NATEF Task List - Collision Repair & Refinish
Non-Structural Analysis & Damage Repair

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For every task in Non-Structural Analysis and Damage Repair, the following safety requirements must be strictly enforced: *Comply with personal and environmental safety practices associated with clothing and the use of gloves; respiratory protection; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.*

II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) **A. Preparation**		**Week**											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	1. Review damage report and analyze damage to determine appropriate methods for overall repair; develop and document a repair plan.												
HP-I	2. Inspect, remove, label, store, and reinstall exterior trim and moldings.												
HP-I	3. Inspect, remove, label, store, and reinstall interior trim and components.												
HP-I	4. Inspect, remove, label, store, and reinstall body panels and components that may interfere with or be damaged during repair.												
HP-G	5. Inspect, remove, label, store, and reinstall vehicle mechanical and electrical components that may interfere with or be damaged during repair.												
HP-I	6. Protect panels, glass, interior parts, and other vehicles adjacent to the repair area.												
HP-I	7. Soap and water wash entire vehicle; complete pre-repair inspection checklist.												

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	II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) A. Preparation **(continued)**	Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	8. Prepare damaged area using water-based and solvent-based cleaners.												
HP-I	9. Remove corrosion protection, undercoatings, sealers, and other protective coatings as necessary to perform repairs.												
HP-I	10. Inspect, remove, and reinstall repairable plastics and other components for off-vehicle repair.												

	II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) B. Outer Body Panel Repairs, Replacements, and Adjustments	Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	1. Determine the extent of direct and indirect/hidden damage and direction of impact; develop and document a repair plan.												
HP-G	2. Inspect, remove and replace bolted, bonded, and welded steel panel or panel assemblies.												
HP-G	3. Determine the extent of damage to aluminum body panels; repair or replace.												
HP-I	4. Inspect, remove, replace, and align hood, hood hinges, and hood latch.												

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	II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) B. Outer Body Panel Repairs, Replacements, and Adjustments **(continued)**	**Week**											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	5. Inspect, remove, replace, and align deck lid, lid hinges, and lid latch.												
HP-I	6. Inspect, remove, replace, and align doors, latches, hinges, and related hardware.												
HP-G	7. Inspect, remove, replace and align tailgates, hatches, liftgates and sliding doors.												
HP-I	8. Inspect, remove, replace, and align bumper bars, covers, reinforcement, guards, isolators, and mounting hardware.												
HP-I	9. Inspect, remove, replace and align fenders, and related panels.												
HP-I	10. Straighten contours of damaged panels to a suitable condition for body filling or metal finishing using power tools, hand tools, and weld-on pulling attachments.												
HP-G	11. Weld damaged or torn steel body panels; repair broken welds.												
HP-I	12. Restore corrosion protection.												
HP-G	13. Replace door skins.												
HP-G	14. Restore sound deadeners and foam materials.												

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II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) B. Outer Body Panel Repairs, Replacements, and Adjustments **(continued)**		Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-G	15. Perform panel bonding and weld bonding.												
HP-G	16. Diagnose and repair water leaks, dust leaks, and wind noise.												
HP-G	17. Identify one-time use fasteners.												

II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) C. Metal Finishing and Body Filling		Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	1. Remove paint from the damaged area of a body panel.												
HP-I	2. Locate and repair surface irregularities on a damaged body panel.												
HP-I	3. Demonstrate hammer and dolly techniques.												
HP-I	4. Heat shrink stretched panel areas to proper contour.												
HP-I	5. Cold shrink stretched panel areas to proper contour.												
HP-I	6. Prepare and apply body filler.												

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II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) C. Metal Finishing and Body Filling **(continued)**		Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-G	7. Identify different types of body fillers.												
HP-I	8. Rough sand body filler to contour; finish sand.												
HP-G	9. Determine the proper metal finishing techniques for aluminum.												
HP-G	10. Determine proper application of body filler to aluminum.												

II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) D. Moveable Glass and Hardware		Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	1. Inspect, adjust, repair or replace window regulators, run channels, glass, power mechanisms, and related controls.												
HP-G	2. Inspect, adjust, repair, remove, reinstall or replace weather-stripping.												
HP-G	3. Inspect, repair or replace, and adjust removable power operated roof panel and hinges, latches, guides, handles, retainer, and controls of sunroofs.												
HP-G	4. Inspect, remove, reinstall, and align convertible top and related mechanisms.												

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	II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) D. Moveable Glass and Hardware **(continued)**	Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-G	5. Initialize electrical components as needed.												

	II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) E. Metal Welding and Cutting	Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	1. Identify weldable and non-weldable substrates used in vehicle construction.												
HP-I	2. Weld and cut high-strength steel and other steels.												
HP-G	3. Weld and cut aluminum.												
HP-I	4. Determine the correct GMAW (MIG) welder type, electrode/wire type, diameter, and gas to be used in a specific welding situation.												
HP-I	5. Set up and adjust the GMAW (MIG) welder to "tune" for proper electrode stickout, voltage, polarity, flow rate, and wire-feed speed required for the substrate being welded.												
HP-I	6. Store, handle, and install high-pressure gas cylinders.												
HP-I	7. Determine work clamp (ground) location and attach.												

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	II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) E. Metal Welding and Cutting **(continued)**	**Week**											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	8. Use the proper angle of the gun to the joint and direction of gun travel for the type of weld being made in the flat, horizontal, vertical, and overhead positions.												
HP-I	9. Protect adjacent panels, glass, vehicle interior, etc. from welding and cutting operations.												
HP-I	10. Protect computers and other electronic control modules during welding procedures.												
HP-I	11. Clean and prepare the metal to be welded, assure good metal fit-up, apply weld-through primer if necessary, clamp or tack as required.												
HP-I	12. Determine the joint type (butt weld with backing, lap, etc.) for weld being made.												
HP-I	13. Determine the type of weld (continuous, stitch weld, plug, etc.) for each specific welding operation.												
HP-I	14. Perform the following welds: continuous, plug, butt weld with and without backing, fillet, etc.												
HP-I	15. Perform visual and destructive tests on each weld type.												
HP-I	16. Identify the causes of various welding defects; make necessary adjustments.												

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	II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) E. Metal Welding and Cutting **(continued)**	**Week**											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	17. Identify cause of contact tip burn-back and failure of wire to feed; make necessary adjustments.												
HP-I	18. Identify cutting process for different substrates and locations; perform cutting operation.												
HP-G	19. Identify different methods of attaching non-structural components (squeeze type resistant spot welds (STRSW), riveting, non-structural adhesive, silicon bronze, etc.).												

	II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) F. Plastics and Adhesives	**Week**											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-I	1. Identify the types of plastics; determine repairability.												
HP-I	2. Clean and prepare the surface of plastic parts; identify the types of plastic repair procedures.												
HP-I	3. Repair rigid, semi-rigid, or flexible plastic panels.												
HP-G	4. Remove or repair damaged areas from rigid exterior composite panels.												

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II. NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR (BODY COMPONENTS) F. Plastics and Adhesives **(continued)**		Week											
		1	2	3	4	5	6	7	8	9	10	11	12
HP-G	5. Replace bonded rigid exterior composite body panels; straighten or align panel supports.												