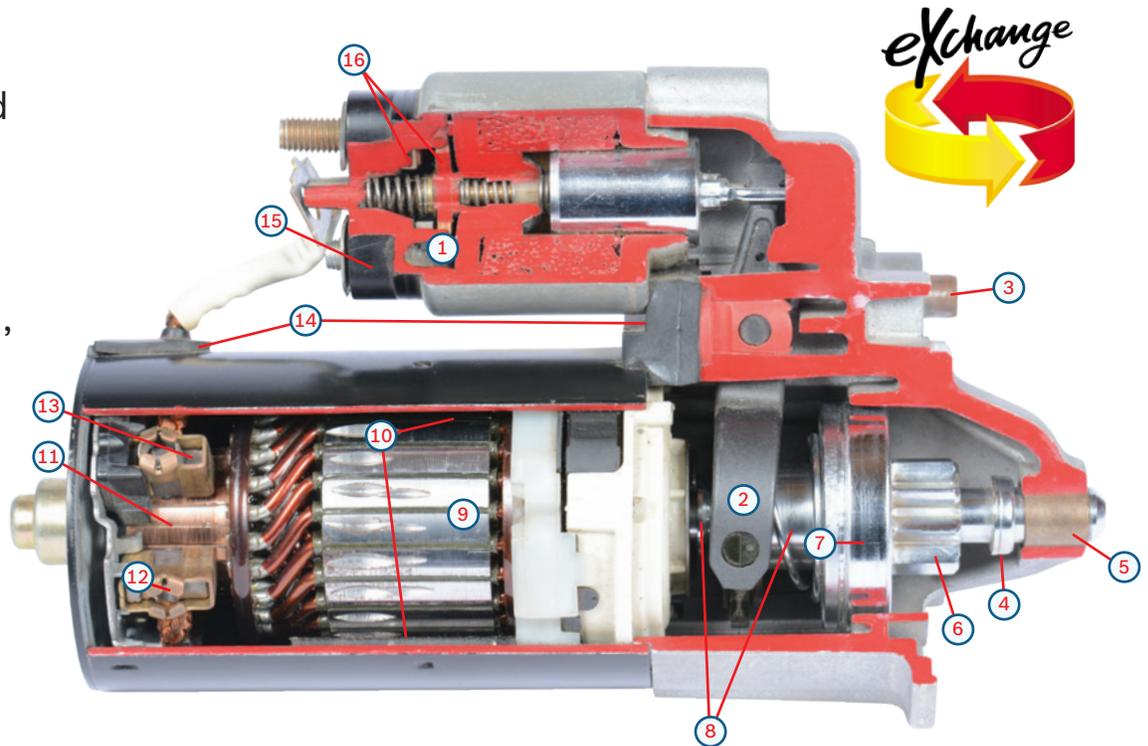


# Bosch Premium eXchange Starters



**BOSCH**  
Invented for life

Full-load tested to meet OE manufacturers' amperage, voltage, torque, and RPM specifications



**24** Hour/Month  
Roadside Assistance

- |   |   |
|---|---|
| <p><b>1 Solenoid</b><br/>- Tested for continuity, pull in and hold strength</p> <p><b>2 Shift lever</b><br/>- Dimensions checked and aligned for proper throw out and engagement</p> <p><b>3 Housing &amp; mounting surfaces</b><br/>- Mounting holes inspected and all threaded holes re-tapped or replaced with stainless steel threaded inserts for easy installation</p> <p><b>4 100% new snap rings</b></p> <p><b>5 100% new bushings/needle bearings</b></p> <p><b>6 Pinion gears</b><br/>- Chamfer checked and replaced if needed</p> <p><b>7 100% new roller springs</b></p> <p><b>8 Shafts &amp; splines</b><br/>- Lubricated with OE specified grease providing protection from -40°F to +302°F</p> | <p><b>9 Armature</b><br/>- 100% checked for continuity, gauged and straightened<br/>- Replaced with new if it does not meet strict Bosch specifications</p> <p><b>10 Permanent magnets</b><br/>- Tested for field strength</p> <p><b>11 Commutators</b><br/>- Remachined to tight Bosch specifications<br/>- Replaced with 100% New as required</p> <p><b>12 Brush plate holder</b><br/>- Realigned and replaced as needed</p> <p><b>13 100% new brushes</b></p> <p><b>14 Seals &amp; gaskets</b><br/>- Replaced per original equipment</p> <p><b>15 100% new solenoid cap</b></p> <p><b>16 100% new contact surfaces in solenoid</b></p> |
|---|---|

**Built for Extremes of Heat, Cold and High Demand**

# Bosch Premium eXchange Starters

| Features   | Benefits   |
|--|--|
| Load tested for OEM torque, amp draw, and RPM                                | Ensures cranking performance and reliability   |
| All seals and gaskets replaced per original equipment                        | Water and oil tight for longer service life  |
| All electrical connections re-soldered                                       | Ensures electrical conductivity under high load  |
| All components 100% cleaned and corrosion protected                          | Eliminates failure of electrical and mechanical components due to contamination                                  |
| <b>Solenoid</b>  |  |
| Completely disassembled  | Allows complete inspection and testing of all components   |
| 100% new terminal hardware   | Improves electrical connections  |
| 100% new contact surface   | Ensures maximum cold starting current  |
| 100% new high temperature cap  | Prevents failure due to current leakage under heavy load   |
| 100% copper winding tested   | Ensures proper performance under severe conditions   |
| 100% pull/hold tested  | Eliminates potential unseen sources of failure   |
| <b>Field coils</b>   |  |
| 100% tested for insulation and continuity                                    | Weak, shorted, and open fields replaced with new for ensured maximum torque performance                          |
| <b>Permanent field magnets</b>   |  |
| 100% tested for field strength   | Ensures maximum torque performance   |
| <b>Armature</b>  |  |
| 100% tested for insulation and continuity                                    | Weak, shorted, and open armatures replaced with New for ensured high torque performance                          |
| 100% alignment gauged and straightened                                       | Ensures specified clearances for maximum torque performance  |
| <b>Commutator</b>  |  |
| Machined to < .05 mm run-out   | Eliminates brush bounce for longer life and maximum power  |
| 100% gauged to rigid Bosch diameter specifications or replaced with 100% new | Ensures longer life  |
| <b>Brushes</b>   |  |
| 100% new brushes   | Longer life and maximum power  |
| 100% new springs where available   | Eliminates brush bouncing and excessive arching for longer life  |
| Brush plate/holder gauged and realigned                                      | Properly aligns new brushes for maximum life and performance   |
| <b>Bushings/bearings</b>   |  |
| 100% new armature support bushings/bearings and gear train bushings          | Ensures maximum life and performance   |
| <b>Drive end</b>   |  |
| 100% new bushings  | Delivers maximum torque and ensures more positive starts   |
| 100% new rollers, springs, and cap   | Eliminates starter clutch slippage   |
| 100% pinion gear chamfer gauged  | Ensures proper engagement and reduced ring gear wear   |
| 100% high temperature OE quality lubrication on all pivot and contact points | Ensures efficiency of drive engagement between -40F to 302F, reduces wear and load on stress and friction points |
| Shift lever gauged   | Ensures perfect drive engagement   |