

Job Ready Assessment Blueprint

Collision Repair and Refinishing Technology



Test Code: 3183 / Version: 01

General Assessment Information

Blueprint Contents

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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 Maine, New York, and Pennsylvania.



47.0603-
Autobody/Collision and Repair
Technology/Technician

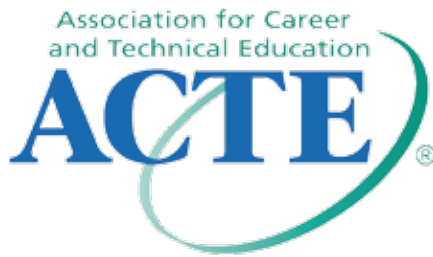


Career Cluster 16 - Transportation,
Distribution, and Logistics



49-3021.00- Automotive Body
and Related Repairers

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!



The Automotive Lift Institute (ALI) applauds students who successfully complete a Career and Technical Education program and validate their knowledge and skills with credentials such as ALI's lift safety certificate course and NOCTI industry-based assessments. As the world's most-widely recognized source for promoting the safe design, construction, installation, inspection, and use of automotive lift products, ALI believes in the importance of third-party, industry-driven credentials and their importance as a foundation for defining a technician's skill level throughout their career.



NATIONAL COLLEGE CREDIT RECOMMENDATION SERVICE
University of the State of New York - Regents Research Fund

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

Written Assessment

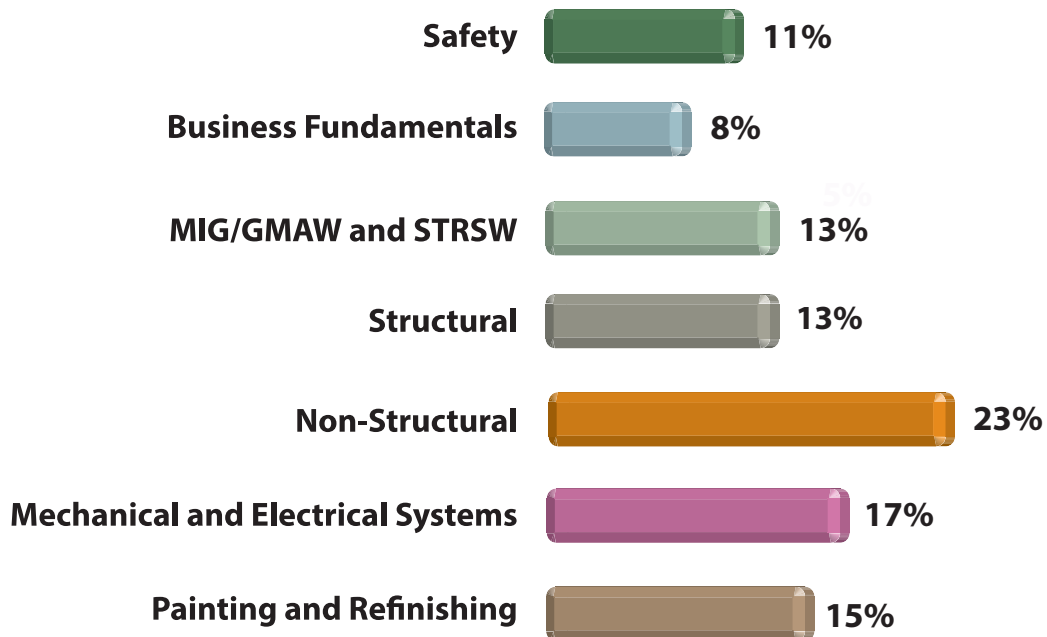
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 188

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 safety and environmental requirements in the collision repair industry
- Demonstrate appropriate care and maintenance of shop tools and equipment
- Identify proper safety techniques for the use of shop equipment, including PPE

Business Fundamentals

- Apply basic business practices within the collision repair industry, including estimating
- Identify employability skills within the collision repair industry

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

- Demonstrate vehicle protection procedures
- Describe various cutting and weld removal processes
- Describe and differentiate various types and uses of welding processes
- Replace and/or repair structural components

Structural

- Select, set-up, and utilize manual measuring systems
- Select, set-up, and utilize computerized measuring systems
- Demonstrate set up and operation of various pulling systems
- Diagnose primary and secondary structural damage
- Demonstrate knowledge of working with high strength steel



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Specific Standards and Competencies (continued)

Non-Structural

- 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 (e.g., tie rod ends, ball joints, steering racks)
- Identify how collision damage affects basic suspension geometry
- Verify functions of electrical system and basic wiring repair (e.g., soldering, quick connectors)
- Perform basic mechanical and electrical diagnostic operations

Painting and Refinishing

- Identify painting and refinishing safety and environmental requirements
- Identify and demonstrate surface preparation techniques
- Identify and demonstrate paint materials preparation techniques
- Identify causes and remedies for paint defects
- Identify and demonstrate paint materials application techniques



Sample Questions

To avoid burns, use caution when opening the

- A. radiator cap
- B. gas cap
- C. brake fluid reservoir
- D. washer reservoir

The term "R & I" means

- A. remove and inspect
- B. replace and install
- C. remove and install
- D. repair and install

To flatten MIG/GMAW welding bead,

- A. increase the wire speed
- B. increase the voltage
- C. change the gas setting
- D. change the ground

Unibody vehicles seldom incur _____ damage.

- A. diamond
- B. twist
- C. sag
- D. side sway

Air bag deployment is considered _____ damage.

- A. primary
- B. secondary
- C. inertia
- D. unibody

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Sample Questions (continued)

The _____ arm is attached to the steering box.

- A. radius
- B. pitman
- C. control
- D. idler

A dual-action sander is used to

- A. smooth welds
- B. feather or remove paint
- C. form ridges
- D. smooth out plastic body filler

Which class of fire involves flammable liquids?

- A. Class A
- B. Class B
- C. Class C
- D. Class D

Insufficient shielding gas flow can cause

- A. excessive penetration
- B. low weld bead
- C. porosity
- D. density

Apply weld-through primers

- A. before welding
- B. after painting
- C. after welding
- D. before painting

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: 3 hours

Number of Jobs: 4

Areas Covered:

33% Welding

Participant will safely adjust the welder, lap weld in a horizontal position, butt weld horizontal with backing, horizontal plug weld, and shut down the welder.

28% Sheet Metal Repair

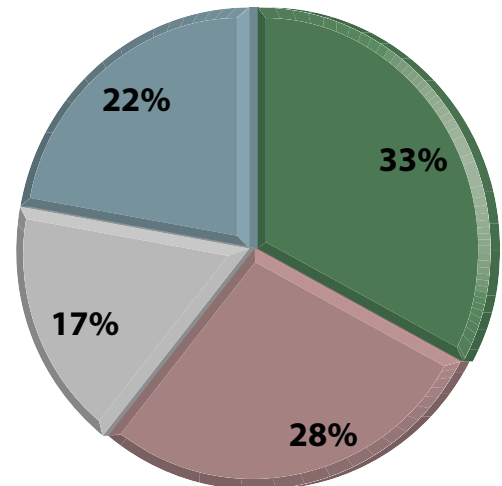
Participant will safely clean the panel, straighten the damaged area, prepare the panel for filler, mix and apply filler, and sand and shape filler.

17% Door Striker Adjustment

Participant will safely adjust the striker and door depth using OEM specifications.

22% Refinishing

Participant will safely clean panel, use the tack rag, apply a base coat, and apply clear coat.



Sample Job

Sheet Metal Repair

Maximum Time: 1 hour

Participant Activity: First clean the panel to see what exactly is damaged. Straighten the damaged area and prepare the panel for filler. Next mix and apply body filler. Once dry, sand and shape the panel.

