INSTALLATION INSTRUCTIONS

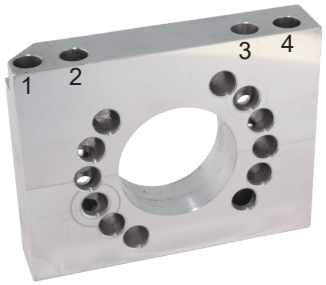
3193 & 13510

Gear Reduction Starters

IMPORTANT! POSITIVE BATTERY CABLE MUST BE DISCONNECTED AT BATTERY PRIOR TO INSTALLATION!
THIS IS A PERFORMANCE MODIFICATION, NOT JUST A REPLACEMENT STARTER.
ALL INSTRUCTIONS & PROCEDURES MUST BE FOLLOWED FOR A SUCCESSFUL INSTALLATION.

The 3193 and 13510 starters are intended for use on Chevrolet small and big block V8 engines as well as 90 degree V6 engines with either a 153 tooth (12 ¾" OD) or 168 tooth (14" OD) flywheel and with a 12 volt negative ground electrical system.

CAUTION: NEVER OPERATE STARTER MOTOR MORE THAN 30 SECONDS AT A TIME WITHOUT ALLOWING IT TO COOL FOR AT LEASE TWO MINUTES. Overheating caused by extended cranking will damage the starter motor and void warranty.



3193 Straight Block
153 or 168 Tooth Flywheel

13510 Staggered Block
168 Tooth Flywheel Only

The 3193 gear reduction starters have 4 mounting holes so they can be mounted on engines with either a small 153 tooth or large 168 tooth flywheel/flex plates. When mounting on an engine with a small 153 tooth flywheel/flex plate, mount the starter using the second and fourth holes as shown in the photo. When mounting on an engine with a large 168 tooth flywheel/flex plate, use the first and third mounting holes to mount the starter.

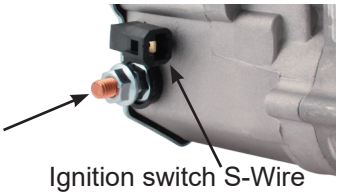
Verify that the pinion gear will engage into the flywheel before final bolt torquing. If the starter interferes with the engine block or any component, the entire starter can be indexed about the nose to gain additional clearance.

Starter removal and installation

1. Disconnect battery then disconnect starter wiring harness and remove old starter.
2. Make sure that the engine block to starter mounting surface is free of any rust, paint or debris to ensure proper grounding.
3. Hold new starter motor in position at engine block. Determine correct bolt holes in starter mounting block to use. The notch in the top of the mounting block is for the oil pan rail clearance.
4. Install (2) supplied mounting bolts. Tighten to 38 ft lbs.

Wiring the starter with Electronic Ignition*

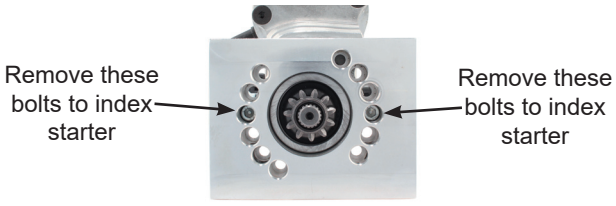
1. Attach the positive battery cable to the large starter terminal. DO NOT OVERTIGHTEN THE NUT! The stud terminal is made of soft brass for superior conductivity and will strip if overtightened.
2. Connect existing ignition switch S-Wire to the spade terminal.
3. Disregard the R-Wire (wrap w/tape).

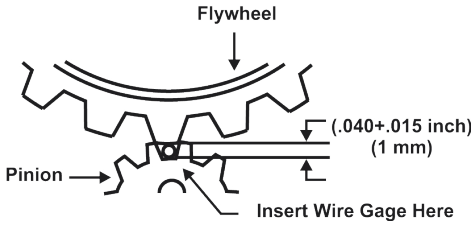


***See page 2 when replacing a starter with Points Ignition.**

Indexing the starter

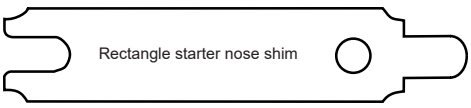
If the starter interferes with the engine block or any component, the entire starter motor can be rotated about the nose to gain additional clearance. To index the starter from the mounting block, remove the two bolts noted and turn the starter motor to gain additional clearance. Reinstall and tighten the mounting bolts once in position.





Pinion Back Lash

When the pinion is engaged into the ring gear, there is to be .040"±.015" backlash between them. This can be checked with a wire gauge (a standard size paper clip will work fine) when holding the pinion into the ring gear with a screwdriver. If the fit is too tight, shim the nose from the block using the provided shims.



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rev 5/24

INSTALLATION INSTRUCTIONS

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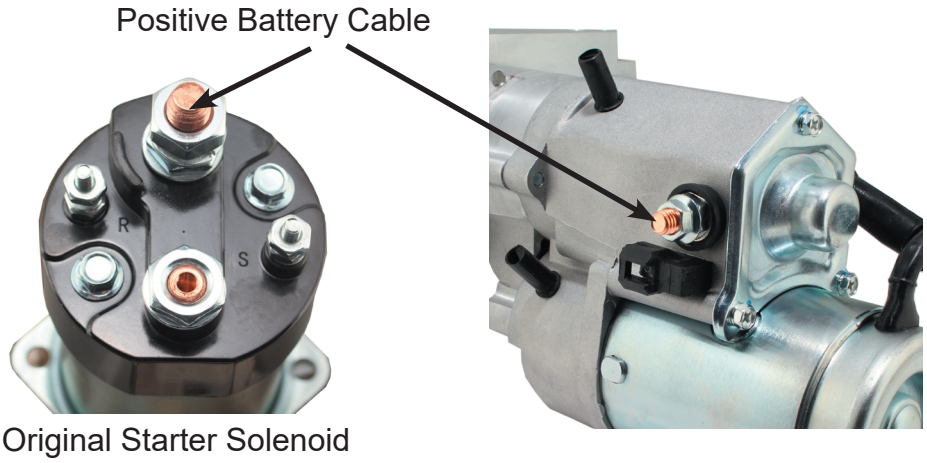
Gear Reduction Starters

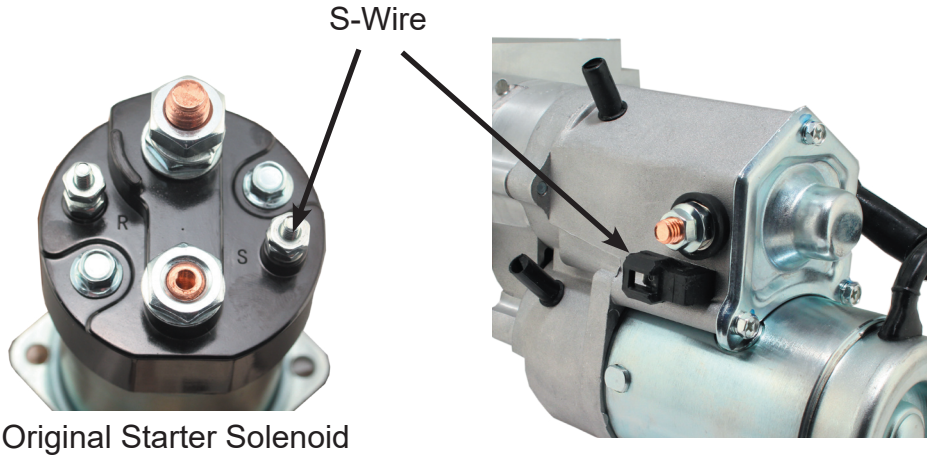
REPLACING AN OEM STARTER WITH POINTS IGNITION

1 - Connect the Positive + battery cable ***from*** the original starter solenoid ***to*** the large positive post on the new starter.



Original Starter Solenoid

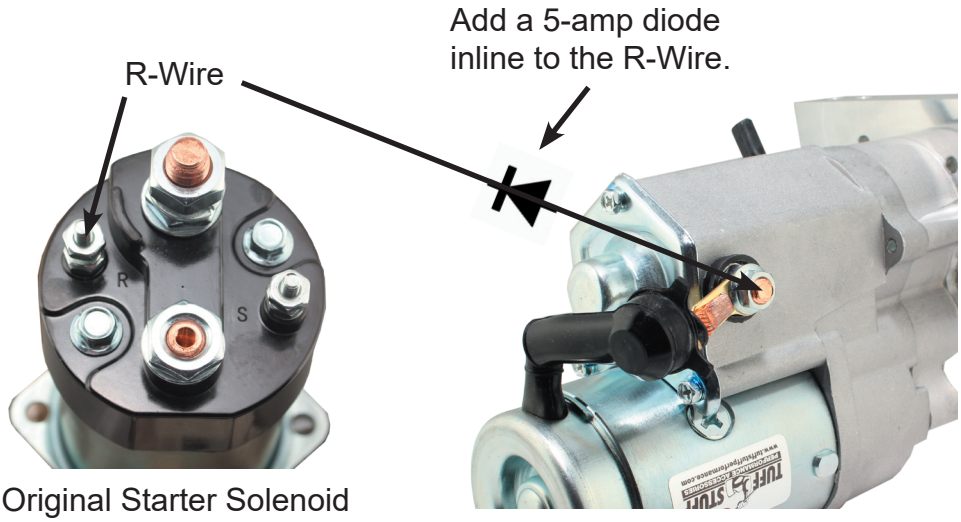
2 - Connect the S-Wire ***from*** the original solenoid ***to*** the ¼' tab (with plastic connector) on the new starter.



Original Starter Solenoid

3 - Connect the R-Wire ***from*** the original solenoid ***to*** the opposite side (under the rubber boot) of the new starter solenoid.

Add a 5-amp diode inline to the R-Wire.



Original Starter Solenoid