

**ASE Education Foundation**  
**2025 ASE Correlation Chart**  
**Heating, Ventilation, and Air Conditioning (HVAC) (A7)**

**MLR-** Maintenance & Light Repair

**AST-** Auto Service Technology (Includes MLR)

**MAST-** Master Auto Service Technology (Includes MLR and AST)

	<b>Task</b>	<b>Priority</b>	<b>MLR</b>	<b>AST</b>	<b>MAST</b>	<b>Text Page #</b>	<b>Task Page #</b>
<b>A. General</b>							
<b>1.</b>	Research vehicle service information, including refrigerant/oil/fluid type, vehicle service history, service precautions, technical service bulletins, and recalls including vehicles equipped with advanced driver assistance systems (ADAS).	P-1	✓	✓	✓	672-701; 781-785; 988-994	
<b>2.</b>	Identify heating, ventilation, and air conditioning (HVAC) components and configurations.	P-1	✓	✓	✓	720-733	
<b>3.</b>	Retrieve and record DTCs, OBD monitor status, and freeze frame data; clear codes and data when directed.	P-1	✓	✓	✓	784	
<b>4.</b>	Perform A/C system performance test; interpret results; determine needed action.	P-1	✓ (P-2)	✓	✓	785-786	
<b>5.</b>	Identify abnormal operating noises in the A/C system; determine needed action.	P-2	✓ (P-3)	✓	✓	789-790	
<b>6.</b>	Leak test A/C system; determine needed action.	P-1	✓ (Visual only)	✓	✓	790-791	
<b>7.</b>	Identify and interpret heating and air conditioning <b>concerns</b> ;	P-1	✓	✓	✓	782-784	

	determine needed action.						
8.	Place a vehicle in service mode as needed before servicing and diagnosing the HVAC system.	P-1	✓ (research only)	✓	✓	785	
9.	Identify refrigerant type; test for sealant; select and connect proper gauge set/test equipment; record temperature and pressure readings.	P-1		✓	✓	757- 764; 768- 771	
10.	Inspect condition/quantity of refrigerant oil removed from A/C system; determine needed action.	P-2		✓	✓	764- 765	
11.	Determine recommended oil and oil capacity for system application and component(s) replacement.	P-1		✓	✓	775	
<b>B. Refrigeration System Components</b>							
1.	Inspect, remove, and/or replace A/C compressor drive belts, pulleys, tensioners; determine needed action.	P-1	✓	✓	✓	782- 783	
2.	Inspect for proper A/C condenser airflow; determine needed action.	P-1	✓ (P-2)	✓	✓	785- 786	
3.	Inspect evaporator housing condensation drain; determine needed action.	P-1	✓	✓	✓	782- 784; 791	
4.	Inspect, test, and/or service A/C compressor clutch components and/or assembly; determine needed action.	P-2		✓	✓	720	
5.	Remove, inspect, reinstall, and/or replace A/C compressor and mountings; determine recommended oil type and quantity	P-1		✓	✓	775	
6.	Remove and inspect A/C system mufflers, hoses, lines, fittings, O-rings, seals, and service valves; determine needed action.	P-2		✓	✓	774- 775	

7.	Remove, inspect, and replace receiver/drier or accumulator/drier; determine recommended oil type and quantity.	P-2		✓	✓	725-727; 794	
8.	Remove, inspect, and install expansion valve or orifice (expansion) tube.	P-1		✓	✓	787	
9.	Diagnose A/C system conditions that cause the protection devices (pressure, thermal, and/or control module) to interrupt system operation; determine needed action.	P-1		✓	✓	782-784	
10.	Determine procedure to remove and reinstall evaporator; determine required oil type and quantity.	P-2		✓	✓	792-794	
11.	Remove, inspect, reinstall, and/or replace condenser; determine required oil type and quantity.	P-2		✓	✓	773-775	
<b>C. Heating, Ventilation, and Engine Cooling Systems</b>							
1.	Inspect engine cooling and heater systems hoses and pipes; determine needed action.	P-1	✓	✓	✓	190-191	
2.	Inspect and test heater control valve(s); determine needed action.	P-2		✓	✓	186-187	
3.	Diagnose temperature control problems in the HVAC system related to the engine cooling system, including electric heating; determine needed action.	P-2		✓	✓	187-191	
4.	Determine procedure to remove, inspect, reinstall, and/or replace heater core; properly refill system.	P-2		✓	✓	792-794	
<b>D. Operating Systems and Related Controls</b>							
1.	Inspect HVAC system ducts, doors, hoses, cabin filters, and outlets; determine needed action.	P-1	✓	✓	✓	738-741	
2.	Identify the source of HVAC	P-2	✓	✓	✓	787-	

	system odors.					789	
3.	Inspect and test HVAC system blower motors, resistors, switches, relays, wiring, and protection devices; determine needed action.	P-1		✓	✓	736-745	
4.	Diagnose A/C compressor control systems; determine needed action.	P-1		✓	✓	784-785	
5.	Diagnose malfunctions in the vacuum, mechanical, and/or electrical components, and controls of the HVAC system; determine needed action.	P-2		✓	✓	749-752	
6.	Inspect, test, remove and/or replace HVAC system control panel; determine needed action.	P-2		✓	✓	751-752	
7.	Check operation of automatic HVAC control systems; determine needed action.	P-2		✓	✓	746-753	
<b>E. Refrigerant Recovery, Recycling, and Handling</b>							
1.	Demonstrate knowledge of the requirement to recover, recycle, and handle refrigerants using proper equipment and procedures	P-1	✓	✓	✓	757-765	
2.	Use and maintain refrigerant handling equipment according to equipment manufacturer's standards.	P-1		✓	✓	767-773	
3.	Identify A/C system refrigerant; test for sealants; recover, evacuate, and charge A/C system; add refrigerant oil as required.	P-1		✓	✓	768-779	
4.	Recycle, label, and store refrigerant.	P-1		✓	✓	778-779	