

# *Processing/Procedures Solutions*

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*Pratt & Whitney*

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<b>Procedure Number</b>	<b>Effective Date</b>	<b>Subject</b>
POP INTRO, Rev. L	11/30/2005	Information on the issuance, use, and control of POP procedures
POP 100-BR	5/2/2011	General Instructions Process Procedure
POP 108-E	3/15/2005	Electrodeposition of a Nickel-CBN Coating on Nickel-Base Parts
POP 119-E	3/15/2005	Electrodeposition of a Nickel-CBN Coating on Titanium Airfoils
POP 130-AR	2/10/2005	Silver Plating (AMS 2410) - Using Nickel Strike
POP 140-AF	5/22/2001	Nickel Plating Steel Parts (AMS 2403 - AMS 2424)
POP 142-AL	7/9/2001	Nickel Plating Stainless Steel Parts Including Type 410 Stainless Steel (AMS 2403 - AMS 2424)
POP 158-AD	11/2/2001	Stripping Coating from Corrosion and Heat Resistant Steel, Nickel-Base Alloys, Cobalt-Base Alloys, and Titanium
POP 164-AA	5/29/1997	Stripping Nickel, Copper, or Nickel-Cadmium
POP 166-AD	12/12/2006	Application of Flame Sprayed Wire and Aluminum Slurry Coatings
POP 170-N	2/10/2005	Chromium Stripping (Inhibited Hydrochloric Acid Method)
POP 188-AJ	6/8/2005	Nickel Plating of Nickel-Base and Cobalt-Base Parts (AMS 2403 - 2424)
POP 196-R	4/21/2003	Nickel and Silver Plating for PWA 85 Brazing



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Procedure Number	Effective Date	Subject
POP 212-AF	10/20/2005	Pickling of Heat and Corrosion Resistant Steels
POP 213-V	11/29/1999	Molten Salt Descaling Steel, Titanium, Columbium, and Heat and Corrosion Resistant Alloys
POP 215-N	3/10/1998	Cleaning of Cast Magnesium Parts
POP 216-J	2/10/2005	Descaling of Corrosion and Heat Resisting Steels
POP 222-P	12/22/2004	Purification of Sulfamate Nickel Plating Solutions (PS 321 and PS 324)
POP 223-AH	10/20/2005	Acid Cleaning of Titanium and Titanium Alloys
POP 225-AB	10/20/2005	Pickling of Heat and Corrosion Resistant Steels (Copper or Silver Brazed)
POP 228-AE	3/28/2011	Chemical Stock Removal of Titanium and Titanium Alloys
POP 230-J	9/10/1997	Removal of Anodic Film (Chromic-Phosphoric Acid Method)
POP 231-AR	6/26/1997	Anodizing Aluminum Alloys 40 Volt, 30 to 40 Minute Treatment (PWA 830, Code 1 - AMS 2470)
POP 232-AD	6/26/1997	Anodizing Aluminum Alloys 20 Volts, 30 to 40 Minute Treatment (PWA 830, Code 1 - AMS 2470)
POP 235-AA	3/5/1998	Anodizing of Engine Parts Requiring Inspection Prior to Sealing, 40 Volts for 30 to 40 Minutes (PWA 830, Code 1 - AMS 2470)
POP 237-E	7/3/1997	High Voltage Chromic Acid Anodization of Aluminum Alloys (PWA 830, Code 1 - AMS 2470)
POP 239-W	5/22/2001	Aluminum Hard Coating (Sulfuric-Oxalic Acids at 50F)
POP 240-P	5/24/2001	Removing Stains from Steel Parts
POP 257-U	5/19/2000	Application of Heat-Resistant Aluminum Enamel PWA 577 on Steel or Aluminum Alloy Engine Parts (PWA 830, Code "OL", "L", or "L2")
POP 260-W	12/10/2002	Application of High Baking Silicone Aluminum Enamel (PWA 830, Code "OM" or M2)
POP 264-H	10/5/1998	Removal of Preservative Varnish from Steel or Magnesium Parts - Electrolytic Method
POP 265-U	12/10/2002	Removal of Anti-Galling Compound, Graphite Varnish, Preservative Varnish, Paint, and PWA 595 from Steel, Magnesium, and Titanium Parts (Immersion Method) - Florida Only
POP 270-G	6/8/1994	Descaling by Caustic Potassium Permanganate and Inhibited Hydrochloric Acid
POP 272-J	11/16/2006	Application of Zinc Chromate Primer (AMS 3110)
POP 277-L	12/2/1996	Anodizing of Engine Parts Requiring Inspection Prior to Sealing, 20 Volts for 30 to 40 Minutes (PWA 830, Code 1 - AMS 2470)
POP 282-E	10/5/1998	Cleaning Corrosion and Heat Resistant Steel Braze Connectors
POP 286-P	4/5/1994	Masking Prior to Chemical Milling
POP 288-K	7/25/1997	Chemical Milling of Carbon Steel and Martensitic Stainless Steel Alloys
POP 289-P	2/15/2002	Chemical Milling of Nickel-Base Alloys, AISI 410, and Greek Ascoloy
POP 293-G	1/4/2000	Alkali Cleaning of Aluminum and Aluminum Alloys
POP 295-E	4/15/1997	Cleaning Commercially Pure Nickel
POP 296-N	1/26/1995	Instructions for Using Thermoplastic Stabilizing Compounds and Waxes



## POP 300

<b>Procedure Number</b>	<b>Effective Date</b>	<b>Subject</b>
POP 301-E	6/19/2006	Abrasive Blasting Using Dry Plastic Blast Media
POP 303-M	3/18/1998	Barrel Finishing
POP 310-J	11/13/1996	Sandblasting
POP 311-T	4/15/1997	Coarse Dry Abrasive Blasting
POP 315-AB	6/29/2000	Wet-Abrasive Blasting
POP 317-M	4/9/1997	Glass Bead Wet Blasting
POP 320-A	2/7/1996	Abrasive Blasting, Nickel-Chromium
POP 338-M	4/15/1997	Cleaning Weldable Aluminum Alloys
POP 346-AJ	9/25/1997	Removal of Low-Melting Alloys
POP 347-AE	10/20/2005	Cleaning of Scale and Rust from Steel
POP 350-AE	2/5/2010	Cleaning/Degreasing of Parts
POP 357-J	7/3/1997	Abrasive Blast Cleaning of Steel or Nickel Alloy Parts Prior to Aluminum Spraying or Ceramic Coating
POP 361-F	10/5/1998	Cleaning Procedure for AMS 4025 Aluminum Alloy
POP 367-T	10/7/2010	Operation of Immersion Agitation Washing Machines
POP 370-V	2/20/2007	Single Stage Power Washers
POP 372-R	10/15/1997	Cleaning Aluminum Alloys Before Welding
POP 373-AC	9/19/2002	Operation of Immersion Type Washing Machines
POP 383-P	12/16/1997	Operation of Roto-Gyro Washing Machine
POP 384-AP	4/17/2000	Alkali Cleaning in Non-Automatic Equipment
POP 386-A	4/5/1994	Cleaning Aluminum and Aluminum Alloys Prior to Anodizing or Welding
POP 390-L	10/15/1997	Cleaning Aluminum Alloys Prior to Brazing or Welding
POP 391-E	10/5/1998	Preventive Measures to Exclude Chips from Complex Hollow Vanes
POP 392-AP	3/15/2004	Wet Glass Bead Peening to PWA 36906



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POP 400

Procedure Number	Effective Date	Subject
POP 406-E	2/1/1994	OBSOLETE - When work instructions specify the use of POP 406 <b>Refer to POP 350</b>
POP 407-L	2/10/2005	Removal of Salts from Parts, Gages, Fixtures, and Machines after Electrochemical Machining
POP 410-M	5/16/2005	Fine Dry Abrasive Blasting
POP 411-AH	3/15/2004	Dry Glass Bead Peening to PWA 36906
POP 426-W	6/14/2001	Application of Preservative Varnish to Engine Parts (PWA 830, Code "C")
POP 428-L	6/14/2001	Preservation Varnish Touch-Up
POP 432-R	12/10/2002	Application of Graphited Varnish PWA 60
POP 438-AA	7/18/2007	Application of Heat and Corrosion Resistant Aluminum Finish (PWA 595-1) per PWA 110
POP 440-E	2/22/1996	Cosmetic Touch-Up of Heat & Corrosion Resistant Aluminum Finish (PWA 595) after Engine Test, in Non Gaspath Areas
POP 451-AE	6/1/2000	Reciprocal Finishing of Compressor and Turbine Rotor Holes
POP 452-H	8/22/1997	Reciprocal Deburring & Finishing
POP 453-F	12/16/1997	Orbital Barrel Finishing
POP 454-K	12/16/1997	Finishing of Compressor and Turbine Rotor Parts by Liquid Buffing (PWA 103)
POP 455-L	6/26/1997	Confined Abrasive Finishing
POP 457-J	12/19/1997	Vibratory Finishing
POP 458-F	1/20/1999	Spindle Finishing



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POP 500

Procedure Number	Effective Date	Subject
POP 501-A	5/14/2001	Procedure for Hand Held Spray Cleaning of Tooling Components in a Spray Booth
POP 564-G	11/2/1998	Cleaning with the Aid of Ultrasonics
POP 567-H	11/5/2003	Stripping of Molybdenum (PWA 53-13 and PWA 53-38) from Titanium Parts
POP 569-F	10/20/2005	Acid Cleaning of Columbium Alloys
POP 570-E	5/18/2001	Stripping of Undiffused PWA 68 Coating
POP 573-AE	10/15/2010	Alkali Cleaning (Immersion)
POP 574-P	10/20/2005	Acid Cleaning of Titanium and Titanium Alloys in Automatic Equipment
POP 575-E	10/15/1997	Stripping Cured Polyimide Coating in Automatic Equipment
POP 576-F	8/16/1999	Alkali Cleaning of Titanium and Titanium Alloys in Automatic Equipment (B/T 527330)
POP 577-G	5/18/2001	Acid Cleaning of Titanium and Titanium Alloys in Automatic Equipment (B/T 527330)
POP 579-E	8/16/1999	Operation of Automatic Spray Washer (B/T 523645)
POP 581-R	2/14/2008	Alkali Cleaning in Cabinet-Type Automatic Spray Wash Equipment
POP 582-D	1/11/2005	Acid Cleaning of Titanium Hollow Fan Blade Details
POP 583-Initial Issue	6/26/2006	Acid Cleaning of PWA 1233 Titanium (Beta 21S)
POP 585-B	1/31/2011	Cleaning by Alkaline Permanganate and Inhibited Hydrochloric Acid



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POP 600

Procedure Number	Effective Date	Subject
POP 600-L	9/10/1997	Normalize, Harden, and Temper AMS 6260, 6263, 6265, and 6267 Steel Forgings to Rc 26-32 <b>Refer to POP 1216</b>
POP 605-L	11/4/1998	Harden and Temper Steel Forgings to PWA 11-22 Rockwell C 26-32
POP 608-K	11/4/1998	Normalize, Harden and Temper Steel Forgings to PWA 11-22 Rockwell C 32-38
POP 609-N	11/4/1998	Normalize, Harden and Temper Steel Forgings to PWA 11-22 Rockwell C 35-40
POP 645-H	4/15/1997	Cold Treatment of Steel Parts
POP 653-L	11/12/1998	Induction Temper Steel Parts for Machinability - Motor Generator
POP 677-H	11/12/1998	Induction Temper Steel Parts for Machinability - Vacuum Tube Oscillator (Westinghouse)



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Procedure Number	Effective Date	Subject
POP 800-V	9/4/2003	GENERAL INSTRUCTIONS: Preservation and Packaging Process Operation Procedure
POP 801-BT	9/7/2010	General Instructions for the Handling and Packaging of Engine Parts and Service Tools During Manufacture, Inspection, and Storage
POP 813-AW	1/21/2009	CANCELLED: Treatment for Corrosion Prevention of Engine Parts and Service Tools Going Into Finished Stores
POP 814-R	1/21/2009	CANCELLED: Corrosion Prevention Procedure for Parts Subject to Corrosion During a Shutdown Period
POP 821-M	7/28/2008	Storage of Fiberglass, Kevlar, Graphite Prepregs, and Film Adhesives
POP 823-W	8/22/1997	Supplier Preservation Information for Use of Volatile Corrosion Inhibitor and Multi-Purpose Volatile Corrosion Inhibitor Treated Paper Refer to POP 1614
POP 824-K	10/6/2008	CANCELLED: Handling and Packaging of Parts Having Knife Edge Seals
POP 826-K	1/21/2009	CANCELLED: Multi-Purpose Volatile Corrosion Inhibitor (MPI)
POP 828-C	6/14/2010	Spares Packaging Procedure (For Parts Manufactured in P&W Product/Module Centers for Spares Requirements)
POP 843-T	7/2/2008	Application of Soft-Film Corrosion Preventive Compound, MIL-C-11796, Class 3 (PMC 9109) (Hot Dip Method)
POP 844-R	7/2/2008	Application of Aircraft Engine Corrosion Preventive MIL-C-6529, Type II (PMC 9111)
POP 845-AV	1/22/2009	Corrosion Prevention of Engine Parts During Manufacturing, Inspection, and Storage
POP 853-T	12/16/2008	Removal of Fingerprints and Perspiration Residues from Parts Being Processed for Spares Shipment
POP 859-T	1/21/2009	CANCELLED: Application of Soft-Film Corrosion Preventive Solvent Cut-Back MIL-PRF-16173, Grade 2 (PMC 9114)
POP 868-L	10/27/2008	Procedure for Petroleum Solvent Spray Cleaning Certain Spare Parts in a Spray Booth
POP 872-G	9/11/2008	CANCELLED: Precautions Against Oil in Jet Engine Bleed Control and Exhaust Nozzle Control System
POP 873-R	1/21/2009	CANCELLED: Volatile Corrosion Inhibitor (VCI)
POP 874-V	5/14/2007	General Procedure for Marking by Electrolytic Etching Process
POP 875-H	9/6/2006	Marking Non-Porous Surfaces with Inks
POP 880-N	7/2/2008	Application of Aircraft Engine Corrosion Preventive MIL-C-6529 Type III (PMC 9112)
POP 881-F	5/8/2008	CANCELLED: Preparation of Cutting Tools for Transportation and Storage
POP 896-K	5/27/2008	CANCELLED: Folding Paperboard Boxes - Shipping Requirements
POP 899-K	8/18/2008	Handling of Thin-Wall Tube Details



## POP 900

Procedure Number	Effective Date	Subject
POP 900-AU	1/13/2006	Welding and Brazing Wire Cross Reference
POP 901-D	6/6/1996	Bare Welding Wire Evaluation
POP 903-C	5/24/2001	Guidelines for Continuous Improvement of Weld Joints
POP 904-A	3/17/2000	Notch Test Substitute
POP 904-A Appendix A	3/17/2000	Notch Test Substitute
POP 905	5/25/1995	Electrical Contact Staking of Vane and Shroud Assemblies
POP 906-A	10/21/1998	Fixture Control for Welding
POP 908-B	5/30/2006	Electron Beam Welding Equipment Radiation Survey
POP 909-Initial Issue	2/3/2011	Certification of Waterflow and Airflow Operators
* POP 910-R	9/26/2011	Cleaning of Parts Prior to Welding
POP 915-D	2/6/2009	Fusion Welder and Weld Operator Training and Requirements
* POP 920-AM	7/21/2011	P&W Welding Engineers
POP 932-AD	12/13/2006	AMS 2665 Brazing by the Induction Heat Process
POP 935-V	1/7/1998	Instructions for the Use of Low-Melt Alloy (PMC 5016)
POP 940-B	10/10/1996	Guidelines for the Establishment of Weld Schedule Parameters for Machine Welding (GTAW-ME)
POP 945-C	5/18/2001	Acceptance Criteria for Titanium Fusion Weld Coloration
POP 946-D	2/3/2009	Requirements for Construction Tack Welds for Diffusion Bonding per PWA 36096 or PWA 36932
POP 947-A	9/4/2007	Requirements for Construction Tack Welds on Brush Seal Tufts
POP 948-D	5/20/2004	Qualification of Employees Processing Peened Parts
POP 950-AR	12/13/2006	Manual Torch Brazing to AMS or PWA Specifications
POP 955-BD	1/25/2005	Manual Fusion Welding
POP 961-D	8/10/1994	Local Gas Tungsten Arc Weld (GTAW) Rebraze of Furnace Brazed Assemblies
POP 965-CD	7/11/2003	Machine Welding by the Inert Gas Arc Fusion Welding Process in Accordance with PWA 16
POP 966-BP	12/11/2008	Resistance Welding
POP 967 Chapter 1 Rev. P	9/4/2002	Procedures for Rewelding Manual and Machine Welds (General Information)
POP 967 Chapter 2 Rev. H	5/31/2001	Limits of Rewelding
POP 967 Chapter 3 Rev. H	9/4/2002	Verify Defects
POP 967 Chapter 4 Rev. H	5/31/2001	Blend
POP 967 Chapter 5 Rev. H	5/31/2001	Rout
POP 967 Chapter 6 Rev. L	8/31/2000	Clean
POP 967 Chapter 7 Rev. J	8/31/2000	Reweld
POP 967 Chapter 8 Rev. G	11/12/1993	Visual Check
POP 967 Chapter 9 Rev. H	5/31/2001	Post Blend
POP 967 Chapter 10 Rev. G	11/12/1993	Check Welds
POP 969-P	5/31/2001	Flash Butt Welding

## POP 900

<b>Procedure Number</b>	<b>Effective Date</b>	<b>Subject</b>
POP 970-AE	2/7/2000	Manual Fusion Rewelding of Titanium And Its Alloys by the Tungsten Inert Gas (TIG) and Plasma-Arc Processes
POP 971-N	7/19/2002	P&W Test Piece Control for All Brazing Processes
POP 972-U	1/27/1999	Qualification of Brazers by the Hand Torch Method
POP 973-Y	12/1/1998	Qualification of Resistance Welding Equipment
POP 974-BK	9/29/2010	Qualification and Requalification of Manual Fusion Welders
POP 975-AC	7/19/2002	P&WA Test Specimen Control for Resistance Welding
POP 976-CE	10/15/2010	Identification and Control of Welding, Brazing, and Soldering Filler
POP 976-CE Appendix A	10/15/2010	Identification and Control of Welding, Brazing, and Soldering Filler Materials, Preforms, Metallic Powders, and Fluxes
POP 977-U	2/11/2011	Pratt & Whitney Test Specimen Control for Fusion Welding
POP 978-L	5/22/2001	Brazing in Controlled Atmospheres by the Induction Heating Process
POP 980-W	4/12/2002	Qualification of Plating Operators
POP 982-U	3/30/2004	Test Piece Control for Heat Treating Processes
POP 982-T Appendix A	10/23/1998	TPH-1 Test Pieces
POP 982-T Appendix B	10/23/1998	TPH-2 Nitride Test Pieces
POP 982-T Appendix C	10/23/1998	TPH-3 Solution and/or Precipitation Heat Treat Test Pieces
POP 982-T Appendix D	10/23/1998	TPH-4 Carburize Test Pieces
POP 982-T Appendix E	10/23/1998	TPH-5 Solution and/or Precipitation Heat Treat Sheet Stock
POP 982-T Appendix F	10/23/1998	TPH-6 Solution and/or Precipitation Heat Treat Sheet Stock Test Pieces
POP 982-T Appendix G	10/23/1998	TPH-7 Solution and/or Precipitation Heat Treat AMS 5544 (Waspaloy Sheet Form) Test Pieces for In-Process Thermal Treatment
POP 982-T Appendix H	10/23/1998	TPH-8 Bonding Specimen per PWA 112
POP 982-T Appendix J	10/23/1998	TPH-9 Solution and/or Precipitation Heat Treat Sheet Stock Test Pieces
POP 982-T Appendix K	10/23/1998	TPH-10 Test Pieces
POP 983-R	6/26/1998	Procedures for Producing and Maintaining an Inert Atmosphere Within Welding Chambers
POP 984-E	7/9/1996	Qualification of Manual or Semi-Automatic Induction or Radiant Brazers
POP 985-D	2/25/1998	In-Process Hardness Check After Heat Treating
POP 985-D Index of Appendices	2/25/1998	In-Process Hardness Check After Heat Treating
POP 985-D Appendix A	2/25/1998	In-Process Hardness Check After Heat Treating
POP 985-D Appendix B	2/25/1998	In-Process Hardness Check After Heat Treating
POP 986-W	2/19/1999	Qualification of Operators for Hardfacing
POP 988-Y	5/10/2011	Qualification and Requalification of Machine Fusion Welding Operators

<b>Procedure Number</b>	<b>Effective Date</b>	<b>Subject</b>
POP 994-J	5/22/2001	Braze to PWA 85 by Induction Heating in a Protective Atmosphere
POP 995-AM	12/9/2009	Electron Beam Welding
POP 997-BW	6/24/2009	Plasma Spray Coating in Accordance with PWA 53
POP 997-AA Appendix A	6/27/1996	Plasma Spray Coating in Accordance with PWA 53
POP 997-BF Appendix B	6/14/2009	Index to Master Spray Schedules
POP 998-K	5/17/2001	Inert Arc Fusion, In-Process Tack Welding of Titanium and Titanium Alloy Parts



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Procedure Number	Effective Date	Subject
POP 1002-BV	10/21/2009	Steel Shot Peening to PWA 36906 or PWA 36930 Using Airblast Machines
POP 1007-G	1/24/1996	Shot Peening of Welded Waspaloy Assemblies Prior to Solution Heat Treatment
POP 1010-E	9/13/2005	Test Procedure for Screening Shot Peening Media
POP 1011	5/18/2005	Ceramic Shot Peening to AMS 2430 - Applicable to: Compression Systems Module Center - Hollow Fan Blade Business Unit Only
POP 1104-AA	12/1/2006	Electrochemical Metal Removal
POP 1105-AK	12/1/2006	Electrodischarge Metal Removal
POP 1111-R	12/1/2006	Electrochemical Metal Removal by Electrolytic Grinding (EG)
POP 1113-U	2/1/1999	Spin Testing of Blades and Blade Bearing Rotors - Manual (Semifinished and Finished)
POP 1119-K	5/17/2001	Plating Nickel on Nickel when Authorized by Quality Review (QR)
POP 1123-F	4/15/1997	Removal of Foreign Material from Holes in Stainless Steels, Nickel-Base Alloys and Titanium
POP 1124-F	2/7/1996	Nickel Plating on Aluminum
POP 1126-H	8/18/1999	Chemical Stripping of Flame Deposition and Plasma Spray Deposition Coatings
POP 1133-P	4/24/2003	Cleaning Weld Spatter and Vapor Deposition from Electron Beam Welding Machine Chamber Surfaces
POP 1136-R	4/14/2009	Bonding Facilities Control
POP 1144-M	6/30/2000	Removal of Low Melting Alloys from Internal Passages of Vanes and Blades
POP 1146-N	6/30/2000	Removing of Low Melt Alloys from Air-cooled Turbine Blades and Vanes (1.0-1.5 Hours Treatment)
POP 1153-E	4/15/1997	Flushing Blades and Vanes with Hot Water after Removal of Low Melt Alloy (Five Minute Minimum Treatment)
POP 1154-G	2/8/1999	Application of Anaerobic Adhesive (PWA 549-2)
POP 1162-H	5/17/2001	Stripping of PWA 47, 73, 273, and 275 Coatings from PWA 655, 656, 658, 663, 689, 1422, 1451, 1455, 1480, and 1484
POP 1163-V	8/20/2010	Stripping of Coatings
POP 1164-H	10/29/2001	Repair of PWA 68, 270, or 273 Coatings using PWA 545-1 by Quality Review Only
POP 1165-D	4/15/1997	Flushing Blades and Vanes with Hot Water after Removal of Low Melt Alloy (2-2.5 Minutes Treatment)
POP 1166-U	6/30/2000	Removal of Low-Melt Alloys from Turbine Blades and Vanes (15-20 Minutes Treatment)
POP 1168-F	12/1/2006	Flushing of Fuel Tubes, Fuel Tube Assemblies and Manifold
POP 1175-E	7/1/1998	Stripping Coatings from Fixtures (PWA 68, PWA 266-1 Metallic, PWA 270, PWA 286, PWA 36301, and PWA 36302 Metallic)
POP 1178-G	10/27/1998	Stripping of PWA 263, PWA 280, PWA 282, or PWA 283 Coating from PWA 655
POP 1180-B	8/28/1998	Preparation and Anodization of Titanium Prior to Bonding
POP 1181-C	5/17/2001	Stripping Silver or Copper Brazing Alloy from Corrosion and Heat Resistant Steel when Authorized by Quality Review Only
POP 1182-D	9/28/2010	CANCELLED: Stripping AMS 4778 and 4779 Brazing Filler Metals from PWA 1422, 1447, 1455, and 1480 Alloys with PWA 73, 273, 275, or 286 Coatings
POP 1183-C	12/6/2000	Phosphoric Acid Anodizing of Aluminum Alloys Prior to Bonding (PWA 36963)
POP 1184-F	7/30/2009	Stripping by High Pressure Water Blasting
POP 1184-F Appendix A Index	7/30/2009	Master Blast Schedule Index

Procedure Number	Effective Date	Subject
POP 1185-D	2/17/1998	Anodizing Aluminum Alloys 40 Volt, 85-95 Minute Treatment Prior to Hard Coat (PWA 830, Code 1 - AMS 2470)
POP 1186-C	6/29/2000	Removal of Low-Melt Alloys from Hollow Turbine Blades, or Blades with Internal Passages (15-20 Minutes Treatment - Hot Acid) (10 Minutes Treatment - Cold Acid)
POP 1187-A	12/22/1999	High Speed Nickel Plating (PWA 36970)
POP 1188-A	11/28/2006	Stripping of Coatings per Quality Review Authorization Process HR
POP 1189 Initial Issue	5/18/2009	Under Platform Damper Pocket Coating Using PWA 545-1 and Employee Qualification
POP 1205-K	4/9/1997	Anneal AMS 5613 Corrosion and Heat Resistant Steel Forgings to BHN 241 Maximum
POP 1208-L	10/29/1998	Harden and Temper AMS 5613 and AMS 5616 Corrosion and Heat Resistant Steel Forgings to Rc 30-38 per PWA 11-22
POP 1209-H	10/29/1998	Harden and Temper AMS 5613 and AMS 5616 Corrosion and Heat Resistant Steel Forgings to Rc 35 Minimum per PWA 11-22
POP 1210-J	10/29/1998	Harden and Temper AMS 5613 Corrosion and Heat Resistant Steel Forgings to Rc 25-33 per PWA 11-22
POP 1216-G	10/29/1998	Normalize, Harden and Temper AMS 6260, AMS 6263, AMS 6265, and AMS 6267 Steel Forgings to Rc 26-32
POP 1217-F	4/9/1997	Anneal AMS 5616 and AMS 5354 Corrosion and Heat Resistant Steel Forgings and Castings to Rc 33 Maximum
POP 1231-E	7/17/2001	Heat Treating PWA 1231 per PWA 11-35 and PWA 11-36
POP 1232-D	10/22/1998	In-Process Thermal Sizing of Titanium and Titanium Alloys in Vacuum
POP 1235-F	12/1/2006	In-Process Heat Treating Steel and Corrosion and Heat Resistant Alloy Vane Stock
POP 1235-F Heat Treat Supplement	12/1/2006	Operators Supplement to POP 1235
POP 1236-C	10/7/2002	Hydrogen Heat Treatment (Preoxidation) of PWA 1487 Turbine Vanes
POP 1247	6/26/2001	Hydrogen Heat Treatment (Preoxidation) of PWA 1499 Turbine Vanes
POP 1273-AE	7/26/2010	Hardening Martensitic Stainless Steels
POP 1273-AC Heat Treat Supplement	2/3/1999	Hardening Martensitic Stainless Steels
POP 1312-D	4/9/1997	Hot Stamping Titanium
POP 1313-D	4/9/1997	Hot Sizing Titanium Alloys
POP 1325-J	11/4/1998	Vacuum De-gassing of Titanium and Titanium Alloys
POP 1326-AJ	12/13/2006	Vacuum Furnace Brazing
POP 1327-N	12/12/2006	Coating and Diffusing of PWA 73
POP 1334-E	2/1/1999	Normalize and Double Temper PWA 733 Steel Forgings to 35-40 Rc or Equivalent (PWA 11-7)
POP 1336-N	11/4/1998	Heat Treatment of PWA 1073 and PWA 1074
POP 1402-AB	12/13/2006	Silver Brazing by the Induction-Heating Process to AMS 2664
POP 1406-M	1/20/1999	Copper Braze to AMS 2670 by Induction Heating in a Hydrogen Gas Atmosphere
POP 1414-L	12/13/2006	Rebrazing of Tube End Joints of Cooler Cores by the Induction Brazing Process
POP 1415-F	12/13/2006	Nickel Alloy Brazing by the Induction-Heating Process to AMS 2675/PWA 36950
POP 1501-AD	11/16/2001	In-Process Annealing of Steels and Heat and Corrosion Resistant Alloys

Procedure Number	Effective Date	Subject
POP 1501-AC Heat Treat Supplement	11/1/2001	In-Process Annealing of Steels and Heat and Corrosion Resistant Alloys
POP 1502-AP	1/6/2000	In-Process Stress Relieving Steel and Heat and Corrosion Resistant
POP 1502-AP Heat Treat Supplement	2/11/2000	In-Process Stress Relieving Steel and Heat and Corrosion Resistant Alloys
POP 1503-AP	2/4/1999	In-Process Solution Heat Treating Heat and Corrosion-Resistant Alloys
POP 1503-AP Heat Treat Supplement	2/4/1999	In-Process Solution Heat Treating Heat and Corrosion-Resistant Alloys
POP 1504-AC	11/3/1995	Heat Treating Aluminum Alloys
POP 1504-AC Heat Treat Supplement	11/3/1995	Heat Treating Aluminum Alloys
POP 1524-E	9/29/1997	Hydrogen Fluoride Cleaning of F100 Diffuser Case Manifolds
POP 1529-AC	7/17/2001	Final Heat Treat to PWA 11
POP 1530-AF	12/8/1998	Stabilize and Precipitation Heat Treating of Heat and Corrosion-
POP 1530-AF Heat Treat Supplement	12/8/1998	Stabilize and Precipitation Heat Treating of Heat and Corrosion-Resistant Alloys
POP 1531-AH	10/18/2000	In-Process Heat Treatment of Titanium and Titanium Alloys
POP 1535-W	6/23/2008	Furnace Stress Relieving Weldments on Corrective Work Orders,
POP 1538-AA	6/24/2008	In-Process Heat Treating Hastelloy Alloys
POP 1538-AA Heat Treat Supplement	6/24/2008	In-Process Heat Treating Hastelloy Alloys
POP 1541-T	10/20/2005	Removal of Zinc Base Die Material Prior to Heat Treatment
POP 1544-U	5/18/2000	Heat Treatment of Waspaloy
POP 1544-U Appendix 1	5/18/2000	Heat Treatment of Waspaloy
POP 1545-H	11/4/1998	Straightening Steel and Titanium Assemblies
POP 1549-J	7/2/1999	Self-Jigging of Brazed Assemblies
POP 1552-R	5/25/2001	Straightening Fuel Manifold Assemblies
POP 1565-P	11/2/1995	Diffusion Cycle for Aluminizing to PWA 44
POP 1578-J	1/27/1999	PWA 19 Braze by Induction Heating in a Protective Atmosphere
POP 1603-H	10/6/2008	CANCELLED: Instructions for Handling of Items Requiring Special Protection
POP 1611-R	9/9/2008	General Instructions to Control the Use, Fabrication, Inspection, Repair and/or Replacement of Industrial Sling Chain Assemblies
* POP 1614-BB	8/2/2011	<a href="#">Supplier Requirements for Preservation and Specialized Packaging</a>
POP 1616-J	2/18/2009	CANCELLED:Instructions for Handling and Packaging Rotating Parts (Disks, Hubs & Shafts) During Manufacturing, Inspection and Storage
POP 1621-A	10/11/2005	Anti-Friction Bearing Packaging and Handling (Refer to OAP 15.1.7)
POP 1618-C	8/21/1996	General Instructions to Control the Use, Inspection, and Replacement of Nylon Slings
POP 1622-Initial Issue	6/18/2009	Supplier Requirements for the Shipment of Raw Material Rings to P&W
POP 1703-A	5/7/2001	Application of Anti-Seize Compound (PWA 36246)
POP 1710-M	4/9/1997	Chromate Conversion Coating for Aluminum Alloys - Immersion Method (AMS 2473 and AMS 2474)

Procedure Number	Effective Date	Subject
POP 1712-AA	5/19/2000	Application of Nylon Reinforced Synthetic Rubber Sponge, PWA 405
* POP 1715-BF	7/12/2011	<a href="#">Application of Anti-Galling Compound (PWA 298, PWA 474, PWA 550, PWA 586, PWA 36035, PWA 36240, PWA 36545, PWA IM 5510, PWA IM-5515, or PWA IM-5525)</a>
POP 1722-R	9/17/2004	Anodize Touch-Up - Brush or Swab Method
POP 1735-J	9/21/2004	Application of Dry Lubricant Coating (PWA 585)
POP 1745-L	11/3/1997	Handling of Numerical Control Tapes <b>Refer to OAP 9.4.1</b>
POP 1746-E	1/25/1999	Chromate Conversion Touch-Up - Brush or Swab Method (AMS 2474)
POP 1748-E	11/3/1997	Handling, Marking, and Storage of Magnetic Media (Diskettes, Tapes, and Cartridges) <b>Refer to OAP 9.4.1</b>
POP 1749-A	9/26/1996	Preparation and Application of Water-Soluble Laser Stop Material
POP 1764-J	3/20/1996	Application of Polyurethane Resin Coating PWA 830 "OV" or "V2"
POP 1769-AD	6/14/2007	Application of Metal Cutting Fluids
POP 1771-E	12/11/1997	Handling the Bismuth-Lead-Tin-Indium Eutectic Alloy
POP 1774-N	2/2/2005	Application of Room Temperature Curing Epoxy Paint, PWA 830 Code "E" or "E2"
POP 1782-S	4/9/1997	Cleaning of Oil Coolers and Other Tube Assemblies
POP 1791-E	4/22/1997	Stripping of Graphite Varnish (PWA 60) from Steel or Titanium Parts
POP 1792-Y	12/10/2002	Application of Heat and Corrosion Resistant Aluminum Finish (PWA
POP 1795-J	10/28/1998	Filling Inlet Guide Vane Assemblies with Liquid Silicone Rubber
POP 1798-D	4/22/1997	Removing Cured Silicone Rubber from Titanium Vane Assembly
POP 1799-U	2/16/2004	Pressure Testing
POP 1800-U	2/14/2008	Masking of Parts Prior to Selective Plating, Chemical Processing, Painting, or Stripping
POP 1801-D	5/30/2001	Masking Procedure for Plasma Spray Coating Repair of Parts with Snap Radii per Quality Review Authorization
POP 1813-P	3/17/2000	Notch Testing of Fusion Welds and Rewelding of Kerfs Produced to Visually Examine Cross Section of Fusion Welds
POP 1820-A	12/4/1997	Localized Induction Stress Relief of Assemblies Joined by Automated Metal Joining Systems
POP 1822-J	6/8/2001	Manual Fusion Rewelding and Stress-Relief of Thoriated (TD) Nickel (AMS 5865) on Production Assemblies
POP 1823-K	4/20/1998	Machine Welding of Thick Titanium Sections by the Electron Beam Process
POP 1824-N	4/25/2008	Inertia Bonding in Accordance with PWA 16 and PWA 102
POP 1825-R	12/12/2006	Application of PWA 74 Abradable Coating
POP 1827-E	12/12/2006	Coating by Dual Wire Arc Deposition Process in Accordance with PWA 271
POP 1827-A Appendix A	10/12/1998	Coating by Dual Wire Arc Deposition Process in Accordance with PWA 271
1827-271-1A	1/27/1994	POP 1827 Appendix B - Master Spray Schedule
1827-271-1B	1/27/1994	POP 1827 Appendix B - Master Spray Schedule
1827-271-13	1/27/1994	POP 1827 Appendix B - Master Spray Schedule
1827-271-35	1/27/1994	POP 1827 Appendix B - Master Spray Schedule
1827-271-47	1/27/1994	POP 1827 Appendix B - Master Spray Schedule

Procedure Number	Effective Date	Subject
POP 1828-B	7/12/2000	Fabrication of PWA 284 Abradable Seals (Plasma Deposition)
POP 1831-W	5/21/2001	Fully-Automated Orbital Welding of Tubes by Machine Gas Tungsten-Arc Process
POP 1832-P	12/12/2006	Application of PWA 75 Abradable Coating
POP 1832-N Appendix A	2/19/1996	Master Spray Schedule
POP 1833-H	11/2/1998	Application of PWA 1337 Powder by the Flame Spray Process
POP 1834-T	12/12/2006	Multi-Layered Coating by Plasma Spray Process in Accordance with PWA 253, PWA 261, or PWA 265
POP 1834-N Appendix A	6/22/1993	Master Spray Schedule
POP 1837-R	5/24/2001	Manual Fusion Rewelding and Local Stress Relieving of Rewelds by the Induction-Heating Process per Quality Review Disposition
POP 1841-T	6/8/2001	Electron Beam Welding of PWA 1095, Columbium Alloy
POP 1842-J	4/22/1997	Manual Rewelding of PWA 1095, Columbium Alloy
POP 1843-Y	7/11/2003	Laser Beam Welding
POP 1845-J	12/12/2006	Application of PWA 255 Plasma Spray Deposition
POP 1845-E Appendix A	6/30/1994	Master Spray Schedule
POP 1846-H	12/12/2006	Application of PWA 262 by the Flame Spray Process
POP 1846-G Appendix A	9/28/1994	Master Spray Schedule
POP 1847-L	12/1/2006	Laser Beam Hardfacing Turbine Blade Shroud Notches
POP 1848-H	12/12/2006	Application of PWA 257 Plasma-Spray Deposition
1848-257-1	10/10/1997	POP 1848-G (Appendix A - Master Spray Schedule)
1848-257-2	10/10/1997	POP 1848-G (Appendix A - Master Spray Schedule)
1848-257-2A	10/10/1997	POP 1848-G (Appendix A - Master Spray Schedule)
536281-2571	10/10/1997	POP 1848-G (Appendix A - Master Spray Schedule)
POP 1849-B	6/1/1994	Thermal Spray Powder Sprayability Test
POP 1851-H	6/8/2001	Fabrication of PWA 279 Abradable Seals by Plasma Deposition
POP 1853-B	6/24/1994	Operation of UTRC Density Gages (B/T#527168, B/T#527707, or 536232) for Checking PWA 279
POP 1855-C	8/6/2001	Plasma Spray Coating
POP 1856-A	11/20/2008	CANCELLED: Guidelines for Bypassing Workstation Enclosure and Interlocks while Operating Laser BT 527090
POP 1900-K	1/10/2000	Hot Forming Titanium and Titanium Alloys
POP 1901-N	12/13/2006	Vapor Deposition Coating to PWA 68, PWA 268, and PWA 270
POP 1906-J	10/27/1998	Vacuum Furnace Bonding, PWA 112
POP 1907-K	12/13/2006	Coating Diffused Aluminide, High Temperature Pack Process, PWA 273
POP 1985-L	1/7/1999	In-Process Fluorescent Penetrant Checking by Manufacturing



## POP 2000

Procedure Number	Effective Date	Subject
POP 2122-K	8/12/2008	Mechanical Finishing of Titanium
POP 2123-F	6/30/1994	Butterfly Polishing of Compressor and Turbine Rotor Holes
POP 2124-G	5/23/2001	Refinish of Disc Bolt Hole Edges and Cylinders after PWA 99-1 Finishing
POP 2131-G	4/22/1997	Application of Fluorocarbon Resin Coating (PWA 36038)
POP 2132-K	8/5/2009	Grinding of Titanium
POP 2133-P	2/2/2005	Application of Aluminized Epoxy Paint and Clear Epoxy Coating (PWA 830 Codes ET or ET2)
POP 2134-G	12/11/1997	Honing of Titanium
POP 2140-W	8/11/2004	Bonding of Silicone Rubber Sealant PWA 36003 and PWA 617
POP 2143-F	12/10/1998	Procedure for Handling Residual Scrap Titanium by Manufacturing Departments
POP 2145-BG	10/28/1997	Calibration Requirements of Processing Instruments
POP 2146-F	9/28/2000	Handling Precious Metal Scrap
POP 2147-AU	10/1/2004	Application of PWA 407
POP 2148-H	7/18/2007	Application of Heat and Corrosion Resistant Aluminum Finish - PWA 595 and PWA 561 per PWA 830 - "OSY" or "SY3"
POP 2149-P	5/31/2005	Precautions for Handling Titanium During Manufacturing
POP 2150-F	10/12/1998	Application of Black Conductive Polyurethane Paint PWA 36013
POP 2151-F	11/5/1998	Application of White Non-Conductive and Black Conductive Polyurethane Paint PWA 36013 and PWA 36014
POP 2156-L	12/13/2006	Application of Aluminum Silicon Coating (PWA 596-1) for Touch-Up Purposes
POP 2159-J	5/23/2001	Application of PWA 36023
POP 2160-P	7/13/1999	Application of PWA 404
POP 2163-F	6/11/2007	REINSTATED: Tint Test for Coating Removal
POP 2164-G	9/10/1997	Application of Boron Nitride Coating
POP 2165-E	9/18/1998	Precautions for Handling Columbium During Manufacturing
POP 2166-N	6/14/2001	Refurbishment of PWA 407, PWA 36447, or PWA 36467 Unbonded
POP 2170-L	5/23/2001	Brush Plating
POP 2173-J	12/1/2006	Handling of Modified IN-100 Scrap Metal for Recycle
POP 2175-E	9/28/2000	Collection of Precious Metal Scrap in Assembly, Braze Prep, Brazing, and Excess Braze Removal Areas
POP 2178-D	11/2/1998	Reticulation of Adhesives
POP 2179-J	12/16/1999	Preparation of Wedge Crack Test Pieces and Wedge Crack Propagation Test
POP 2180-G	5/23/2001	Autoclave Bonding
POP 2182-E	2/8/1999	Bagging Procedure for Adhesive Bonded Assemblies
POP 2183-J	9/27/2001	Handling of PWA 451, PWA 452, PWA 454, PWA 455, PWA 456, PWA 457, PWA 477, and PWA 603
POP 2185-B	10/27/1998	Stripping Brush Nickel Plate (SIFCO - Aero Nickel 250)
POP 2187-F	2/8/1999	Application of Sealing and Retaining Anaerobic Compound - PWA 549-5, PWA 549-6, and PWA 549-7
POP 2189-K	3/27/2007	Application of Polyimide Coating (Stop-off Coating)
POP 2190-G	10/27/1998	Application of PWA 256 (Gator-Gard®) Plasma Spray Coatings
POP 2195-J	10/22/2007	Brush Plating per PWA 36953 and AMS 2403
POP 2196-C	2/9/1999	Preparation for and Application of Mold Releases (Parting Agents) to Molds
POP 2222-C	5/23/2001	Application of PWA 36447
POP 2223-A	1/30/2004	Installation, Removal, and Re-Installation of Key Locked Inserts and Studs
POP 2224	3/7/2001	Application of PWA 36467

## POP 2000

Procedure Number	Effective Date	Subject
POP 2307-E	1/20/1998	Cleaning of Titanium Flakes or Chips for Use as Oxygen Getters in Heat Treat Operations
POP 2400-J	10/19/1998	Glossary of Selected Terms Related to Heat Treating
POP 2401-F	6/26/2009	Glossary of Selected Terms Related to Chemical Processing
POP 2402-E	11/5/2001	Glossary of Selected Terms Relating to Arc Welding
POP 2600-B	11/1/1999	Alkali Cleaning of Alloy "C" and Conventional Titanium Alloys
POP 2601	4/7/1999	WaterJet Cutting System (Huffman Model WJ26A)
POP 2602	3/30/1999	Stress Relieving Columbium, Titanium and Titanium Alloys in a
POP 2603	4/1/1999	Solution Heat Treatment of INCO 718 in a Vacuum Furnace
POP 2604	4/1/1999	Precipitation Heat Treatment of INCO 718 in a Vacuum Furnace
POP 2605	4/1/1999	Solution Heat Treatment of Waspaloy in a Vacuum Furnace
POP 2606	4/1/1999	Stabilization and Precipitation Heat Treatment of Waspaloy in a Vacuum Furnace
POP 2607	4/1/1999	Removing Carbon from Heat and Corrosion Resistant Steels
POP 2608-A	3/12/2001	Stress Relieving Columbium, Titanium and Titanium Alloys in Argon
POP 2609	4/1/1999	High Temperature Carbon Removal from Heat and Corrosion Resistant Alloys
POP 2612	6/16/1999	Application of C3A Thermal Paint
POP 2613	4/14/1999	Procedure for Set-Up of Heater Base (B/T 809749) in the HPM and/or Lake Erie Press
POP 2614-B	11/9/1999	Acid Cleaning of Alloy "C" and Conventional Titanium Alloys
POP 2615-C	3/28/2011	Chemical Stock Removal of Alloy "C" and Conventional Titanium Alloys
POP 2616	4/14/1999	Waterjet Cutting of Engine Hardware - Huffman Machine BT 807136
POP 2617-B	6/8/2004	Nickel Plating RL-10 Exit Manifold
POP 2618-A	5/25/1999	Waspaloy Parts Processing
POP 2619-C	8/16/2000	Titanium Parts Processing
POP 2620	5/10/1999	Heat Treatment of Tooling Materials Commonly Used at P&W Florida
POP 2621-C	12/22/2005	Heat Treatment of Parts in a Welded Seal Retort using Hydrogen Gas (PMC 2227)
POP 2622	5/10/1999	Start-Up and Shut-Down of Gas Fired and Electric Furnaces
POP 2623	5/10/1999	Dew Cup Operating Instructions
POP 2624-A	9/4/2007	Heat Treatment of Parts in Welded Seal Retorts using Argon Gas (PMC 2200)
POP 2625-D	10/15/2010	Nickel Plating Rocket Chamber Tubes
POP 2627-B	6/8/2004	Nickel Plating and Silver Plating of the Inlet Manifold P/N 2118798
POP 2628	5/21/1999	Brazing with PWA 707 in Hydrogen



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<b>Procedure Number</b>	<b>Effective Date</b>	<b>Subject</b>
POP 3008-Y	12/1/2006	Hole Drilling by Laser Beam
POP 3010-F	12/1/2006	Hardware Stock Forging
POP 3011-J	12/1/2006	Hole Drilling by Electron Beam
POP 3013-K	12/1/2006	Hole Drilling by Continuous Wave Laser Beam Metal Removal
POP 3014-N	1/11/2006	Turbine Airfoil Product Center In-process Airflow Test Bench Operation Procedure
POP 3018-D	6/17/2009	Turbine Module Center (TMC) "Right to Run" Process
POP 3020	7/22/2008	Polishing Titanium, Nickel, and Steel Material with Abrasive Impregnated Nylon Material
POP 3030-E	12/1/1998	Plating Facilities, Equipment, and Tooling Control



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Procedure Number	Effective Date	Subject
PS Intro Rev. W	5/30/2006	Information on the issuance, use, and control of PS specifications
PS 1-R	3/26/2008	Anodizing Solution
PS 3-M	5/29/2007	Hydrochloric Acid Solution - 20%
PS 4-G	6/2/1995	CANCELLED: Brass Bright Dip Solution
PS 5-E	3/26/2008	Nickel Sulfamate Strike Solution
PS 6-K	5/7/2007	CANCELLED: Lead Strip Solution
PS 7-M	5/29/2007	Nitric Acid Solution - 25%
PS 8-C	3/26/1999	CANCELLED: Hydrofluoric Acid 25% by Volume
PS 9-J	5/29/2007	Nitric Acid Solution - 10%
PS 10-E	5/29/2007	Nitric and Sulfuric Acid Solution
PS 11-M	5/29/2007	Nitric Acid Solution - 50%
PS 12-M	5/29/2007	Phosphoric Acid Solution - 70%
PS 13-L	5/29/2007	Sulfuric Acid Solution - 20%
PS 14-AA	3/26/2008	Nickel Strike Solution
PS 15-E	5/29/2007	Sulfuric Acid Solution 5%
PS 17-C	7/3/1989	CANCELLED: Nickel Strike Solution "High Sulfate Type"
PS 18-H	5/29/2007	Nitric Acid Solution - 100%
PS 19-N	5/29/2007	Hydrochloric Acid Solution - 35%
PS 20-N	12/5/2007	96% Alcohol - 4% Nitric Acid Solution
PS 21-N	12/5/2007	95% Alcohol - 5% Hydrochloric (Muriatic) Acid Solution
PS 22-H	12/5/2007	Alkali Neutralizing Solution
PS 23-L	5/29/2007	Hydrochloric Acid Solution - 100%
PS 24-E	7/19/1988	CANCELLED: Bullard Dunn Solution
PS 25-K	5/29/2007	Sulfuric Acid Solution - 40%
PS 27-H	3/25/1985	CANCELLED: Manganese Acid Phosphate Solution (Anti-Chafing)
PS 28-F	3/26/1999	CANCELLED: Hydrochloric Acid Solution - 5%
PS 29-B	5/20/1958	CANCELLED: Caustic Soda Solution - 20%
PS 30-H	3/26/2008	Zincate Solution (Alumon Process)
PS 31-J	7/10/2007	Hydrochloric Acid Solution (100% Inhibited)
PS 32-D	6/20/1988	CANCELLED: Phosphate Graphite Coating Solution
PS 34-B	3/25/1985	CANCELLED: Anodizing Solution (Airports)
PS 35-F	3/26/2008	Acid Cleaner for Weldable AMS 4025, Aluminum Alloy
PS 36-G	3/26/2008	Chromate Conversion Solution
PS 37-E	3/26/2008	Acid Cleaner for Weldable AMS 4026 Aluminum Alloy
PS 38-J	3/26/2008	Titanium Etching Solution
PS 39-E	7/27/2007	Chromic-Nitric Acid Solution
PS 40-G	12/5/2007	Etching Solution for Austenitic Steels
PS 41-G	12/5/2007	Etching Solution for Martensitic Steel
PS 43-F	5/29/2007	Drop Test Solution for Determining Iron
PS 44-F	5/29/2007	Drop Test Solution for Determining Iron
PS 45-F	5/29/2007	Sodium Hydroxide Solution - 2%
PS 47-G	3/26/2008	Hydrochloric Acid Solution (200:1) Inhibited
PS 48-G	7/27/2007	Nitric - Hydrofluoric Solution
PS 49-M	3/28/2011	Hydrofluoric-Nitric Acid Solution
PS 50-E	5/29/2007	Sulfuric Acid Solution - 10%
PS 51-G	5/29/2007	Sodium Hydroxide Solution - 30%
PS 52-G	5/29/2007	Sodium Hydroxide Solution - 3%
PS 53-G	5/29/2007	Hydrochloric Acid Solution - 65%
PS 54-F	8/17/2007	Sulfuric-Hydrofluoric Acid Solution

<b>Procedure Number</b>	<b>Effective Date</b>	<b>Subject</b>
PS 55-B	10/2/1980	CANCELLED: Nitric Acid Solution - 50%
PS 56-H	3/26/2008	Chromate Conversion Solution
PS 57-E	3/26/2008	Electrolytic Macro-Etching Solution for Cobalt Base Alloys
PS 58-F	7/27/2007	Acetic Acid Solution
PS 59-E	3/26/2008	Flux, Silver Brazing Mixture (High Temperature)
PS 60-J	3/26/2008	Copper-Iron Brazing Paste (3% - 5% Iron)
PS 61-B	12/7/1999	CANCELLED: Brazing Wire Cement
PS 64-B	6/2/1995	CANCELLED: Aluminum Brazing Paste
PS 65-E	12/5/2007	Titanium Etching Solution
PS 66-K	12/5/2007	Anodize Seal Solution
PS 67-E	12/5/2007	Descaling Solution
PS 68-E	8/17/2007	Nitric Acid - Ammonium Bifluoride Solution
PS 69-B	6/2/1995	CANCELLED: Extrudable Aluminum Brazing Paste
PS 70-D	6/20/1995	CANCELLED: High Temperature Silver Brazing Paste (AMS 4772)
PS 71-F	6/26/2008	Aluminize Paint Slurry
PS 72-D	12/7/1999	CANCELLED: Sprayable Suspension (Aluminum - Silicon)
PS 75-A	3/25/1985	CANCELLED: Nickel-Salt Mixture (PWA 56)
PS 76-E	7/30/2007	Acetic Acid Solution
PS 78-C	6/2/1995	CANCELLED: Carburizing Gas Mixture
PS 80-E	8/4/2008	CANCELLED: Lean Gas Mixture
PS 84-B	3/24/1965	CANCELLED: Compound Gas Atmosphere (North Haven)
PS 85-H	8/4/2008	CANCELLED: Fairly Lean Exothermic Atmosphere For Stress Relieving & Annealing Corrosion Resistant Alloys
PS 86-H	8/4/2008	CANCELLED: Fairly Lean, Wet Exothermic Atmosphere For Hardening Martensitic Stainless Steel
PS 87-J	8/4/2008	CANCELLED: Lean, Wet Exothermic Atmosphere For Purging Brazing Furnaces and For Annealing Stainless & Nickel Alloys
PS 88-K	8/4/2008	CANCELLED: Rich Exothermic Atmosphere For Hardening Martensitic Stainless and Low Alloy Steels
PS 89-K	8/4/2008	CANCELLED: Lean Exothermic Atmosphere, Purified - Dry & Free From Carbon Dioxide, For Stress Relieving, Annealing & Tempering Low Alloy & Martensitic Stainless Steel
PS 90-G	6/2/1995	CANCELLED: Carburizing Atmosphere
PS 91-E	6/2/1995	CANCELLED: Carburizing Atmosphere Pit Furnace
PS 92-L	8/4/2008	CANCELLED: Endothermic Atmosphere For Hardening and Annealing Carbon and Low Alloy Steels
PS 93-L	8/4/2008	CANCELLED: Endothermic Atmosphere For Brazing Low Carbon Steels, and for Hardening Carburizing Steels
PS 94-J	8/4/2008	CANCELLED: Lean, Wet Exothermic Atmosphere For Annealing Stainless Steel & Heat and Corrosion Resistant Alloys
PS 95-F	3/22/2004	Silver Brazing Flux For Continuous Induction Brazing of Valve Guide Assemblies
PS 96-C	4/4/1962	CANCELLED: Copper Brazing Paste Mixture
PS 97-E	1/25/2008	CANCELLED: Preheat Salt Bath
PS 98-F	1/25/2008	CANCELLED: Hardening Salt Bath
PS 99-E	1/25/2008	CANCELLED: Quenching Salt Bath
PS 100-K	12/5/2007	Descaling Salt Bath - Steel and Heat and Corrosion Resistant Alloy
PS 101-K	3/22/2004	Alkali Cleaner (Heavy Duty)

Procedure Number	Effective Date	Subject
PS 102-C	5/2/1988	CANCELLED: Annealing Salt Bath
PS 103-D	5/12/1995	CANCELLED: Aluminum Brazing Salt Bath
PS 104-E	8/4/2008	CANCELLED: Nitrogen-Hydrogen Gas Mixture Atmosphere for Sintering Nickel Metal Powder
PS 105-B	7/20/1995	CANCELLED: Nickel Powdered Metal Mixture
PS 106-B	5/20/1988	CANCELLED: Lithium Nitrate
PS 108-B	7/20/1995	CANCELLED: Nickel Powder Metal Mixture
PS 109-H	3/30/2004	Gold-Nickel Alloy Powder plus Nickel Powder Mixture and Paste
PS 110-E	3/30/2004	Paint Stripping Solution
PS 112-B	12/7/1999	CANCELLED: Silver-Copper-Palladium Braze Alloy PWA 706 Powder Braze Paste
PS 113-D	6/2/1995	CANCELLED: Descaling Salt Solution for Titanium and Titanium Alloys
PS 114-C	6/26/2008	Polyalkylene Glycol/Water Quenching Solution
PS 115-H	6/26/2008	Chromium Plating Solution
PS 116-H	7/27/2007	Chromic Acid Solution (Pre-Chrome Plate)
PS 117-G	4/19/2007	Chromium Strip Solution
PS 118-F	6/26/2008	Electropolishing Solution
PS 119-J	4/7/2004	Chromium Plating Solution
PS 120-C	5/2/1988	CANCELLED: Copper Strip Solution
PS 121-D	4/7/2004	Self-Regulating Chromium Plating Solution
PS 122-B	6/2/1995	CANCELLED: Copper Strip Solution (Nonelectrolytic)
PS 123-F	7/10/2007	CANCELLED: Hydrochloric Acid Solution (50%) Inhibited
PS 124-E	9/15/2009	High-Speed Chromium Plating Solution
PS 125-C	4/7/2004	Silver Strip Solution (From Copper Alloys)
PS 126-F	8/17/2007	Nitric Acid Solution - 20%
PS 127-B	7/24/1989	CANCELLED: Cyanide Gold Plating Solution
PS 128-E	7/24/1989	CANCELLED: Acid Gold Plating Solution
PS 129-E	4/19/2007	Copper Sulfate Solution
PS 130-N	4/7/2004	Titanium Etching Solution
PS 131-C	8/22/2000	CANCELLED: Paint Stripping Solution
PS 132-B	8/28/1989	CANCELLED: Paint Stripping Solution
PS 133-Initial Issue	3/25/1985	CANCELLED: Ceria-Chromia Mixture
PS 134-Initial Issue	3/25/1985	CANCELLED: Nickel-Chromia-Ceria Mixture (2/3-1/3)
PS 136-D	5/29/2007	Phosphoric Acid Solution - 30%
PS 138-D	4/7/2004	Acid Salt Solution
PS 139-A	7/20/1995	CANCELLED: Copper-Manganese-Cobalt Alloy Powder plus Nickel Powder Mixture and Paste
PS 140-C	4/7/2004	Neutral Cleaning & Descaling Solution
PS 141-D	4/7/2004	Solution for Electrolytic Etch Processing of Weld and Braze Test Samples
PS 142-D	4/7/2004	Silver-Copper-Palladium Powder plus Nickel Powder Mixture and Paste
PS 143-D	12/5/2007	Etchant For Austenitic Stainless Steel Honeycomb
PS 144-D	6/2/2004	Descaling Salt Bath - Steel and Heat and Corrosion Resistant Alloys
PS 145-E	7/20/1995	CANCELLED: Masking Paste for PWA 73 & PWA 273
PS 146-D	7/20/1995	CANCELLED: External Coating Mixture for PWA 73 & Low Temperature Cycle PWA 273
PS 147-D	6/2/2004	Internal Coating Mixture for PWA 73
PS 148-D	6/2/2004	Anodize Sealing Solution

Procedure Number	Effective Date	Subject
PS 149-B	3/25/1985	CANCELLED: Hydroxy-Propyl Cellulose Solution
PS 152-D	6/2/2004	PWA 1337 - PWA 1333 Mixture (35-65)
PS 153-C	10/2/1992	CANCELLED: Pack Material for PWA 26 Coating
PS 154-B	7/20/1995	CANCELLED: Nicekl-Chromium-Boron-Nickel-Aluminum Mix
PS 156-D	6/2/2004	PWA 1317 - PWA 1333 Mixture (35-65)
PS 157-C	10/24/1994	CANCELLED: Powder Mix for PWA 76-2
PS 161-C	4/3/2000	CANCELLED: Lubricating Oil Mixture
PS 162-F	6/2/2004	Lubricating Mixture
PS 163-E	6/2/2004	Lubricating Mixture
PS 164-A	7/20/1995	CANCELLED: Silver-Copper-Nickel Alloy Powder plus Nickel Powder Mixture and Paste
PS 165-A	7/20/1995	CANCELLED: Silver-Copper-Zinc Alloy Powder plus Nickel Powder Mixture and Paste
PS 166-A	7/20/1995	CANCELLED: Copper-Manganese-Cobalt Alloy Powder Plus Nickel Powder Mixture and Paste
PS 167-A	7/20/1995	CANCELLED: Nickel-Aluminum Powder Mixture (Plasma Repair of Tools and Fixtures)
PS 168-B	2/14/1996	CANCELLED: Masking Paste for Aluminide Coatings
PS 169-D	6/2/2004	O-Ring Lubricant (Not for Engine Use)
PS 170-C	6/2/2004	Leak Test Solution
PS 171-A	1/28/1994	CANCELLED: Leak Test Solution
PS 172-C	8/17/2001	CANCELLED: Anodize Sealing Solution
PS 174-D	7/27/2007	Deoxidizer Solution
PS 175-E	6/2/2004	Polyimide Thinner
PS 176-A	11/14/1990	CANCELLED: Orange Indicator Solution



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Procedure Number	Effective Date	Subject
PS 177-E	6/2/2004	Mixed Gas for Stress Relieving, Annealing & Tempering Low Alloy Martensitic Stainless Steel
PS 178-E	5/29/2007	Sodium Hydroxide Solution - 3%
PS 179-E	5/29/2007	Hydrochloric Acid Solution - 3%
PS 180-B	6/2/2004	Lubricating Mixture
PS 181-C	12/5/2007	Lubricating Oil Mixture
PS 183-Initial Issue	7/20/1995	CANCELLED: Broach Coolant for Columbus, Georgia Facility
PS 184-C	12/5/2007	Descaling Salt Bath - Steel, Heat and Corrosion Resistant Alloys, Columbium, and Titanium
PS 185-C	12/5/2007	Lubricating Mixture
PS 186-C	12/5/2007	Lubricating Mixture
PS 187-A	10/30/2003	CANCELLED: Molten Salt Bath for Dissolving Glass Lubricants
PS 189-C	7/30/2007	Deoxidizer Solution
PS 190-B	6/2/2004	Anodizing Solution
PS 191-B	6/2/2004	Abrasive Finishing Solution
PS 192-C	5/29/2007	Nitric Acid Solution - 60%
PS 193-F	3/28/2011	Titanium Etching Solution
PS 194-B	8/17/2007	Sulfuric Acid Solution (1.5%)
PS 195-B	8/17/2007	Oxalic Acid Solution - 5% (For use at P&WR only)
PS 196-A	7/26/2004	Alkali Cleaner (Heavy Duty)
PS 197-C	8/17/2005	Lubricant, Aircraft Turbine Engine, Dyed Blue
PS 198-Initial Issue	6/26/2006	Nitric Acid Rinse for PWA 1233 (Beta 21S) Titanium Details
PS 199-A	12/7/2004	Descaling Solution for Titanium Hollow Fan Blade Details
PS 200-H	12/5/2007	Alkali Cleaner Solution (Light-Duty)
PS 201-J	12/5/2007	Alkali Cleaner Solution (Medium-Duty)
PS 202-F	4/4/1962	CANCELLED: Alkali Cleaner Solution (Heavy Duty)
PS 204-E	9/20/1993	CANCELLED: Alkali Cleaner Solution (Light Duty)
PS 206-H	7/26/2004	Alkali Cleaner Solution (Light-Duty)
PS 209-K	12/5/2007	Sodium Hydroxide Solution - 7-1/2%
PS 210-R	2/11/2008	CANCELLED: Descaling Solution (Ferric Sulfate - Hydrofluoric Acid)
PS 211-F	7/26/2004	Alkali Smut Removal Solution
PS 212-D	5/2/1988	CANCELLED: Alkali Cleaner Solution (Medium Duty)
PS 213-C	5/2/1988	CANCELLED: Alkali Cleaner Solution (Medium Duty)
PS 214-E	7/26/2004	Alkali Cleaner Heavy Duty (Drawing Compound Removal)
PS 215-E	7/26/2004	Alkali Cyanide Cleaner Solution (Heavy-Duty)
PS 216-Initial Issue	2/22/1957	CANCELLED: Alkali Cleaner Solution (Heavy Duty)
PS 217-F	7/26/2004	Descaling Solution
PS 218-A	2/23/1988	CANCELLED: Cleaner Solution, Buffered Alkali (Spray Washer Type)
PS 219-Initial Issue	1/11/1957	CANCELLED: Descaling Solution
PS 221-A	10/17/1983	CANCELLED: Muriatic Acid with Inhibitor
PS 222-R	7/26/2004	Descaling Solution
PS 223-C	5/9/1989	CANCELLED: Alkali Smut Removal Solution
PS 224-Initial Issue	7/29/1983	CANCELLED: Alkali Carbon Remover & Paint Stripper
PS 225-D	12/5/2007	11% (16 Oz. Wt./Gal.) Sodium Hydroxide Solution
PS 226-C	7/26/2004	Lead Anode Cleaning Solution
PS 227-E	7/26/2004	Caustic-Potassium Permanganate Descaling Solution
PS 228-D	7/26/2004	Alkali Cleaner Solution (Heavy-Duty)
PS 229-A	11/28/1962	CANCELLED: Alkali Cleaner Solution (Heavy Duty)
PS 230-K	7/26/2004	Wet Abrasive Solution
PS 231-D	7/26/2004	Process Slurry Using #220 Aluminum Oxide Abrasive
PS 232-B	9/19/1975	CANCELLED: Alkaline Descaler Solution - 100%

Procedure Number	Effective Date	Subject
PS 233-F	2/25/2008	Alkaline Permanganate Solution
PS 234-D	5/29/2007	Nitric Acid Solution - 28%
PS 235-T	1/18/2005	Glass Bead Suspension
PS 236-C	7/26/2004	Alkaline Permanganate Solution
PS 237-A	6/6/1975	CANCELLED: Alkaline Descaler Solution - 100%
PS 239-A	7/31/1985	CANCELLED: Fuel Manifold Cleaner
PS 240-D	7/26/2004	Alkaline Rust Remover Solution (Overhaul and Repair)
PS 241-A	7/18/1988	CANCELLED: Acidic Scale Conditioner Solution (Southington Overhaul)
PS 244-A	10/11/1968	CANCELLED: Flux Removal Solution Aluminum Brazing
PS 245-A	11/28/1962	CANCELLED: Nitric-Hydrofluoric Acid Solution
PS 246-B	5/26/1992	CANCELLED: Chemical Milling Solution for Aluminum
PS 247-A	4/25/1967	CANCELLED: Chemical Milling Solution for Aluminum (6061T6 Condition)
PS 248-E	7/26/2004	Chemical Milling Solution for Stainless Steel
PS 249-G	7/26/2004	Chemical Milling Solution for Nickel Base Alloys, AISI 410, and Greek Ascoloy
PS 250-B	2/18/1994	CANCELLED: Electrochemical Machining Electrolyte Solution
PS 251-L	2/18/1994	CANCELLED: Electrochemical Machining Electrolyte Solution Manual and Automatic Systems
PS 253-J	7/26/2004	Water Inhibitor Solution
PS 254-C	7/26/2004	Alkali Cleaner Solution
PS 255-D	2/18/1994	CANCELLED: Pure Titanium Electrochemical Machining Electrolyte Solution
PS 256-A	2/18/1994	CANCELLED: Electrolytic Grinding Electrolyte Solution
PS 257-C	3/26/1999	CANCELLED: Acid Chemical Milling Solution for Aluminum
PS 258-Initial Issue	3/15/1985	CANCELLED: Corrosion Inhibitor Base, PMC 9311
PS 259-A	10/25/1967	CANCELLED: Leak Test Solution Base
PS 260-B	8/17/2001	CANCELLED: Nitric Acid - Sodium Dichromate Solution
PS 262-B	7/26/2004	Silver Nitrate - Halide Test Solution
PS 263-G	7/27/2004	Electrochemical Machining Electrolyte Solution Manual and Automatic Systems
PS 264-D	7/27/2004	Packing Leak Test Solution
PS 265-C	7/27/2004	Sealing Solution
PS 266-A	10/31/1995	CANCELLED: Packing Leak Test Solution
PS 267-B	8/17/2001	CANCELLED: Sulfuric Acid - Sodium Dichromate Solution
PS 268-L	8/17/2001	CANCELLED: Electrochemical Machining Electrolyte Solution
PS 269-B	2/18/1994	CANCELLED: Electrochemical Machining Electrolyte Solution
PS 270-D	7/27/2004	Electrochemical Machining Electrolyte Solution Manual And Automatic Systems
PS 271-D	7/27/2004	Electrochemical Machining Electrolyte Solution
PS 272-E	7/27/2004	Electrochemical Machining Electrolyte Solution
PS 273-C	7/27/2004	Stripping Solution For Molybdenum
PS 274-E	7/27/2004	Anodize Electrolyte Solution (AMS 2471)
PS 275-C	8/17/2001	CANCELLED: Anodize Sealing Solution (AMS 2471)
PS 276-B	2/18/1994	CANCELLED: ECM Electrolyte Solution
PS 277-B	1/28/1994	CANCELLED: Cleaning & Etching Solution for Wax Patterns
PS 278-D	1/28/1994	CANCELLED: Wetting Agent Rinse Solution
PS 279-C	1/28/1994	CANCELLED: Alcohol Water Rinse
PS 280-E	7/27/2004	15% Wetting Agent Solution
PS 281-E	7/27/2007	Columbium Cleaning Solution

<b>Procedure Number</b>	<b>Effective Date</b>	<b>Subject</b>
PS 282-A	6/2/1995	CANCELLED: Titanium Electropolishing Solution
PS 283-A	7/18/1988	CANCELLED: Dry Film Photo Resist Stripper Solution
PS 284-A	7/18/1988	CANCELLED: Dry Film Photo Resist Developer Solution
PS 286-C	7/27/2004	Electrochemical Machining Electrolyte Solution
PS 287-B	8/17/2001	CANCELLED: Sodium Dichromate - Sulfuric Acid Etch Solution
PS 291-E	7/27/2004	Sodium Hydroxide Solution
PS 292-F	7/27/2004	Sodium Hydroxide Solution - 25%
PS 293-C	7/27/2004	Alkali Cleaner Heavy Duty - Drawing Compound And Identification Ink Removal
PS 294-E	3/26/1999	CANCELLED: Chemical Milling Solution for AMS 5596 Diffuser Cases
PS 295-C	12/5/2007	Jet Engine Cleaning Solution 50% Alcohol
PS 296-C	8/27/2004	Cleaning and Degreasing Solution
PS 297-B	8/27/2004	Electrochemical Machining Electrolyte Solution
PS 298-C	8/27/2004	Chemical Milling Premix Solution
PS 299-B	8/27/2004	Regeneration Solution Deionizer Alkali
PS 300-C	8/27/2004	Cadmium Plating Solution (AMS 2401)
PS 301-P	11/2/2004	Cadmium Plating Solution
PS 302-J	8/27/2004	Cyanide Solution
PS 303-H	7/29/1988	CANCELLED: Caustic Cyanide Solution
PS 304-L	8/27/2004	Copper Strike Solution
PS 305-H	8/27/2004	Silver Strike Solution
PS 306-L	8/27/2004	Silver Plate Solution
PS 307-K	8/27/2004	Brightener Solution (Silver Plate)
PS 308-B	2/18/1994	CANCELLED: Copper Plating Solution (Potassium Salts)
PS 309-N	8/27/2004	Copper Plating Solution
PS 310-J	8/27/2004	Copper & Silver Strip Solution
PS 311-A	1/7/1982	CANCELLED: Cadmium Plating Solution (Liquid Concentrate Make-up)
PS 312-B	2/26/1999	CANCELLED: Strip Solution for Stainless Steel Plating Fixtures
PS 313-G	4/4/1985	CANCELLED: Indium Plating Solution
PS 314-A	6/23/1994	CANCELLED: Strip Solution for Stainless Steel Plating Fixtures
PS 315-G	4/9/1985	CANCELLED: Nickel Plating Solution
PS 316-E	2/12/2008	Nickel Strip Solution
PS 317-B	4/4/1985	CANCELLED: Lead-Tin-Antimony
PS 318-Initial Issue	4/4/1985	CANCELLED: Nickel Plating Solution (Low Chloride)
PS 319-Initial Issue	4/4/1985	CANCELLED: Black Nickel Plating Solution
PS 320-A	8/14/1984	CANCELLED: Electroless Nickel Plating Solution
PS 321-AE	5/30/2007	Nickel Plating Solution (Sulfamate)
PS 322-A	10/26/2007	Reinstated: Strip Solution
PS 323-Initial Issue	4/4/1985	CANCELLED: Silver Plating Solution (Low Caustic)
PS 324-N	5/30/2007	Hard Nickel Plating Solution (Sulfamate)
PS 325-E	8/27/2004	Nickel Strip Solution (Silver Alloy or Copper Alloy Brazed Assemblies)
PS 326-E	8/27/2004	Alkali Smut Removal Solution
PS 327-A	7/24/1989	CANCELLED: Aluminum Plating Solution
PS 328-H	10/20/2005	CANCELLED: Electroless Nickel Plating Solution
PS 329-L	3/28/2011	Trisodium Phosphate Solution
PS 330-A	10/19/1979	CANCELLED: Nickel Strip Solution (Silver Alloy or Copper Alloy Brazed Assemblies)
PS 331-H	5/9/2006	Stripping Solution
PS 332-C	8/27/2004	Stripping Solution For PWA 47 And PWA 73 Coatings
PS 334-D	10/20/2005	CANCELLED: Alkali Cleaner (General Purpose)
PS 337-E	10/9/2007	Electrocleaner Solution For Brush Plating

Procedure Number	Effective Date	Subject
PS 338-E	10/9/2007	Activator Solution For Brush Plating
PS 339-E	10/9/2007	Nickel Solution For Brush Plating
PS 340-D	8/31/2004	High-Speed Nickel Solution For Brush Plating
PS 341-B	9/20/1993	CANCELLED: Alkali Cleaner - 3%
PS 342-B	10/31/1995	CANCELLED: Alkali Cleaner - 2%
PS 343-D	6/27/2007	Alkali Cleaner (General Purpose)
PS 344-L	8/31/2004	Alkali Cleaner (Heavy-Duty) Phosphate Free
PS 345-D	8/31/2004	Nickel Strike Solution For Brush Plating
PS 346-D	8/31/2004	Nickel XHB Solution For Brush Plating
PS 347-E	10/9/2007	Activator Solution For Brush Plating
PS 348-D	8/31/2004	Activator Solution For Brush Plating
PS 349-D	8/31/2004	Nickel (Semi-Bright, High-Leveling) Solution For Brush Plating
PS 350-D	6/27/2007	Alkali Cleaner (Low Temperature)



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Procedure Number	Effective Date	Subject
PS 351-E	5/7/2007	CANCELLED: Nickel Strip Solution For Brush Plating
PS 352-G	8/5/2005	Solution for Stripping PWA 68, PWA 266-1, PWA 270, PWA 286, PWA 36301, PWA 36302, PWA 36306, PWA 36309, and PWA 36330 Coatings
PS 353-Initial Issue	4/18/1985	CANCELLED: Nickel Chloride Solution
PS 354-A	7/11/1988	CANCELLED: Synthetic Cleaner - 2%
PS 355-A	10/31/1995	CANCELLED: Nickel - Tungsten Brush Plating Solution
PS 359-D	8/31/2004	Electroless Nickel Plating Solution
PS 360-D	7/8/2010	CANCELLED: Electroless Nickel Plating Solution
PS 361-C	8/4/2006	CANCELLED: Electroless Nickel Plating Solution
PS 362-C	9/20/1993	CANCELLED: Inhibited Alkali Cleaner (Immersion)
PS 363-C	8/31/2004	Alkali Cleaner Solution For Spray Washers
PS 364-C	10/22/2007	SUPERSEDED BY PS 337: Electrocleaner Solution For Brush Plating
PS 365-C	10/22/2007	SUPERSEDED BY PS 338: Activator Solution for Brush Plating
PS 366-C	10/22/2007	SUPERSEDED BY PS 347: Activator Solution for Brush Plating
PS 367-B	8/31/2004	Activator Solution #3 For Brush Plating
PS 368-B	8/31/2004	Activator Solution #4 For Brush Plating
PS 369-C	10/22/2007	SUPERSEDED BY PS 369: Nickel Strike Solution for Brush Plating
PS 370-B	9/2/2004	Nickel Solution For Brush Plating
PS 371-B	6/27/2007	Alkali Cleaner (General Purpose)
PS 372-D	9/2/2004	Alkali Cleaning Solution
PS 373-B	9/2/2004	Alkali Cleaner Solution For Automatic Spray Washer B/T 523645
PS 374-D	7/9/2007	Alkali Cleaner (General Purpose)
PS 375-B	9/2/2004	Alkali Cleaner (General Purpose - 20%)
PS 376-B	9/2/2004	Alkali Cleaner (General Purpose - 4%)
PS 377-C	6/27/2007	Alkali Cleaner (Spray Wash)
PS 378-B	9/2/2004	Activator Solution #10 For Brush Plating
PS 379-B	9/2/2004	Chromium Brush Stripping Solution
PS 380-C	9/28/2010	CANCELLED: Nickel Braze Stripping Solution
PS 381-C	6/30/2010	CANCELLED: Nickel Sulfamate Brush Plating Solution
PS 382-A	9/25/2003	CANCELLED: Weld Stop-Off Stripping Solution
PS 383-D	9/2/2004	Alkali Cleaner (General Purpose) For Immersion or Spray Cleaning
PS 384-B	9/2/2004	Alkali Cleaner (General Purpose) For Immersion Cleaning
PS 385-Initial Issue	10/23/1992	CANCELLED: Alkali Cleaner (General Purpose) for Immersion Cleaning
PS 386-C	9/2/2004	Alkali Cleaner (General Purpose) For Immersion or Spray Cleaning
PS 387-B	9/2/2004	Alkali Cleaner (General Purpose) For Spray Cleaning
PS 389-B	9/2/2004	Corrosion Inhibitor Solution
PS 390-C	9/10/2004	Cleaning and Degreasing Solution
PS 391-B	9/10/2004	Corrosion Inhibitor Solution
PS 393-Initial Issue	9/10/2004	CANCELLED: Alkali Cleaner
PS 394-A	9/10/2004	Alkali Cleaner For Spray Cleaning (General Purpose - Non-Phosphated)
PS 395-D	9/10/2004	Alkali Cleaner (Low Foaming) For Spray Cleaning
PS 396-A	3/9/2004	Nickel Sulfate Plating Solution
PS 397-A	3/9/2004	Nickel-Cobalt Plating Solution
PS 399-B	12/5/2007	Totally Volatile Aqueous Cleaner (For Non-Bonding Applications Only)
PS 400-G	4/18/1985	CANCELLED: Lead Fluoborate
PS 401-M	9/10/2004	Wet Abrasive Solution
PS 402-F	9/10/2004	Wet Abrasive Solution

Procedure Number	Effective Date	Subject
PS 403-H	9/10/2004	Wet Abrasive Solution
PS 404-F	9/10/2004	Wet Abrasive Solution
PS 405-H	9/10/2004	#240 Aluminum Oxide Wet-Abrasive Solution
PS 406-G	9/27/1995	CANCELLED: Wet Abrasive Solution
PS 407-F	9/10/2004	Wet Abrasive Solution
PS 408-B	9/10/2004	#150 Aluminum Oxide Wet-Abrasive Solution
PS 409-B	9/10/2004	#180 Aluminum Oxide Wet-Abrasive Solution
PS 410-B	9/10/2004	#220 Aluminum Oxide Wet-Abrasive Solution
PS 411-A	1/11/2011	CANCELLED: Hydrochloric Acid Solution (200:1) Inhibited
PS 412-Initial Issue	7/31/2008	Metal Cleaning Solution
PS 413-A	9/19/2002	CANCELLED: Alkali Cleaner (General Purpose) for Spray Wash
PS 414-C	9/10/2004	Alkali Cleaner (General Purpose) for Immersion Cleaning
PS 415-B	9/10/2004	Superseded by PS 383
PS 416-F	7/30/2008	Alkaline Cleaner Solution (P&W Rocketdyne Only)
PS 419-A	9/10/2004	Titanium Deoxidizer/Alkaline Rust Remover
PS 420-B	9/10/2004	Lapping Compound 1-Micron Aluminum Oxide
PS 421-B	9/10/2004	Lapping Compound 3-Micron Aluminum Oxide
PS 422-Initial Issue	10/15/2010	Alkali Cleaner (Immersion)
PS 423-Initial Issue	5/9/2011	Alkali Cleaner with Rust Protection (Spray Wash)
PS 424-D	7/30/2008	Alkaline Cleaner Solution (P&W Rocketdyne Only)
PS 425-B	6/27/2007	Alkali Cleaner (Spray Wash)
PS 426-Initial Issue	7/31/2008	Metal Cleaning Solution (Spray Wash)
PS 427-B	9/10/2004	Superseded by PS 383
PS 428-A	9/14/2004	Alkali Cleaner (General Purpose) for Immersion or Spray Cleaning
PS 429-A	9/14/2004	Alkaline Cleaner - Heavy Duty (Rocket Parts Only)
PS 430-A	9/14/2004	Metal Cleaning Solution
PS 431-A	9/14/2004	Alkali Cleaner (Spray Wash)
PS 433-A	9/14/2004	Alkaline Permanganate Solution
PS 434-Initial Issue	11/28/2006	Chemical Stripping Solution to Remove Recast from AMS 5662 Nickel Alloy
PS 435-A	3/28/2011	Etch Inspection, Acid Salt Solution
PS 436-Initial Issue	2/14/2008	Alkali Cleaner (Spray Wash)
PS 437-Initial Issue	2/14/2008	Alkali Cleaner (Immersion)
PS 438-Initial Issue	5/6/2010	Alkali Cleaner (Spray Wash)
PS 441-A	9/14/2004	Alkali Cleaner (General Purpose) For Immersion Cleaning
PS 442-C	9/14/2004	Alkali Cleaner (Spray Wash)
PS 443-B	9/14/2004	Alkali Cleaning solution
PS 448-Initial Issue	1/14/2008	Alkali Cleaning Solution
PS 449-A	9/14/2004	CANCELLED: Aqueous Degreaser for Immersion or Spray Cleaning
PS 450-E	8/17/2001	CANCELLED: Chrome Pickle Solution
PS 452-A	3/9/2004	Nickel-Cobalt Plating Solution (Sulfamate, for PWA 293 only)
PS 453-Initial Issue	2/18/2008	Trivalent Chromium Phosphate (TCRP) Process Solution
PS 454-Initial Issue	2/18/2008	Zinc Sulfate Plating Solution
PS 455-Initial Issue	6/2/1995	CANCELLED: 4% Detergent Solution
PS 456-A	6/2/1995	CANCELLED: Impregnation Resin Solution
PS 457-Initial Issue	10/9/2008	Conversion Coating Solution (Hexavalent Chromium-Free)
PS 458-Initial Issue	7/9/2008	Platinum Plating Solution
PS 470-Initial Issue	7/12/2007	Thick Nickel Plating Solution
PS 471-A	9/14/2004	Electrocleaner Solution For Brush Plating
PS 472-A	9/21/2004	Brush Plating Activator and Etch Solution

Procedure Number	Effective Date	Subject
PS 473-A	9/21/2004	Brush Plating Activator and Etch Solution
PS 474-A	9/21/2004	Brush Plating Activator and Etch Solution
PS 475-A	9/21/2004	Brush Plating Nickel Strike Solution
PS 476-A	9/21/2004	Brush Plating Nickel Sulfamate Solution
PS 478-Initial Issue	2/18/2008	Hydrochloric Acid Strip Solution - 50%
PS 479-Initial Issue	12/11/2006	Copper Plating Solution
PS 480-L	9/21/2004	Cadmium Bright Dip Solution
PS 481-G	6/2/1995	CANCELLED: Copper Strip Solution
PS 482-C	3/8/1957	CANCELLED: Chromic Acid Solution - 18%
PS 483-A	11/22/1960	CANCELLED: Sodium Dichromate
PS 484-F	7/27/2007	Chromic Acid Solution
PS 486-H	9/21/2004	Chromate Conversion Solution Immersion Method
PS 487-D	9/21/2004	Aluminum Hard Coating Solution
PS 488-D	9/21/2004	Chromic-Phosphoric Acid Anodize Stripper Solution
PS 489-B	9/21/2004	Chromic-Phosphoric Acid
PS 490-A	11/20/1998	CANCELLED: Dichromate Solution
PS 491-B	9/21/2004	Regeneration Solution; Chrome Removal Unit Acid
PS 492-B	9/21/2004	Regeneration Solution; Deionizer Acid
PS 493-B	8/17/2007	Powder Cleaning Solution (0.03% Sulfuric Acid)
PS 495-B	12/5/2007	Aqueous Hand Wipe Cleaner
PS 497-A	9/21/2004	Nickel Tungsten Alloy Plating Solution
PS 498-C	5/30/2007	Nickel Plating Solution (Sulfamate)
PS 499-A	9/21/2004	Ion Exchange Regeneration Solution (3-6% Sodium Hydroxide)
PS 500-A	9/21/2004	Starch Solution
PS 501-A	9/21/2004	Corrosion Inhibitor Solution for Cleaning Modular Tooling Components
PS 502-F	4/18/1985	CANCELLED: Sodium Silicate Solution - 50%
PS 503-R	2/10/2011	Ferric Chloride Solution
PS 504-B	4/1/1955	CANCELLED: Ferric Chloride Pickling Solution
PS 505-D	6/4/1987	CANCELLED: Synthetic Resin Impregnant
PS 506-B	6/4/1987	CANCELLED: Resin Impregnation Compound Inhibitor Solution
PS 509-Initial Issue	4/18/1985	CANCELLED: Lubricant, Spray-Type Low Temperature
PS 510-Initial Issue	4/12/1985	CANCELLED: Polyester Laminating Compound
PS 511-Initial Issue	3/5/1962	CANCELLED: Polyester Surfacing Compound
PS 514-Initial Issue	4/12/1985	CANCELLED: Mold Release Compound
PS 515-B	9/27/1995	CANCELLED: Dry Lubricant Application Mixture
PS 516-A	4/18/1985	CANCELLED: Mixture - Bonding (Epoxy Type)
PS 517-D	8/17/2010	CANCELLED: Adhesive Compound, Epoxy, AMS 3690
PS 518-C	6/30/2000	CANCELLED: Aluminized Enamel (PWA 582)
PS 519-B	9/27/1995	CANCELLED: Waspaloy Etchant
PS 521-D	7/30/2007	Ferric Chloride Solution for Use on Semi-Finished Parts at the Columbus, Georgia Plant and at Outside Suppliers Only
PS 522-C	7/27/2007	Ammonium Bifluoride/Nitric Acid Solution
PS 523-A	5/19/1992	CANCELLED: GE-Schantz Etch Solution for Macroetching Superalloys for the F404 Engine per GE Specification P4TF2
PS 524-B	9/22/2004	Die Lubricant
PS 525-C	7/30/2007	Ferric Chloride Premix Solution



Procedure Number	Effective Date	Subject
PS 526-E	7/30/2007	Hydrochloric-Hydrofluoric Acid Solution
PS 527-A	9/22/2004	Coating Stripping Solution
PS 528-Initial Issue	1/3/2005	Ferric Chloride Solution
PS 529-Initial Issue	6/26/2006	Descaling Solution for PWA 1233 (Beta 21S) Titanium Details
PS 530-B	9/22/2004	Ammonium Bifluoride Solution
PS 531-Initial Issue	4/1/2008	Titanium Etching Solution
PS 551-F	4/18/1985	CANCELLED: Tin Immersion Solution
PS 586-A	9/22/2004	Synthetic Metal Cutting Fluid
PS 590-F	9/22/2004	Cadmium Strip Solution
PS 600-F	9/22/2004	Stop-Off Lacquer
PS 601-C	4/22/1985	CANCELLED: Cleaner Solution (Heavy Duty)
PS 602-B	4/22/1985	CANCELLED: Nitriding Stop-Off Paste
PS 603-B	1/13/1960	CANCELLED: Carburizing Stop-off Paste
PS 604-B	9/6/1961	CANCELLED: Hot Stripping Compound (Cresol Type)
PS 605-H	9/22/2004	Anodize Touch-Up Solution; Immersion Method
PS 606-B	4/29/1985	CANCELLED: Carbon and Paint Remover Solution
PS 607-F	9/22/2004	Anodize Touch-Up Solution (Brush or Swab Method)
PS 608-Initial Issue	4/29/1985	CANCELLED: Wax Compound
PS 609-B	11/2/1999	CANCELLED: Cleaning Solvent
PS 610-A	7/11/1988	CANCELLED: Anti-Seize, Anti-Galling Compound - High Temperature
PS 611-B	7/11/1988	CANCELLED: AMS 3132 Bonded Molybdenum Disulfide-Graphite Dry Film Lubricant (PWA 61)
PS 613-C	4/29/1985	CANCELLED: Fluorescent Penetrant Solution
PS 614-E	9/23/2004	Epoxy Sealant Mixture
PS 615-A	7/11/1988	CANCELLED: Nontoxic Cleaning Solution
PS 616-C	9/23/2004	Sulfuric Acid Anodize Solution
PS 617-Initial Issue	7/18/1983	CANCELLED: Blue Anodized Dye Solution
PS 618-A	5/16/1988	CANCELLED: Light Yellow Anodize Dye Solution
PS 619-B	10/22/1993	CANCELLED: Black Anodize Dye Solution
PS 620-D	9/23/2004	Fiberglass Bonding Mixture
PS 621-B	9/4/2002	CANCELLED: Carbon and Paint Remover Solution
PS 622-E	9/23/2004	Fiberglass Bonding Mixture (Face Sealant)
PS 624-A	5/26/1992	CANCELLED: Cermet Sealing Adhesive HTA 66-2
PS 627-C	9/23/2004	Chromate Conversion Coating Solution (Brush or Swab Solution)
PS 629-K	2/25/2008	Hydrofluoric - Glacial Acetic Acid Solution
PS 630-B	11/2/1999	CANCELLED: Rivet Swaging Lubricant
PS 631-M	3/28/2011	Etch Inspection Acid Salt Solution
PS 632-D	9/23/2004	Rochelle Salt Solution
PS 633-F	9/23/2004	Copper Sulfate Strike Solution
PS 634-B	6/2/1995	CANCELLED: Titanium Anodizing Solution
PS 635-E	8/17/2007	Nitric Acid Solution - 70%
PS 636-D	7/30/2007	Hydrochloric Acid Solution (100% Reagent Grade)
PS 637-E	4/23/1992	CANCELLED: Confined Abrasive Finishing Compound
PS 638-C	9/23/2004	Pressure-Flushing Solution For Removing PS 637
PS 639-J	5/27/2010	CANCELLED: Hydrophilic Emulsifier Solution
PS 640-A	5/4/1976	CANCELLED: Confined Abrasive Finishing Compound (#2)
PS 641-C	9/23/2004	Fiberglass Bonding Mixture
PS 643-J	9/23/2004	Hydrophilic Emulsifier Solution
PS 644-F	9/23/2004	Nickel Strip Solution (Non-Cyanide)
PS 645-M	7/27/2007	Hydrofluoric - Nitric Acid Solution
PS 646-E	7/30/2007	Hydrochloric Acid Solution (400:1) Inhibited

Procedure Number	Effective Date	Subject
PS 647-B	7/18/1988	CANCELLED: Confined Abrasive Finishing Compound
PS 648-E	8/17/2007	Nitric - Hydrofluoric Acid Solution
PS 652-D	9/23/2004	Graphite Lubricant Solution
PS 653-E	7/10/2007	CANCELLED: Hydrochloric Acid Solution (10%) Inhibited
PS 654-A	2/14/1978	CANCELLED: Nitric-Sulfuric-Hydrofluoric Acid Solution
PS 656-G	6/18/2010	Reinstated: Hydrophilic Emulsifier Solution
PS 657-C	9/23/2004	Internal and External Coating Mixture For High Temperature PWA 273 Pack Coat Cycle
PS 658-D	9/23/2004	External Coating Mixture For High Temperature PWA 273 Pack Coat Cycle
PS 659-C	10/5/2004	Bench Cleaning Solution
PS 660-D	11/14/1990	CANCELLED: Alumina Prime Slurry
PS 661-B	11/14/1990	CANCELLED: Alumina Back-up Slurry
PS 662-D	9/27/1995	CANCELLED: Zircon Back-up Slurry
PS 663-C	10/5/2004	Identification Marker Solution
PS 664-A	5/29/1987	CANCELLED: Hydrophylic Emulsifier Solution
PS 665-A	7/18/1988	CANCELLED: 10% Polyvinyl Alcohol Solution
PS 666-A	7/18/1988	CANCELLED: Electron Beam Drilling Backer Material
PS 667-A	11/14/1990	CANCELLED: Alumina Back-up Slurry
PS 668-B	11/14/1990	CANCELLED: Alumina Prime Slurry
PS 670-B	11/14/1990	CANCELLED: Alumina Prime Slurry
PS 671-E	9/27/1995	CANCELLED: Alumina-Mullite Back-up Slurry
PS 672-B	9/27/1995	CANCELLED: Extrudable Backer Mixture
PS 673-D	10/5/2004	Ammonium Hydroxide (1,2, and 4 Molar Solutions)
PS 674-B	9/27/1995	CANCELLED: Ammonium Hydroxide 1,2, and 4 Molar Solutions
PS 675-G	9/27/1995	CANCELLED: Alumina - Prime Slurry
PS 676-A	11/14/1990	CANCELLED: Colloidal Silica Predip Solution
PS 677-F	10/5/2004	38.5% Potassium Hydroxide Solution
PS 678-C	10/5/2004	Calcium Aluminate Cement Solution
PS 679-E	5/27/2010	CANCELLED: Hydrophilic Emulsifier Solution
PS 680-C	5/29/2007	10% Potassium Hydroxide Solution
PS 681-B	10/5/2004	3.5% Potassium Hydroxide Solution
PS 682-C	7/27/2007	Hydrochloric (Muriatic) Acid Solution 10%
PS 683-B	10/5/2004	Hydrophilic Emulsifier Solution (For Immersion Applications)
PS 684-C	5/29/2007	Hydrochloric Acid Solution - 5%
PS 685-C	5/29/2007	Nitric Acid Solution - 4%
PS 686-B	10/5/2004	Hydrophilic Emulsifier Solution (For Spray Applications)
PS 687-C	10/5/2004	Titanium Anodizing Solution
PS 688-C	5/27/2010	CANCELLED: Hydrophilic Emulsifier Solution
PS 689-B	10/5/2004	Fluorescent Penetrant Developing Solution
PS 691-A	3/26/1999	CANCELLED: Chemical Milling Solution
PS 692-E	8/26/2005	Titanium Chem Mill Solution
PS 693-B	10/5/2004	Magnetic Particle Inspection Solution (Non-Fluorescent)
PS 694-C	10/5/2004	Magnetic Particle Inspection Solution (Fluorescent)
PS 698-B	7/27/2007	Ion Exchange Regeneration Solution (4-8% Hydrochloric Acid)
PS 699-Initial Issue	11/15/2000	CANCELLED: Anti-Galling Compound (PWA 566)
PS 9247-Initial Issue	7/28/2010	Electrical Discharge Machining (EDM) Fluid PMC 9247
PS 9393-B	2/23/2010	Water Soluble Metalworking Fluid PMC 9393

