



Collision Repair

ELIGIBILITY

Open to active SkillsUSA members enrolled in programs with automotive collision technology as the occupational objective.

CLOTHING REQUIREMENTS

Official SkillsUSA light blue work shirt and navy pants, black or brown leather work shoes, and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

NOTE: At the district level if a student is not able to wear the official SkillsUSA attire he/she may wear an outfit that would be acceptable in their specific field of study. Please keep in mind that official SkillsUSA attire will be required at the state and national level.

EQUIPMENT AND MATERIALS SUPPLIED BY HOST

1. Materials for metalworking phase:
 1. Identical fender panels to be repaired
 2. Plastic filler
 3. Various grits of sandpaper/grinding discs for sanding blocks (must have backing plate)
 4. Basic tram gage and tape measure for under hood measurements
 5. Miller 135, Miller 141, Miller 180 and Miller 252 Auto MIG welders set up with .023 wire
 6. Cleaning materials and wipes

Note: The air fittings used at WMCTC Collision Repair Shop are Milton 777 (M) and 778 (F) air fittings.

EQUIPMENT AND MATERIALS SUPPLIED BY CONTESTANT

Students who do not bring and wear their personal protective equipment (safety glasses, respirator, work shoes, shirt or pants) WILL NOT be allowed to participate.

1. All students must have a one-page, typewritten resume
2. Proof of Training - signed
3. Safety glasses with side shields
4. Dust respirator
5. Body files
6. Dollies
7. Various metal finishing hammers
8. 6" DA sander (Stickit paper pads)
9. Grinder
10. Sticky back or velcro D/A pad
11. Sticky back DA pad
12. DA pad wrench
13. Sanding pads
14. Welding gloves



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15. Welding jacket
16. Welding respirator
17. Welding helmet
18. Tape measure
19. Optional—tram gage/digital tram gage

SCOPE OF THE CONTEST - (DEFINED BY THE NATIONAL COMPETITION REGULATIONS)

(District Competitions are meant to be a scaled down version of National Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels)

The contest is defined by industry standards as set by the current industry technical standards. The contest is divided into three portions: a written ASE exam, an interview, and a series of workstations. Contestants will demonstrate their ability to perform tasks selected from the following list of competencies.

Standards and Competencies – *(Summary of national technical standards list)*

1. Repair depressed area(s) on a steel panel with plastic body filler
2. Repair depressed area using shrinking techniques on a steel panel
3. Repair depressed areas using metal finishing techniques on a steel panel to related tasks
4. Prepare steel panel for primer application to related tasks
5. Demonstrate welding skills needed for collision repair of steel panels
6. Complete surface preparation for painting and refinishing
7. Mix and apply repair material
8. Perform block and featheredge
9. Measure and analyze structural, steering and suspension misalignment of a unitized body vehicle
10. Oral Assessment/Interview
11. Maintain professional conduct
12. Maintain professional appearance
13. Complete job application and resume
14. Demonstrate interview skills

KNOWLEDGE PERFORMANCE

The contest will include a 20-question ASE written exam assessing knowledge of Structural and Non - Structural Analysis.

SKILLS PERFORMANCE

The contest includes a series of workstations and an interview process designed to assess skills in the following areas: metalwork, welding, and structural analysis. The overall appearance of the finished product, speed and proper safety practices will be judged.



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Contest Guidelines

1. Metal Repair
2. Welding
3. Structural Analysis
4. Oral Assessment
5. Written Exam (ASE)



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Collision Repair Scoring Sheet

| Items evaluated | Possible points | Contestant score |
|--|-----------------------|------------------|
| Metal Finishing | – | |
| Proper cleaning procedures | 15 | |
| Safety while cleaning | 15 | |
| Selection of straightening tools | 15 | |
| Proper technique for metal work | 15 | |
| Safety while metal working | 15 | |
| Proper selection and application of fillers | 15 | |
| Proper shaping and sanding of fillers | 15 | |
| Safety procedures while working with fillers | 15 | |
| Demo feather edging procedures | 15 | |
| Safety procedures while feather edging | 15 | |
| Quality of product | 15 | |
| | Subtotal = 165 | |
| Welding Procedures | – | |
| Set-up and tuning of Welder | 15 | |
| Proper gas settings | 15 | |
| Proper lap joint | 15 | |
| Proper butt weld with backer | 15 | |
| Proper plug weld | 15 | |



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| Proper safety procedures, clothing, gloves, glasses, respirator | 15 | |
| Overall appearance of product | 15 | |
| | Subtotal = 105 | |
| Measurement Procedures | – | |
| Length measurement | 15 | |
| Width measurement | 15 | |
| Diagonal measurement | 15 | |
| Wheelbase measurement | 15 | |
| Safety related to procedure | 15 | |
| | Subtotal = 75 | |
| Interview | – | |
| Knowledgeable answers during interview | 15 | |
| Appearance is trade appropriate | 15 | |
| Voice clear/understandable | 15 | |
| | Subtotal = 45 | |
| Written Test | 20 | |
| | TOTAL = 410 | |
| Clothing Penalty | Deduction -10 | |
| No resume | Deduction -10 | |
| | TOTAL | |

Note: No cell phones or other electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.

Note: Scorecards should only be used as guidance. Changes may occur.