

2017 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)

	Task	Priority	MLR	AST	MAST	Text Page #	Task Page #
A. General: A/C System Diagnosis and Repair							
1.	Identify and interpret heating and air conditioning problems; determine needed action.	P-1		✓	✓	789-795	209
2.	Research vehicle service information including refrigerant/oil type, vehicle service history, service precautions, and technical service bulletins.	P-1	✓	✓	✓	759	187; 193
3.	Performance test A/C system; identify problems	P-1		✓	✓	732-733	194
4.	Identify abnormal operating noises in the A/C system; determine needed action	P-1		✓	✓	789	195
5.	Identify refrigerant type; select and connect proper gauge set/test equipment record temperature and pressure readings	P-1		✓	✓	799; 802-803	196
6.	Leak test A/C system; determine needed action	P-1		✓	✓	795-796	197
7.	Inspect condition of refrigerant oil removed from A/C system; determine needed action.	P-2			✓	799-800	198
8.	Determine recommended oil and oil capacity for system application.	P-1		✓	✓	759; 802	198

9.	Using a scan tool, observe and record related HVAC data and trouble codes	P-3		✓	✓	776-777	199
B. Refrigeration System Component Diagnosis and Repair							
1.	Inspect, remove and/or replace A/C compressor drive belts, pulleys, and tensioners and visually inspect A/C components for signs of leaks; determine needed action.	P-1	✓	✓	✓	149-150	210
2.	Inspect, test, service and/or replace A/C compressor clutch components and/or assembly; check compressor clutch air gap; adjust as needed.	P-2		✓	✓	768; 803	207; 210
3.	Remove, inspect, reinstall and/or replace A/C compressor and mountings; determine recommended oil type and quantity.	P-2		✓	✓	803	210
4.	Identify hybrid vehicle A/C system electrical circuits and service/safety precautions	P-2	✓	✓	✓	787	188
5.	Determine need for an additional A/C system filter; perform needed action.	P-3		✓	✓	-	200
6.	Remove and inspect A/C system mufflers, hoses, lines, fittings, O-rings, seals, and service valves; perform needed action.	P-2		✓	✓	800	214
7.	Inspect for proper A/C condenser airflow; determine needed action.	P-1	✓	✓	✓	804	211
8.	Remove, inspect, and replace receiver/drier or accumulator/drier; determine recommended oil type and quantity.	P-2		✓	✓	804	212
9.	Remove, inspect, and install expansion valve or orifice (expansion) tube.	P-1		✓	✓	804	213
10.	Inspect evaporator housing water drain; perform needed action.	P-1		✓	✓	760	215

11.	. Diagnose A/C system conditions that cause the protection devices (pressure, thermal, and/or control module) to interrupt system operation; determine needed action.	P-2			✓	792	199
12.	Determine procedure to remove and reinstall evaporator; determine required oil type and quantity.	P-2			✓	795; 804	216
13.	Remove, inspect, reinstall and/or replace condenser; determine required oil type and quantity.	P-2			✓	804	217
C. Heating, Ventilation, and Engine Cooling Systems Diagnosis and Repair							
1.	Inspect engine cooling and heater systems hoses and pipes; perform needed action.	P-1	✓	✓	✓	206; 788	202; 218
2.	Inspect and test heater control valve(s); perform needed action	P-2		✓	✓	206	201
3.	Diagnose temperature control problems in the heater/ventilation system; determine PCM) to interrupt system operation; determine needed action.	P-2		✓	✓	676	201; 209
4.	Determine procedure to remove, inspect, and/or replace heater core.	P-2		✓	✓	804	205; 216
D. Operating Systems and Related Controls Diagnosis and Repair							
1.	Inspect and test HVAC system blower motors, resistors, switches, relays, wiring, and protection devices; perform needed action.	P-1		✓	✓	779- 780	189; 206
2.	Diagnose A/C compressor clutch control systems; determine needed action.	P-2			✓	756	207
3.	Diagnose malfunctions in the vacuum, mechanical, and electrical components and controls of the heating, ventilation, and A/C (HVAC) system; determine needed action.	P-2			✓	772- 776	191

4.	Inspect and test HVAC system heater control panel assembly; determine needed action.	P-3			✓	772	208
5.	Inspect and test A/C-heater control cables, motors, and linkages; perform needed action.	P-3			✓	776	208
6.	Inspect HVAC system heater ducts, doors, hoses, cabin filters, and outlets; perform needed action.	P-1	✓	✓	✓	773-776; 784-786	223
7.	Identify the source of HVAC system odors.	P-2	✓	✓	✓	-	209
8.	Check operation of automatic or semi-automatic heating, ventilation, and air-conditioning (HVAC) control systems; determine needed action.	P-2			✓	770-780	190; 192
E. Refrigerant Recovery, Recycling, and Handling							
1.	Perform correct use and maintenance of refrigerant handling equipment according to equipment manufacturer's standards.	P-1		✓	✓	756-758	219; 222
2.	Identify A/C system refrigerant; test for sealants; recover, evacuate, and charge A/C system; add refrigerant oil as required	P-1		✓	✓	792	220
3.	Recycle, label, and store refrigerant	P-1		✓	✓	756-758	221