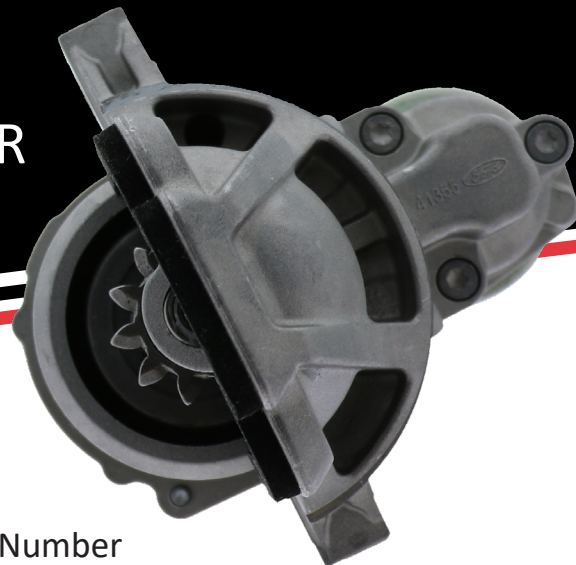


# PRODUCT SHEET:

## HIGH DUTY CYCLE DESIGNED STARTER



# BOSCH

Invented for life

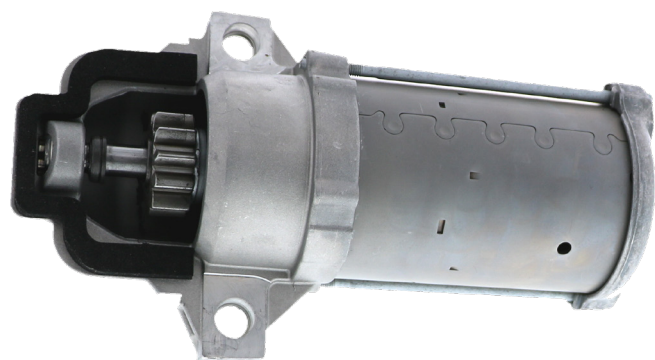
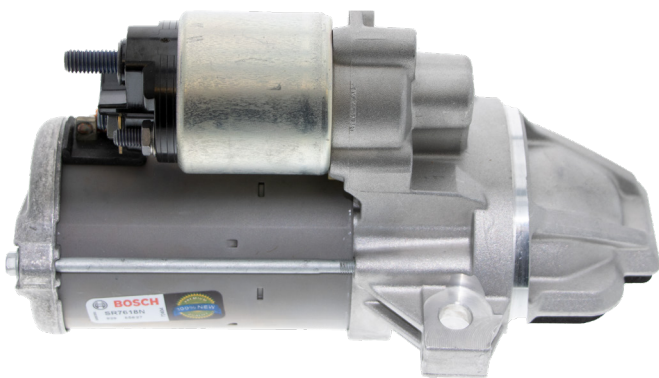
**Sage Parts partnered with Bosch to design starters for the rigorous demands of high start/stop cycles**

This enhanced design is based on start/stop technology where starter motor service life involves a greatly increased number of starting operations. These starter motors have a heavy-duty optimized design that enables the starter motor to withstand more frequent starting cycles, under the most adverse conditions.

Sage Part Number  
SPP00940314

### Design features include:

- ✓ Reinforced highly-stressed bearing points
- ✓ Improved heavy duty planetary gear unit
- ✓ Durable commutator for a longer service life
- ✓ Oversized permanent magnets
- ✓ Optimized brushes and brush holder
- ✓ Heavy duty pinion gear with maximized teeth count
- ✓ Enhanced drive end housings with needle bearings rather than the use of copper bushings



### GSE APPLICATION INFORMATION

MSG - 425 EFI 4 CYL. 2.5L  
L4 CYL., 2.0L, Turbocharged  
L4 CYL., 2.3L., Turbocharged

# SAGE PARTS

Anticipating needs, meeting demands. Reducing costs.



Sage Parts  
30 Hub Drive, Melville, NY 11747  
+1.877.SAGE.877 | +1.631.501.1300 Tel  
info@sageparts.com

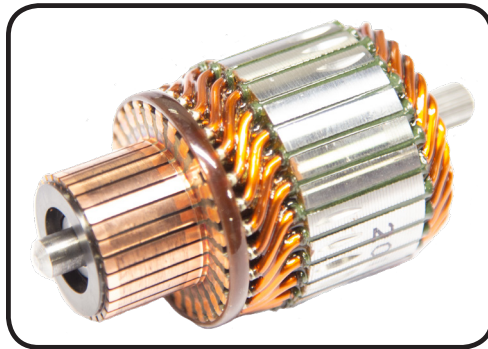
[www.sageparts.com](http://www.sageparts.com)

# PRODUCT SHEET:

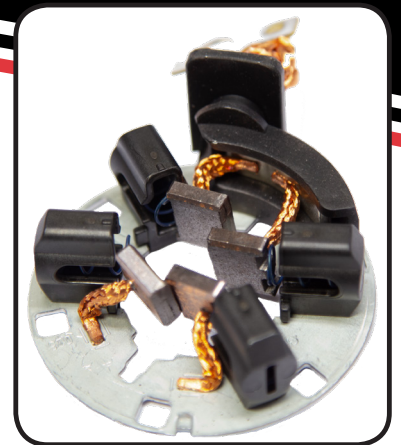
## High Duty Cycle Designed Starter



Utilizes significantly larger permanent magnets to provide a stronger magnetic field for quicker starts and longer life.



Copper segments are larger and contain more copper than conventional commutators to provide a longer wearing surface for brushes.



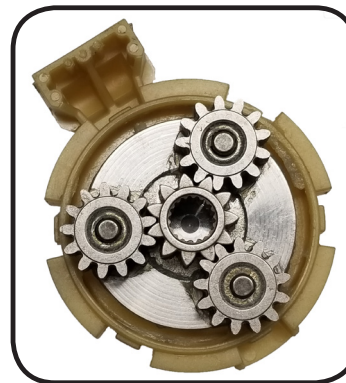
Longer length brushes are used to improve conductivity and greater service life.



Enhanced friction reducing components such as needle bearings are used instead of sintered bronze bushings.



The pinion gear contains the maximum number of teeth, up to 14, conventional starters typically have 8 to 11 teeth.



Enhanced heavy duty planetary gears are designed for high duty cycles and longer life.



The shift lever includes either reinforced nylon and/or steel bushings for high duty cycles.

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