

# Engine Removal

## GENERAL MOTORS (Cont.)

### BUICK (Cont.)

#### V6 & V8 RIVIERA

1) Mark hinges and remove hood. Disconnect battery, drain cooling system, remove cooler lines and radiator. Remove air cleaner, all vacuum lines and electrical connections from engine.

2) Remove air conditioner and power steering pump. Do not disconnect lines, just position out of way. On turbocharged models, disconnect turbo output exhaust pipe from turbocharger assembly.

3) Raise vehicle and support on safety stands. Remove starter, converter cover and converter-to-flywheel bolts. Remove bolts from transmission, motor mounts, and output shaft. Install chain to support final drive, remove engine to final drive bracket, and remove engine.

### BUICK

#### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
305" & 350" (VIN G,H,L)	
Motor Mount to Block .....	30-40
Motor Mount to Frame .....	25-35
Through Bolt .....	65-80
All Other Engines	
Motor Mount to Block .....	60-70
Motor Mount to Frame .....	25-35
Through Bolt .....	45-50
Converter Housing to Engine .....	30-35
Clutch Housing to Engine .....	25
Rear Mount to Transmission .....	40-45
Rear Mount to Crossmember .....	60

### CADILLAC

**CAUTION** — Do not loosen fittings on fuel injection system until pressure is first bled from system by opening Schrader fitting on fuel rail near pressure regulator. When opening fitting, place rags or container near fitting to catch any fuel spillage.

#### ALL MODELS, EXC. ELDORADO & SEVILLE

1) Remove hood and mark hinges for installation. Disconnect battery, remove air cleaner and inlet resonator assembly, and drain cooling system. Remove retaining screws for each wheel housing strut-to-radiator cover and position struts to side. Remove radiator hoses, radiator cover and fan.

2) Disconnect wiring harness and all electrical connections to engine. Disconnect Cruise Control servo from left cylinder head and brake hose from brake pipe. Disconnect throttle linkage and vapor canister hose. Detach power steering pump and air conditioning compressor without disconnecting hoses and position to one side.

3) Disconnect spark plug wires from right side of engine. Disconnect vacuum lines, heater hoses at right cylinder head. Loosen tie struts and swing to one side. Remove two upper transmission-to-engine bolts.

4) Raise vehicle and position on safety stands. Remove nuts securing front engine mounts to frame. Remove starter, converter inspection cover and bolts securing converter to flex plate. Remove remaining bolts securing engine to transmission. Disconnect exhaust pipes at exhaust manifolds.

5) Disconnect fuel line and vapor return line (if equipped with air conditioning) from fuel pump. Lower vehicle and support transmission with a jack. Move right side lifting bracket to a position so it straddles intake passage for number one cylinder. On engines with fuel injection, install suitable lifting bracket (J-25511). Attach suitable hoist to engine, pull engine forward to separate engine and transmission and remove engine.

#### ELDORADO

1) Mark hinges for installation and remove hood. Disconnect battery, remove air cleaner and drain cooling system. Remove heater hoses and vacuum lines from engine. Disconnect wiring harness, speedometer and throttle cables, other wiring and ground strap.

2) Raise vehicle and secure on safety stands. Remove exhaust pipe flange bolts and disconnect left exhaust pipe from "Y" pipe. Remove from car. Disconnect transmission shift linkage and fuel lines. Remove drive axle to output shaft bolts on both sides. Remove nuts from engine and transmission mounts. Lower vehicle.

3) Remove fan shroud and radiator hoses, transmission cooler lines, radiator, fan and A/C belt. Move compressor to fender well, disconnect and cap power steering lines. Install suitable lifting bracket (J-25511) and move engine forward and up to clear firewall. Remove engine, transmission, and final drive as a unit.

## GENERAL MOTORS (Cont.)

### CADILLAC (Cont.)

#### SEVILLE

1) Disconnect battery, remove air cleaner assembly and drain cooling system. Remove hood and mark hinges for installation. Remove both wheelhouse struts and radiator cover. Disconnect brake hose from brake pipe at rear of left cylinder head. Disconnect left branch of electrical harness and remove all heater, upper radiator and overflow hoses. Remove fan assembly and lower radiator hose.

2) Remove distributor cap and wiring, disconnect right branch of electrical harness. Disconnect accelerator linkage and vapor canister hose from throttle body. Remove fuel inlet line from fuel rail. Remove and plug power steering hoses from steering gear, secure hoses to engine. Disconnect fuel return line from pressure regulator. Remove, but do not disconnect, air conditioning compressor.

3) Raise vehicle and disconnect right exhaust pipe from manifold. Remove screws securing converter cover and remove cover. Remove starter motor and clip securing transmission cooler lines to oil pan. Remove three screws securing flex plate to converter. Remove engine mount bolts and exhaust crossover pipe. Remove engine-to-transmission screws.

4) Lower vehicle and remove screws securing heater water valve to evaporator and position valve out of way. Install suitable lifting fixture to engine, support transmission and slowly raise engine off mounts. Reposition transmission support, raise engine carefully and pull forward to disengage transmission. Raise engine and remove from vehicle.

#### CADILLAC

#### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
All Models (Exc. Eldorado and Seville)	
Front Mount to Engine Nut .....	21
Front Mount Stud to Frame Nut .....	30
Rear Mount to Crossmember .....	45
Crossmember to Frame Bolt .....	20
Rear Mount to Transmission Bolt .....	30
Transmission to Engine Bolts .....	35
Eldorado	
Engine Mount Bracket to Block .....	48
Engine Mount Bracket to Mount .....	40
Engine Mount to Frame .....	65
Transmission Mount Bracket .....	40
Transmission Mount Bracket to Mount .....	40
Transmission Mount to Frame .....	40
Seville	
Motor Mount to Engine .....	65
Motor Mount to Frame .....	30
Through Bolt .....	30
Converter Housing to Engine .....	35

### CHEVROLET

#### 4 CYLINDER MODELS

1) Disconnect battery cables, all water, vacuum and emission control hoses. Disconnect all wires at sending units, switches and solenoids. Remove radiator panel or shroud, radiator, fan and spacer. Position power steering pump and/or air conditioning compressor (if equipped) out of way without disconnecting hoses.

2) Raise vehicle and disconnect exhaust pipe at manifold. Remove flywheel inspection cover or converter underpan. If equipped with automatic transmission, remove converter-to-flex plate bolts and install converter safety strap. Remove converter housing or clutch housing bolts. Loosen engine front mounts at frame.

3) Lower vehicle and position jack under transmission for support. Using a suitable hoist, raise engine enough to take weight off of engine. Remove front engine mount bolts. Pull engine forward to separate from transmission and remove engine.

#### V6 AND 6 CYLINDER MODELS

1) Mark hinges and remove hood. Disconnect battery, remove air cleaner and drain cooling system.

**NOTE** — On VIN code "M" model, remove radiator.

2) Remove fan shroud, pulley and fan. Disconnect all electrical wiring, water and vacuum hoses, and fuel inlet line at fuel pump.

3) Disconnect accelerator linkage and exhaust pipes at manifold. Position power steering pump and/or air conditioning compressor (if equipped) out of way without disconnecting hoses.

4) Raise vehicle and position on safety stands. Remove starter, flywheel or converter cover, and on automatic, converter to flex plate bolt. On even-fire V6 (VIN A & 2), disconnect drive