

AU3.316 Drive Train Service

LBCC Task	AU3.316 Drive Train Service	
	<b>I. ENGINE REPAIR</b>	
	<b>A. General</b>	
2	1. Research applicable vehicle and service information, vehicle service history, service precautions, and technical service bulletins.	P-1
3	2. Verify operation of the instrument panel engine warning indicators.	P-1
4	3. Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action.	P-1
5	4. Install engine covers using gaskets, seals, and sealers as required.	P-1
6	5. Remove and replace timing belt; verify correct camshaft timing.	P-1
7	6. Perform common fastener and thread repair, to include: remove broken bolt, restore internal and external threads, and repair internal threads with thread insert.	P-1
9	7. Identify hybrid vehicle internal combustion engine service precautions.	P-3
	<b>I. ENGINE REPAIR</b>	
	<b>B. Cylinder Head and Valve Train</b>	
14	1. Adjust valves (mechanical or hydraulic lifters).	P-1
	<b>I. ENGINE REPAIR</b>	
	<b>C. Lubrication and Cooling Systems</b>	
39	1. Perform cooling system pressure and dye tests to identify leaks; check coolant condition and level; inspect and test radiator, pressure cap, coolant recovery tank, and heater core and galley plugs; determine necessary action.	P-1
41	2. Inspect, replace, and adjust drive belts, tensioners, and pulleys; check pulley and belt alignment.	P-1
45	3. Remove, inspect, and replace thermostat and gasket/seal.	P-1
46	4. Inspect and test coolant; drain and recover coolant; flush and refill cooling system with recommended coolant; bleed air as required.	P-1
48	5. Perform engine oil and filter change.	P-1
	<b>II. AUTOMATIC TRANSMISSION AND TRANSAXLE</b>	
	<b>A. General</b>	
53	1. Research applicable vehicle and service information, fluid type, vehicle service history, service precautions, and technical service bulletins.	P-1
55	2. Check fluid level in a transmission or a transaxle equipped with a dip-stick.	P-1
56	3. Check fluid level in a transmission or a transaxle not equipped with a dip-stick.	P-1
64	4. Check transmission fluid condition; check for leaks.	P-2
	<b>II. AUTOMATIC TRANSMISSION AND TRANSAXLE</b>	
	<b>B. In-Vehicle Transmission/Transaxle</b>	
65	1. Inspect, adjust, and replace external manual valve shift linkage, transmission range sensor/switch, and park/neutral position switch.	P-2
66	2. Inspect for leakage at external seals, gaskets, and bushings.	P-2
68	4. Drain and replace fluid and filter(s).	P-1
69	3. Inspect replace and align power train mounts.	P-2
	<b>II. AUTOMATIC TRANSMISSION AND TRANSAXLE</b>	
	<b>C. Off-Vehicle Transmission and Transaxle</b>	
73	1. Describe the operational characteristics of a continuously variable transmission (CVT).	P-3
74	2. Describe the operational characteristics of a hybrid vehicle drive train.	P-3

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	<b>III. MANUAL DRIVE TRAIN AND AXLES</b>	
	<b>A. General</b>	
93	1. Research applicable vehicle and service information, fluid type, vehicle service history, service precautions, and technical service bulletins.	P-1
94	3. Check fluid condition; check for leaks.	P-2
95	2. Drain and refill manual transmission/transaxle and final drive unit.	P-1
	<b>III. MANUAL DRIVE TRAIN AND AXLES</b>	
	<b>B. Clutch</b>	
100	1. Check and adjust clutch master cylinder fluid level.	P-1
103	2. Check for system leaks.	P-1
	<b>III. MANUAL DRIVE TRAIN AND AXLES</b>	
	<b>C. Transmission/Transaxle</b>	
105	1. Describe the operational characteristics of an electronically-controlled manual transmission/transaxle.	P-3
	<b>III. MANUAL DRIVE TRAIN AND AXLES</b>	
	<b>D. Drive Shaft, Half Shafts, Universal and Constant-Velocity (CV) Joints</b>	
112	1. Inspect, remove, and replace front wheel drive (FWD) bearings, hubs, and seals.	P-2
113	2. Inspect, service, and replace shafts, yokes, boots, and universal/CV joints.	P-2
	<b>III. MANUAL DRIVE TRAIN AND AXLES</b>	
	<b>E. Differential Case Assembly</b>	
115	1. Clean and inspect differential housing; check for leaks; inspect housing vent.	P-2
116	2. Check and adjust differential housing fluid level.	P-1
117	3. Drain and refill differential housing.	P-1
	<b>E.1 Drive Axles</b>	
130	1. Inspect and replace drive axle wheel studs.	P-2
	<b>III. MANUAL DRIVE TRAIN AND AXLES</b>	
	<b>F. Four-wheel Drive/All-wheel Drive</b>	
136	1. Inspect front-wheel bearings and locking hubs.	P-3
137	2. Check for leaks at drive assembly seals; check vents; check lube level.	P-2
	<b>VII. HEATING AND AIR CONDITIONING</b>	
	<b>A. General</b>	
348	1. Research applicable vehicle and service information, vehicle service history, service precautions, and technical service bulletins.	P-1
	<b>VII. HEATING AND AIR CONDITIONING</b>	
	<b>B. Refrigeration System Components</b>	
356	1. Inspect and replace A/C compressor drive belts, pulleys, and tensioners; determine necessary action.	P-1
359	2. Identify hybrid vehicle A/C system electrical circuits and the service/safety precautions.	P-2
362	3. Inspect A/C condenser for airflow restrictions; determine necessary action.	P-1
	<b>VII. HEATING AND AIR CONDITIONING</b>	
	<b>C. Heating, Ventilation, and Engine Cooling Systems</b>	
369	1. Inspect engine cooling and heater systems hoses; perform necessary action.	P-1
	<b>VII. HEATING AND AIR CONDITIONING</b>	
	<b>D. Operating Systems and Related Controls</b>	
378	1. Inspect A/C-heater ducts, doors, hoses, cabin filters, and outlets; perform necessary action.	P-1
379	2. Identify the source of A/C system odors.	P-2