

Automotive Refinishing Technology

Description

The NYC SkillsUSA Automotive Refinishing Technology contest is to evaluate each competitor's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of automotive refinishing technology.

Clothing Requirements

- White crew neck short-sleeved T-shirt
- Work pants or jeans,
- Leather or steel-toed work shoes.
- Long hair must be restrained.
- Tyvek Paint Suit
- Safety glasses with side shields or goggles, (Prescription glasses can be used only if they are equipped with side shields and approved by OSHA(Z-87). If not, they must be covered with goggles.)

Note

Contestants must wear their official contest clothing to the contest orientation meeting. Also bring #2 pencil, resume, and safety assurance form.

Equipment and Materials

Supplied by the technical committee:

- All necessary tools and equipment for the competition
- All necessary service publications for the competitors

Supplied by the competitor:

- All competitors must create a one-page resume. See "Resume Requirement" below for guidelines.

RESUME REQUIREMENT

Competitors must create a one-page resume to submit at orientation.

DEVICES

Cell phones or other electronic devices not approved by the NYS Chairperson will be collected by the contest chair during the competition. Chairpersons will announce their acceptance by listing it on their standard or at the orientation meeting. In case of emergencies, advisors should allow the competitors to take their phones to the contest areas. If the competitor uses their device in a manner that compromises the integrity of the competition, the competitor's score may be penalized.

Scope of the Competition

The competition will be consistent with the Collision Repair/Refinishing Technician Task list.

Competitors will demonstrate their ability to perform jobs of skills selected from the standards mentioned above as determined by the SkillsUSA Championships technical committee. Committee membership includes (but is not limited to): 3M Automotive Aftermarket Division, Akzo Nobel Coatings Inc., Axalta Performance Coatings, BC Marketing Inc., BASF, Collision Hub, Dan Am Air, LKQ Corp., National Institute for Automotive Service Excellence (ASE), PPG, WIN, Society of Collision Repair Specialist (SCRS), Saint-Gobain Norton, SATA Spray Equipment, Sherwin-Williams, State Farm Insurance Companies, New Pig & Carstar

KNOWLEDGE PERFORMANCE

All competitors are required to take the SkillsUSA professional development test at orientation.

The competition includes a written knowledge test given by ASE covering the automotive refinishing areas that are identified in the NATEF Collision Repair/Refinishing Program Standards and the ASE Official StudyGuide: Collision Repair/Refinish. The tests for the high school and college competitors will consist of surface preparation; spray gun operation and related equipment; paint mixing, matching, and applying; solving paint application problems; and finish defects, causes, and cures and safety precautions.

SKILL PERFORMANCE

The competition includes a series of workstations, an interview process designed to assess skills in the following areas: spot repair, color tinting, featheredge, prime and block, paint id and masking. The overall appearance of the finished product, speed and proper safety practices will be judged.

STANDARDS AND COMPETENCIES: HIGH SCHOOL

Spot Repair

Prepare a panel surface for a basecoat blend & clear coat application (full panel) in relationship to the Technical Data Sheet (TDS) supplied by the supporting paint Manufacture.

- 1.1. Demonstrate proper safety procedures.
- 1.2. Clean the entire area of panel being repaired; use appropriate cleaner to remove contaminants (we must use waterborne cleaner only due to fumes in the competition area).
- 1.3. Dry sand areas to be refinished, removing all gloss to level finish using TDS recommendations for sandpaper grit range.
- 1.4. Clean area to be refinished using a final cleaning solution.
- 1.5. Remove dust from the area to be refinished, using a tack rag.

Basecoat spot repair application in relationship to the Technical Data Sheet (TDS) supplied by the supporting paint manufacturer.

- 2.1. Demonstrate proper safety procedures.
- 2.2. Remove, with a tack rag, any dust or lint particles from the area to be refinished
- 2.3. Check and adjust spray gun operation.
- 2.4. Apply clear blender if applicable to prevent metallic halo.
- 2.5. Apply finish using appropriate spray techniques (gun arc, gun angle, gun distance, gun speed and spray pattern overlap) for the finish being applied.
- 2.6. Apply basecoat for panel blending.
- 2.7. Dry basecoat per Technical Data Sheet.

Full panel clearcoat application in relationship to the Technical Data Sheet (TDS) Supplied by the supporting paint manufacturer.

- 3.1. Demonstrate proper safety procedures.
- 3.2. Remove, with a tack rag, any dust or lint particles from the area to be refinished
- 3.3. Check and adjust spray gun operation.
- 3.4. Apply clearcoat finish using appropriate spray techniques (gun arc, gun angle, gun distance, gun speed and spray pattern overlap) for the finish being applied

Complete color assessment in relationship to the tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 4.1. Determine the type of mismatch problem encountered while evaluating the color sample.
- 4.2. Determine adjustment that must be made to correct the hue/color, value/lightness or darkness, chroma/saturation/purity, and flop.

Select the correct toner for color adjustment (toner within the formula) application in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 5.1. Demonstrate the ability to select the correct toner to correct predetermined mismatch problems while selecting the correct toner.
- 5.2. Demonstrate the ability to select the correct toner to correct the hue/color, value/lightness or darkness, chroma/ saturation/purity, and flop

Spray out completed (includes clearcoat application) application in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 6.1. Apply finish using appropriate spray techniques (gun arc, gun angle, gun distance, gun speed and spray pattern overlap) for the finish being applied.

Make proper adjustments/hits producing a blendable color match (evidenced of a spray out card) application in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 7.1 Apply tinted product to produce evidence of a blendable color match for the finish being applied

Featheredge, Priming and Blocking

Surface cleaning application in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing. (B2 ASE Test)

- 8.1. Clean the entire panel; use appropriate cleaner to remove contaminants.
- 8.2. Apply surface cleaner to remove contaminants

Repair damaged area in preparation for primers in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 9.1. Sand area using dual action sander.
- 9.2. Sand areas to show appropriate removal of material for good featheredge technique.
- 9.3. Sand beyond the repair area for adhesion of primer.

Apply UV primers application in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 10.1. Apply UV primer surfacer onto surface of repaired area.
- 10.2. Check and adjust spray gun operation.
- 10.3. Apply finish using appropriate spray techniques (gun arc, gun angle, gun distance, gun speed and spray pattern overlap) for the finish being applied.
- 10.4. Use UV light to dry according to material manufacturer recommendations.

Perform proper block sanding techniques and final sand for basecoat application in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 11.1. Dry sand the area to which two-component finishing filler has been applied.
- 11.2. Dry sand is the area to which UV primer-surface has been applied.
- 11.3. Block the sand area to achieve levelness of repaired area.

Paint Code ID and Masking

Locate and document vehicle manufacturers' paint code application in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 12.1. Determine the type and color of paint already on the vehicle by manufacturer's vehicle information label.
- 12.2. Identify the code using paint manufacture manuals and or computer to determine paint code location.

Select the correct variant application if applicable in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 13.1. Identify variants of watches/chips.
- 13.2. Match variant to vehicle using color- corrected lighting.
- 13.3. Identify a variant that will produce the best possible blend

Appropriate masking techniques for refinishing fender and blending into adjacent panel(front door) application in relationship to tasks in the National Automotive Technicians Education Foundation (NATEF) Collision Repair and Refinishing Technical Standards for Painting and Refinishing (B2 ASE Test)

- 14.1. Mask and protect adjacent panels that will not be refinished.
- 14.2. Mask door jams and other aperture panels.

Oral Assessment/Interview

- 15.1. Exhibit personal skills such as attendance, time management and individual responsibility.
- 15.2. Demonstrate promptness when required to meet the interviewer at specific time and location.

Maintain professional conduct

16.1. Demonstrate courteous behavior while waiting for the interviewer.

Maintain professional appearance

17.1. Demonstrate proper attire (SkillsUSA uniform).

Complete job application and resume

18.1. Properly and legibly complete a job application and resume

Demonstrate interview skills

19.1. ASE Written Test

Competitors will be required to take a written test

20.1. Competitors will take a written test in painting and refinishing that includes surface preparation, spray gun operation and related equipment, paint mixing, matching, and applying, solving paint application problems, finish defects, causes, and cures, and safety precautions.

This information was obtained through the National Institute for Automotive Service Excellence Painting and Refinishing (B2) Certification Test.