

***Entry Level Assessment Blueprint***

***Collision Repair***



## Specific Competencies and Skills Tested 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
- Describe 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, setup, 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



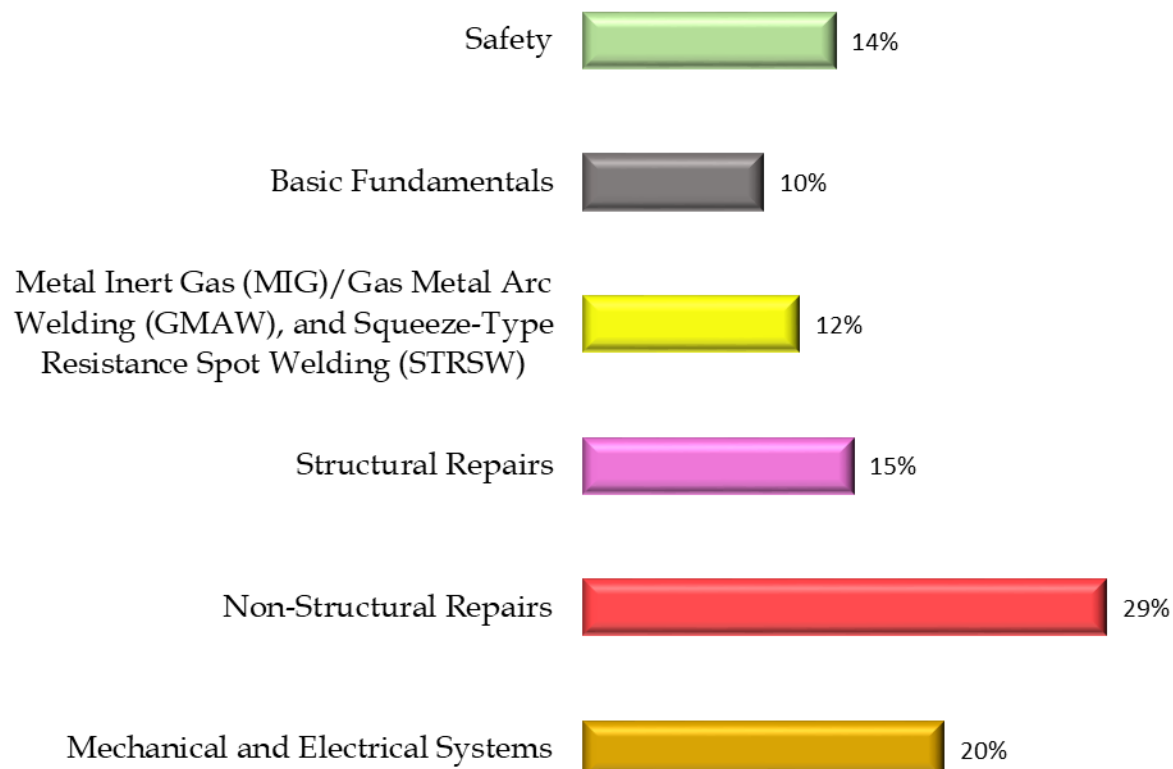
### Non-Structural Repairs

- 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, etc.)

## **Specific Competencies and Skills (continued)**

### **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

**Written Assessment:****Administration Time:** 3 hours**Number of Questions:** 146**Areas Covered:**

## 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

## Performance Assessment:

**Administration Time:** 2 hours and 15 minutes

**Number of Jobs:** 3

### Areas Covered:

#### 46% **Welding**

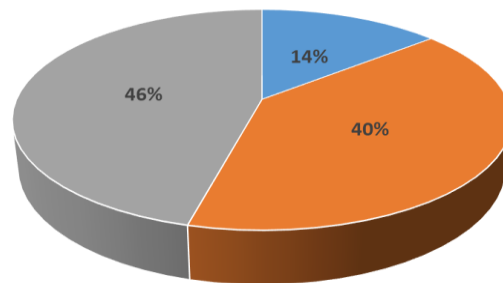
Participant will adjust the welder, perform a vertical lap weld, vertical butt weld with backing, vertical plug weld, and shut down the welder.

#### 40% **Sheet Metal Repair**

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

#### 14% **Vehicle Measurement**

Participant will safely measure wheel base and obtain the X measurement of the engine compartment.



**Sample Job:** Vehicle Measurement

**Maximum Time:** 15 minutes

**Participant Activity:** The participant will obtain tram gauge from storage area, measure vehicle wheel base (hub to hub) with tram gauge, and record results in metric measurement on the chart provided.