



## HIGH TORQUE GEAR REDUCTION STARTER INSTALLATION INSTRUCTIONS

Part No. 66277

### Contents:

- 1 Starter motor
- 2 Mounting bolts
- 1 Solderless terminal
- 1 Round-nose shim
- 1 Housing shim

This starter is intended for use on GM corporate engines: V8 LS Engines. NOTE: not compatible with Pontiac GTO engine configuration.

The armature housing may be rotated in relation to the mounting block. This allows for adjustment, if necessary, for clearance problems when used with large wet oil sumps and/or header exhaust systems.

This starter motor is designed for 12 volt - negative ground electrical systems.

**NOTICE: NEVER OPERATE THIS STARTER MOTOR MORE THAN 30 SECONDS AT A TIME WITHOUT ALLOWING IT TO COOL FOR AT LEAST TWO MINUTES. OVERHEATING CAUSED BY CRANKING FOR TOO LONG A PERIOD WILL DAMAGE THE STARTER MOTOR.**

**CAUTION: Disconnect battery leads prior to starter installation.**

### INSTRUCTIONS

Hold starter motor in position at engine block. Install (2) supplied mounting bolts. Tighten to: 38 lbs. ft.

**NOTE: Before operating starter, gear clearance must be checked.**

(A) Starter pinion to ring gear clearance. This should be (.100 inch = .040 inch)  
(See Fig. 1). If not enough clearance exists, install the supplied shims as follows:

- 1. Remove (3) mounting plate bolts.
- 2. Fully remove housing gasket for re-use.
- 3. Insert round nose shim into mounting plate.
- 4. Align housing gasket and housing shim in proper position.
- 5. Insert housing into starter mounting plate.
- 6. Install (3) bolts and tighten to: 65 lbs. inch.

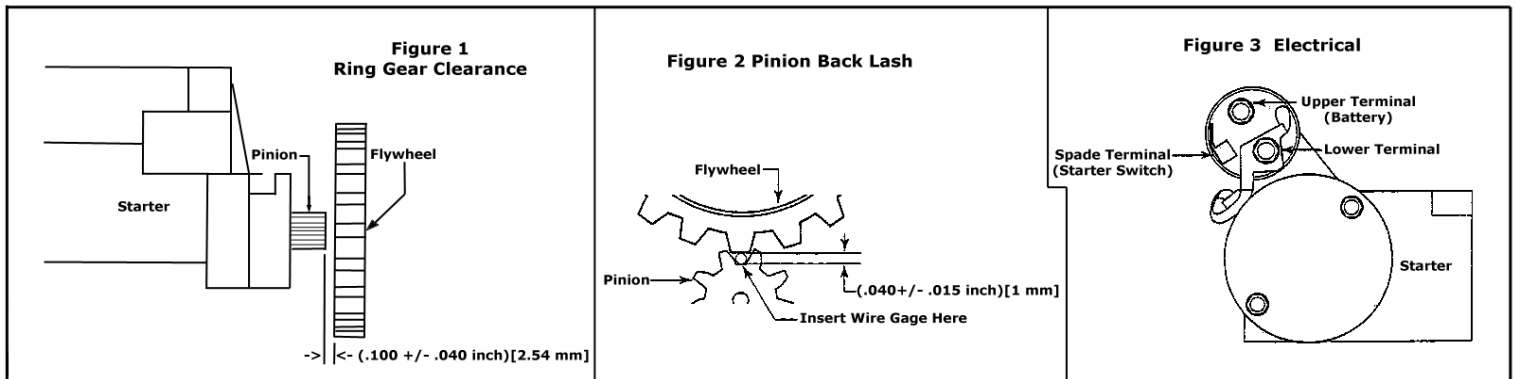
(B) Check starter pinion backlash. This should be  $.040 = .015$  inch). Measure and adjust as follows:

- 1) Pull out and engage pinion gear into flywheel.
- 2) Measure clearance between meshing gears. (See Fig. 2.)
- 3) If the backlash isn't correct: remove starter mounting bolts and install mounting block shims as needed. (Mounting block shims are available at auto part stores)
- 4) Tighten starter mounting bolts: 38 lbs. ft.

### Wiring:

NOTE: (3) terminals at end of solenoid (See Fig. 3)

- a) Upper terminal
  - b) Lower terminal (NOTE: Black lead is already attached.)
  - c) Spade terminal
- 1) Attach positive battery wire to upper terminal
  - 2) Connect a 12 or 14 gauge wire from starter switch to the spade terminal. Use the supplied mating connector if required.



For addition tech support, please call (586)774-2500, Monday-Friday, 9 a.m.-5 p.m. EST, or send an email to [tech@ProformParts.com](mailto:tech@ProformParts.com)

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