

Engine Removal

CHRYSLER CORP.

NOTE — On vehicles equipped with automatic transmission, removal of transmission is optional, however, if transmission is removed, it must be removed separately and then engine is removed. If vehicle is equipped with manual transmission, transmission must be removed first and then engine is removed.

6 CYLINDER MODELS

NOTE — The following is the transmission removal procedure.

1) Mark hinges for installation and remove hood. Disconnect battery, drain cooling system, and remove air cleaner. Disconnect radiator and heater hoses, and remove radiator. Remove air conditioning compressor and/or power steering pump (if equipped) without disconnecting lines, and position out of way. Disconnect hoses at valve cover and all electrical leads and vacuum hoses at engine. Disconnect fuel line at fuel pump and accelerator linkage at carburetor. Disconnect exhaust pipe at manifold flange.

2) Raise vehicle and position on safety stands. If equipped with automatic transmission, drain converter housing and transmission, remove filler tube and cooler lines. If equipped with manual transmission, disconnect clutch linkage and remove clutch shaft. On all transmissions, disconnect speedometer cable and shift linkage, and remove drive shaft. Position a suitable support under rear of engine. Remove transmission crossmember and remove transmission. Lower vehicle and attach a suitable hoist to engine. Remove engine support and remove engine.

NOTE — The following is the transmission (automatic transmission) remaining in vehicle procedure.

1) Mark hinges for installation and remove hood. Disconnect battery, drain cooling system, and remove air cleaner. Disconnect radiator and heater hoses, and remove radiator. Remove air conditioning compressor and/or power steering pump (if equipped) without disconnecting lines, and position out of way. Disconnect all electrical leads and vacuum hoses at engine. Disconnect accelerator linkage at carburetor.

2) Remove distributor cap and wiring. Remove starter, alternator, charcoal canister, and horns. Disconnect exhaust pipe at manifold flange. Remove transmission-to-engine bolts and remove inspection cover. Remove flex plate-to-converter bolts (mark position of converter on flex plate for reassembly). Support transmission and attach a suitable hoist to engine. Remove engine front mount bolts and remove engine.

V8 MODELS

NOTE — The following is the transmission removal procedure.

1) Mark hinges for installation and remove hood. Disconnect battery, drain cooling system, and remove air cleaner. Disconnect radiator and heater hoses, and remove radiator

and shroud. Remove air conditioning compressor and/or power steering pump (if equipped) without disconnecting lines, and position out of way. Disconnect all electrical leads and vacuum hoses at engine. Disconnect fuel line at fuel pump and accelerator linkage at carburetor.

2) Raise vehicle and position on safety stands. Disconnect exhaust pipes at manifold flanges. If equipped with automatic transmission, drain converter housing and transmission, remove filler tube and cooler lines. If equipped with manual transmission, disconnect clutch linkage and remove clutch shaft. On all transmissions, disconnect speedometer cable, clutch linkage, and drive shaft. Position a suitable support under rear of engine. Remove transmission-to-engine bolts, detach rear crossmember, and remove transmission. Lower vehicle and attach a suitable hoist to engine. Remove front engine support and remove engine.

NOTE — The following is the transmission (automatic transmission) remaining in vehicle procedure.

1) Mark hinges for installation and remove hood. Disconnect battery, drain cooling system, and remove air cleaner. Disconnect radiator and heater hoses, and remove radiator. Remove air conditioning compressor and/or power steering pump (if equipped) without disconnecting lines, and position out of way. Disconnect all electrical leads and vacuum hoses at engine. Disconnect accelerator linkage at carburetor.

2) Remove distributor cap and wiring. Remove starter, alternator, charcoal canister, and horns. Disconnect exhaust pipes at manifold flanges. Remove transmission-to-engine bolts and remove inspection cover. Remove flex plate-to-converter bolts (mark position of converter on flex plate for reassembly). Support transmission and attach a suitable hoist to engine. Remove engine front mount bolts and remove engine.

CHRYSLER CORP. TIGHTENING SPECIFICATIONS 6 CYLINDER MODELS	
Application	Ft. Lbs.
Motor Mount-to-Engine	50
Motor Mount-to-Frame	75
Rear Mount-to-Trans	50
Rear Mount-to-Crossmember	50
V8 MODELS	
Application	Ft. Lbs.
Motor Mount-to-Engine	55
Motor Mount-to-Frame	75
Rear Mount-to-Trans	50
Rear Mount-to-Crossmember	50

FORD MOTOR CO.

4 CYLINDER MODELS

1) Drain crankcase and cooling system. Disconnect all electrical wiring, vacuum and water hoses. Remove radiator and fan. Remove A/C compressor from mounting bracket and lay aside with refrigerant lines attached.

2) Disconnect flexible fuel line from fuel tank line and remove starter. Raise vehicle and remove flywheel or converter housing upper bolts. Disconnect exhaust pipe at manifold, then right and left engine mounts at underbody bracket. Remove flywheel or converter housing cover.

3) With manual transmission, remove flywheel housing lower bolts. With automatic transmission, disconnect converter from flywheel and remove converter housing lower bolts.

4) Lower vehicle and support transmission on a jack. Attach suitable hoisting tackle to engine lifting brackets and remove engine from vehicle.

6 CYLINDER MODELS

1) Mark hinges for installation and remove hood. Drain crankcase and cooling system, disconnect battery and remove air cleaner. Disconnect all radiator and heater hoses and remove radiator. Remove fan, spacer, belt, and pulley. Disconnect accelerator linkage, fuel line, all electrical connections, and vacuum lines at engine.

NOTE — If engine is equipped with Thermactor system, remove or disconnect all components of system that will interfere with removal of engine.

2) On models equipped with power steering or air conditioning, remove unit from mount and lay aside with hoses attached. Remove starter.

3) On manual transmissions, disconnect the clutch retracting spring. Disconnect clutch equalizer shaft and arm bracket at underbody and remove.

4) Raise vehicle and remove flywheel or converter housing upper attaching bolts. Disconnect muffler inlet pipe at exhaust manifold. Disconnect right and left engine mounts at underbody bracket. Remove flywheel or converter housing cover.

V6 MODELS

1) Remove hood, drain cooling system and crankcase, then disconnect battery cables. Remove air cleaner and intake duct

assembly, then disconnect all coolant and vacuum hoses and fuel lines. Remove radiator and fan shroud.

NOTE — If engine is equipped with Thermactor system, remove or disconnect all components of system that will interfere with removal of engine.

2) Disconnect alternator ground wire and remove alternator with bracket. Disconnect all wiring, engine-to-body ground straps, carburetor linkage, and brake booster line. Raise vehicle, remove starter, and disconnect exhaust pipes from manifolds. Remove front support through-bolts.

3) On automatic transmissions, remove converter inspection cover, disconnect flywheel from converter, remove downshift rod, and remove converter housing-to-engine block bolts. Remove adapter plate-to-converter housing bolts.

4) On manual transmissions, remove clutch linkage and remove bell housing-to-engine block bolts. Lower vehicle and support transmission. Attach suitable lifting sling to lifting brackets at exhaust manifolds. Carefully remove engine from vehicle.

V8 MODELS

1) Drain crankcase and cooling system; disconnect battery and alternator ground cables from engine. Remove hood, air cleaner, and intake duct assembly. Disconnect all coolant and vacuum hoses, fuel lines, and transmission oil cooler lines.

NOTE — If engine is equipped with Thermactor system, remove or disconnect all components of system that will interfere with removal of engine.

2) Remove radiator, A/C condenser, fan, pulley, and starter motor. Position alternator and power steering pump out of way. Isolate A/C compressor and remove from engine.

3) Disconnect all wiring, engine-to-body ground straps, and transmission and carburetor controls. Disconnect exhaust pipes from manifolds. On manual transmission vehicles, remove clutch equalizer bar and any other clutch linkage. On vehicles with automatic transmission, remove converter housing cover and disconnect flywheel from converter. Remove engine front support bolts on all models.

4) Lower vehicle and support transmission with floor jack. Attach suitable lifting sling to engine lifting brackets. Lift engine slightly and pull forward and away from transmission. Lift engine from vehicle.

FORD MOTOR CO. TIGHTENING SPECIFICATIONS

4 CYLINDER MODELS

Application	Ft. Lbs.
Motor Mount-to-Engine	35-60
Motor Mount Through-Bolt	20-30
Rear Mount-to-Trans.	40-60
Rear Mount-to-Crossmember	30-45
Crossmember-to-Frame	
Pinto	20-36
Mustang II	35-60

6 CYLINDER MODELS

Application	Ft. Lbs.
Motor Mount Bracket-to-Engine	17-32
Motor Mount Bracket-to-Frame	20-37
Motor Mount-to-Engine Bracket	20-32
Motor Mount-to-Frame Bracket	30-50
Rear Mount-to-Trans.	
Man. Trans.	17-32
Auto. Trans.	40-60
Rear Mount-to-Crossmember	30-50
Crossmember-to-Frame	14-24

Engine Removal

FORD MOTOR CO. (Cont.)

FORD MOTOR CO.

TIGHTENING SPECIFICATIONS (Cont.)

V6 MODELS

Application	Ft. Lbs.
Motor Mount-to-Engine	35-60
Motor Mount Through-Bolt	20-30
Rear Mount-to-Trans.	40-60
Rear Mount-to-Crossmember	20-30
Crossmember-to-Frame	20-30

V8 MODELS

Application	Ft. Lbs.
All Models W/302" & 351" W (Exc. Granada & Monarch)	
Motor Mount-to-Engine	35-60
Motor Mount Bracket-to-Frame	
Mustang II	20-30
Comet & Maverick	20-37
Motor Mount Through-Bolt	
Mustang II	50-65
Comet & Maverick	20-30
Torino & Montego	35-50
Rear Mount-to-Trans.	
Man. Trans.	17-32
Auto. Trans.	40-60
Rear Mount-to-Crossmember	30-50
Crossmember-to-Frame	
Mustang II	20-30
Comet & Maverick	14-24
Granada & Monarch W/302" & 351" W	
Motor Mount Bracket-to-Engine	35-60
Motor Mount-to-Bracket	30-50
Motor Mount Through-Bolt	20-37

V8 MODELS (Cont.)

Application	Ft. Lbs.
Rear Mount-to-Transmission	
Man. Trans.	17-32
Auto. Trans.	40-60
Rear Mount-to-Crossmember	30-50
Crossmember-to-Engine	14-24
All Models W/351" & 400"	
Motor Mount-to-Engine	35-60
Motor Mount Bracket-to-Frame	
Ford & Mercury Only	25-40
Motor Mount Through-Bolt	
Ford & Mercury	25-40
Cougar, Montego & Torino	35-50
Rear Mount-to-Trans.	40-60
Rear Mount-to-Crossmember	
Ford & Mercury	20-35
Cougar, Montego & Torino	30-50
Engine Rear Support-to-Frame	
Cougar, Montego & Torino Only	70-100
Continental, Mark IV & Thunderbird W/460"	
Motor Mount & Bracket-to-Engine	35-60
Motor Mount-to-Bracket	30-50
Motor Mount Through-Bolt	35-50
Rear Mount-to-Trans.	20-30
Rear Mount-to-Crossmember	30-50
Ford & Mercury W/460"	
Motor Mount-to-Engine	35-60
Motor Mount Bracket-to-Frame	20-35
Motor Mount Through-Bolt	25-40
Rear Mount-to-Trans.	40-60
Rear Mount-to-Crossmember	20-35