

**TEST INFORMATION GUIDE**

This test information guide provides a summary of concepts that are tested on the multiple-choice examination for the **Automotive Mechanic: Option 2 – Medium / Heavy Trucks** job. This information can be reviewed in combination with the class specification and examination announcement to assist you in preparing for the examination.

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**I. EMISSIONS AND FUEL SYSTEMS (16 Questions)**

Employees in this job are responsible for diagnosing mechanical problems affecting a vehicle's emission system and the various components which comprise the fuel system. They make necessary repairs or adjustments to the emissions system, its secondary components and to the components of the fuel system. Test questions topics include:

- Emission control system components and function;
- Emission system mechanical problems and resolutions;
- Fuel system components and function; fuel system mechanical problems and resolutions;
- Fuel, fuel mixes, fuel injection, and carbureted systems;
- Air injection system components and function.

**II. SUSPENSION AND STEERING (10 Questions)**

Employees in this job are responsible for diagnosing mechanical problems affecting a vehicle's suspension and steering components as well as making necessary repairs or adjustments to these systems and their secondary components. Test question topics include:

- Suspension and steering system components and function;
- Causes of excessive tire wear on inside edge, outside edge, and cupping;
- Camber adjustments;
- Front end alignments;
- Suspension and steering system mechanical problems and resolutions.

**III. BRAKES / DIFFERENTIAL / TPMS (18 Questions)**

Employees in this job are responsible for diagnosing mechanical problems affecting the differential or rear axle and the brake system of a vehicle. They are responsible for making necessary repairs or adjustments to the differential, its secondary components and to the brake system and its secondary components; they must also possess knowledge of Tire Pressure Monitor Systems (TPMS) equipped on vehicles. Test question topics include:

- Components and function of the differential or rear axle of a vehicle;
- Differential mechanical problems and resolutions;
- Effects of improper differential adjustments;
- Tools and methods used for measuring differential components;
- Transaxles and conventional axles;
- Different brake systems components and function; ratio of braking action;
- Tire Pressure Monitor System (TPMS) function and components.

**IV. ENGINES / DIAGNOSTICS** **(10 Questions)**

Employees in this job perform various tasks which require knowledge of the different components of gasoline engines. They must be knowledgeable in testing and diagnosing various engine problems and determining appropriate repairs. Test question topics include:

- Engine component location and function;
- Interrelation between the various engine components;
- Engine system mechanical problems and resolutions;
- Component measurement and testing.

**V. IGNITION AND ELECTRICAL SYSTEMS** **(18 Questions)**

Employees in this job are responsible for diagnosing mechanical problems affecting the ignition system and the various components which comprise the electrical system of a vehicle. They are responsible for making necessary repairs or adjustments to various components of the ignition and electrical systems. Test question topics include:

- Primary and secondary ignition systems components and function;
- Signs and signals of mechanical problems associated with the ignition systems;
- Current, voltage, voltage measurement, amperes, charging rates spark test, and coil reserve;
- Electrical system components and function;
- Electrical system mechanical problems and resolutions.

**VI. HEATING AND AIR CONDITIONING SYSTEMS** **(10 Questions)**

Employees in this job are responsible for diagnosing mechanical problems affecting the various components which comprise the heating and air conditioning systems of a vehicle as well as making necessary repairs and adjustments to the components of these systems. Test question topics include:

- Heating and air conditioning systems component location and functions;
- Heating/air conditioning system mechanical problems and resolutions;
- Refrigerant, and the methods and procedures for charging an A/C system.

**VII. WELDING**

**(12 Questions)**

Employees in this job are responsible for repairing existing mechanical equipment as well as constructing specialized tools or equipment using oxyacetylene or electric welding equipment. Test question topics include:

- Welding components and their operation;
- Various welding techniques or procedures;
- General safety precautions for welding equipment and operation.

**VIII. MEDIUM/HEAVY TRUCKS**

**(18 Questions)**

Employees in this job are required to perform a variety of repairs that are specific to medium and heavy trucks. The mechanical systems covered in this section of the exam are gasoline engines, diesel engines, drive trains, brakes and suspension and steering. Test question topics include:

- Fuel system components and function;
- Mechanical problems associated with the ignition systems;
- Brake systems components and function;
- Engine component functions;
- Alternator, transmission and radiator components and function.