



Pennsylvania - District 2
Education . . . with a competitive side



COLLISION REPAIR COMPETITION

Clothing Requirements

Official SkillsUSA light blue work shirt and navy pants, black or brown leatherwork 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.*

Eligibility

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

Equipment and Materials: Supplied by host school:

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. Millermatic 140 Auto MIG welders set up with .023 wire

Note: The air fittings used at DCTS are Milton 777, 778 air

Equipment and Materials: Supplied by contestant:

1. All students must have a one-page, typewritten resume
2. Safety glasses with side shields
3. Dust respirator
4. Body files
5. Dollies
6. Various metal finishing hammers
7. 6" DA sander (3m. hook it paper)
8. Grinder
9. Plastic filler mixing boards and spreaders
10. Sticky back DA pad
11. DA pad wrench
12. Sanding pads
13. Welding gloves
14. Welding jacket
15. Skull cap
16. Welding respirator

17. Welding helmet
18. Tape measure
19. Optional—tram gage/digital tram gage

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.

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, 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. Maintain professional conduct
11. Maintain professional appearance
12. resume

Knowledge Performance

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

Skill Performance

The contest includes a series of workstations and a 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.

Contest Guidelines

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

Items Evaluated	Possible Points	Contestant Score
Metal Finishing	165	
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 featheredging procedures	15	
Safety procedures while featheredging	15	
Quality of product	15	
Welding Procedures	105	
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	
Proper safety procedures, clothing, gloves, Glasses, respirator	15	
Overall appearance of product	15	
Measurement Procedures	75	
Length measurement	15	
Width measurement	15	
Diagonal measurement	15	
Wheelbase measurement	15	
Safety related to procedure	15	
Resume	60	
Written Test	20	
Total Points	425	

Rubric Scale

0 – Below Basic

The contestant has no knowledge/experience in this area; failed to complete task; displayed an inadequate level of compliance with shop rules and work habits.

5 – Basic – The contestant did not meet knowledge/performance criteria and/or needed significant help

to complete task; displayed an inconsistent level of compliance with shop rules and work habits

10 – Proficient– The contestant met knowledge/ performance criteria without help at least on time; demonstrated the ability to complete some task to industry standards; consistently

followed shop rules and displayed safe work habits.

15 – Advanced – The contestant met knowledge / performance criteria without help many times; completed all task to industry standards within industry timelines; independently displayed a high level of compliance with shop rules and displayed safe work habits.

Rubric				
WORK SKILLS				
	Below Basic	Basic	Proficient	Advanced
Task Performance	Failure to complete task	Demonstrated task completion to some degree but unable to meet industry standards	Demonstrated ability to complete task to industry standards	Demonstrated ability to complete task to industry standards within industry timelines
Safety	Displayed an inadequate level of compliance with classroom/shop rules and work habits	Displayed an inconsistent level of compliance with classroom/shop rules and work habits	Consistently followed classroom/shop rules and displayed safe work habits	Independently displayed a high level of compliance with classroom/shop rules and displayed safe work habits
Points	0	5	10	15

Note: Judges may use their own discretion to assign points between the numerical values listed above in order to more accurately grade contestant performances.

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.