DRAFT NEW TRADE

AIRCRAFT REFINISHING PAINT TECHNICIAN
(Hybrid)

APPENDIX A
O*NET CODE 49-3011.00

WORK PROCESSES

Hybrid apprenticeships are premised on attainment of demonstrated, observable and measurable competencies in addition to meeting time-based work experience and on-the-job learning requirements.

This training outline is a minimum standard for Work Processes and Related Instruction. Changes in technology and regulations may result in the need for additional on-the-job or classroom training.

	Approximate Hours Minimum/Maximum
A. Workplace Orientation	30/50

1. Demonstrate knowledge of workplace policies, procedures, etc.
2. Exhibit proficiency of reading and comprehending aircraft manual, technical order and paperwork procedures.
3. Work safely around equipment.
4. Follow workplace safety plans; use appropriate Personal Protective Equipment (PPE).
5. Gain awareness of hazardous materials handling and disposal procedures.
6. Follow OSHA Safety procedures when using equipment and materials such as manlifts, Self-Retracting Lifelines (SRLs), Safety Data Sheets (SDS), Respiratory Protection Program, Personal Protective Equipment (PPE), Lockout/Tagout (LOTO), workplace hazards, etc.

B. Masking 120/200

1. Demonstrate knowledge and application of multiple masking materials such as solvent resistant, high performance, heat resistant, foil, etc.
2. Utilize masking methods appropriate for processes and airframes.
3. Demask the aircraft and properly handle/dispose of contaminated materials.
4. Perform a full masking procedure to aircraft manufacturer or customer standards.

C. Aircraft Stripping 240/320

1. Utilize stripping methods appropriate based on the make, model, and specifications of the aircraft, by referencing the General Maintenance Manual (GMM), Technical Order (TO), Original Equipment Manufacturer (OEM) manuals, or by specific customer request.
2. Remove stripper and wash the aircraft.
3. Clean up contaminated materials and supplies per the Department of Environment Conservation (DEC) and other regulatory guidance.
4. Perform a full stripping procedure to aircraft manufacturer or customer standards.

D. Chemical Washes 120/200

1. Utilize chemical washing methods appropriate based on the make, model, and specifications of the aircraft.
2. Exhibit an understanding for the application of chemical soaps designed for metals that dissolve the greases, trichloroethylene's, and lubricants on the aircraft from flight.
3. Comprehend and troubleshoot the water breaking process to determine is the skin of the airframe is clean referencing the ASTM-F22 handbook or standards.
4. Perform full chemical wash procedures to aircraft manufacturer or customer standards.

E. Sanding 280/360

1. Identify type of sandpaper required to smooth the different surfaces of the aircraft.
2. Sand aircraft surfaces such as windows and rivets.
3. Perform full sanding procedures to aircraft manufacturer or customer standards.

F. Composites 120/200

1. Inspect materials, becoming proficient in understanding the differences and common applications in order to effectively repair aircraft surfaces.
2. Learn and employ composite processes that include mixing ratios, application of filler, filler primer, and sanding of filler.
3. Refinish composite filled areas.
4. Perform full composite procedures to aircraft manufacturer or customer standards.

G. Priming 160/240

1. Mask for Priming, understanding the proper materials for masking different surface metals and materials of the aircraft.
2. Reference manual to mix primer to the correct specification of the aircraft.
3. Set up and clean-up of equipment.
4. Execute the application of the primers.
5. Perform full priming procedures to aircraft manufacturer or customer standards.

H. Painting Stripes 160/240

1. Mask and tape for line work.
2. Prepare such sanding and cleaning application area.
3. Demonstrate gun selection and spray techniques for stripes.
4. Perform full paint striping procedures to aircraft manufacturer or customer standards.

I. Aircraft Painting 320/640

1. Effectively exhibit spraying techniques which includes conventional, airless, electrostatic, HVLP (high volume/low pressure sprayer), pressure feed, brushing, and dripping.
2. Troubleshoot paint issues; “fish eyes”, runs, wrinkling, bleeding, sags, orange peel, solvent popping, sand scratches, peeling, pinholes, dirt, dry times, blistering or blushing.
3. Mix paints according to manual or customer request.
4. Perform full aircraft painting procedures to aircraft manufacturer or customer standards.

J. Detailing 160/240

1. Perform demask process; remove masks, decals, and patterns.
2. Identify blemishes and paint non-conformances.
3. Perform touch up process.
4. Complete repair processes of decal, tail numbers, etc.
5. Complete blending process specific to aircraft; referenced in manual.
6. Execute polishing process specific to aircraft; referenced in manual.
7. Perform full masking detailing procedures to aircraft manufacturer or customer standards.

K. Mapping and Layouts 160/240

1. Interpret drawings and renderings.
2. Apply fine line tape for layout for painted graphics on aircraft.
3. Apply decals and paint masks.
4. Perform full mapping and layout procedures to aircraft manufacturer or customer standards.

L. Placards and Markings 160/240

1. Read customer or OEM graphics renderings.
2. Utilize graphics software to create decals, tail numbers, etc.
3. Map and measure the appropriate placement on aircraft.
4. Mask and tape for painted markings.

5. Perform full placard and marking procedures to aircraft manufacturer or customer standards.

Total Approximate Hours (Minimum/Maximum) 2030/3170

Apprentices in this Hybrid Apprenticeship Program shall participate in no fewer than 2030 documented hours of on-the-job training, and until they have demonstrated a competency for each skill in the Work Processes, with the understanding competency will be demonstrated reasonably proximate to the maximum on-the-job training hours. Competency Assessment described in Appendix B.

Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to https://www.labor.ny.gov/workerprotection/publicwork/PW_faq1.shtm

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RELATED INSTRUCTION

Safety & Health
General Workplace Safety
First Aid & CPR (minimum 6.5 hours every 3 years)
Personal Protective Equipment (PPE)
Right-to-Know/Safety Data Sheets (SDS)
Lock-Out/Tag-Out (LO/TO)
Sexual Harassment Prevention Training – must comply with section 201-g of the Labor Law
HAZWOPER Training – 40 hours (optional)
Standard Practices and Aircraft Safety
Fire Safety
Waste Disposal
Walking on Aircraft

Trade Skills and Theory
Basic Mathematics and trade-specific math
Aircraft Anatomy and Terminology
Taxing, Towing, Jacking and Leveling Aircraft
International Council of Aeronautical Sciences (ICAS) (Maintenance Manuals, Structural Repair Manuals, Service Bulletins, Service Letters)
Paint Manufacturer Documents (Product Data Sheets, Safety Data Sheets)
Airworthiness Directives and Advisory Circulars
Air Transport Association (ATA) Codes
Forms and Record (FAA and Customer record entries)
Approved Vendor List
Aircraft Manuals and locations on aircraft
Composite Types
Delamination
Theory of Corrosion
Identification of Corrosion
Protection against Corrosion

Aircraft Painter Equipment and Troubleshooting
Low Volume Low Pressure (LVHP) Sprayers, High Volume Low Pressure (HVLP) Sprayers, HTE (High Tranfser Efficient) Spray gun, Electrostatic, Airless

Pressure Pots
Compressors
Equipment Troubleshooting
Equipment Maintenance
Equipment Clean-up
Surface Preparation
Corrosion Removal
Paint Removal
Cleaning
Conversion Coatings
Masking
Paint Materials, Application and Finish Techniques
Types of Paints, Primers, Topcoat, Coatings, Tape, Paper, Cleaning Chemicals
Mixing Paint
Application Methods (Brush, Dipped, Sprayed)
Spraygun Patterns
Paint Defects
Finish Techniques (Feathering and compatibility)
Markings and Quality Control
Identification Marketings (FAR Part 45)
Masking for markings and trim
Quality Control and Inspection
Control Surface Rebalancing

Competency Assessment
Test Preparation
Written/Practical Proficiency Examination(s)

At least 180 hours of Related Instruction must be available for the apprentice at the time of his/her indenture.