

**COL-FRM-0105-00 – Applicable Special Process Requirements**

This form lists the applicable special process requirements for all special processes being performed for Collins Aerospace or as defined by the SBU/site. At a minimum the accreditation scope shall fully cover all product produced for Collins Aerospace.

NOTE: Special Process commodities not listed in this form are not required by Collins Aerospace.

**Required Commodities and Checklists**

COMMODITY	CHECKLIST
Additive Manufacturing	AC7131 Base Checklist
Additive Manufacturing	AC7131/1 Laser and Electron Beam Metallic Powder Bed
Chemical Processing	AC7108 Base Checklist
Chemical Processing	AC7108/1 Painting, Dry Film Lube
Chemical Processing	AC7108/2 Pre-Penetrant and Etch Inspection
Chemical Processing	AC7108/3 Metal Bond Prep
Chemical Processing	AC7108/4 Solution Analysis
Chemical Processing	AC7108/5 Alpha Case Removal and Chemical Cleaning Milling
Chemical Processing	AC7108/6 Cleanliness Verification
Chemical Processing	AC7108/7 Vacuum Cadmium and Vapor Deposition Aluminum
Chemical Processing	AC7108/8 Anodizing
Chemical Processing	AC7108/9 Plating/Electro-Deposition
Chemical Processing	AC7108/10 Electroless Plating
Chemical Processing	AC7108/11 Chemical Conversion Coating
Chemical Processing	AC7108/12 Standalone cleaning, Descaling, Passivation and Electropolishing
Chemical Processing	AC7108/13 Brush Anodize and plating
Coatings	AC7109 Base Checklist
Coatings	AC7109/1 Thermal Spray

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COMMODITY	CHECKLIST
Coatings	AC7109/2 All Vapor Deposition
Coatings	AC7109/4 Stripping of Coated Material
Coatings	AC7109/5 Coating Evaluation
Coatings	AC7109/6 Plating of Coated Parts
Coatings	AC7109/7 Heat Treating of coatings
Composites	AC7118 Base Checklist
*Conventional Machining as a Special Process	AC7126 Base Checklist
*Conventional Machining as a Special Process	AC7126/1 Holemaking
*Conventional Machining as a Special Process	AC7126/2 Broaching
*Conventional Machining as a Special Process	AC7126/3 Turning
*Conventional Machining as a Special Process	AC7126/4 Milling and Hobbing
*Conventional Machining as a Special Process	AC7126/5 Grinding
*Conventional Machining as a Special Process	AC7126/6 Edge Treatment
Electronics - Printed Boards	AC7119 Base Checklist
Electronics - Printed Boards	AC7119/2 Flexible and Rigid-Flexible Printed Boards
Electronics - Printed Boards	AC7119/5 High Frequency Printed Boards
Electronics - Printed Boards	AC7119/6 In House Fabrication
Electronics - Printed Boards	AC7119/7 Final Finishes and X-Ray Fluorescence
Electronics - Printed Boards	AC7119/8 Drilling (Mechanical & Laser)
Electronics - Printed Boards	AC7119/9 Electrical Testing
Electronics - Printed Boards	AC7119/10 In House Fabrication Via Fill & Planarization
Electronics - Printed Board Assemblies	AC7120 Base Checklist

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COMMODITY	CHECKLIST
Electronics - Printed Board Assemblies	AC7120/2 General Soldering
Electronics - Printed Board Assemblies	AC7120/3 Plated Through-Hole Technology
Electronics - Printed Board Assemblies	AC7120/4 Surface Mount Technology
Electronics - Printed Board Assemblies	AC7120/5 Mixed Metallurgy for Ball Grid Array
Electronics - Printed Board Assemblies	AC7120/6 Lead Free Soldering
Electronics - Printed Board Assemblies	AC7120/7 Conformal Coating
Electronics - Printed Board Assemblies	AC7120/8 Encapsulation
Electronics - Printed Board Assemblies	AC7120/9 Programming
Electronics - Printed Board Assemblies	AC7120/10 Final Testing
Electronics - Printed Board Assemblies	AC7120/11 Refinishing of Electronic Components
Electronics - Printed Board Assemblies	AC7120/12 Depaneling
Electronics - Cable and Harness Assemblies	AC7121 Base Checklist
Electronics - Cable and Harness Assemblies	AC7121/2 Soldering
Electronics - Cable and Harness Assemblies	AC7121/3 Splices and Ultrasonic Welding
Electronics - Cable and Harness Assemblies	AC7121/4 Wire Bundle Securing
Electronics - Cable and Harness Assemblies	AC7121/5 Electrical Shielding
Electronics - Cable and Harness Assemblies	AC7121/6 Over-Molding and Potting
Electronics - Cable and Harness Assemblies	AC7121/7 Soldering and Crimping of Coaxial and Biaxial Connector Assemblies
Electronics - Cable and Harness Assemblies	AC7121/8 Control of Electrostatic Discharge
Electronics - Cable and Harness Assemblies	AC7121/10 Solderless Wrap and Insulation Displacement
Electronics - Cable and Harness Assemblies	AC7121/11 Finished Assemblies

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COMMODITY	CHECKLIST
Heat Treating	AC7102 Base Checklist
Heat Treating	AC7102/1 Brazing
Heat Treating	AC7102/2 Aluminum Heat Treating
Heat Treating	AC7102/3 Carburizing
Heat Treating	AC7102/4 Gas and/or Ion/Plasma Nitriding
Heat Treating	AC7102/5 Hardness and/or Conductivity Testing
Heat Treating	AC7102/6 Hot Isostatic Pressing
Heat Treating	AC7102/7 Induction Hardening
Heat Treating	AC7102/8 Pyrometry
Heat Treating	AC7102/9 Sintering
Heat Treating	AC7102/ Localized Heat Treating
Metallic Materials Manufacturing	AC7140 Forgings
Metallic Materials Manufacturing	AC7141 Investment Castings
Metallic Materials Manufacturing	AC7142 Sand Casting
Nonconventional Machining	AC7116 Base Checklist
Nonconventional Machining	AC7116/1 Electrochemical Machining
Nonconventional Machining	AC7116/2 Electrochemical Grinding
Nonconventional Machining	AC7116/3 Electrical Discharge Machining
Nonconventional Machining	AC7116/4 Laser Beam Machining
Nonconventional Machining	AC7116/5 Laser Part Marking
Nonconventional Machining	AC7116/6 Spark Erosion Grinding
Nondestructive Testing	AC7114 Base Checklist

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## COL-FRM-0105-00 – Applicable Special Process Requirements

COMMODITY	CHECKLIST
Nondestructive Testing	AC7114/1 Penetrant Survey
Nondestructive Testing	AC7114/2 Magnetic Particle Survey
Nondestructive Testing	AC7114/3 Ultrasonic Survey
Nondestructive Testing	AC7114/4 Film Radiography Survey
Nondestructive Testing	AC7114/5 Eddy Current Survey
Nondestructive Testing	AC7114/6 Digital Radiography, Utilizing Digital Detector Array
Nondestructive Testing	AC7114/7 Ultrasonic Survey - Rotating Components
Nondestructive Testing	AC7114/8 Digital Radiography, Utilizing Computed Radiography, Photostimulable Luminescence Survey
Nondestructive Testing	AC7114/9 Remote Image and Film Viewing
Nondestructive Testing	AC7114/11 National Aerospace NDT Boards
Nondestructive Testing	AC7114/12 NonDestructive Testing for Outside Agencies
Nonmetallic Materials Testing	AC7122 Base Checklist
Nonmetallic Materials Testing	AC7122/1 Mechanical Testing
Nonmetallic Materials Testing	AC7122/2 Physical Testing
Nonmetallic Materials Testing	AC7122/3 Chemical Testing
Nonmetallic Materials Testing	AC7122/4 Thermal Test
Nonmetallic Materials Testing	AC7122/5 Flammability Testing
Surface Enhancement	AC7117 Base Checklist
Surface Enhancement	AC7117/1 Computer Controlled Peening
Surface Enhancement	AC7117/2 Automated Peening
Surface Enhancement	AC7117/3 Peen Forming

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## COL-FRM-0105-00 – Applicable Special Process Requirements

COMMODITY	CHECKLIST
Surface Enhancement	AC7117/4 Flapper Peening
Surface Enhancement	AC7117/5 Manual Peening
Welding	AC7110 Base Checklist
Welding	AC7110/1 Brazing (Torch and Induction)
Welding	AC7110/2 Flash Welding
Welding	AC7110/3 Electron Beam Welding
Welding	AC7110/4 Resistance (Spot, Seam, Projection)
Welding	AC7110/5 Fusion Welding
Welding	AC7110/6 Laser Welding
Welding	AC7110/7 Rotational Friction/Inertia Welding
Welding	AC7110/8 Diffusion Welding
Welding	AC7110/9 Percussion Stud Welding
Welding	AC7110/12 Welder/Welding Operator Qualification
Welding	AC7110/13 Evaluation of Weld Joints and Torch & Induction Braze Joints
ADDITIONAL REQUIREMENTS	CHECKLIST
Vibratory Testing	N/A
Leak Testing	N/A
Resistance Brazing	N/A

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