

2022 ASE Correlation Chart

Heating, Ventilation, and Air Conditioning (HVAC) (A7)

MLR- Maintenance & Light Repair

AST- Auto Service Technology

MAST- Master Auto Service Technology

	Task	MLR	AST	MAST	Text Page #	Task Page #
A. General						
1.	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	P-1	P-1	759	187; 193
2.	Identify heating, ventilation, and air conditioning (HVAC) components and configurations.	P-1	P-1	P-1	752- 755	187
3.	Retrieve and record DTCs, OBD monitor status, and freeze frame data; clear codes and data when directed.	P-1	P-1	P-1	776- 779	199; 275
4.	Identify steps of an A/C performance test; perform A/C system performance test; interpret results; determine needed action.	P-2 Identify the steps only	P-1	P-1	732- 733	194
5.	Identify abnormal operating noises in the A/C system; determine needed action	P-3 Identify noises only	P-2	P-1	789	195

	Task	MLR	AST	MAST	Text Page #	Task Page #
6.	Visually inspect A/C system for signs of leaks; leak test A/C system; determine needed action.	P-1 Inspect only	P-1	P-1	795-796	197
7.	Identify and interpret heating and air conditioning problems; determine needed action.	P-1 Identify problems only	P-1	P-1	789-795	209
8.	Identify refrigerant type; select and connect proper gauge set/test equipment record temperature and pressure readings		P-1	P-1	799; 802-803	196
9.	Inspect condition of refrigerant oil removed from A/C system; determine needed action.		P-2	P-2	799-800	198
10.	Determine recommended oil and oil capacity for system application.		P-1	P-1	759; 802	198
B. Refrigeration System Components						
1.	Inspect, remove, and/or replace A/C compressor drive belts, pulleys, and tensioners; determine needed action.	P-1 Inspect and replace only	P-1	P-1	149-150	210
2.	Inspect for proper A/C condenser airflow; determine needed action.	P-2	P-1	P-1	804	211
3.	Inspect evaporator housing water drain; perform needed action.	P-1	P-1	P-1	760	215
4.	Inspect, test, and/or service A/C compressor clutch components and/or assembly; determine needed action.		P-2	P-2	768; 803	207; 210
5.	Remove, inspect, reinstall and/or replace A/C compressor and mountings; determine recommended oil type and quantity.		P-1	P-1	803	210

	Task	MLR	AST	MAST	Text Page #	Task Page #
6.	Remove and inspect A/C system mufflers, hoses, lines, fittings, O-rings, seals, and service valves; perform needed action.		P-2	P-2	800	214
7.	Remove, inspect, and replace receiver/drier or accumulator/drier; determine recommended oil type and quantity.		P-2	P-2	804	212
8.	Remove, inspect, and install expansion valve or orifice (expansion) tube.		P-1	P-1	804	213
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-2	P-1	792	199
10.	Determine procedure to remove and reinstall evaporator; determine required oil type and quantity.		P-2	P-2	795; 804	216
11.	Remove, inspect, reinstall and/or replace condenser; determine required oil type and quantity.		P-3	P-2	804	217
C. Heating, Ventilation, and Engine Cooling Systems						
1.	Inspect engine cooling and heater systems hoses and pipes; determine needed action.	P-1	P-1	P-1	206; 788	202; 218
2.	Inspect and test heater control valve(s); perform needed action		P-2	P-2	206	201
3.	Diagnose temperature control problems in the HVAC system related to the engine cooling system, including electric heating; determine needed action.		P-3	P-2	676	201; 209

	Task	MLR	AST	MAST	Text Page #	Task Page #
4.	Determine procedure to remove, inspect, reinstall, and/or replace heater core; properly refill system.		P-2	P-2	804	205; 216
D. Operating Systems and Related Controls						
1.	Inspect HVAC system heater ducts, doors, hoses, cabin filters, and outlets; determine needed action.	P-1	P-1	P-1	773-776; 784-786	223
2.	Identify the source of HVAC system odors.	P-2	P-2	P-2	795	209
3.	Inspect and test HVAC system blower motors, resistors, switches, relays, wiring, and protection devices; determine needed action.		P-1	P-1	779-780	189; 206
4.	Diagnose A/C compressor control systems; determine needed action.		P-2	P-1	756	207
5.	Diagnose malfunctions in the vacuum, mechanical, and/or electrical components and controls of the HVAC system; determine needed action.		P-2	P-2	772-776	191
6.	Inspect, test, remove and/or replace HVAC system control panel; determine needed action.		P-2	P-2	772	208
8.	Check operation of automatic HVAC control systems; determine needed action.		P-2	P-2	770-780	190; 192
E. Refrigerant Recovery, Recycling, and Handling						
1.	Demonstrate awareness of the need to recover, recycle, and handle refrigerants using proper equipment and procedures.	P-1	P-1	P-1	756-757	219
2.	Use and maintain refrigerant handling equipment according to equipment manufacturer's standards.		P-1	P-1	756-758	219; 222

	Task	MLR	AST	MAST	Text Page #	Task Page #
3.	Identify A/C system refrigerant; test for sealants; recover, evacuate, and charge A/C system; add refrigerant oil as required		P-1	P-1	792	220
4.	Recycle, label, and store refrigerant		P-1	P-1	756- 758	221