

# **MSD** INSTALLATION INSTRUCTIONS

## **MSD DynaForce Starter Jeep Inline-6, 232, 258, 4.0L, PN 5094**

**ONLINE PRODUCT REGISTRATION:** Register your MSD product online. Registering your product will help if there is ever a warranty issue with your product and helps the MSD R&D team create new products that you ask for! Go to [www.msdpower.com/registration](http://www.msdpower.com/registration).

**IMPORTANT:** Proper installation of the DynaForce Starter is important to the overall operation. Correct alignment of the starter pinion with the ring gear is needed to achieve the best operation and longevity from your starter. Please read the instructions before attempting the installation.

### **Parts Included:**

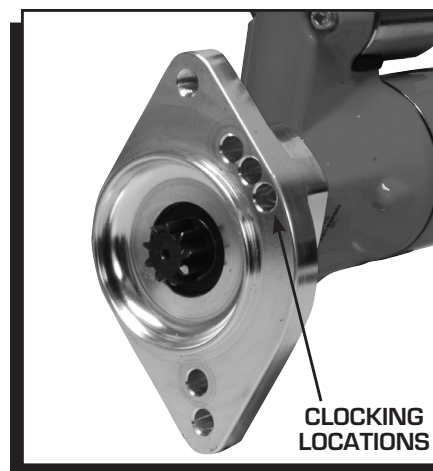
1 - Starter                      1 - Shim Ring                      1 - Outer Shim

**WARNING:** Before installing the DynaForce Starter disconnect the battery cables. When disconnecting the battery cables, always remove the Negative (-) cable first and install it last.

Thank you for purchasing the DynaForce Starter from MSD. Please be sure to read, understand, and follow the instructions prior to installation so that everything goes smoothly and the engine starts reliably time after time.

## **INSTALLATION**

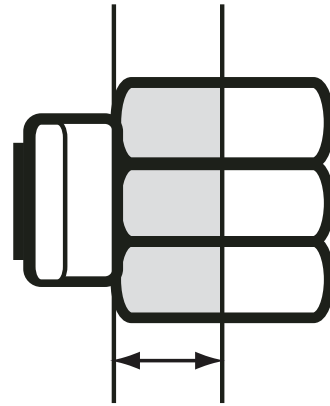
1. Make sure the starter mounting surface is clean and smooth.
2. Mount the starter and check that the position of the solenoid is away from direct heat sources and other components. If there are clearance problems, the starter housing can be rotated to move the location of the solenoid. This is done by removing the three bolts on the mounting block and repositioning the starter motor (Figure 1).



**Figure 1 Clocking the Starter  
for Clearance.**

3. After confirming clearances and position of the solenoid, it is time to check the pinion engagement to the ring gear. This is done by gently prying out the pinion gear to the ring gear. The pinion should engage by 1/4" minimum and 3/8" max on to the ring gear (Figure 2).
- **If there is not enough clearance**, you will need to install the supplied shim kit by removing the mounting block (Figure 3). If the pinion gear engages too far onto the ring gear, there will be issues with disengagement. MSD supplies a shim ring to move the pinion 0.060". Remove the mounting block and place the small shim ring in the bearing bore and install the outer shim on the support housing. Reinstall the mounting block. This will move the pinion gear into the starter approximately 0.060".
4. With the starter mounted and gear engagement confirmed, it is time to connect the wires. The switch wire that connects to the solenoid should be at least 12-gauge (Figure 4). For alternative wiring to incorporate the factory remote solenoid, See Figure 5.
5. Attach the battery cable. The gauge of the battery cable depends on its length. Using the proper gauge wire is important to the operation of the starter. Both the positive and ground wires must be able to meet the demands of the starter. The chart in Figure 5 shows the recommended sizes. Be sure to route the wire away from the exhaust and moving parts of the engine.
6. Connect the battery terminals and start the engine.

**IMPORTANT:** Never operate a starter for more than 30 seconds at a time without letting it cool for at least two minutes.



THE CORRECT PINION DEPTH SHOULD MEASURE 1/4" to 3/8".

Figure 2 Pinion Gear Pattern.

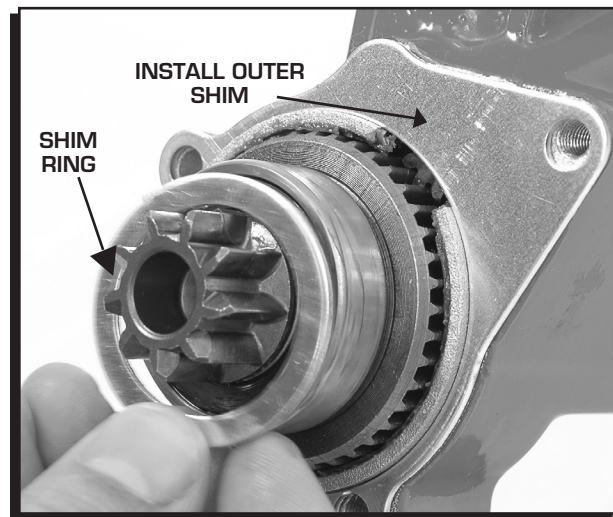


Figure 3 Installing the Pinion Shim Spacers.

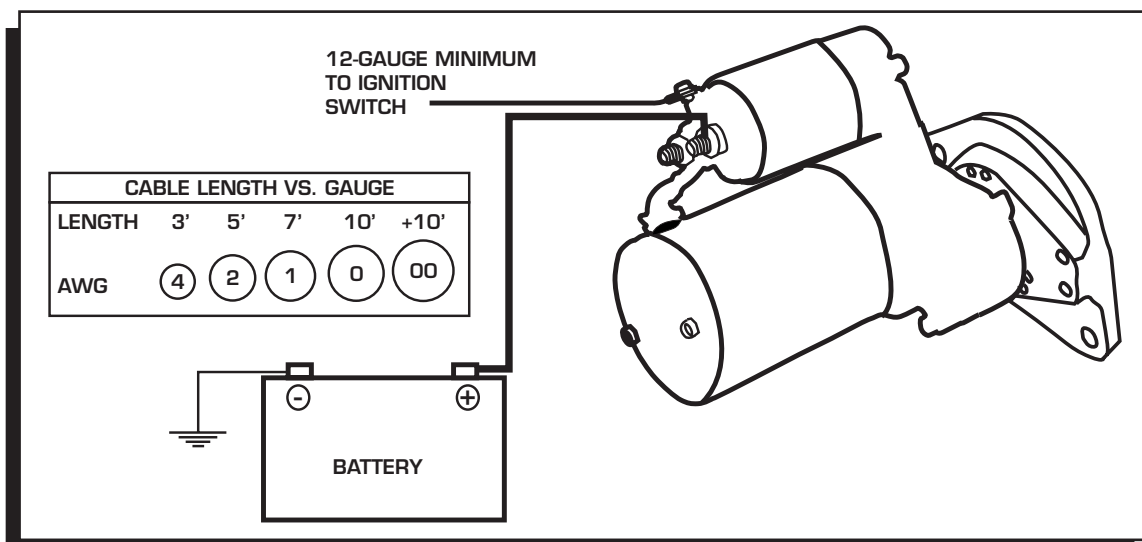


Figure 4 Wiring the DynaForce High Speed Starter.

## SLOW CRANKING

## DISCONNECT SWITCHES

## TECH NOTES

[illegible]



## This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

When returning the unit for repair, leave all wires at the length in which you have them installed. Be sure to include a detailed account of any problems experienced, and what components and accessories are installed on the vehicle. The repaired unit will be returned as soon as possible using Ground shipping methods (ground shipping is covered by warranty). For more information, call MSD at (915) 855-7123. MSD technicians are available from 7:00 a.m. to 5:00 p.m. Monday - Friday (mountain time).

\*Intended normal use means that this item is being used as was originally intended and for the original application as sold by MSD. Any modifications to this item or if it is used on an application other than what MSD markets the product, the warranty will be void. It is the sole responsibility of the customer to determine that this item will work for the application they are intending. MSD will accept no liability for custom applications.