

Engine Removal

GENERAL MOTORS (Cont.)

OLDSMOBILE (Cont.)

OLDSMOBILE TIGHTENING SPECIFICATIONS	
Application	Ft. Lbs.
Crossmember-to-Frame	37
Transmission-to-Mount	45
Mount-to-Crossmember	
Tornado	60
All Others	45
Flywheel Housing-to-Engine	35
Converter-to-Flywheel	40
Motor Mount-to-Frame	50
Motor Mount-to-Engine	
Starfire	55
All Others	75

PONTIAC

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 MODELS

NOTE — Manual transmission and engine are removed as an assembly.

1) Remove hood and mark hinges for installation. Disconnect battery and drain cooling system. Remove air cleaner. Remove air conditioning compressor (if equipped) from mount, without disconnecting lines, and position out of way. Remove fan blade, pulleys and belts. Disconnect radiator and heater hoses.

2) Remove fan shroud assembly. Remove power steering pump (if equipped) without disconnecting lines, and position out of way. Disconnect fuel pump hoses and battery ground cable from engine. Disconnect all vacuum and electrical connections at engine. Disconnect throttle control cable at carburetor.

3) Remove alternator and disconnect engine to body ground strap(s) at engine. Raise vehicle and disconnect starter cables, and cable shield from engine (if equipped). Disconnect exhaust pipes from manifolds. Remove lower flywheel or converter housing.

4) Remove flywheel to converter bolts. Scribe a chalk mark on flywheel and converter for reassembly alignment.

NOTE — This is not necessary for manual transmissions, remove manual transmission with engine.

On automatic transmissions remove transmission to engine attaching bolts. On manual transmissions disconnect propeller shaft, shift linkage, clutch equalizer shaft, and transmission mount.

5) On all models remove motor mount through bolts and (if equipped) cruise control bracket. On automatic transmissions, lower vehicle and support transmission. On all models attach a lifting device to engine. Disengage automatic transmission from engine and remove engine.

V8 MODELS

305" & 350" (VIN L)

1) Remove hood and mark hinges for installation. Disconnect battery cables at battery. Remove air cleaner and drain cooling system. Disconnect radiator and heater hoses, and remove fan shroud and radiator. Disconnect all electrical wires and vacuum connections at engine.

2) Disconnect fuel line at fuel pump and accelerator linkage at intake manifold. Remove air conditioning compressor, and/or power steering pump, without disconnecting lines, and position off to side. Raise vehicle and disconnect exhaust pipe at manifold and (if equipped), converter bracket at rear transmission mount. Remove starter. Remove flywheel splash shield or converter housing cover as applicable.

GENERAL MOTORS (Cont.)

PONTIAC (Cont.)

3) On automatic transmissions, remove converter to flywheel attaching bolts. On all models, remove mount through bolts and bell housing bolts. Lower vehicle and raise transmission using a floor jack. Attach a lifting device to engine, and raise engine enough to remove motor mount to engine brackets. Remove engine.

3) On manual transmissions, disconnect clutch linkage, remove clutch cross shaft, starter and lower flywheel cover. Remove four lower bell housing bolts (two on each side). Disconnect transmission filler tube support (automatic transmission). Remove two front motor mount bolts. Lower vehicle and support transmission using a floor jack. Remove two remaining bell housing bolts and raise transmission slightly. Using suitable lifting device, remove engine.

350" (VIN R) & 403"

1) Drain cooling system. Remove air cleaner and hot air pipe. Remove hood and mark hinges for installation. Disconnect negative battery cable at battery and ground wire at inner fender panel. Disconnect engine ground strap. Disconnect radiator and heater hoses. Disconnect all electrical and vacuum connections at engine.

2) Disconnect power steering hose bracket from engine and fuel hose from fuel line. Disconnect air conditioning compressor, with hoses attached, and position out of way. Disconnect throttle cable. Remove upper radiator support and radiator.

3) Raise vehicle and disconnect exhaust pipes at manifolds. Remove torque converter cover and three bolts holding converter to flywheel. Remove engine mount bolts or nuts. Remove three (right side) engine to transmission bolts. Remove starter with wires attached. Lower vehicle and attach lifting device to engine. Raise transmission slightly, and remove three (left side) engine to transmission bolts. Remove engine.

301", 350" (VIN P) & 400"

1) Disconnect battery cables at battery. Drain cooling system. Scribe alignment marks around hood hinges and remove hood. Disconnect engine wire harness and engine to body ground straps. Remove air cleaner, and disconnect radiator and heater hoses at engine. Remove power steering pump and/or air conditioning compressor, with hoses attached, and position out of way.

2) Remove engine fan and pulley. Disconnect accelerator control linkage. Disconnect all electrical and vacuum connections at engine. Raise vehicle and disconnect exhaust pipes from manifolds. Disconnect starter wires. On automatic transmissions, remove converter cover, three retaining bolts and slide converter to rear.

PONTIAC TIGHTENING SPECIFICATIONS

4 CYLINDER MODELS

Application	Ft. Lbs.
Clutch Housing-to-Engine	25
Automatic Transmission-to-Engine	35
Crossmember-to-Frame Bolts	28
Crossmember-to-Mount Bolts	26
Rear Mount-to-Transmission	26

V6 MODELS

Application	Ft. Lbs.
Motor Mount-to-Engine.....	55
Flywheel Housing-to-Block	15
Motor Mount Through-Bolt	40-55
Motor Mount-to-Frame	25-35

V8 MODELS

Application	Ft. Lbs.
Exhaust Pipe-to-Manifold	30
Rear Mount-to-Transmission	35
Frame-to-Crossmember	30
Engine Mount-to-Frame	50
Engine Mount-to-Block	75
Rear Mount-to-Crossmember	40
Transmission Case-to-Engine	35
Motor Mount Through-Bolt	45
Rear Mount-to-Transmission	40