

Oil Pan Removal

FORD MOTOR CO. (Cont.)

LTD II, Cougar & Thunderbird (302", 351" & 400") – Remove dipstick and fan shroud bolts. Position shroud over fan. Raise vehicle and drain crankcase. Remove stabilizer bar and front mount through bolts. Raise engine and block up with wood blocks between front support and chassis bracket. If equipped, disconnect oil cooler lines at radiator. Remove oil pan attaching bolts and lower pan onto crossmember. Rotate crankshaft as necessary to clear pan.

Ford & Mercury (302" & 351" W) – Remove negative battery cable. Disconnect fan shroud and position toward engine, away from radiator. Raise vehicle and drain crankcase, then remove oil dipstick and tube. Remove windshield wiper motor, and disconnect wiring, fuel lines, cables and linkage as necessary to remove engine. Loosen rear engine mount attaching nuts and remove engine mount through bolts. Raise engine, using care that brake lines, transmission linkage and starter motor do not interfere. Place wood blocks under engine and remove oil pan retaining bolts. Lower oil pan. Remove oil pump pickup tube and screen assembly and lower into oil pan. Remove oil pan.

All Models (351" M & 400") – Disconnect battery and remove dipstick. Remove fan shroud bolts and position air inlet tube and shroud over fan. Raise vehicle and drain crankcase. Remove sway bar (if equipped), and lower for clearance.

Remove front engine support through bolts, raise engine, and block up with wood block. Remove oil pan bolts and position transmission cooler lines out of way. Lower oil pan. Remove oil pump and inlet tube and lower into oil pan. Position crankshaft throw horizontally to permit oil pan removal.

FORD MOTOR CO. TIGHTENING SPECIFICATIONS

Oil Pan Bolts	Ft. Lbs.
4 Cylinder	
6 mm Bolts	6-8
8 mm Bolts	8-10
6 Cylinder	7-9
V6 Models	7-10
V8 Models	
1/4" Bolts	① 7-9
5/16" Bolts	② 11-13

① – 10-12 Ft. Lbs. on 351" W engine.

② – 15-17 Ft. Lbs. on 351" W engine.

GENERAL MOTORS

BUICK

V6 MODELS

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

All Other Models – Raise vehicle and drain crankcase. Remove flywheel inspection cover and exhaust crossover pipe. Remove oil pan retaining screws and remove oil pan.

V8 MODELS

All Models (301") – Disconnect battery and remove fan and distributor cap. If necessary, remove A/C compressor for clearance. Raise vehicle, drain crankcase and disconnect exhaust pipes from manifolds. Remove starter and flywheel inspection cover. Position number 1 cylinder at bottom dead center. Loosen fuel pump to timing cover bolts for clearance and attach suitable lifting tool (J-23515) to engine and crossmember. Raise engine and remove engine mount through bolts. Remove oil pan bolts, and allowing tool to swing freely, lift engine until oil pan can be removed.

All Models (305" & 350" VIN G,H,L) – Disconnect battery, remove air cleaner and upper half of fan shroud. Remove oil dipstick and tube on Century and Regal only. Raise vehicle and drain crankcase. Remove crossover pipe, converter cover and

starter (manual transmission). Remove engine mount through bolts, raise engine and remove pan. Replace through bolts to hold engine.

Skylark (350" VIN X) – Disconnect battery. Remove radiator tie bar screws. Remove air cleaner and disconnect accelerator linkage at intake manifold. Raise vehicle and drain crankcase. Remove lower flywheel housing cover and shift linkage bolt. Disconnect exhaust crossover pipe. Remove engine mount through bolts. Disconnect idler arm at frame and swing downward. Raise engine and remove oil pan bolts and pan.

All Other Models (350" VIN X) – Disconnect battery and remove radiator tie bar screws. Remove air cleaner and disconnect throttle linkage. Raise vehicle and drain crankcase. Disconnect exhaust crossover pipe and remove lower flywheel housing cover. Remove shift linkage attaching bolt and swing out of way. Remove engine front mounting bolts. Raise engine slowly and remove oil pan bolts and pan.

NOTE – On A/C equipped vehicles, place a support under right side of transmission prior to raising engine. This prevents engine/transmission assembly from cocking to the right.

Riviera (350" VIN R) – Engine must be removed before oil pan can be removed. See *appropriate article in ENGINE REMOVAL Section*.

GENERAL MOTORS (Cont.)

BUICK (Cont.)

All Other Models (350" & 400" VIN R & K) — Align rotor to number 1 firing position. Disconnect battery cable and remove dipstick. Remove upper radiator support and fan shroud screws. Raise vehicle and drain crankcase. Remove flywheel cover. Disconnect exhaust and crossover pipes. Remove starter and engine mounts from block. Raise engine as far up as possible using suitable support tool (J-23515) and adapter (J-23515-20). Remove oil pan bolts and pan.

BUICK TIGHTENING SPECIFICATIONS	
Application	Ft. Lbs.
Oil Pan Bolts	
196", 231" & 350" (VIN C,A,2,3,X)	14
301" (VIN Y,W)	12
305" & 350" (VIN G,H,L)	7
350" & 403" (VIN R & K)	10

CADILLAC

ALL MODELS

Eldorado — Remove final drive assembly with output shafts attached. Remove starter motor and drain crankcase. Remove oil pan bolts and oil pan. On vehicles with Diesel engines, loosen engine mounts and slightly raise engine, using a screw jack under harmonic balancer.

Seville (Diesel) — Remove drive and vacuum pump. Disconnect battery cables and remove rear battery. Remove fan screws, leaving fan in housing. Raise vehicle and drain crankcase. Remove flywheel cover and oil cooler lines. Disconnect exhaust crossover pipe and remove starter, ground strap and engine mount through bolts. Remove tunnel stiffener strut, transmission dipstick and tube. Using jack under harmonic balancer, raise engine so oil pan is 4" above frame crossmember. Remove oil pan bolts and pan.

Seville — Remove wheelhouse struts from both fenders. Remove radiator cover and raise vehicle. Remove through bolts

from front engine mounts. Remove exhaust crossover pipe, starter motor and flywheel housing lower cover. Remove oil pan bolts and raise engine as far as necessary to remove oil pan by placing jack under crankshaft pulley.

All Other Models — Disconnect negative battery cable. Remove radiator cover, support rods and shroud. Loosen fan belts and remove pulleys. Raise vehicle and drain crankcase. Remove exhaust pipe at manifold and catalytic converter. Remove engine mount through bolts. Remove starter and transmission lower cover. Using a block of wood under crankshaft hub, raise engine with suitable jack. Remove oil pan.

CADILLAC TIGHTENING SPECIFICATIONS	
Application	Ft. Lbs.
Oil Pan Bolts	10

CHEVROLET

4 CYLINDER MODELS

Chevette — 1) Remove heater housing assembly from front of dash and rest housing on top of engine. Remove engine mount nuts. Pull back engine mount wire restraints. Remove radiator upper support and upper fan shroud (if equipped). Disconnect fuel line from charcoal canister. Raise vehicle and drain crankcase. Remove flywheel lower cover.

2) On vehicles with manual transmission, remove rack and pinion mounting bolts and move rack and pinion aside. Loosen rear catalytic converter-to-exhaust pipe clamp bolts. Using suitable adapter (J-26436), raise engine. Remove oil pan bolts and lower pan about 1". Rotate front of pan to right and rear to left. Tilt front of pan down 45° and remove pan from vehicle.

All Other Models — Disconnect battery and raise vehicle. Drain crankcase and remove rear section of frame crossmember. Disconnect exhaust pipe at manifold and loosen bracket.

Remove flywheel lower cover and disconnect steering linkage at steering gear and idler arm support. Remove oil pan bolts and pan.

L6 MODELS

Disconnect battery, remove air cleaner and loosen fan shroud. Remove bolt from starter bracket, raise vehicle, remove starter. Drain crankcase, remove torque converter cover. Disconnect exhaust pipe and catalytic converter from manifold and transmission bracket. Wire up out of way. Remove engine through bolts, raise engine and remove bolts and oil pan.

V6 MODELS

All Models (200" VIN M) — Drain crankcase, disconnect battery and remove oil dipstick and tube. Disconnect exhaust crossover pipe, inboard starter bolt and brace. Swing starter to side. On automatics, remove converter housing under pan. Remove oil pan bolts and pan.