

ASE Education Foundation

Automatic Transmission and Transaxle (A2) 2022 Correlation Chart

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							
1.	Research vehicle service information such as fluid type, vehicle service history, service precautions, technical service bulletins, and recalls including xEVs and vehicles equipped with advanced driver assistance systems (ADAS).	P-1	✓	✓	✓	117-119 692 1647	
2.	Identify automatic transmission and transaxle components and configurations, including converter automatic, dual-clutch automatic (DCT), CVT, and xEV drive.	P-1	✓	✓	✓	1622-1632	
3.	Retrieve and record DTCs, OBD monitor status, and freeze frame data; clear codes and data when directed.	P-1	✓	✓	✓	972-974 1682-1683	
4.	Inspect transmission fluid condition; check fluid level; inspect for leaks on transmission or transaxle equipped with a dipstick.	P-1	✓	✓	✓	1680	
5.	Inspect transmission fluid condition; check fluid level; inspect for leaks on transmission or transaxle not	P-1	✓ (P-3)	✓	✓	1681	

	equipped with a dipstick.						
	Task	Priority	MLR	AST	MAST	Text Page #	Task Page #
6.	Diagnose transmission/transaxle gear reduction/multiplication concerns using driving, driven, and held member (power flow) principles.	P-1	✓ (P-3)	✓	✓	1628-1631	
7.	Diagnose pressure concerns in a transmission using hydraulic principles (Pascal's Law).	P-1	✓ (P-3)	✓ (P-2)	✓	1088-1090 1687-1688	
8.	Identify and interpret transmission/transaxle concerns, differentiate between engine performance and transmission/transaxle concerns; determine needed action.	P-1		✓	✓	1680-1682	
9.	Diagnose fluid loss and condition concerns; determine needed action.	P-1		✓	✓	1685-1686	
10.	Perform stall test; determine needed action.	P-2		✓	✓	1685	
11.	Perform lock-up converter system tests; determine needed action.	P-2		✓ (P-3)	✓	1686	
12.	Perform pressure tests on transmissions/transaxles equipped with electronic pressure control; determine needed action.	P-1		✓ (P-3)	✓	1687-1688	
13.	Diagnose electronic transmission/transaxle control systems using appropriate test equipment and service information.	P-1		✓	✓	1682-1685	
14.	Diagnose noise and vibration concerns; determine needed action.	P-2			✓	1609-1620	

	Task	Priority	MLR	AST	MAST	Text Page #	Task Page #
B. In-Vehicle Transmission/Transaxle							
1.	Inspect, adjust, and replace external manual valve shift linkage, transmission range sensor/switch, and park/neutral position switch.	P-1	✓ (P-2)	✓ (P-2)	✓	1657 1690	
2.	Drain and replace fluid and filter(s); use proper fluid type per manufacturer specification.	P-1	✓	✓	✓	1688-1689	
3.	Perform relearn procedures	P-2	✓**	✓	✓	1702	
4.	Inspect, replace/or and align powertrain mounts.	P-1	✓ (P-3)	✓	✓	1570	
5.	Inspect for leakage; replace external seals, gaskets, and bushings.	P-2		✓	✓	1685-1686	
6.	Inspect, test, adjust, repair, and/or replace electrical/electronic components and circuits.	P-1		✓	✓	1692	
C. Off-Vehicle Transmission and Transaxle							
1.	Describe the operational characteristics of a continuously variable transmission (CVT).	P-2	✓ (P-3)	✓	✓	1634-1639	
2.	Describe the operational characteristics of a hybrid vehicle drive train.	P-2	✓	✓	✓	1665-1666	
3.	Remove and reinstall transmission/transaxle and torque converter; inspect engine core plugs, rear crankshaft seal, dowel pins, dowel pin holes, and mounting surfaces.	P-2		✓	✓	1693 1702	
4.	Inspect, leak test, flush, and/or replace transmission/transaxle oil cooler, lines, and fittings.	P-1		✓	✓	1701	
5.	Inspect, leak test, flush, and/or replace transmission/transaxle oil cooler, lines, and fittings.	P-1		✓	✓	1702	

**Demonstrate understanding of relearn procedures.

6.	Inspect converter flex (drive) plate, converter attaching bolts, converter pilot, converter pump drive surfaces, converter end play, and crankshaft pilot bore.	P-2		✓	✓	1694-1695	
7.	Disassemble, clean, and inspect transmission/transaxle.	P-2			✓	1694-1695	
8.	Inspect, measure, clean, and replace valve body (includes surfaces, bores, springs, valves, sleeves, retainers, brackets, check valves/balls, screens, spacers, and gaskets).	P-2			✓	1695-1696	
9.	Inspect servo and accumulator bores, pistons, seals, pins, springs, and retainers; determine necessary action.	P-2			✓	1654 1696	
10.	Assemble transmission/transaxle.	P-2			✓	1698-1701	
11.	Inspect, measure, and reseal oil pump assembly and components.	P-2			✓	1695-1696	
12.	Measure transmission/transaxle end play and/or preload; determine necessary action	P-2			✓	1700	
13.	Inspect, measure, and replace thrust washers and bearings.	P-2			✓	1696	
14.	Inspect oil delivery circuits, including seal rings, ring grooves, and sealing surface areas, feed pipes, orifices, and check valves/balls.	P-2			✓	1696	
15.	Inspect bushings; determine necessary action.	P-2			✓	1699	
16.	Inspect and measure planetary gear assembly components; determine necessary action.	P-2			✓	1698	
17.	Inspect case bores, passages, bushings, vents, and mating surfaces; determine necessary action.	P-2			✓	1699	

18.	Diagnose and inspect transaxle drive, link chains, sprockets, gears, bearings, and bushings; perform necessary action.	P-2			✓	1601 1631	
19.	Inspect measure, repair, adjust or replace transaxle final drive components.	P-2			✓	1631-1632	
20.	Inspect clutch drum, piston, check-balls, springs, retainers, seals, and friction and pressure plates, bands and drums; determine necessary action.	P-2			✓	1651-1653 1697-1698	
21.	Measure clutch pack clearance; determine necessary action.	P-2			✓	1698-1699	
22.	Air test operation of clutch and servo assemblies.	P-2			✓	1698-1699	
23.	Inspect roller and sprag clutch, races, rollers, sprags, springs, cages, retainers; determine necessary action.	P-2			✓	1654 1699-1700	