



Collision Repair and Refinishing Technology

General Assessment Information

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Test Type: The Collision Repair and Refinishing Technology industry-based credential is included in NOCTI's Job Ready assessment battery. Job Ready assessments measure technical skills at the occupational level and include items which gauge factual and theoretical knowledge. Job Ready assessments typically offer both a written and performance component and can be used at the secondary and post-secondary levels. Job Ready assessments can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from secondary, post-secondary, and business/industry representatives from the states of Michigan, New York, Pennsylvania, and Virginia.



47.0603-
Autobody/Collision and Repair
Technology/Technician



Career Cluster 16 - Transportation,
Distribution, and Logistics

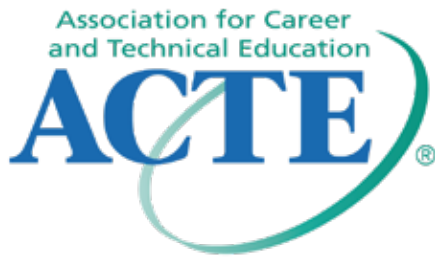


49-3021.00- Automotive Body
and Related Repairers



In the lower division
baccalaureate/associate degree
category, 3 semester hours in
Automotive Collision Repair and
Refinishing

General Assessment Information (continued)



The Association for Career and Technical Education (ACTE), the leading professional organization for career and technical educators, commends all students who participate in career and technical education programs and choose to validate their educational attainment through rigorous technical assessments. In taking this assessment you demonstrate to your school, your parents and guardians, your future employers and yourself that you understand the concepts and knowledge needed to succeed in the workplace. Good Luck!

Written Assessment

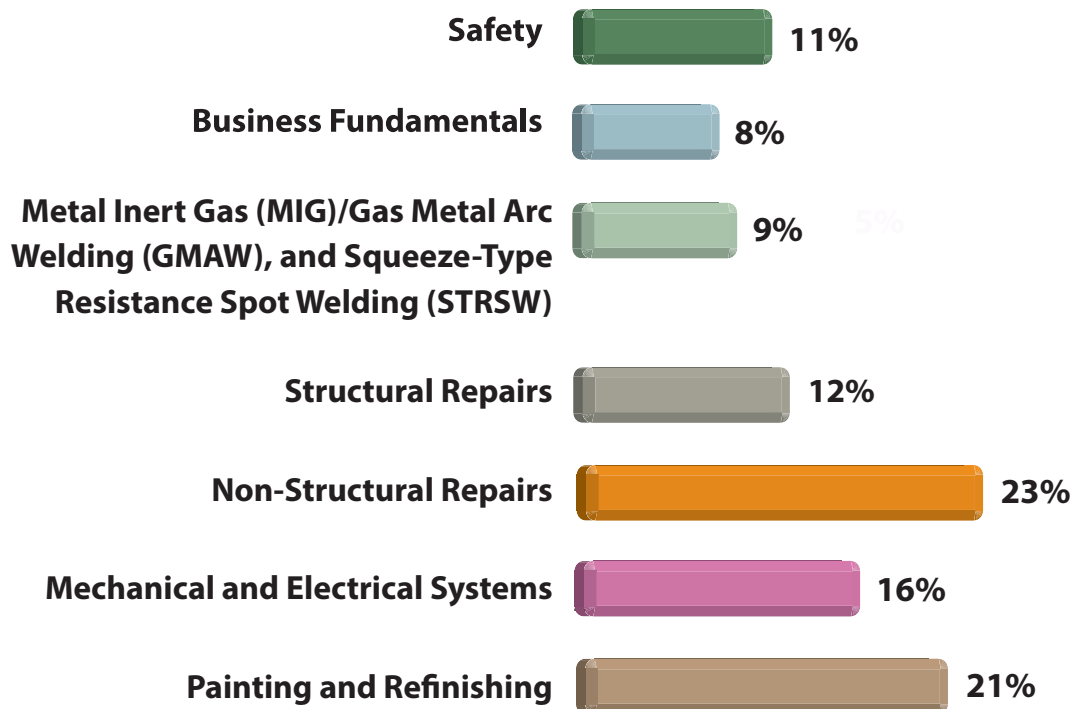
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 184

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Safety

- Demonstrate knowledge of workplace safety and environmental practices
- Demonstrate appropriate care and maintenance of shop tools and equipment
- Identify proper use of Personal Protective Equipment (PPE)

Business Fundamentals

- Demonstrate knowledge of estimating terminology
- Identify employability skills within the collision repair industry
- Calculate estimates and costs related to repair procedures

Metal Inert Gas (MIG)/Gas Metal Arc Welding (GMAW), and Squeeze-Type Resistance Spot Welding (STRSW)

- Demonstrate vehicle protection procedures
- Demonstrate understanding of welder set-up and maintenance
- Describe various welding and removal processes
- Describe and differentiate various types and uses of welding processes

Structural Repairs

- Replace and/or repair structural components
- Select, set up, and utilize manual measuring systems
- Explain and identify computerized 3-D measuring systems
- Explain and identify the operation of various pulling systems
- Diagnose direct and indirect structural damage
- Demonstrate knowledge of working with various strengths of metals



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Specific Standards and Competencies (continued)

Non-Structural Repairs

- Demonstrate understanding of metal straightening and finishing
- Identify automotive plastics and proper repair procedures
- Diagnose primary and secondary non-structural damage
- Demonstrate knowledge of movable and stationary glass
- Utilize basic corrosion protection procedures
- Use adhesive bonding procedures
- Remove and replace automotive trim
- Remove, install, replace, align, or repair non-structural panels
- Remove, install, and replace ancillary components (e.g., headlamps, under-hood fuse boxes)

Mechanical and Electrical Systems

- Identify basic steering and suspension components
- Verify functions of electrical systems and basic wiring repair
- Identify service and operation of air conditioning (AC) and cooling systems
- Identify a basic safety restraint system (SRS)
- Perform basic mechanical and electrical operations

Painting and Refinishing

- Identify and demonstrate surface preparation techniques
- Demonstrate masking and taping application techniques
- Identify and demonstrate paint material preparation techniques
- Identify causes and remedies for paint defects
- Identify and demonstrate paint materials, applications, and techniques



Sample Questions

Clogged spray booth filters will cause

- A. runs in the finish
- B. orange peel in the finish
- C. shorter flash times
- D. malfunction of the spray booth

What information does the eighth digit from the right of a VIN provide?

- A. assembly plant
- B. body type
- C. model year
- D. engine type

Bird-nesting occurs on a MIG/GMAW welder

- A. between the drive rollers and liner
- B. at the contact tip
- C. on the work being welded
- D. inside the liner

When making a vertical butt weld, start from the

- A. top
- B. bottom
- C. center
- D. left

When a door intrusion beam is severely damaged in an accident,

- A. replace the door shell
- B. straighten the beam
- C. repair the door skin
- D. heat the beam

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Sample Questions (continued)

On a typical unibody vehicle, the anchoring points are located

- A. under the front and rear frame rails
- B. on the front and rear suspension
- C. at the four corners of the center section
- D. on the front and rear bumpers

One of the functions of hydraulic shock absorbers is to help control

- A. jounce and rebound
- B. radius and camber
- C. radial runout
- D. axle runout

A properly operating air conditioning (AC) system's low side system pressure is

- A. 5 to 25 psi
- B. 25 to 55 psi
- C. 60 to 75 psi
- D. 75 to 110 psi

Etch primer is used to

- A. promote adhesion to bare metal
- B. remove oxidation and etch the metal
- C. remove wax and grease
- D. increase color retention

What is caused by solvent escaping through a partially cured paint film?

- A. orange peel
- B. lifting
- C. solvent pop
- D. zebra striping

Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 2 hours and 30 minutes

Number of Jobs: 3

Areas Covered:

40% Welding

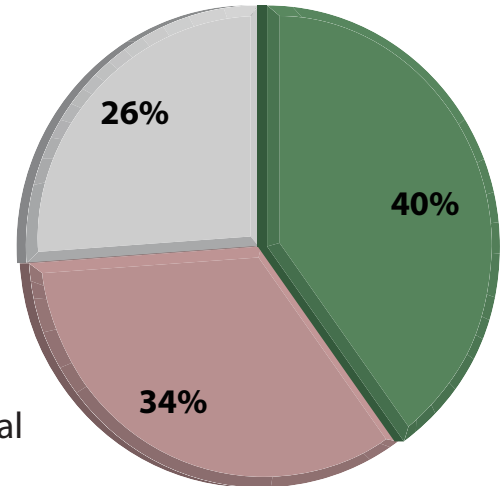
Participant will use 18 gauge coupons to practice and tune equipment. Participant will perform a horizontal lap weld, horizontal butt weld, and horizontal plug weld; presenting the best one for scoring to the evaluator, and clean work area and shut down equipment.

34% Sheet Metal Repair

Participant will obtain required tools, equipment, and materials, repair dent in the panel, and clean work area.

26% Refinishing

Participant will safely clean, tack and refinish panel, apply basecoat and clearcoat, and clean work area.



Sample Job

Sheet Metal Repair

Maximum Time: 1 hour

Participant Activity: Participant will obtain required tools, equipment, and materials, and clean panel, rough finish the damaged area, apply filler, finish contour, put away tools, and clean work area.

