

2017 ASE 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 #
SUSPENSION AND STEERING (A4)							
A. General: Suspension and Steering Systems							
1.	Research vehicle service information including fluid type, vehicle service history, service precautions, and technical service bulletins.	P-1	✓	✓	✓	5	4
2.	Identify and interpret suspension and steering system concerns; determine needed action.	P-1			✓	2-3	95; 107
B. Steering Systems Diagnosis and Repair							
1.	Disable and enable supplemental restraint system (SRS); verify indicator lamp operation.	P-1	✓	✓	✓	535-536	104
2.	Remove and replace steering wheel; center/time supplemental restraint system (SRS) coil (clock spring).	P-1		✓	✓	536	104
3.	Diagnose steering column noises, looseness, and binding concerns (including tilt mechanisms); determine needed action.	P-2		✓	✓	591-594	105

4.	Diagnose power steering gear (non-rack and pinion) binding, uneven turning effort, looseness, hard steering, and noise concerns; determine needed action.	P-2		✓	✓	593-596	111
5.	Diagnose power steering gear (rack and pinion) binding, uneven turning effort, looseness, hard steering, and noise concerns; determine needed action.	P-2		✓	✓	593-596	111
6.	Inspect steering shaft universal-joint(s), flexible coupling(s), collapsible column, lock cylinder mechanism, and steering wheel; perform needed action.	P-2		✓	✓	536-539	105
7.	Remove and replace rack and pinion steering gear; inspect mounting bushings and brackets.	P-2		✓	✓	599-601	106
8.	Inspect rack and pinion steering gear inner tie rod ends (sockets) and bellows boots; replace as needed.	P-1	✓ Inspect only (P-1)	✓	✓	562-566	106
9.	Inspect power steering fluid level and condition.	P-1	✓	✓	✓	592	112
10.	Flush, fill, and bleed power steering system; use proper fluid type per manufacturer specification.	P-2	✓	✓	✓	593	112
11.	Inspect for power steering fluid leakage; determine needed action.	P-1	✓	✓	✓	594	113
12.	Remove, inspect, replace, and/or adjust power steering pump drive belt.	P-1	✓	✓	✓	591	114
13.	Remove and reinstall power steering pump.	P-2		✓	✓	595-598	114
14.	Remove and reinstall press fit power steering pump pulley; check pulley and belt alignment.	P-2	✓ Check/adjust PS belt (P-1)	✓	✓	596	114

15.	Inspect, remove and/or replace power steering hoses and fittings.	P-2	✓	✓	✓	594	115
16.	Inspect, remove and/or replace pitman arm, relay (centerlink/intermediate) rod, idler arm and mountings, and steering linkage damper.	P-2	✓ (P-1)	✓	✓	562-567	109
17.	Inspect, replace, and/or adjust tie rod ends (sockets), tie rod sleeves, and clamps.	P-1	✓	✓	✓	562-567	110
18.	Inspect, test and diagnose electrically assisted power steering systems (including using a scan tool) ; determine needed action.	P-2	✓ Inspect electric power steering only	✓	✓	608-609	116
19.	Identify hybrid vehicle power steering system electrical circuits and safety precautions.	P-2	✓	✓	✓	35; 608	118
20.	Test power steering system pressure; determine needed action.	P-2			✓	608-609	117
C. Suspension Systems Diagnosis and Repair							
1.	Diagnose short and long arm suspension system noises, body sway, and uneven ride height concerns; determine needed action.	P-1		✓	✓	474-480	96
2.	Diagnose strut suspension system noises, body sway, and uneven ride height concerns; determine needed action.	P-1		✓	✓	474-480	96
3.	Inspect, remove and/or replace upper and lower control arms, bushings, shafts, and rebound bumpers.	P-3	✓ Inspect and replace rebound and jounce bumper only (P-1)	✓	✓	491-493	97
4.	Inspect, remove and/or replace strut rods and bushings.	P-3	✓	✓	✓	490	98
5.	Inspect, remove, and/or replace upper and/or lower ball joints (with or without wear indicators).	P-2	✓ Inspect only (P-1)	✓	✓	480-483	97

6.	Inspect, remove and/or replace steering knuckle assemblies.	P-3		✓	✓	493	97
7.	Inspect, remove and/or replace short and long arm suspension system coil springs and spring insulators.	P-3	✓ Inspect only (P-1)	✓	✓	491-493	97
8.	Inspect, remove and/or replace torsion bars and mounts.	P-3	✓ Inspect only (P-1)	✓	✓	493	99
9.	Inspect, remove and/or replace front/rear stabilizer bar (sway bar) bushings, brackets, and links.	P-3	✓ Inspect only (P-1)	✓	✓	489	98
10.	Inspect, remove and/or replace strut cartridge or assembly, strut coil spring, insulators (silencers), and upper strut bearing mount.	P-3	✓ Inspect only (P-1)	✓	✓	486-488	100
11.	Inspect, remove and/or replace track bar, strut rods/radius arms, and related mounts and bushings.	P-3	✓ Inspect only (P-1)	✓	✓	490	97
12.	Inspect rear suspension system leaf spring(s), spring insulators (silencers), shackles, brackets, bushings, center pins/bolts, and mounts.	P-1		✓	✓	510	102
D. Related Suspension and Steering Service							
1.	Inspect, remove, and/or replace shock absorbers; inspect mounts and bushings.	P-1	✓	✓	✓	486; 509	101
2.	Remove, inspect, service and/or replace front and rear wheel bearings.	P-1		✓	✓	143-148	36; 39
3.	Describe the function of suspension and steering control systems and components, (i.e. active suspension, and stability control).	P-3	✓	✓	✓	515-532	103
E. Wheel Alignment Diagnosis, Adjustment, and Repair							
1.	Diagnose vehicle wander, drift, pull, hard steering, bump steer, memory steer, torque steer, and steering return concerns; determine needed action.	P-1		✓	✓	662-665; 690	121

2.	Perform pre-alignment inspection, measure vehicle ride height; determine needed action.	P-1	✓	✓	✓	661	123
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3.	Prepare vehicle for wheel alignment on alignment machine; perform four-wheel alignment by checking and adjusting front and rear wheel caster, camber; and toe as required; center steering wheel.	P-1		✓	✓	664-666	124; 125
4.	Check toe-out-on-turns (turning radius); determine needed action.	P-2		✓	✓	667	126
5.	Check steering axis inclination (SAI) and included angle; determine needed action.	P-2		✓	✓	667	126
6.	Check rear wheel thrust angle; determine needed action.	P-1		✓	✓	672	127
7.	Check for front wheel setback; determine needed action.	P-2		✓	✓	652	127
8.	Check front and/or rear cradle (subframe) alignment; determine needed action.	P-3		✓	✓	670	127
9.	Reset steering angle sensor	P-2			✓	689-690	129

F. Wheels and Tires Diagnosis and Repair

1.	Inspect tire condition; identify tire wear patterns; check for correct tire size, application (load and speed ratings) and air pressure as listed on the tire information placard/label.	P-1		✓	✓	412-415	88
2.	Diagnose wheel/tire vibration, shimmy, and noise; determine needed action.	P-2		✓	✓	419-421	89
3.	Rotate tires according to manufacturer's recommendations including vehicles equipped with tire pressure monitoring systems (TPMS).	P-1	✓	✓	✓	418	90

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4.	Measure wheel, tire, axle flange, and hub runout; determine needed action.	P-2		✓	✓	419-421	91
5.	Diagnose tire pull problems; determine needed action.	P-1		✓	✓	662	89
6.	Dismount, inspect, and remount tire on wheel; balance wheel and tire assembly.	P-1	✓	✓	✓	421-429;	92
7.	Dismount, inspect, and remount tire on wheel equipped with tire pressure monitoring system sensor.	P-1	✓	✓	✓	421-422	92
8.	Inspect tire and wheel assembly for air loss; perform needed action.	P-1	✓	✓	✓	412	88
9.	Repair tire following vehicle manufacturer approved procedure.	P-1	✓	✓	✓	429-430	93
10.	Identify indirect and direct and test tire pressure monitoring system (TPMS); calibrate system; verify operation of instrument panel lamps.	P-1	✓	✓	✓	398-409	87
11.	Demonstrate knowledge of steps required to remove and replace sensors in a tire pressure monitoring system including relearn procedure.	P-1	✓ (P-2)	✓	✓	406-409	87