

# TECHNICAL SERVICE BULLETIN

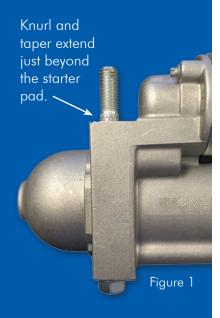
Remy PG starter is designed, engineered and manufactured as original equipment (OE).



**10MT Starter** 



**PG Starter** 



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# Remy Starter Upgrade 10MT (SD300) to PG (PG260)

10MT (SD300) straight drive starters were introduced in the 1950s and used in several applications through 1994. Today, most 10MT starters can be upgraded to a PG (PG260) design. With increased reliability and durability, PG starters generally have a life span two to three times longer than the 10MT. Plus, thanks to their smaller size and weight, PG starters—often called mini starters—install more easily and provide increased exhaust clearance. The Remy PG starter is designed, engineered and manufactured as original equipment (OE).

## 10MT (SD300)

# The 10MT straight drive starter creates a magnetic field by flowing electricity through coils of wires around a steel core (pole shoe). The mass of these coils contributes to the larger size and weight of the 10MT family. (Image left)

## PG (PG260)

The smaller PG starter takes advantage of highly efficient rare earth magnets and an internal gear reduction design. (Image left) Additionally, the PG family has a more electrically efficient armature that can turn at approximately 7000 RPM due to the gear reduction design. As a result, PG starters have a much different sound compared to the 10MT.

The smaller PG design also has increased clearance to the exhaust, reducing heat soak concerns and allowing more header clearance in custom applications.

# When upgrading to PG, check:

#### 1. Starter Mounting Bolts

Starter mounting bolts are a critical part of starter alignment and must be replaced. Use designated starter mounting bolts and do not substitute traditional bolts. There are three bolt factors that affect proper starter alignment.

- **Threads:** The threads are either standard 3/8 x 16 or metric M10 x 1.5 depending upon the year of engine block. In some applications, the bolt head (Hex) is metric, and the threads remain standard. Measure the threads on your original bolt to determine if they are metric or standard. **Using the wrong thread will result in engine block damage.**
- **Knurl:** The knurled area of the starter bolt maintains correct pinion alignment by preventing twisting between the starter housing and the bolt. All PG starter housings are machined for a 10.1mm knurl. Most 10MT starters use a 9.7mm housing. Using the incorrect knurl will allow the starter to twist and result in pinion misalignment, noise, and premature pinion and flywheel wear.
- **Taper (Bolt Length):** Between the knurl and the threads is a taper. The bolt length should result in a small amount of the knurl and the taper protruding beyond the starter pad. (Figure 1) The engine block is machined to accommodate the knurl and taper to maintain starter alignment.



Use the table below to choose the correct starter mounting bolts based upon engine block threads. Upgrading to the PG will either require two long bolts, or one long and one short bolt.

GM Part Number	Hex (Bolt Head)	Length	Thread
12338064	9/16	Long	3/8 x 16
14037733	9/16	Short	3/8 x 16
11610787	15mm	Long	10 x 1.5
14001842	15mm	Short	10 x 1.5

#### 2. Pinion Teeth: 9 vs. 11

PG starters with either 9 or 11 drive pinion teeth are completely interchangeable. Both the 9 and 11 tooth pinions are made on the same pinion pitch. The gear size changes based upon the centerline of the armature in proximity to the flywheel.

#### 3. PG Starter Shimming

Many times an upgrade to a PG design eliminates the need for starter shims. However, due to variations in engine block machining, the replacement PG starter may still require shimming. You can learn more at **remyautoparts.com.** 

#### 4. The "R" Terminal

Early applications used the "R" terminal to bypass the ballast resistor and power conventional point-type ignition systems with 12 volts while the engine is cranking. Electronic ignition applications do not use the R terminal, so ignition system upgrades generally eliminate it. If your vehicle requires an R terminal, choose the part number from the appropriate column in the chart below.

# **Choosing the Correct PG Upgrade**

Use the Remy products catalog to look up your starter by application at **remyautoparts.com.** The cross reference chart below lists the most popular upgrades. If your starter is not listed or you would like assistance, contact Technical Support.

Original 10MT	PG Upgrade No R Terminal	PG Upgrade With R Terminal
25236	96207	RS41113
25365	96207	RS41113
25367	96206	RS41117
25368	96206	RS41117
28236	96207	RS41113
28365	96207	RS41113
28367	96206	RS41117
28368	96206	RS41117
28370	96206	RS41117
96112	96207	RS41113
96113	96206	RS41117
96122	96206	RS41117

For custom configurations, you can choose the PG starter by flywheel. However, not every possible combination of engine, transmission and flywheel can be accounted for. Contact Technical Support for assistance at 800-854-0076.

GM Flywheel	PG / No R Terminal	PG / With R Terminal
153 Tooth	96207	RS41113
168 Tooth	96206	RS41117

