

INTERNATIONAL HARVESTER

4 CYLINDER ENGINES

196" MODELS

NOTE — Engine removal will vary between models and between individual chassis because of various equipment and accessories. Following procedures on all engines cover general disconnect points and lifting instructions.

- 1) Drain cooling system at radiator and block. Drain crankcase and disconnect battery ground cable. Disconnect heater hoses and remove radiator hoses, fan blade and radiator. Remove radiator cross braces and heater air ducts which may interfere with engine removal. Remove air cleaner and disconnect throttle linkage, choke control, fuel line and vacuum line from carburetor. Remove carburetor.
- 2) Disconnect electrical wiring to engine as necessary, heater temperature control valve control wire and fuel line at fuel pump. Disconnect exhaust pipe from manifold. Install suitable lifting fixture on engine, connect hoisting equipment to fixture and raise slightly to support engine.
- 3) Disconnect engine front mountings. Remove flywheel to transmission bolts or clutch housing to engine bolts. Pull engine forward to clear clutch assembly from transmission main shaft. Tilt front of engine up and raise engine out of vehicle. Rotate engine sufficiently to avoid contact between engine and chassis components.

6 CYLINDER ENGINES

198" DIESEL MODELS

NOTE — Engine removal procedure not available at time of publication.

V8 ENGINES

304" & 345" MODELS

NOTE — Removal will vary between models and between individual chassis because of various equipment and accessories. Following procedure covers general disconnect points and lifting instructions.

CAUTION — Vehicles equipped with LPG fuel system must be serviced with extreme care. System is pressurized and tank valves should be closed tightly. Exhaust all fuel from lines before working on or disconnecting fuel system.

- 1) Drain cooling system at radiator and block. Drain crankcase and disconnect battery cables from battery. Remove hood hinge bracket mounting bolts and remove hood. Remove radiator hoses, radiator and fan shroud. **NOTE** — Disconnect transmission oil cooler lines if equipped. Remove air cleaner and transmission filler tube support (automatic transmissions only).
- 2) Disconnect heater hoses, vacuum lines and hoses as necessary, fuel line from fuel pump and governor lines (if equipped). Disconnect electrical leads and harnesses, carburetor linkage, and power steering pump line (if equipped). Disconnect air conditioning compressor lines (if equipped), tachometer drive at distributor, and exhaust pipes at manifolds.
- 3) Remove carburetor and install suitable lifting device (SE-1948) at carburetor mounting pad. Attach lift hoist and support engine assembly. Disconnect front engine mounts and support transmission using suitable floor jack.
- 4) Remove transmission front cover and transmission housing to engine attaching bolts. Remove converter to drive plate attaching bolts (automatic transmission only). Pull engine assembly forward to clear transmission converter or main shaft and clutch driven disc. Raise engine and remove from vehicle.

TIGHTENING SPECIFICATIONS

| Application | Ft. Lbs. |
|---|----------|
| Engine Mounting Brackets | |
| $\frac{3}{8}$ " Bolts | 40-45 |
| $\frac{1}{2}$ " Bolts | 70-80 |
| Flywheel Housing-to-Engine | ⓪ |
| Converter-to-Flywheel..... | ⓪ |
| ⓪ — All $\frac{5}{16}$ " Bolts are 14-16 ft. lbs. | |
| All $\frac{3}{8}$ " Bolts are 25-30 ft. lbs. | |
| All $\frac{7}{16}$ " Bolts are 35-40 ft. lbs. | |