



## Job Ready Assessment Blueprint

# Automotive Technician Standard



Test Code: 4009 / Version: 01

**“Measuring What Matters”**

## Specific Competencies and Skills Tested in this Assessment:

### Customer Relations and Shop Procedures

- Interpret repair and work orders
- Exhibit understanding of appropriate customer interactions
- Exhibit understanding of environmental requirements
- Display understanding of safe working environment and shop procedures

### Engine Repair

- Perform engine service and diagnosis
- Perform cylinder head and valve train diagnosis and repair
- Perform engine block assembly diagnosis and repair
- Perform lubrication and cooling systems diagnosis and repair
- Perform exhaust inspection and service
- Perform mechanical timing and front-end service



### Automatic Transmission/Transaxle

- Diagnose general transmission/transaxle concerns
- Maintain and adjust transmission/transaxle
- Perform in-vehicle transmission/transaxle service
- Perform off-vehicle transmission/transaxle service
- Diagnose transmission/transaxle electronic issues

### Manual Drivetrain and Axles

- Diagnose general drivetrain concerns
- Diagnose and repair manual transmission/transaxle issues
- Perform in-vehicle manual transmission/transaxle service
- Perform off-vehicle manual transmission/transaxle service
- Diagnose and repair four-wheel drive/all-wheel drive components
- Diagnose and repair general axle concerns

***Specific Competencies and Skills continued:***

**Suspension and Steering**

- Diagnose, service, and repair steering systems
- Diagnose, service, and repair suspension systems
- Perform wheel alignment diagnosis, adjustment, and repair
- Diagnose, service, and repair wheels and tires

**Brakes**

- Diagnose and repair hydraulic systems
- Diagnose and repair drum brakes
- Diagnose and repair disc brakes
- Diagnose and repair power assist systems
- Diagnose and repair parking brake systems
- Diagnose and repair ABS (antilock brake systems) and TCS (traction control systems)

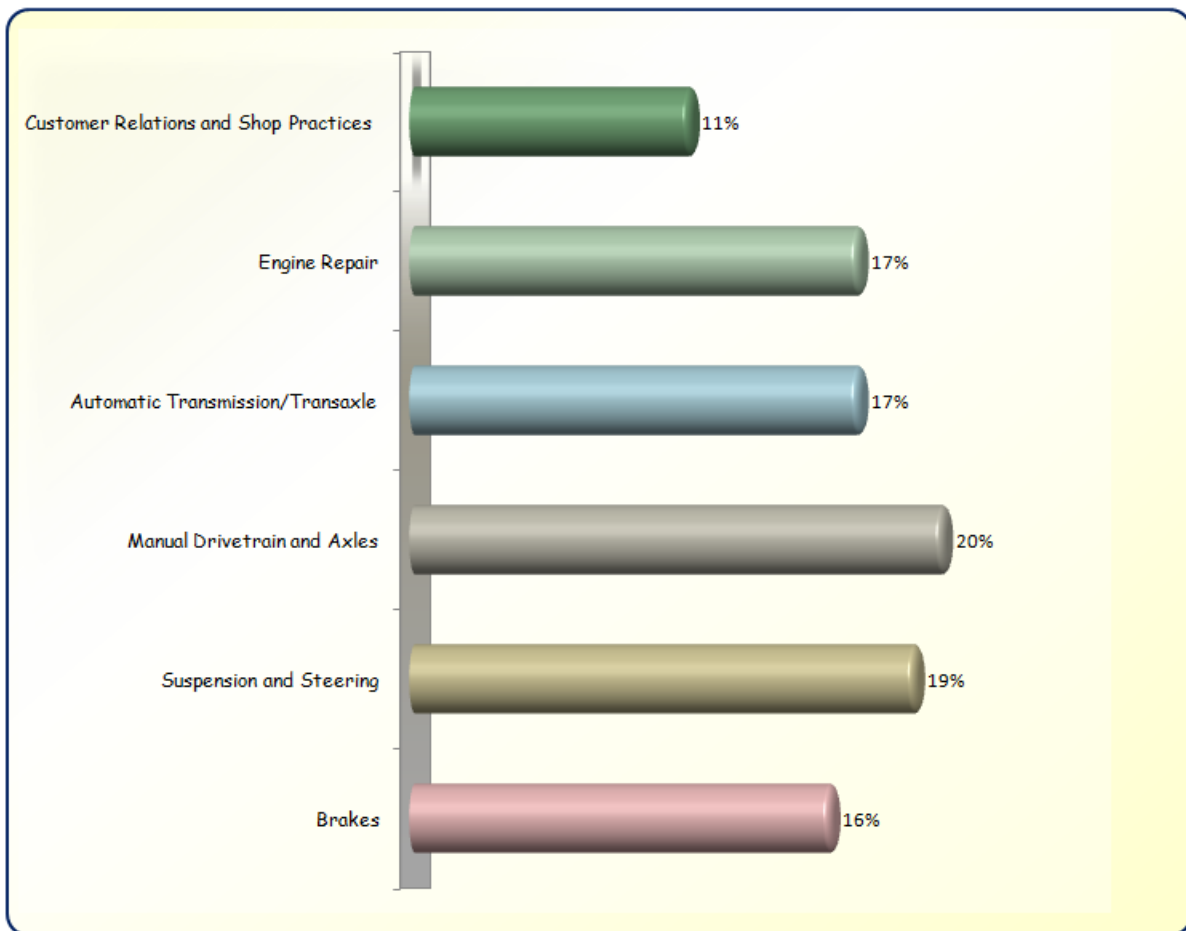


## Written Assessment:

Administration Time: 3 hours

Number of Questions: 120

### Areas Covered:



**Sample Questions:**

The service charge for a job that requires 7/10 of an hour at \$60.00 per hour would equal

- A. \$28.50
- B. \$34.40
- C. \$42.00
- D. \$72.10

Timing belt service intervals are critical on interference engines because

- A. overheating may occur
- B. loose belts may damage the water pump
- C. valve damage may occur if the belt fails
- D. detonation may occur

Electronic shift transfer case controls include a

- A. powertrain control module
- B. reverse light switch
- C. body control module
- D. fluid temperature switch

When installing a wheel and tire on a vehicle, the lug nuts should be

- A. torqued in a start pattern
- B. fully tightened individually
- C. installed with an impact wrench
- D. torqued in rotational pattern

On a parking brake system, the component that evenly distributes the mechanical force is the

- A. equalizer
- B. cable guide
- C. park brake pedal
- D. cable adjustment nut



## Performance Assessment:

**Administration Time:** 1 hour and 35 minutes

**Number of Jobs:** 4

### Areas Covered:

#### 11% Identification of Parts

Identify engine parts, automotive transmission/transaxle parts, manual drive train and axle parts, suspension and steering parts, brake parts, and time to complete Job 1.

#### 41% Disc Brake Assembly Service

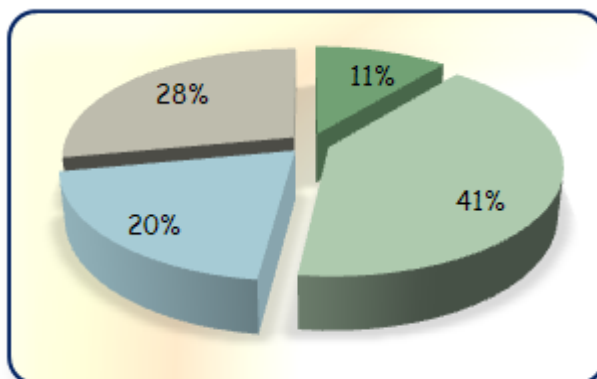
Remove caliper mounting bolts, replace brake pads, record caliper mounting bolt torque specs, remount and torque caliper, measure and record rotor thickness and manufacturer's discard specs, set up rotor on lathe and refinish service, measure and record rotor thickness post cut, determine usability of rotor, and time to complete Job 2.

#### 20% Tire Service and Balance

Dismount the tire from wheel, mount replacement tire on wheel, inflate tire, balance tire and wheel assembly, and time to complete Job 3.

#### 28% Cylinder Head Service

Cylinder head - look up and record max allowable clearance, measure cylinder head surface straightness, record measurements, determine cylinder head condition. Cylinder head valve - look up and record valve stem diameter specs, measure exhaust valve stem, record actual measurements, determine cylinder head valve condition, and time to complete Job 4.



**Sample Job:** Identification of Parts

**Maximum Time:** 15 minutes

**Participant Activity:** The participant will identify parts that are laid out on a workbench.



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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!