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## SECTION HEADING

### AUTO 1120: Air Conditioning

#### Description

Air Conditioning identifies and defines the theory, principles, diagnosis, testing, and repairs of the air conditioning and heater system operations.

#### Credits

3

#### Prerequisite

TRAN 1100

#### Corequisite

None

#### Topics to be Covered

1. Air conditioning fundamentals
2. Air conditioning systems
3. Testing and repairing of air conditioning systems
4. Computer controlled air conditioning systems

#### Learning Outcomes

1. Identify heating, ventilation and air conditioning (HVAC) components and configuration.
2. Inspect and replace A/C compressor drive belts, pulleys, and tensioners; determine necessary action.
3. Identify hybrid vehicle A/C system electrical circuits and the service/safety precautions.
4. Inspect A/C condenser for airflow restrictions; determine necessary action.
5. Inspect engine cooling and heater systems hoses and pipes; determine necessary action.
6. Inspect A/C-heater ducts, doors, hoses, cabin filters, and outlets; identify the source of A/C system odors, and determine necessary action
7. Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations
8. \*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