasing and confirmed by a change to the Purchase Order.

V-Packaging: Unless otherwise specified in the purchase order, the seller shall package all material in a manner that will prevent corrosion, oxidation, deterioration, Electrostatic discharge damage and physical damage during shipment to Transicoil. Particular care must be given to hazardous materials. Dented/Damaged containers will not be accepted.

W-Configuration Control: When parts are supplied to ADS Transicoil specifications, no changes in materials, construction, or performance shall be made by the vendor for the item(s) covered by this purchase order without prior written approval from Transicoil.

X-Unacceptability of 100% Tin in solder applications: Because of the risk of tin 'whisker' induced failure of electronic hardware, it is advisable to avoid using pure tin plating on any of the parts utilized in the construction of electronic hardware, such as lead finishes, RF shields, mounting hardware, and electronic enclosures. The supplier must provide written compliance with this clause in the form of a letter or Certificate of Compliance signed by a member of their quality organization, included with each shipment. The supplier understands that they may be audited on this issue and/or be asked to provide Transicoil with additional proof of compliance such as test certificates from the plating material manufacturer.

Y-DFARS Clauses pertaining to Preference For Domestic Specialty Metals

All material supplied under this purchase order shall be compliant to DFARS 252.225.7008, DFARS 252.225.7009 and 252.225.7010. Qualifying countries are listed in DFARS 252.225.7012. Transicoil's Supplier shall flow down this requirement to their suppliers and they shall flow down the requirement to their suppliers.

Z-Welding

All welds must be 100% inspected by a certified welder. Certification must indicate that the above inspections were accomplished.

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AA- Document Retention/Access to Records/Correction

Documents such as Inspection Records (Receiving Inspection, In-Process Inspection and Final Inspection) and Purchased Material Certification will be retained for a minimum of 11 years after shipment date as applicable. Raw material certification may be sent with each shipment at the supplier's discretion in lieu of retention at supplier facility. The supplier shall have records available for review within 2 business days.

Corrections to documents shall be made with a single line through the original data, enter the corrected data. Initial and date the correction. No erasures, covering or white-out is allowed

AB- Delivery Window Requirement – 5 days Early, 0 Day Late

Shipments are to be received on dock within the 5 Days early 0 Days late window. Shipments received greater than 5 days early may be held on dock until the scheduled date, refused or returned to the sender at Transicoil's discretion.

AC- Printed Circuit Board test coupon analysis per the requirements of IPC-6012 Class 3.

Test coupon report(s) per IPC-6012, Class 3 are required to be sent to Transicoil with each shipment. All data required by the specification must be included in the report. The supplier may use an actual printed circuit board removed from each pallet in lieu of test coupons.

AD-Printed Circuit Board net list testing is required.

All printed circuit boards are required to be 100% net list tested. Evidence of this testing is required to appear on the certification of compliance or a separate certification that indicates the received lot has been 100% net list tested. Individual board passing test shall be stamped (space permitting) with "ET".

AE-Counterfeit Electronics and Raw Material - Suppliers of Electronics and Raw material must have a counterfeit component procedure that detects and prevents shipment to Transicoil any counterfeit parts. SAE AS5553 should be used as guidance. The supplier shall provide a certificate of conformance from the OEM (Original Equipment Manufacture) or a certificate of conformance from an AESP (Authorized Electronic Part Seller).

AF-Change of Quality System or Change of Location- Supplier shall immediately notify Transicoil's purchasing of any change of Location, Ownership, Quality system or Control Process Certification. Manufacture's that have a location change and provide parts to an Transicoil Part Number will need to provide First Article Inspection data on the first shipment produced/manufactured at the new location. Distributors and Standard parts are exempt from the First Article requirement.

AG-Obsolescence-The supplier shall notify Transicoil's purchasing regarding part or material obsolescence as soon as the information becomes available.

AH-Ozone Depleting Substances – Class 1 Ozone Depleting Substances (ODS) shall not be used in the design, test, manufacture, integration and assembly, handling, transportation, operations, maintenance, or disposal of the hardware and components delivered to this order

AI - Supplier shall screen the Sourcing Document for key characteristics and address with Transicoil Quality Department their control means for agreement

AJ - NADCAP certification required for processes

AK - Honeywell SPOC 2 requiring APSL listing

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AL - Customer Specific Flow Down Requirements

MSDS: Material Safety Data Sheet is required with shipment.

5 Records

All Records associated with this procedure are maintained and controlled in accordance with the *Control of Records Procedure, #10-023*

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6 Revision History

Rev.	Description of Change	Date
-	Initial Release; - Supplier Quality Requirement Clauses, #20-020 –Obsolete AP-250-285	See DCN 1093
A	Update code "Z" Welding to add requirement to state on certification that 100% inspection was performed. DCN 1153	08/23/06
B	Add new code "AA" – Document retention DCN 1966	10/19/07
C	Add new code "AB" – "Delivery Requirements – 5 days Early, 1 Day Late"	05/14/08
D	Revise code "AB" – "Delivery Requirements to " 5 days Early, 0 Day Late" DCN 2696	02/03/09
E	Added code AC & AD DCN 3138	07/06/09
F	Add Code AE, corrected "Y" to update DFARS sections, "A" 2000 to 2008, "AA" to 11 years.	12/19/11
G	Minor changes to: A, C, M, N, V ,AA Major Changes to: I ,T ,Y Added AE, AF, AG ,AH	2/20/2013
H	Added key characteristics clause per AIRBUS TDCA & IPCA Action Plans	5-7-14
J	Add Quality Clauses to require the following: AJ - NADCAP certification required for processes ; AK - Honeywell SPOC 2 requiring APSL listing ; and AL - Customer Specific Flow Down Requirements	