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## SECTION HEADING

### AUTO 1126: Steering/Suspension/Alignment

#### Description

Steering/Suspension/Alignment identifies the skills necessary to diagnose and repair steering and suspension systems. The course teaches suspension systems using leaf springs, coil springs, MacPherson struts, torsion bars and wheel balance. The course also covers the principles of operation, disassembly, checks and adjustments of power and manual steering gears, and manual and power rack and pinion systems. The procedures required for checking and adjusting wheel alignment will also be covered.

#### Credits

3

#### Prerequisite

None

#### Corequisite

None

#### Topics to be Covered

1. Steering system operation
2. Diagnosis and repair of steering systems
3. Hydraulic assisted steering
4. Diagnosis and repair of hydraulic assisted steering systems
5. Suspension system operation
6. Diagnosis and repair of suspension systems
7. Alignment geometry
8. Basic alignment performance
9. Tire and wheel relationship to steering and alignment
10. Tire maintenance and repair

#### Learning Outcomes

1. Perform a basic alignment
2. Replace common hydraulic steering components
3. Replace common steering components
4. Replace common suspension components
5. Repair and replace tires
6. Diagnose and repair basic steering problems
7. Diagnose and repair basic suspension problems
8. Comply with personal and environmental safety practices associated with clothing, eye protection, hand tools, power equipment, and proper ventilation
9. Demonstrate safe handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations
10. \*The required outcomes follow the Auto Service Technician (AST) model of the Board of the National Institute for Automotive Service Excellence (ASE)

#### Credit Details

Lecture: 1

Lab: 2

OJT: 0

MnTC Goal Area(s): None