



## Collision Repair

### Available Certifications:

OSHA Certification

Collision Repair & Refreshing Technology

Automotive Service Excellence Certification (ASE)

### Complete Task List:

| Task Number                             | Description  | Hours | Level |
|---|--|-------|-------|
| <i>*State Approved Program of Study</i> |  |       |       |
| 100                                     | Safety   |       |       |
| 101                                     | Follow general shop safety rules.  |       |       |
| 102                                     | Use of personal safety devices and clothing.   |       |       |
| 103                                     | Locate and identify fire extinguishers.  |       |       |
| 104                                     | Locate and operate emergency switches.   |       |       |
| 105                                     | Explain fire and tornado drill procedures.   |       |       |
| 106                                     | Demonstrate proper handling of hazardous materials.  |       |       |
| 107                                     | Follow proper chemical disposal techniques.  |       |       |
| 108                                     | Operate shop and spray area ventilation systems.   |       |       |
| 109                                     | Identify and follow rules for care and safe use of hand tools.                                     |       |       |
| 110                                     | Identify and demonstrate safe and proper use of power tools and equipment.                         |       |       |
| 111                                     | Identify the proper methods and options for safely moving vehicles in the shop area.               |       |       |
| 112                                     | Identify information on Safety Data Sheets (SDS).  |       |       |
| 113                                     | Demonstrate the ability to secure vehicles on jack stands and/or hydraulic lifts.                  |       |       |
| 200                                     | Vehicle Design and Construction  |       |       |
| 201                                     | Identify the differences between various vehicle construction types.                               |       |       |
| 202                                     | Identify and describe structural and nonstructural panels of a unibody vehicle.                    |       |       |
| 203                                     | Determine the various materials used in vehicle construction.                                      |       |       |
| 300                                     | Panel Replacement and Alignment  |       |       |
| 301                                     | Identify the principles of full or partial panel replacement (bonded, bolted, welded, or riveted). |       |       |
| 302                                     | Remove, reinstall, and align bolt on panels.   |       |       |
| 303                                     | Remove and reinstall wheel/tire assembly.  |       |       |
| 304                                     | Aim headlights using mechanical aiming equipment.  |       |       |
| 305                                     | RESERVED   |       |       |
| 400                                     | Trim and Hardware  |       |       |
| 401                                     | RESERVED   |       |       |
| 402                                     | Determine types of fasteners.  |       |       |
| 403                                     | Remove and replace adhesive-held molding and trim.   |       |       |
| 404                                     | Remove and install seats.  |       |       |
| 405                                     | RESERVED   |       |       |
| 406                                     | Remove and install interior parts and hardware.  |       |       |
| 407                                     | Remove and install exterior parts and hardware.  |       |       |
|   |  |       |       |

| Task Number | Description   | Hours | Level |
|-------------|---|-------|-------|
| 408         | Remove and install exterior trim, moldings, and emblems.  |       |       |
| 500         | Metal Finishing   |       |       |
| 501         | Select proper metal straightening tools.  |       |       |
| 502         | Evaluate stretched metal for repair.  |       |       |
| 503         | Demonstrate weld-on nail gun to repair sheet metal.   |       |       |
| 504         | Repair metal to meet industry standards.  |       |       |
| 505         | Explain the characteristics of aluminum repair and tools required.  |       |       |
| 600         | Body Fillers  |       |       |
| 601         | Select correct body filler and tools.   |       |       |
| 602         | Prepare surface for body filler.  |       |       |
| 603         | Mix and apply body filler.  |       |       |
| 604         | Sand body fillers to correct contour.   |       |       |
| 700         | Glass and Hardware  |       |       |
| 701         | Remove and reinstall a door window regulator.   |       |       |
| 702         | Remove and reinstall moveable door glass.   |       |       |
| 703         | Describe the removal and replacement of stationary glass.   |       |       |
| 800         | Structural Component Repair and Damage Analysis   |       |       |
| 801         | Classify the various types structural damage a vehicle can sustain.   |       |       |
| 802         | Interpret body dimension specifications.  |       |       |
| 803         | Use a tram gauge to diagnose vehicle length and width damage and X measurements of body or frame.   |       |       |
| 804         | Diagnose vehicle height with datum line gauges.   |       |       |
| 805         | Identify various measuring systems.   |       |       |
| 806         | Identify repair methods for vehicle with diamond damage, twist, sag side swag, or mash.   |       |       |
| 900         | Structural Straightening  |       |       |
| 901         | Mount and anchor vehicle to a pulling system.   |       |       |
| 902         | Measure vehicle structure and analyze data.   |       |       |
| 903         | Interpret data to make a structural pull back to factory specs.   |       |       |
| 1000        | Corrosion Protection  |       |       |
| 1001        | Identify corrosion causes and OEM corrosion protection.   |       |       |
| 1002        | Apply repair methods for corrosion protection.  |       |       |
| 1003        | RESERVED  |       |       |
| 1004        | Demonstrate the application of seam sealers.  |       |       |
| 1100        | Welding   |       |       |
| 1101        | Identify different methods of attaching components (MIG welding, squeeze type resistance spot welding (STRSW), structural adhesive, silicon bronze, etc.) |       |       |
| 1102        | Demonstrate personal safety practices.  |       |       |
| 1103        | Set up and tune the MIG welder.   |       |       |
| 1104        | Complete a butt joint with backing in various welding positions.  |       |       |
| 1105        | Complete an overlap weld in various positions.  |       |       |
| 1106        | Complete a plug weld in various positions.  |       |       |
|             |   |       |       |

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|--------------------|--|--------------|--------------|
| 1107               | Define protection of adjacent panels, glass, vehicle interior, etc. from welding and cutting operations.                       |              |              |
| 1200               | Cutting Processes  |              |              |
| 1201               | Identify cutting processes.  |              |              |
| 1202               | Demonstrate sheet metal cutting processes.   |              |              |
| 1300               | Refinishing and Equipment Safety   |              |              |
| 1301               | Explain various environmental regulations.   |              |              |
| 1302               | Locate hazardous warning information.  |              |              |
| 1303               | Select and inspect personal protection equipment (PPE).  |              |              |
| 1304               | Demonstrate safe painting practices.   |              |              |
| 1305               | Identify personal health and safety hazards.   |              |              |
| 1400               | Automotive Finishes  |              |              |
| 1401               | Describe the difference between paint systems (water borne, solvent, multi-stage).   |              |              |
| 1402               | Describe causes and cures of paint defects.  |              |              |
| 1403               | Identify various undercoats.   |              |              |
| 1404               | Identify various topcoats (single stage, basecoat/clearcoat, tricoat, quadcoat).   |              |              |
| 1500               | Surface Preparation  |              |              |
| 1501               | Demonstrate proper steps to pre-wash entire vehicle.   |              |              |
| 1502               | Use wax and grease remover.  |              |              |
| 1503               | Demonstrate proper use of sanding and featheredging techniques.  |              |              |
| 1504               | Wet, sand, and featheredge.  |              |              |
| 1505               | RESERVED   |              |              |
| 1506               | Locate and obtain the vehicle paint code.  |              |              |
| 1507               | Apply undercoats.  |              |              |
| 1508               | Prepare panels for blending.   |              |              |
| 1509               | RESERVED   |              |              |
| 1510               | Identify masking materials.  |              |              |
| 1511               | Perform masking.   |              |              |
| 1512               | Select the appropriate abrasive.   |              |              |
| 1600               | Refinishing Equipment and Paint Area   |              |              |
| 1601               | Operate the spray booth.   |              |              |
| 1602               | Maintain the paint mixing area.  |              |              |
| 1603               | Set up, test, and adjust spray guns.   |              |              |
| 1604               | Inspect, clean, and determine conditions of spray guns and equipment.  |              |              |
| 1605               | Select and use the National Institution of Safety and Health (NIOSH) approved personal painting/refinishing respirator system. |              |              |
| 1700               | Refinishing Operations   |              |              |
| 1701               | Prepare surface for topcoat system (degrease and tack).  |              |              |
| 1702               | Apply primer-sealer.   |              |              |
| 1703               | Apply single-stage finish.   |              |              |
| 1704               | Apply basecoat/clearcoat finish.   |              |              |
|                    |  |              |              |

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|-------------------------|--|--------------|--------------|
| 1705                    | Describe the application of stone chip-resistant coating to lower body areas.  |              |              |
| 1706                    | Demonstrate paint manufacturer's mixing ratio when preparing paint products.   |              |              |
| 1800                    | Blending Operations  |              |              |
| 1801                    | RESERVED   |              |              |
| 1802                    | Blend basecoat/clearcoat finish.   |              |              |
| 1803                    | Tint and blend color coat.   |              |              |
| 1900                    | Detailing  |              |              |
| 1901                    | Remove overspray.  |              |              |
| 1902                    | Clean exterior of vehicle.   |              |              |
| 1903                    | Clean interior of vehicle.   |              |              |
| 1904                    | Apply decals and stripes.  |              |              |
| 1905                    | Demonstrate color sanding and polishing techniques.  |              |              |
| 1906                    | Clean body openings.   |              |              |
| 1907                    | Clean exterior and interior glass surfaces.  |              |              |
| 2000                    | Estimating Damage Analysis   |              |              |
| 2001                    | Identify vehicle by vehicle identification number (VIN).   |              |              |
| 2002                    | Collect vehicle and customer data.   |              |              |
| 2003                    | Use collision estimating guides/estimating software.   |              |              |
| 2004                    | Identify different types of vehicle damage (direct and indirect).  |              |              |
| 2005                    | Indicate repair and replace decisions.   |              |              |
| 2006                    | Prepare an estimate/repair and sequence/calculate repair costs/supplements.  |              |              |
| 2007                    | Explain the need for a pre-repair scan and post-repair scan of the vehicle computer.   |              |              |
| 2100                    | Plastic Repair   |              |              |
| 2101                    | Identify plastic to make repair decisions.   |              |              |
| 2102                    | Use plastic repair methods (adhesives and welding).  |              |              |
| 2103                    | Repair plastics with two-part adhesives, with and without reinforcement.   |              |              |
| 2104                    | Research recommended repair processes for bumper cover repair on Advance Driver Assistance System (ADAS) vehicles.             |              |              |
| 2200                    | Restraint Systems  |              |              |
| 2201                    | Research auto manufacturers' recommended safety procedures to prevent accidental deployment of supplemental restraint systems. |              |              |
| 2202                    | Identify supplemental restraint systems.   |              |              |
| 2203                    | Remove and reinstall seat belt components.   |              |              |
| 2300                    | Advanced Technology  |              |              |
| 2301                    | Explain function and components of the Advance Driver Assistance System (ADAS).  |              |              |
| 2302                    | Describe precautions required when working on high voltage vehicles.   |              |              |
| <b>*Local Task List</b> |  |              |              |
| VA3513                  | 13.2.11.A- Apply effective speaking and listening skills used in a job interview.  |              |              |
|                         |  |              |              |

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|--------------------|--|--------------|--------------|
| VA3514             | 13.2.11.B- Apply research skills in searching for a job. (CareerLink, O-NET, Networking, Newspapers, Professional Associations, Resource Books (OOH), etc.   |              |              |
| VA3515             | 13.2.11.C-Develop and assemble, for career portfolio placement, career acquisition documents, such as, but not limited to: job application, letter of appreciation, Cover Letter, Resume, Post-Secondary Application, etc.                             |              |              |
| VA3516             | 13.2.11.E- Demonstrate, in the career acquisition process, the application of essential workplace skills/knowledge, such as, but not limited to: Communication, Health and Safety, Resilience, Integrity, Problem Solving, Teamwork and Communication. |              |              |
| VA3517             | 13.3.11.A- Evaluate personal attitudes and work habits that support career retention and advancement, with focus on Resilience, Integrity, Problem Solving, Communication, Teamwork.   |              |              |
| VA3518             | 13.3.11.B-Evaluate team member roles and describe and illustrate active listening techniques: clarifying, encouraging, reflecting, restating, and summarizing.   |              |              |
| VA3519             | 13.3.11.C- Evaluate conflict resolution skills as they related to the workplace.: constructive criticism, group dynamics, managing leaderships, mediation, negotiation, problem solving.   |              |              |
| VA3520             | 13.3.11.D- Develop a personal budget based on career choice, such as but not limited to : fixed/variable expenses, gross pay, net pay, saving, taxes.  |              |              |
|                    |  |              |              |