

Starter Removal

AMERICAN MOTORS

2.5L (151") 4-Cyl. — Disconnect negative battery cable at battery. Raise vehicle on hoist. On Eagle models, remove vibration bracket. Remove 2 starter-to-engine block bolts. Allow starter motor to drop down. Disconnect solenoid wires and battery cable from starter motor. Remove starter motor.

4.2L (258") 6-Cyl. (Exc. Eagle) — Disconnect cable from starter motor terminal. Remove starter motor attaching bolts. Remove starter motor.

4.2L (258") 6-Cyl. (Eagle) — 1) Disconnect cable from starter motor terminal. Disconnect vibration bracket from front axle tube. Remove bolts attaching vibration bracket to flywheel housing. Remove vibration bracket bolt from starter motor.

2) Swing bracket down out of way. Remove remaining starter attaching bolts. Remove starter motor.

CHRYSLER CORP.

1.7L (105") & 2.2L (135") 4-Cyl. — 1) Disconnect negative battery cable at battery. Remove bolts attaching starter to flywheel housing. Remove bolts attaching rear bracket to engine or transaxle. On 2.2L engines, loosen air pump tube at exhaust manifold and swivel tube bracket away from starter.

2) If equipped, remove heatshield clamp and heatshield. Remove starter cable at starter. Disconnect solenoid lead wire from starter solenoid. Remove starter.

2.6L (156") 4-Cyl. — Disconnect negative battery cable at battery. Remove starter cable at starter. Disconnect solenoid

lead wire at starter solenoid. Remove bolts attaching starter to flywheel housing. Remove starter.

3.7L (225") 6-Cyl. & 5.2L (318") V8 — 1) Disconnect negative battery cable at battery. Remove cable at starter. Disconnect solenoid lead wires at solenoid terminals.

2) Remove 1 stud nut and 1 bolt attaching starter to flywheel. If equipped, slide automatic transmission oil cooler tube bracket off stud. Remove starter. Do not damage flywheel housing seal.

FORD MOTOR CO.

1.6L (98") 4-Cyl. Man. Trans. — 1) Disconnect negative battery cable at battery. Raise vehicle on hoist. Disconnect starter cable at starter terminal. Remove 3 nuts that attach roll restrictor brace to starter studs. Remove brace.

2) Remove 2 starter rear support bracket bolts. Remove retaining nut from rear of starter through bolt. Remove bracket. Remove 3 starter mounting studs. Remove starter.

1.6L (98") 4-Cyl. Auto. Trans. — 1) Disconnect negative battery cable at battery. Raise vehicle on hoist. Disconnect

starter cable at starter terminal. Remove 3 nuts that attach roll restrictor brace to starter studs. Remove brace.

2) Remove 2 starter rear support bracket bolts. Remove retaining nut from rear of starter through bolt. Remove bracket. Remove 2 starter retaining studs. Remove starter retaining bolt. Remove starter.

All 6-Cyl., V6 & V8 Engines — Disconnect negative battery cable from battery. Raise vehicle on hoist. Disconnect starter cable from starter. Remove starter attaching bolts. Remove starter.

GENERAL MOTORS

BUICK

4.3L (262") V6 Diesel Front Wheel Drive — 1) Disconnect negative battery cable at battery. Install engine support fixture (J-22825-45, J-22825-1, and J22825-48) as shown in Fig. 1. Raise vehicle on hoist.

2) Remove left and center engine mount stud nuts. Remove 2 front cradle mount bolts. Lower cradle. Remove 4 flywheel cover bolts. Remove flywheel cover (2 pieces).

3) Remove starter shield nut at starter. Remove flex shield. Disconnect wires from starter. Remove 2 starter bolts. Remove starter.

All Rear Wheel Drive Models — Disconnect negative battery cable at battery. Raise vehicle on hoist. Remove starter braces and shields. Remove 2 starter-to-engine bolts. Allow starter to

drop down. Remove solenoid wires and battery cable from starter. Remove starter.

1.8L (112") & 2.0L (122") 4-Cyl. — Disconnect negative battery cable at battery. Remove solenoid wires and starter cable from starter. Remove rear engine support bracket. If equipped, remove A/C compressor support rod. Remove 2 starter-to-engine bolts. Remove starter.

2.5L (151") 4-Cyl. & 3.0L (181") V6 — Disconnect negative battery cable at battery. Remove 2 starter-to-engine bolts. Lower starter. If equipped with 2.5L engine, remove nut that holds starter bracket to rear of starter. Remove solenoid wires and battery cable from starter. Remove starter.

GENERAL MOTORS (Cont.)

CADILLAC

All 4-Cyl. Engines – Disconnect negative battery cable at battery. Remove solenoid wires and battery cable from starter. Remove rear engine support bracket. If equipped, remove A/C compressor support rod. Remove 2 starter-to-engine bolts. Remove starter.

All V6 & V8 Engines – Disconnect negative battery cable at battery. Raise vehicle on hoist. Remove starter braces and shields. Remove 2 starter-to-engine bolts. Allow starter to drop down. Remove solenoid wires and battery cable from starter. Remove starter.

CHEVROLET

1.6L (98") 4-Cyl. Without Power Brakes – 1) Disconnect negative battery cable at battery. Remove air cleaner. Disconnect fuel line at carburetor and move aside. Remove splash shield from ignition coil.

2) Remove upper starter bolt. Remove lower starter bolt. Move starter for access to wiring. Disconnect starter wires at starter. Remove master cylinder mounting nuts. Move master cylinder aside. Remove starter.

1.6L (98") 4-Cyl. With Power Brakes – 1) Disconnect negative battery cable at battery. Remove air cleaner. Disconnect fuel line at carburetor and move aside. Remove splash shield from ignition coil.

2) Remove upper starter bolt. Remove steering column cover screws. Remove steering column cover. Remove steering column upper nuts. Remove toe pan screw. Raise vehicle on hoist.

3) Remove steering shaft from steering coupling. From inside vehicle, move steering column aside. Disconnect starter wiring. Remove lower starter bolt. Remove starter.

1.8L (111") 4-Cyl. Diesel – Disconnect battery cables at battery. Remove fuel separator, and position aside. Remove upper

and lower starter mounting bolts. Remove all wires from starter. Remove starter.

1.8L (112") & 2.0L (122") 4-Cyl. – Disconnect battery cable at battery. Remove solenoid wires and battery cable from starter. Remove rear engine support bracket. If equipped, remove A/C compressor support rod. Remove 2 starter-to-engine bolts. Remove starter.

4.3L (262") V6 Diesel Front Wheel Drive – 1) Disconnect negative battery cable at battery. Install engine support fixture (J-22825-45, J-22825-1, and J22825-48) as shown in Fig. 7. Raise vehicle on hoist.

2) Remove left and center engine mount stud nuts. Remove 2 front cradle mount bolts. Lower cradle. Remove 4 flywheel cover bolts. Remove flywheel cover (2 pieces).

3) Remove starter shield nut at starter. Remove flex shield. Disconnect wires from starter. Remove 2 starter bolts. Remove starter.

All Other Engines – Disconnect negative battery cable at battery. Raise vehicle on hoist. Remove starter braces and shields, if equipped. Remove 2 starter-to-engine bolts. Allow starter to drop down. Remove solenoid wires and battery cable from starter. Remove starter.

OLDSMOBILE

1.8L (112") & 2.0L (122") 4-Cyl. – Disconnect negative battery cable at battery. Remove solenoid wires and battery cable from starter. Remove engine rear support bracket. If equipped, remove A/C compressor support rod. Remove 2 starter-to-engine bolts. Remove starter.

2.5L (151") 4-Cyl. & 2.8L (173") & 3.0L (181") V6 – Disconnect negative battery cable at battery. Raise vehicle on hoist. Remove starter-to-engine bolts. Lower starter. If equipped with 2.5L engine, remove nut that holds starter bracket to rear of starter. Remove solenoid wires and battery cable from starter. Remove starter.

4.3L (262") V6 Diesel Front Wheel Drive – 1) Disconnect negative battery cable at battery. Install engine support fixture (J-22825-45, J-22825-1, and J22825-48) as shown in Fig. 7. Raise vehicle on hoist.

2) Remove left and center engine mount stud nuts. Remove 2 front cradle mount bolts. Lower cradle. Remove 4 flywheel cover bolts. Remove flywheel cover (2 pieces).

3) Remove starter shield nut at starter. Remove flex shield. Disconnect wires from starter. Remove 2 starter bolts. Remove starter.

4.3L (262") V6 Diesel & 4.3L (260") & 5.0L (307") V8 – Disconnect negative battery cable at battery. Raise vehicle on hoist. Remove upper support attaching bolts and shield. Remove flywheel housing cover. Remove 2 starter mounting bolts. Lower starter. Remove wires from starter. Remove starter.

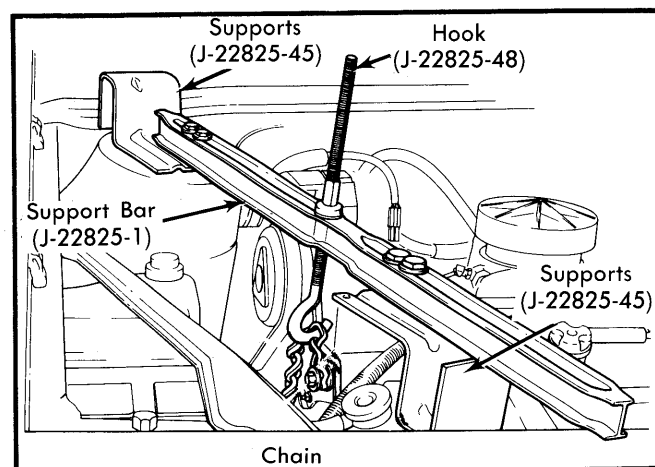


Fig. 1 Installation of Engine Support Fixture for Starter Removal

Starter Removal

GENERAL MOTORS (Cont.)

OLDSMOBILE (Cont.)

5.7L (350") V8 Diesel Exc. Toronado – Disconnect negative battery cable at starter. Raise vehicle on hoist. Remove flywheel cover. Remove starter shield side nut. Loosen starter shield upper bolt. Remove 2 starter bolts. Lower starter. Disconnect wires at starter. Remove starter.

5.7L (350") V8 Diesel Toronado – Disconnect negative battery cable at battery. Raise vehicle on hoist. Remove 3 starter attaching bolts. Disconnect wires from starter. Remove starter.

PONTIAC

1.6L (98") 4-Cyl. Without Power Brakes – 1) Disconnect negative battery cable at battery. Remove air cleaner. Disconnect fuel line at carburetor and move aside. Remove splash shield from ignition coil.

2) Remove upper starter bolt. Remove lower starter bolt. Move starter for access to wiring. Disconnect starter wires at starter. Remove master cylinder mounting nuts. Move master cylinder aside. Remove starter.

1.6L (98") 4-Cyl. With Power Brakes – 1) Disconnect negative battery cable at battery. Remove air cleaner. Disconnect fuel line at carburetor and move aside. Remove splash shield from ignition coil.

2) Remove upper starter bolt. Remove steering column cover screws. Remove steering column cover. Remove steering column upper nuts. Remove toe pan screw. Raise vehicle on hoist.

3) Remove steering shaft from steering coupling. From inside vehicle, move steering column aside. Disconnect starter wiring. Remove lower starter bolt. Remove starter.

1.8L (111") 4-Cyl. Diesel – Disconnect battery cables at battery. Remove fuel separator, and position aside. Remove upper and lower starter mounting bolts. Remove all wires from starter. Remove starter.

1.8L (112") & 2.0L (122") 4-Cyl. – Disconnect negative battery cable at battery. Remove solenoid wires and battery cables from starter. Remove rear engine support bracket. If equipped, remove A/C compressor support rod. Remove 2 starter-to-engine bolts. Remove starter.

4.3L (262") V6 Diesel – 1) Disconnect negative battery cable at battery. Install engine support fixture (J-22825-45, J-22825-1 and J-22825-48) as shown in *Fig. 1*. Raise vehicle on hoist.

2) Remove left and center engine mount stud nuts. Remove 2 front cradle mount bolts. Lower cradle. Remove 4 flywheel cover bolts. Remove flywheel cover (2 pieces).

3) Remove starter shield nut at starter. Remove flex shield. Disconnect wires from starter. Remove 2 starter bolts. Remove starter.

All Other Engines – Disconnect negative battery cable at battery. Raise vehicle on hoist. Remove starter braces and shields, if equipped. Remove 2 starter-to-engine bolts. Allow starter to drop down. Remove solenoid wires and battery cable from starter. Remove starter.