MOPAR Denso Starter INSTRUCTIONS

TECH DEPT
(630) **957-4019**

XS Torque
9530, 9531



#9530

Early Hemi 146 Tooth Flywheel **1951-1956 12v Only**



#9531

Early Hemi 172 Tooth Flywheel **1957-1958**

Wiring Instructions:

1. Install a jumper wire from the “Bat” terminal connection on the starter solenoid to the “IGN” terminal.

[OPTIONAL: Run the “switch” wire from the starter relay to the “IGN” terminal on the starter solenoid.]

2. Connect the positive battery wire to the “BAT” terminal on the starter solenoid.



Need Help? Call our Tech Line

(630) 957-4019

Email : tech@powermasterperformance.com

Battery Condition:
Charge and Load Test Battery. A weak or discharged battery can cause starter failure.

Grounds:
Battery must be grounded to engine block.

Cables and Wiring:
All terminals should be crimped and soldered. Connections clean and tight.

Do Not over tighten small Ign terminal on starter.

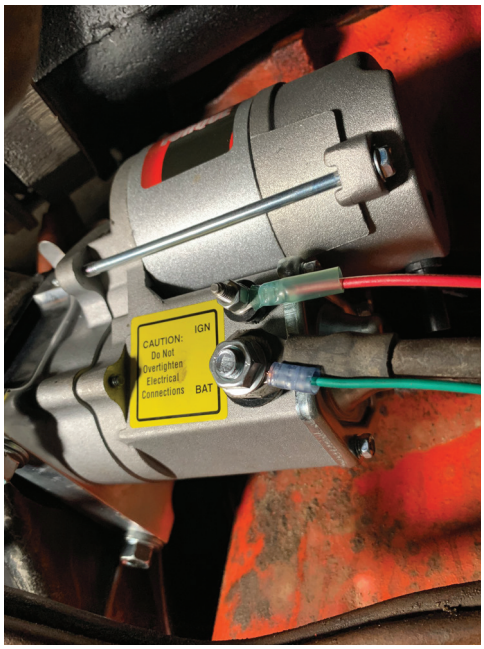
Failure to follow these instructions may void your warranty

POWERMASTER Performance

TECH BULLETIN

Checking Starter Supply Voltage

When it comes to starter performance issues, the most common cause is low voltage supply. If you're experiencing intermittent cranking, clicking, grinding or erratic operation, there is likely low voltage supply to one of the two starter circuits. Low voltage at either the battery connection or the smaller ignition terminal can lead to internal solenoid damage which also affects the clutch assembly that controls the pinion gear. Also, note that the ignition wire may go through a park/neutral switch or an OEM resistor causing a low voltage issue.



Low voltage supply can be caused by a weak battery, too small gauge of cable, internal cable corrosion and even poor quality crimps on the cable. Low voltage on the ignition terminal can be due to factory resistor wiring, excessive engine heat or how it is routed through a park/neutral switch.

The good news is that these can easily be checked and remedied. Two things you'll need for the test – a volt meter and a friend to help.

TEST PROCEDURE

The goal is to check the voltage with a digital volt meter at BOTH, the battery cable connection and the ignition terminal of the starter WHILE CRANKING the engine.





1. Make sure the battery is fully charged. The battery must be at least 12.6 volts before checking the voltage values at the starter terminals. If the battery does not read 12.6 or higher, charge it or replace it.

2. With the battery at full charge, connect your volt meter to the battery terminal of the starter. It should read the same at the starter as it did across the battery terminals. If not, there is an issue within the cable/terminals from the battery positive post to the starter terminal.

Tech Line: 630-957-4019 tech@powermasterperformance.com

POWERMASTER Performance

TECH BULLETIN

3. If the voltage is the same at the battery as the starter, have your partner crank the engine for about 3-5 seconds and note the voltage on the battery terminal of the starter while cranking. It should stay above 11 volts.

4. Next, connect your volt meter to the small terminal of the starter (ignition) and to ground. Have your partner crank the starter for 3-5 seconds and note the voltage. It should also be over 11 volts.



If less than 11 volts:



1. For block mounted starters, ensure the engine block mount is clean of all paint. This is the ground source for hundreds of amps being used by the starter. A poor ground will affect the voltage values and performance of the starter.

2. Inspect the wiring. Original cables need to be replaced. Corrosion can build up inside an older cable which you'll never see. Also, the gauge may be too small to carry the current and voltage needed for a high torque starter. We recommend a high quality, multi-strand copper wire and remember that trunk mounted batteries require heavier gauge cables. You can't go too big on the battery cable!

3. Inspect the ring lug/terminals. Use the proper ring lugs and ensure they are crimped to the bare wire strands – not the insulation!

If you have any questions about checking the starter supply voltage or other starter concerns, please contact our tech team at 630-957-4019.

Follow for a Tech Video

Tech Line: 630-957-4019 tech@powermasterperformance.com