

**Raytheon Quality Note**  
**SL****Revision - Date**  
**5 – 02/25/21**

## **SPECIAL PROCESS CONTROL**

### **REVISION HISTORY**

- Revision 5 replaces revision 4 dated 05/14/20.
  - This revision updates wording in requirement 1,
  - Changes requirement 1.1 to align to requirement 3,
  - Removes previous requirements 1.2, 1.3, 2.2 and 2.3,
  - Adds sub bullets of special processes groups under requirement 3,
  - Clarifies wording in 3.3, and
  - Incorporates various wording changes for clarity.
- The applicable revision of this document is determined by:
  - The revision specified on the purchase order, or
  - The revision in effect at the time of the purchase order if no revision is listed on the purchase order.

### **REQUIREMENTS**

1. The requirements of this document are applicable in full to all items (including lower level items) that are processed, assembled, manufactured, inspected, or tested at Seller's facility, or its sub-tier suppliers, which include a Special Process specification that is imposed by Raytheon within the items' Technical Data Package (TDP).
  - 1.1. Raytheon requires Special Process Control for the processes listed in requirement 3.
2. Exceptions:
  - 2.1. Piece parts, components and/or assemblies that are manufactured in accordance with (or manufactured to meet the requirements of) a Military, Federal or Commercial Specification Part Number are exempt from the requirements of this document. Examples include JANTX, M39014, MS15795, NAS, RNR, MIL-PRF-39012, etc.
    - 2.1.1. This exemption includes all Commercial-off the-Shelf (COTS) parts, except when a seller's COTS item has been modified in any way to meet a Raytheon requirement, i.e. modified or militarized COTS, as prescribed in the Raytheon drawing, TDP, Statement of Work, or Purchase Order, in which case requirement 1 applies.
  - 2.2. If the TDP Special Process Specification is not denoted in the Raytheon ASL, or only a general special process category (ex: heat treating) is listed in the TDP, the requirements of this document shall be managed by the Seller in accordance with their Quality Management System.

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3. Requirements for suppliers performing the Special Processes that are defined below:
- Welding / Brazing
  - Non-Destructive Testing (NDT)
  - Heat Treating
  - Plating and Chemical Finishing
  - Painting
- 3.1. Suppliers, including sub-tier suppliers, performing a Special Process shall meet one of the following:
- 3.1.1. Nadcap accredited for the specification as defined in the eAuditNet supplier scope with the exception of the Painting Special Process (see the Paint Application Process requirement below).
- eAuditNet registration and use instructions are available as a Quality Note (Q-Note) SL Supporting Document on the Raytheon Quality Notes website: <http://qnotes.raytheon.com>
- 3.1.2. Raytheon approved for the process as defined in the Q-Note SL Approved Supplier List (ASL)
- Approved Suppliers, by specification, are available as a Q-Note SL Supplier Listing on the Raytheon Quality Notes website: <http://qnotes.raytheon.com>
- 3.2. Approved Suppliers included on the ASL shall have a Quality Management System that meets one of the following:
- A current 3rd party certification to AS9100, ISO 9001 or AC7004 from an International Aerospace Quality Group (IAQG) or International Accreditation Forum (IAF), or
  - Adequately passed a Raytheon Enterprise Supplier Assessment (RESA) Chapter 0 audit for AS9100, ISO 9001 or AS9003.
- 3.3. The Special Process supplier shall only perform processes for which they have been approved. Supplier scope is listed in the applicable section of the Raytheon ASL or on eAuditNet.
- If there is no supplier available to meet the requirements of 3.1.1 or 3.1.2, contact the Raytheon Buyer with a suggested source of supply for consideration.
- 3.4. Special Process Control requirements shall apply to the following processes:
- 3.4.1. Plating and Chemical Finishing Processes
- Examples include, but are not limited to: Conversion Coating, Passivation, Oxide Coating, Anodic Coating, Vapor Deposited Coating, and Plating.

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- Examples include, but are not limited to: Fusion Welding, Spot Welding, Arc Welding, Resistance Welding, Friction Stir Welding, Electron Beam Welding, Brazing, and Diffusion Bonding.

**3.4.3. Non Destructive Testing (NDT) Processes**

- Penetrant, Magnetic Particle, Radiography, Ultrasonic, and Eddy Current.

**3.4.4. Heat Treating Processes**

- Examples include, but are not limited to: Annealing, Hardening, Tempering, Precipitation Hardening, Aging, and Case Hardening. Also included are thermal treatments specified by drawing callout such as Stress Relieving, Thermal Cycling and Stabilization Treatments.
- This requirement does not apply to heat treatment processing that is controlled by an Industry/Military material specification. Examples include:
  - Aluminum Forging: 7075-T7352 IAW AMS 4117
  - Aluminum Plate: 6061-T651 IAW ASTM B209
  - Aluminum Casting: A356-T6 IAW AMS 4218

**3.4.5. Paint Application Processes**

- Examples include, but are not limited to: Paint Application in accordance with MIS- 41252, MIS-47255, WS-9778, or WS-9780.
- Only suppliers listed on the Q-Note SL ASL shall be used for the specifications listed; Nadcap accreditation of paint suppliers is not accepted by Raytheon at this time.
- If the paint specification is not listed on the ASL, Raytheon supplier approval is not required.

**DATA SUBMISSION SUMMARY**

- There is no deliverable data to Raytheon required by this document.

**NOTES**

- A Special Process is defined as a process where the resulting output cannot be verified by subsequent monitoring or measurement.
- Use of Nadcap or Raytheon approved sources of supply does not absolve the Seller of their responsibility to monitor supplier performance, provide acceptable processes, products, and services to Raytheon, and to comply with all specification and quality requirements.