

# Oil Pan Removal

## GENERAL MOTORS (Cont.)

### OLDSMOBILE (Cont.)

2) Remove flywheel cover or converter underpan. Remove oil pan bolts, tap oil pan and remove from vehicle. To remove oil pan baffle, remove pick-up screen-to-support and screen-to-baffle bolts and remove support from baffle. Remove bolt securing oil drain back tube to baffle, then rotate baffle 90° towards left side of vehicle and remove baffle from pick-up screen.

#### 6 CYLINDER MODELS

1) Disconnect negative battery cable, fuel line at fuel pump and electrical leads at starter. Remove upper radiator support and bracket to upper hose. Remove front motor mount bracket to engine bolts. Raise vehicle, position on safety stands and drain crankcase. Disconnect shift linkage on automatic transmission equipped vehicles. Disconnect exhaust pipe at manifold flange. Remove flywheel or converter housing cover and starter.

2) Rotate engine until timing mark on harmonic balancer is at 6 o'clock position. Raise engine by using a suitable lifting tool (BT-7317 and BT-6501) positioned under harmonic balancer. Remove right engine mount and bracket from frame to gain additional clearance for removal of oil pan. Remove oil pan retaining bolts and raise engine just high enough to remove oil pan. **CAUTION** — Avoid lifting engine too high as damage to components mounted on cowl may occur.

#### V6 MODELS

Raise vehicle, position on safety stands and drain crankcase. Remove flywheel inspection cover and exhaust crossover pipe. Remove oil pan retaining screws and remove oil pan.

#### V8 MODELS

**Omega W/350"** — 1) Disconnect battery ground cable. Remove tie bars between radiator and shroud. Remove air cleaner and disconnect downshift linkage at manifold. Raise vehicle, position on safety stands and drain crankcase. Remove shift linkage bolt and swing linkage out of way. Disconnect exhaust crossover pipe at manifold flanges. Remove front mount through bolts and remove lower flywheel housing cover.

2) Disconnect idler arm from frame and pull steering linkage down out of way. Raise engine by using a suitable lifting tool (BT-6501) positioned under harmonic balancer. Remove oil pan bolts and remove oil pan. It may be necessary to rotate crankshaft to gain clearance between crankshaft counterweights and oil pan.

**All Remaining Models W/260", 350" & 455" (Exc. Toronado)** — 1) — Remove distributor cap and turn engine over until rotor is at number one firing position. Disconnect battery cable and remove dipstick. Remove upper radiator support and shroud bolts. Raise vehicle, position on safety stands and drain crankcase.

2) Remove flywheel or converter housing cover and starter. Disconnect exhaust or crossover pipes at manifold flanges. Disconnect front engine mounts and raise engine using a suitable lifting tool (BT-6501) positioned under harmonic balancer. Remove oil pan retaining bolts and remove oil pan.

**Toronado** — Engine must be removed before oil pan can be removed. See appropriate article in ENGINE REMOVAL Section.

### OLDSMOBILE TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Oil Pan Bolts	
4 Cylinder Models .....	15
6 Cylinder Models	
Oil Pan-to-Cylinder Block.....	80 INCH Lbs.
Oil Pan-to-Front Cover.....	45 INCH Lbs.
V6 Models .....	14
V8 Models	
350" Omega .....	14
All Others .....	10

## PONTIAC

#### 4 CYLINDER MODELS

1) Raise vehicle, position on safety stands and drain crankcase. Support front of engine so that weight is off front mounts. Remove front crossmember and both front crossmember braces. Disconnect steering idler arm at frame side rails. **NOTE** — If equipped with air conditioning, disconnect idler arm at relay rod. Mark position of pitman arm on steering gear shaft, and remove pitman arm. **CAUTION** — Do not turn steering gear shaft with pitman arm removed, as wheel alignment will change.

2) Remove flywheel or converter housing cover. Remove oil pan screws and remove oil pan. Remove pickup screen bolt. Remove pickup screen to baffle support bolts and remove baffle support. Remove bolt securing oil drainback to baffle and remove baffle.

#### 6 CYLINDER MODELS

1) Disconnect battery cable and remove upper radiator shield assembly. Raise vehicle, position of safety stands and drain crankcase. Disconnect exhaust pipe at manifold flange. Remove starter without disconnecting electrical leads and position off to one side. Remove flywheel or converter housing inspection cover.

2) Install a suitable lifting tool and adapter (J-23515-1) to frame and front of engine. Raise engine enough to take weight off front motor mounts. Remove both front motor mount through bolts. **NOTE** — On Ventura models it may be necessary to add washers between tool adapter and harmonic balancer to gain enough clearance between adapter and frame. Remove right front engine mount and bracket from frame. Remove oil pan bolts and raise engine just enough to remove oil pan.

## GENERAL MOTORS (Cont.)

### PONTIAC (Cont.)

#### V6 MODELS

Raise vehicle and drain crankcase oil. Remove flywheel cover and exhaust crossover pipe. Remove oil pan.

#### V8 MODELS

**All Models W/260" - 1)** Remove distributor cap and turn engine over until rotor is at number one firing position. Disconnect battery cable and remove dipstick. Remove upper radiator support and remove fan shroud bolts. Raise vehicle, position on safety stands and drain crankcase.

**2)** Remove flywheel or converter housing cover and starter. Disconnect exhaust crossover pipe at manifold flanges. Disconnect front engine mounts and raise engine using a suitable lifting tool (BT-6501) positioned under harmonic balancer. Remove oil pan retaining bolts and remove oil pan.

**Ventura W/350" - 1)** Disconnect battery cable. If equipped with air conditioning, loosen compressor bolts and tilt compressor inward as far as possible. Remove fan. Raise vehicle, position on safety stands and drain crankcase. Disconnect exhaust pipe crossover at exhaust manifold flanges and hanger at transmission.

**2)** Remove front motor mount through bolts. Attach a suitable lifting tool (J-23515) to engine and crossmember and raise engine approximately 2" to 3". Remove flywheel or converter housing cover. Remove oil pan retaining bolts and remove oil pan.

**All Models W/350" (Exc. Ventura), 400" & 455" - 1)** Disconnect battery cable and remove engine fan. Inspect hoses and wiring harness routings for adequate clearances to avoid stretching or binding during engine lifting operation. Remove air conditioning compressor and secure away from engine on Le Mans and Grand Prix models with VIR. Remove distributor cap, raise vehicle and drain crankcase oil.

**2)** Disconnect exhaust pipes at manifolds. Remove starter motor, bracket and flywheel inspection cover. Rotate crankshaft until number one cylinder is at bottom dead center. Attach suitable lifting device to engine and remove front motor mount through bolts. Remove oil pan bolts and raise front of engine until pan can be removed. **CAUTION - Support engine with wood blocks while engine is raised off mounts.**

### PONTIAC TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Oil Pan Bolts	
4 Cyl. Models .....	15
6 Cyl. Models .....	80 INCH Lbs.
V6 Models .....	15
V8 Models	
260" .....	10
350" (Ventura Only) .....	14
350" (Exc. Ventura), 400" & 455"	
Front Bolts .....	12
Rear Bolts (Through Reinforcement Straps) .....	18