

JEEP

4 CYLINDER ENGINES

1965-66 L4 134"

1) Drain cooling system and disconnect positive battery cable at battery. Disconnect radiator and heater hoses. Remove fan, hub and radiator. Disconnect fuel line and windshield wiper hose at fuel pump. Remove air cleaner, starting motor cables and starter. Disconnect choke and throttle controls, generator wires, primary wire at coil and wires at oil pressure and temperature sender units.

2) Remove both front engine supports and install suitable lifting sling on engine. Attach chain hoist to sling and raise engine slightly. Remove clutch housing to engine bolts. Pull engine forward until clutch clears housing and remove engine from vehicle.

1965-71 F4 134" JEEPSTER MODELS

1) Remove hood and air cleaner, then disconnect air bleed hose to carburetor. Drain cooling system and crankcase. Disconnect battery cables at battery and radiator hoses. Remove radiator, radiator grille support rods and fan. Disconnect wiring harness connectors at front of cowl, wiring harness from alternator, and sending unit electrical leads.

2) On engines equipped with exhaust emission control, remove air pump, air distribution manifold and anti-backfire valve. Disconnect wires and battery cable at solenoid switch, then remove starter. Disconnect engine fuel line at right frame rail, throttle and choke cables from carburetor and exhaust pipe from engine manifold.

3) Remove front mount to frame bracket bolts. Attach suitable sling to engine and support engine weight using suitable hoist. Remove clutch housing to engine bolts. Raise engine slightly and slide engine forward enough to remove transmission main shaft from clutch plate spline. Raise engine and remove from vehicle.

1965-71 F4 134" CJ & DJ MODELS

The following procedure covers removal of engine only. The engine, transmission and transfer case may be removed as a unit by removing the radiator guard and access plates in the floor pan in addition to the following components.

1) Drain cooling system, disconnect positive battery cable at battery and remove hood. Remove both radiator hoses, radiator, grille support rods, fan blades and hub. Disconnect choke and throttle controls at carburetor, fuel line at fuel pump, heater hoses, electrical leads to engine as necessary, and ignition primary wire at coil.

2) Remove air cleaner and disconnect breather hose at oil filler pipe. Disconnect exhaust pipe at manifold and spark plug cables at plugs. Remove cable bracket from rocker arm cover stud and remove rocker arm cover. Attach a suitable lifting bracket to engine. Attach lifting hoist to bracket and remove all slack.

3) Remove nuts and bolts from both front motor mounts and disconnect ground straps. Remove and lower engine slightly for access to two top bolts on clutch housing. Remove clutch housing to engine bolts. Pull engine forward until clutch clears housing and lift engine from vehicle.

V6 ENGINES

1965-71 225"

1) Disconnect battery cables from battery and engine, then remove hood. Drain cooling system and crankcase. Disconnect radiator hoses and transmission oil cooler lines (if equipped). Remove right and left radiator support bars. On Jeepster models, remove right and left fender to cowl attaching screws, and radiator grille to front frame crossmember attaching screws. Remove front fenders, radiator and radiator grille as a unit from vehicle. On CJ and DJ models remove radiator.

2) Remove air cleaner and disconnect alternator wiring harness from connector at regulator. Disconnect fuel evaporative purge line connected to PCV valve (Jeepster only), head lamp wiring from block on left fender (CJ and DJ models only) and horn wiring harness from horn (CJ and DJ models only). If equipped with air conditioning, remove compressor from engine with hoses attached and position to one side.

3) Disconnect engine wiring harnesses from connectors on engine firewall. On engines equipped with exhaust emission control, remove air pump, air distribution manifold and anti-backfire valve. Disconnect wiring from starter and remove starter assembly. Disconnect fuel hoses from lines at right frame rail and plug fuel lines. Disconnect carburetor linkage as necessary and exhaust pipes from manifolds.

4) Position suitable jack to support transmission and remove engine to front motor mount attaching bolts. Attach suitable sling to engine lifting eyes and support engine weight using hoist. Remove clutch housing to engine attaching bolts. Raise engine slightly and pull forward to remove transmission main shaft from clutch plate spline. Raise engine and remove from vehicle.

6 CYLINDER ENGINES

1965-66 230" OHC

1) Drain cooling system and crankcase, then remove oil filter. Disconnect line at clutch slave cylinder. Remove hood, radiator hoses, heater hoses, transmission oil cooler lines (if equipped) and radiator. Disconnect electrical wiring as necessary, battery ground cable at engine and engine ground strap. Remove battery, battery supports, alternator, fan and fan spacer.

2) Disconnect exhaust pipe from manifold and exhaust pipe bracket attached to clutch housing. Disconnect fuel line at flexible hose between engine and frame. Remove carburetor and front engine support bolts. Attach a suitable lifting sling to engine brackets and remove all slack using a suitable lifting device. Remove transfer case and transmission. Raise engine slightly and pull forward until clearance is obtained. Raise engine and remove from vehicle.

1965-71 232"

1) Drain cooling system and crankcase, then remove hood from vehicle. Disconnect transmission oil cooler lines (if equipped) and remove radiator hoses, radiator, fan and pulley. Disconnect battery cables, accelerator linkage, electrical leads to engine, fuel lines and vacuum lines. Remove air cleaner, power steering pump, oil filter and transmission filler tube bracket (if equipped).

Engine Removal

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2) If equipped with air conditioning, remove compressor from engine with hoses attached and position to one side. Install suitable lifting attachment on engine and support weight of engine using a suitable hoist. Disconnect front engine supports. Raise front end of vehicle and support using blocks or jack stands. Disconnect exhaust pipe from manifold.

3) Remove transmission oil cooler lines from oil pan and floor mat and cover from cab floorplate. Remove blocks or jack stands and lower vehicle. Support transmission and remove transmission-to-engine adapter plate bolts or clutch housing-to-engine bolts. Raise engine slightly and pull forward until clearance is obtained. Raise engine and remove from vehicle.

1972-74 232" & 258"

1) Mark hinge positions on hood and remove hood on all models except CJ. Remove air cleaner and drain cooling system. Disconnect radiator hoses and transmission oil cooler lines. *NOTE — If equipped with radiator shroud, separate shroud from radiator.* Remove radiator and fan.

2) Remove power steering pump and bracket assembly and position to one side leaving hoses connected. If equipped with air conditioning, turn both service valves clockwise to front seated position and bleed refrigerant charge by slowly loosening service valve fittings. Disconnect condenser and evaporator lines from compressor and receiver outlet at disconnect coupling. Remove condenser and receiver assembly.

3) Disconnect all wires, lines, linkage and hoses connected to engine. Remove oil filter and front support bolts. Disconnect exhaust pipe at manifold and support bracket. Remove front support to frame retaining nuts and support weight of engine using suitable lifting device. Remove front support and bracket assemblies from engine.

4) Remove transfer case shift lever boot, floor mat and transmission access cover. Remove upper bolts securing transmission to engine adapter plate or clutch housing to engine. Remove starter. On models equipped with automatic transmission, remove adapter plate inspection covers and mark assembled position of converter and flex plate. Remove converter to flex plate bolts and remaining bolts securing transmission.

5) On models equipped with manual transmission remove clutch housing lower cover and remaining bolts securing clutch housing to engine. On all models, support transmission using a suitable floor jack and remove engine by pulling forward and upward.

V8 ENGINES

1965-69 327"

1) Drain cooling system and crankcase. Remove hood and air cleaner. Remove radiator hoses, then disconnect heater hoses

and transmission oil cooler lines. Remove radiator, fan and fan hub. Disconnect electrical leads, accelerator cable, fuel line and exhaust pipe at manifolds. Disconnect hose to heater system vacuum valve at intake manifold and remove oil filter.

2) If equipped with air conditioning, remove compressor from engine with hoses attached and position to one side. On vehicles with manual transmission, disconnect clutch linkage and clutch cross shaft support brackets at clutch housing and frame. Install suitable lifting fixture to engine and support transmission with suitable floor jack.

3) Remove engine front support bracket nuts. Remove bolts attaching transmission to clutch housing (manual transmissions) or bolts attaching transmission housing to flywheel housing adapter (automatic transmission). Raise engine and pull forward until transmission main drive gear shaft is free of its bearing in flywheel and remove engine from vehicle.

1968-71 350"

1) Disconnect positive cable from battery and remove hood. Disconnect all hoses from air cleaner, clamp securing hot air pipe to air cleaner intake boot and remove air cleaner. Drain cooling system and crankcase. Remove radiator hoses, then disconnect heater hoses and transmission oil cooler lines. Remove radiator, fan and fan hub.

2) Disconnect electrical leads, accelerator cable, intake and return fuel lines, and exhaust pipe at manifolds. Disconnect hose to heater system vacuum valve at intake manifold and remove oil filter. Install suitable lifting fixture to engine and support transmission with suitable floor jack.

3) On vehicles with manual transmission, remove clutch fork retaining spring and disconnect clutch cross shaft bracket at flywheel housing. Remove bolts attaching transmission to clutch housing (manual transmissions) or bolts attaching transmission housing to flywheel housing adapter (automatic transmission). Remove engine front support bracket bolts. Raise engine and pull forward until transmission main drive gear shaft is free of its bearing in flywheel and remove engine from vehicle.

1971-74 304", 360" & 401"

1) Mark hinge positions on hood and remove hood on all models except CJ. Remove air cleaner and drain cooling system. Disconnect radiator hoses and transmission oil cooler lines. *NOTE — If equipped with radiator shroud, separate shroud from radiator.* Remove radiator and fan. Remove battery and tray if necessary.

2) Remove power steering pump and bracket assembly and position to one side leaving hoses connected. If equipped with air conditioning, turn both service valves clockwise to front seated position and bleed refrigerant charge by slowly loosening service valve fittings. Disconnect condenser and evaporator

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lines from compressor and receiver outlet at disconnect coupling. Remove condenser and receiver assembly.

3) Disconnect all wires, lines, linkage and hoses connected to engine. On automatic transmissions, disconnect filler tube bracket from right cylinder head. Use suitable lifting device to support engine and remove front support to frame bolts. On CJ and Commando models, remove transfer case shift lever boot, floor mat (if equipped) and transmission access cover.

4) Remove upper bolts securing transmission or clutch housing to engine. Disconnect exhaust pipes at manifolds and support bracket. Remove starter motor and support transmission using a floor jack. On vehicles with automatic transmission, remove inspection cover, mark assembled position of converter to flex plate and remove converter to flex plate bolts. Remove remaining bolts securing transmission or clutch housing to engine. Remove engine and pull forward to remove from vehicle.

TIGHTENING SPECIFICATIONS

ALL MODELS

Application	Ft. Lbs.
Engine Mounting Bracket-to-Block	
1965-71	50-75
1972-74	28
Flywheel Housing-to-Block	
1965-71	30-40
1972-74	27
Clutch Housing-to-Block	
6 Cyl. Engine (Top Bolts)	27-33
Bottom Bolts.....	40-45
V8 Engines.....	25-28
Front Support Cushion-to-Block	
"J" Models.....	30-35
Front Insulator-to-Frame	10-15