

Engine Removal

GENERAL MOTORS (Cont.)

BUICK (Cont.)

5) On left side, remove through bolt and bracket securing final drive to engine. Raise vehicle on hoist. Remove splash shield. Remove flywheel shield. Remove right exhaust pipe at manifold. Disconnect starter wiring and remove starter.

6) Remove converter-to-flywheel bolts. Partially lower vehicle. Remove right front wheel. Remove right exhaust manifold. Disconnect oil cooler lines at filter base and remove oil filter base. Again raise vehicle.

7) Remove 2 bolts securing right output shaft support brackets. Scribe around washers for reassembly alignment reference. Remove lower right transmission-to-engine bolts. Attach final drive support chain. Lower vehicle. Attach lifting chain to engine.

8) Move engine oil cooler pipes rearward. Remove radiator. Remove water control valve. Remove remaining transmission-to-engine bolts. Lower transmission using a floor jack. Remove engine from engine compartment.

CADILLAC

4-CYLINDER MODELS

1.8L (112") & 2.0L (122") – 1) Disconnect battery cables at battery. Drain cooling system. Remove air cleaner. If equipped, remove power steering pump. Remove window washer bottle. If equipped with A/C, remove relay bracket at bulkhead connector. Remove bulkhead connector.

2) If equipped, remove cruise control servo bracket. Disconnect all vacuum hoses and wiring to engine. Remove bolts attaching vacuum booster-to-master cylinder. Lay vacuum booster aside. Remove heater hose at hot water pipe. Remove fan assembly. Remove horn. Remove carburetor linkage.

3) Raise vehicle on hoist. Remove heater hose and fuel line at intake manifold. If equipped, remove A/C compressor brace. Remove exhaust shield. Remove starter. Remove exhaust pipe at manifold. Remove front tires.

4) Remove stabilizer at lower control arms. Remove ball joints from steering knuckle. Remove drive axles at transaxle. Remove transaxle strut. If equipped with A/C, remove inner fender shield, drive belt and compressor.

5) Remove front motor mount nuts. If equipped with manual transaxle, remove clutch cable at transaxle. If equipped with automatic transaxle, remove detent cable at transaxle. On all models, install engine lifting device. Remove transaxle mount and bracket. Remove engine from engine compartment.

V6 MODELS

4.1L (252") Exc. Eldorado & Seville – 1) Mark hood and hinges for reassembly reference. Remove hood. Disconnect battery cables at battery. Drain cooling system. Remove air cleaner. If equipped, remove A/C compressor, with hoses and brackets attached, and position aside.

2) Remove fan, pulleys and belts. Remove power steering pump from bracket and position aside, with hoses connected. Disconnect fuel pump hoses. Disconnect negative battery cable from engine. Disconnect all vacuum hoses to engine. Disconnect accelerator cable at carburetor. Remove all wiring to engine.

3) Raise vehicle on hoist. Disconnect cable shield from engine. Disconnect exhaust pipes at manifolds. Remove lower converter cover. Remove flywheel-to-converter attaching bolts. Remove transmission-to-engine bolts. Remove motor mount through bolts.

4) If equipped, remove cruise control bracket. Lower vehicle. Support transmission with suitable jack. Attach lifting device to

engine. Raise engine enough to remove motor mount through bolts. Remove engine from engine compartment.

4.1L (252") Eldorado & Seville – 1) Mark hood and hinges for reassembly reference. Remove hood. Disconnect battery cables from battery. Drain cooling system. Remove air cleaner. Remove heater hoses. Remove fan, pulleys and belts. Disconnect radiator hoses from engine.

2) Remove fan shroud assembly. Remove transmission oil cooler lines from radiator. Remove radiator. Remove air conditioning compressor. Disconnect all electrical wires and vacuum hoses from engine. Disconnect accelerator cable at carburetor.

3) Disconnect fuel pump hoses. Remove power steering pump from bracket and position aside, with hoses connected. Raise vehicle on hoist. Drain crankcase. Remove converter cover. Remove converter-to-flywheel bolts. Remove transmission-to-engine bolts.

4) Remove right output shaft support bolts. Remove front motor mount bolts. Install final drive support chain. Remove final drive-to-engine bracket. Attach lifting device to engine. Remove engine from engine compartment.

V8 MODELS

4.1L (250") & 6.0L (368") – 1) Disconnect negative battery cable at battery. Drain cooling system. Remove 2 screws attaching strut support rods to radiator cover. Remove 2 top radiator shroud-to-radiator support screws. Remove power steering reservoir-to-upper fan shroud screws and position reservoir aside.

2) Mark hood and hinges for reassembly reference. Remove hood. Remove air cleaner and inlet duct assembly. Disconnect upper radiator hose from thermostat housing. Disconnect all wires to engine. Disconnect all vacuum hoses to engine. Disconnect throttle linkage from carburetor.

3) Remove clutch fan assembly. Remove lower radiator hose. Remove A/C compressor from engine, with hoses connected, and position aside. Disconnect water line from coolant reservoir to water pump. Remove hose from water nipple at rear of intake manifold. Disconnect all fuel lines from engine.

4) Raise vehicle on hoist. Disconnect oil cooler lines from filter adapter. Remove oil filter adapter. Remove strut rods that connect motor mounts to flywheel inspection cover. Remove flywheel inspection cover. Remove transmission-to-engine bolts.

GENERAL MOTORS (Cont.)

CADILLAC (Cont.)

5) Remove motor mount through bolts (rear wheel drive) or front engine mount from crossmember (front wheel drive). Remove bolts that attach flywheel-to-converter. Disconnect exhaust pipes from manifolds. Support exhaust system. Lower vehicle. Support transmission with suitable jack.

6) Install lifting chain to lifting brackets on engine. Raise engine slowly while pulling forward to disengage engine from transmission. Raise engine and remove from engine compartment.

5.7L (350") Diesel Exc. Eldorado & Seville - 1) Drain cooling system. Remove air cleaner and install cover over air intake port in intake manifold. Mark hood and hinges for assembly reference. Remove hood. Disconnect negative battery cables at batteries. Disconnect engine ground strap (from right cylinder head to cowl).

2) Remove radiator hoses. Remove engine oil and transmission oil cooler lines. Remove heater hoses. Disconnect power steering hoses from steering gear. Remove A/C compressor from engine, with hoses and brackets attached, and position aside.

3) Disconnect fuel line from fuel pump. Disconnect all wiring to engine. Remove hairpin clip at bellcrank. Remove throttle and T.V. cables from intake manifold and position aside. Remove upper radiator support. Remove radiator.

4) Raise vehicle on hoist. Disconnect exhaust pipes at manifolds. Remove torque converter cover. Remove bolts attaching converter-to-flywheel. Remove motor mount bolts or nuts. Remove 3 bolts attaching transmission-to-engine on right side.

5) Disconnect wires from starter and remove starter. Lower vehicle. Secure chain lift to engine. Place a board on top of a jack and raise transmission slightly. Remove 3 bolts attaching transmission-to-engine on left side. Remove engine from engine compartment.

5.7L (350") Diesel Eldorado & Seville - 1) Disconnect negative battery cable at battery. Drain cooling system. Remove upper radiator support. Remove air cleaner and install cover over air intake port in intake manifold. Mark hood and hinges for reassembly reference. Remove hood.

2) Disconnect engine ground strap. Remove fan and fan shroud together. Disconnect upper and lower radiator hoses at engine. Disconnect transmission and engine oil cooler lines at radiator. Disconnect heater hoses from water pump and water control valve.

3) Disconnect all wiring to engine. Remove alternator with upper brace. Remove power steering pump bracket from engine. Position power steering pump aside. Remove A/C compressor from engine, with hoses and brackets attached, and position aside.

4) Disconnect all fuel lines to engine. Disconnect accelerator rod detent cable. Disconnect all vacuum hoses from engine. Remove cooler line bracket. Disconnect left exhaust pipe at manifold. Remove upper mount heat shield.

5) On left side, remove through bolt and bracket securing final drive to engine. Raise vehicle on hoist. Remove splash shield. Remove flywheel shield. Remove right exhaust pipe at manifold. Disconnect starter wiring and remove starter.

6) Remove converter-to-flywheel bolts. Partially lower vehicle. Remove right front wheel. Remove right exhaust manifold. Disconnect oil cooler lines at filter base and remove oil filter base. Again raise vehicle.

7) Remove 2 bolts securing right output shaft support brackets. Scribe around washers for reassembly alignment reference. Remove lower right transmission-to-engine bolts. Attach final drive support chain. Lower vehicle. Attach lifting chain to engine.

8) Move engine oil cooler pipes rearward. Remove radiator. Remove water control valve. Remove remaining transmission-to-engine bolts. Lower transmission using floor jack. Remove engine from engine compartment.

CADILLAC TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N·m)
4-Cyl. Engines	
1.8L (112") & 2.0L (122")	
Front Motor Mount-to-Engine	25-35 (34-47)
Lower Motor Mount-to-Engine	15-20 (20-27)
Motor Mounts-to-Frame	35-45 (47-61)
Starter-to-Engine	26-37 (35-50)
Transaxle-to-Engine	48-63 (65-85)
Flywheel-to-Torque Converter	35 (47)
6-Cyl. Engines	
4.1L (252")	
Motor Mount-to-Frame	65 (88)
Motor Mount Through Bolt	30 (41)
Engine Mount Strut Rod-to-Flywheel Hsg.	35 (47)
Starter-to-Engine	26-37 (35-50)
Transmission-to-Engine	35 (47)
Flywheel-to-Torque Converter	30 (41)
V8 Engines	
5.7L (350") Diesel	
Starter-to-Engine	35 (47)
Transmission-to-Engine	35 (47)
Flywheel-to-Torque Converter	40 (54)
4.1L (250") & 6.0L (368")	
Motor Mount-to-Engine	21 (28)
Motor Mount-to-Frame	30 (41)
Motor Mount Through Bolt	30 (41)
Starter-to-Engine	45 (61)
Transmission-to-Engine	35 (47)
Flywheel-to-Torque Converter	30 (41)