AUTOMOTIVE BODY PANEL ADJUSTMENT AND ALIGNMENT
Course Syllabus

Course Number: NSRT-0275  
OHLAP Credit: No

OCAS Code: None

Course Length: 45 Hours

Career Cluster: Transportation, Distribution, and Logistics

Career Pathway: Automotive Collision Repair

Career Major(s): Collision Repair Technician

Pre-requisite(s):

Course Description: In this course the students will learn to remove, install and align bolted body parts. Some of the parts covered in this course will be fenders, hoods, doors, deck lids, bumpers and bumper covers. This course will also cover wind noise and water leak detection related to panel alignment.


Course Objectives: A. Perform Minor Collision Repairs

1. Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants from those areas to be repaired. (HP-I) 1
2. Inspect, remove, store and replace non-structural body panels and components that may interfere with or be damaged during repair. (HP-I) 1
3. Inspect, remove, store, and replace exterior trim and moldings. (HP-I) 1
4. Inspect, remove, store, and replace interior trim and components. (HP-I) 1
5. Protect panels, glass, and parts adjacent to the repair area. (HP-I) 1
6. Remove corrosion protection, undercoatings, sealers, and other protective coatings necessary to perform repairs. (HP-I) 1
7. Inspect, remove, and replace repairable plastics and other components that are recommended for off-vehicle repair. (HP-I) 1
8. Inspect, remove, store and replace all vehicle mechanical and electrical components that may interfere with or be damaged during repair. (HP-G) 1
9. Remove and replace damaged sections of structural steel body panel assemblies in accordance with manufacturer’s specifications and procedures. (HP-I) 1
10. Determine the extent of damage to aluminum body panels; repair or replace. (HP-G) 1
11. Inspect, remove, replace, and align hood, hood hinges, and hood latch. (HP-I) 1
12. Inspect, remove, replace, and align deck lid, lid hinges, and lid latch. (HP-I) 1
13. Inspect, remove, replace and align doors, tailgates, hatches, lift gates, latches, hinges and related hardware. (HP-I) 1
14. Inspect, remove, replace, and align bumper bars, covers, reinforcement, guards, isolators, and mounting hardware. (HP-I) 1
15. Inspect, remove, replace and align front fenders, headers, and other panels. (HP-I) 1
16. Check door hinge condition; check doorframes for proper fit; check and adjust door clearances (where adjustable) along quarter panel, door, rocker panel, fender, and top.
17. Braze body panels only in locations recommended by vehicle manufacturers.
18. Diagnose and repair water leaks, dust leaks, and wind noise. (HP-G) 1
19. Determine the extent of damage to aluminum structural components; repair, weld or replace. (HP-G) 1

B. Replace and Align Structural Panels
1. Determine the extent of damage to structural steel body panels; repair, weld, or replace in accordance with vehicle manufacturers’ specifications/industry standards.
2. Perform structural panel sectioning in accordance with vehicle manufacturers’ specifications/industry standards.
3. Recheck panel contour and alignment after repairing; correct or adjust as necessary.
4. Discuss full body structural sectioning.
5. Discuss custom body panels.
6. Inspect, remove and replace bolted, bonded, and welded steel panel or panel assemblies. (HP-I) 1
7. Repair damage using power tools and hand tools to restore to proper contours and dimensions. (HP-I) 1
8. Remove and replace damaged sections of structural steel body panels. (HP-G) 1
9. Cut out damaged sections of sheet steel body panels and weld in replacements according to manufacturer/industry specifications. (HP-I) 1
10. Replace door skins. (HP-G) 1
11. Perform panel bonding. (HP-G) 1

1ASE objective
All unmarked objectives are TTC instructor developed.

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.
**Automotive Body Panel Adjustment and Alignment**

<table>
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<tr>
<th>Available Certifications/College Credit</th>
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<tr>
<td>The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.</td>
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**College Credit Eligibility:**

The student must maintain a grade point average of 2.0 or better.