

2021 ASE Correlation Chart

Automatic Transmissions/ Transaxles (A2)

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 such as 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 | 19-21; 187-194 | 1, 2, 3 |
| 2. | Identify automatic transmission and transaxle components and configurations. | P-1 | P-1 | P-1 | 9-16 | 1 |
| 3. | Retrieve and record DTCs, OBD monitor status, and freeze frame data; clear codes and data when directed. | P-1 | P-1 | P-1 | 142-143; 192-197 | 23, 25, 34 |
| 4. | Inspect transmission fluid condition; check fluid level; inspect for leaks on transmission or transaxle equipped with a dipstick. | P-1 | P-1 | P-1 | 189-190 | 30, 31 |
| 5. | Inspect transmission fluid condition; check fluid level; inspect for leaks on transmission or transaxle not equipped with a dipstick. | P-3 | P-1 | P-1 | 190 | 30, 31 |

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| 6. | Demonstrate knowledge of/ diagnose transmission/transaxle gear reduction/multiplication concerns using driving, driven, and held member (power flow) principles. | P-3 Demonstrate knowledge only | P-1 | P-1 | 70-91 | - |
| 7. | Demonstrate knowledge of/ diagnose pressure concerns in a transmission using hydraulic principles (Pascal's Law). | P-3 Demonstrate knowledge only | P-2 | P-1 | 30-37 | - |
| 8. | Identify and interpret transmission/transaxle concern, differentiate between engine performance and transmission/transaxle concerns; determine needed action. | | P-1 | P-1 | 187-188 | - |
| 9. | Diagnose fluid loss and condition concerns; determine needed action. | | P-1 | P-1 | 188-192 | 30 |
| 10. | Perform stall test; determine needed action. | | P-2 | P-2 | 59-61 | 7 |
| 11. | Perform lock-up converter system tests; determine needed action. | | P-3 | P-2 | 58 | 8 |
| 12. | Perform pressure tests on transmissions/transaxles equipped with electronic pressure control; determine needed action. | | P-3 | P-1 | 201-203 | 32 |
| 13. | Diagnose electronic transmission/transaxle control systems using appropriate test equipment and service information. | | P-1 | P-1 | 192-197 | 28, 34 |
| 14. | Diagnose noise and vibration concerns; determine needed action. | | | P-2 | 187-188; 197-200 | 33 |

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| B. In-Vehicle Transmission/Transaxle | | | | | | |
| 1. | Inspect, adjust, and/or replace external manual valve shift linkage, transmission range sensor/switch, and/or park/neutral position switch. | P-2 | P-2 | P-1 | 211-212 | 37 |
| 2. | Drain and replace fluid and filter(s); use proper fluid type per manufacturer specification. | P-1 | P-1 | P-1 | 208-209 | 36 |
| 3. | Demonstrate understanding of /perform relearn procedures. | P-2 Under- standing only | P-2 | P-2 | 134-144; 263 | - |
| 4. | Inspect, replace and/or align powertrain mounts. | P-3 | P-1 | P-1 | 276 | 35 |
| 5. | Inspect for leakage; replace external seals, gaskets, and bushings. | | P-2 | P-2 | 210-211 | 31, 51 |
| 6. | Inspect, test, adjust, repair, and/or replace electrical/electronic components and circuits. | | P-1 | P-1 | 114-122 | 24 |
| C. Off-Vehicle Transmission and Transaxle | | | | | | |
| 1. | Describe the operational characteristics of a continuously variable transmission (CVT). | P-3 | P-2 | P-2 | 166-171 | 27 |
| 2. | Describe the operational characteristics of a hybrid vehicle drive train. | P-2 | P-2 | P-2 | 147-163 | 26 |
| 3. | Remove and reinstall transmission/transaxle and torque converter; inspect engine core plugs, rear crankshaft seal, dowel pins, dowel pin holes, and mating surfaces. | | P-2 | P-2 | 221-222; 263-264 | 40 |
| 4. | Inspect, leak test, flush and/or replace transmission/transaxle oil cooler, lines, and fittings. | | P-1 | P-1 | 207-210 | 38 |

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| 5. | Inspect converter flex (drive) plate, converter attaching bolts, converter pilot, converter pump drive surfaces, converter end play, and crankshaft pilot bore. | | P-2 | P-2 | 61-63 | 9 |
| 6. | Disassemble, clean, and inspect transmission/transaxle. | | | P-2 | 223-228 | 41 |
| 7. | Inspect, measure, clean, and replace valve body (includes surfaces, bores, springs, valves, switches, solenoids, sleeves, retainers, brackets, check valves/balls, screens, spacers, and gaskets). | | | P-2 | 237-242 | 50 |
| 8. | Inspect servo and accumulator bores, pistons, seals, pins, springs, and retainers; determine needed action. | | | P-2 | 224-225 | - |
| 9. | Assemble transmission/transaxle. | | | P-2 | 246-242 | 52 |
| 10. | Inspect, measure, and reseal oil pump assembly and components. | | | P-2 | 253-255 | 5 |
| 11. | Measure transmission/transaxle end play or preload; determine needed action | | | P-2 | 260 | 53 |
| 12. | Inspect, measure, and/or replace thrust washers and bearings. | | | P-2 | 246-247 | 42 |
| 13. | Inspect oil delivery circuits, including seal rings, ring grooves, and sealing surface areas, feed pipes, orifices, and check valves/balls. | | | P-2 | 250-251 | 43, 46 |
| 14. | Inspect bushings; determine needed action. | | | P-2 | 246-247 | 44 |

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| 15. | Inspect and measure planetary gear assembly components; determine needed action. | | | P-2 | 258-259 | 45 |
| 16. | Inspect case bores, passages, bushings, vents, and mating surfaces; determine needed action. | | | P-2 | 251-253 | 6 |
| 17. | Diagnose and inspect transaxle drive, link chains, sprockets, gears, bearings, and bushings; perform needed action. | | | P-2 | 226 | 47 |
| 18. | Inspect measure, repair, adjust or replace transaxle final drive components. | | | P-2 | 260-261 | 48 |
| 19. | Inspect clutch drum, piston, check-balls, springs, retainers, seals, friction plates, pressure plates, and bands; determine needed action. | | | P-2 | 255-257 | 49 |
| 20. | Measure clutch pack clearance; determine needed action. | | | P-2 | 257 | 11 |
| 21. | Air test operation of clutch and servo assemblies. | | | P-2 | 259 | 11 |
| 22. | Inspect one-way clutches, races, rollers, sprags, springs, cages, retainers; determine needed action. | | | P-2 | 258 | 12 |