



360940 Mopar Starter Installation

These instructions are provided as a supplement to the factory service manual procedures for starter replacement.

Installation:

1) Disconnect the battery.

2) Mount Starter. Make sure the mounting surface of the bellhousing is smooth, and free of paint or debris buildup. Torque starter to engine manufacturers specifications, typically 30-35 ft/lbs.

3) Attach Battery Cable and Switch Wire. Reconnect the original switch wire to the ignition terminal on the starter. (small post) The switch wire should be capable of handling 50A intermittent and 10A continuous. (min. 12AWG) Reconnect the battery cable to the starter. See chart for appropriate sizes for the length of cable. All connections should be clean and tight, and terminals should be soldered on if possible. The ground cable is important and should be direct to the block for the best path. Full frame vehicles can also be grounded to the frame. Ground cable should be the same size as the starter cable. A ground strap should also be used connecting the engine block to the frame.

Distance
3' use 4 AWG
5' use 2 AWG
7' use 1 AWG
10' use 0 AWG
10'+ use 00 AWG

4) Connect the battery.

5) Operate the starter. It should operate quietly. Check the cables and connectors for voltage drop with a voltmeter. To check for voltage drop, connect one side of the voltmeter to one end of the cable, and the other side of the voltmeter to the other end. Operate the circuit while monitoring the voltage drop. It should be less than 0.5V. A high voltage drop indicates a bad connection or undersized cable. Check the ground circuit the same way. Measure input voltage by connecting the positive probe to the "motor" terminal of the solenoid and connect the negative to the starter housing. It should read a minimum of 9.6V while cranking.

Additional notes:

1) It is important for long starter life that the ring gear is round and true. Check the ring gear in at least six places verifying that the clearance is the same in all locations. If not, remove the ring gear and make sure the mounting surface of the crankshaft is clean and free of paint and debris. Reinstall the ring gear and torque the mounting bolts to the proper specification. If that does not correct the problem, replace the ring gear.

2) When using battery disconnect switches, ensure you are using a switch that will handle the load. Starter current across the terminals can be as much as 700A! After the engine is running, all the alternator current is also running across this switch. Switches are rate in intermittent and continuous amperage. The intermittent rating should match or exceed the amount the starter will pull, and the continuous should match or exceed the amount the alternator can produce. Using a switch that is too small will cause voltage loss and possible switch failure.