

BBB Industries® Premium Remanufactured Alternators

The OE quality and power today's hard-working vehicles demand

Looking for dependability? BBB Industries® remanufactured alternators meet or exceed OE standards because they're remanufactured using processes similar to the way new alternators are made. Our remanufactured alternators are built with components that are gauged, sorted, tested and renewed to OE quality specifications, and with vital new parts, too. In fact, every component and part must meet strict BBB Industries® standards.

Inspection and spot testing of products from the assembly line includes a comprehensive "hot performance" test that compares an alternator's performance with the OE-quality standards established for its particular applications.

The result of such attention to OE-quality is BBB Industries® premium remanufactured alternators. They install easily, operate dependably and deliver performance that meets the high-power demands of today's vehicles.



BBB
INDUSTRIES®

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BBB Industries® Premium Remanufactured Alternators

At BBB Industries®, the remanufacturing of alternators starts with a carefully engineered and controlled process that's similar to the way new alternators are made. Part of the process is frequent spot testing of all models to ensure consistent adherence to OE-quality standards.

How BBB Industries® remanufactures an alternator:

Housing - Mounting threads, surfaces inspected and renewed as necessary

Fan - Straightened or replaced as necessary

Pulley - Renewed or refinished as necessary

Bearings - Replaced throughout

Shaft - Gauged and replaced as necessary

Rotor - Inspected, tested and balanced to OE specifications

Stator - Inspected and tested for rated output

Voltage regulator - Tested and replaced as necessary

Rectifier - Load tested, replaced as necessary

Insulators, brushes, terminal hardware - Inspected and replaced as necessary

Slip ring - Gauged and renewed as necessary

"Hot Performance" testing

BBB Industries® has laboratory facilities to support engineering and quality testing of its remanufactured alternators, and production samples are "hot performance" tested. Few other remanufacturers have the capability and facilities to test products as thoroughly. Our premium remanufactured alternators are tested to ensure they always meet OE-quality standards for their specific applications.

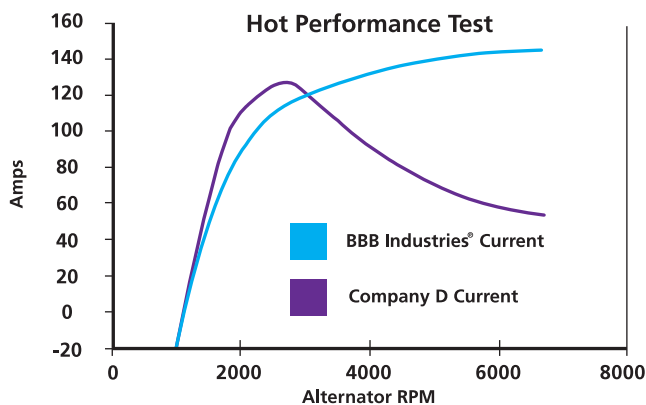


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Testing steps

- Test at alternator RPMs (not engine speed RPMs)
- Check current output
- Check voltage for specific application
- Check cut-in speed
- Check noise level (NVH)
- Test for high-temperature durability:
 - Preload bearings up to 200 lbs. (depending on model)
 - Set temperature as high as 115° Celsius (depending on model)
 - Run for predetermined number of hours at variety of RPMs

Performance comparison of aftermarket remanufactured alternators.



One from BBB Industries® and one from supplier 'D'. Current output drop at 2,500 indicates a defective voltage regulator in the 'D' unit.

Buyer Beware

It's not just quality buyers need to be concerned about. Over time, testing of a number of competitive remanufactured alternators has revealed a pattern of unscrupulous substitutions in coverage. A substituted alternator may not have the output a vehicle requires and may also overheat from a mismatch of cooling requirements. Buyers need to be sure a remanufactured alternator is the correct one for its application.

Depend on BBB Industries® premium remanufactured alternators to be accurately matched to their OE-applications. And count on us for products that install easily, operate dependably just like the original equipment, and provide a more economical repair. For those who want the extra benefits of new parts, BBB Industries® also offers 100% new alternators.

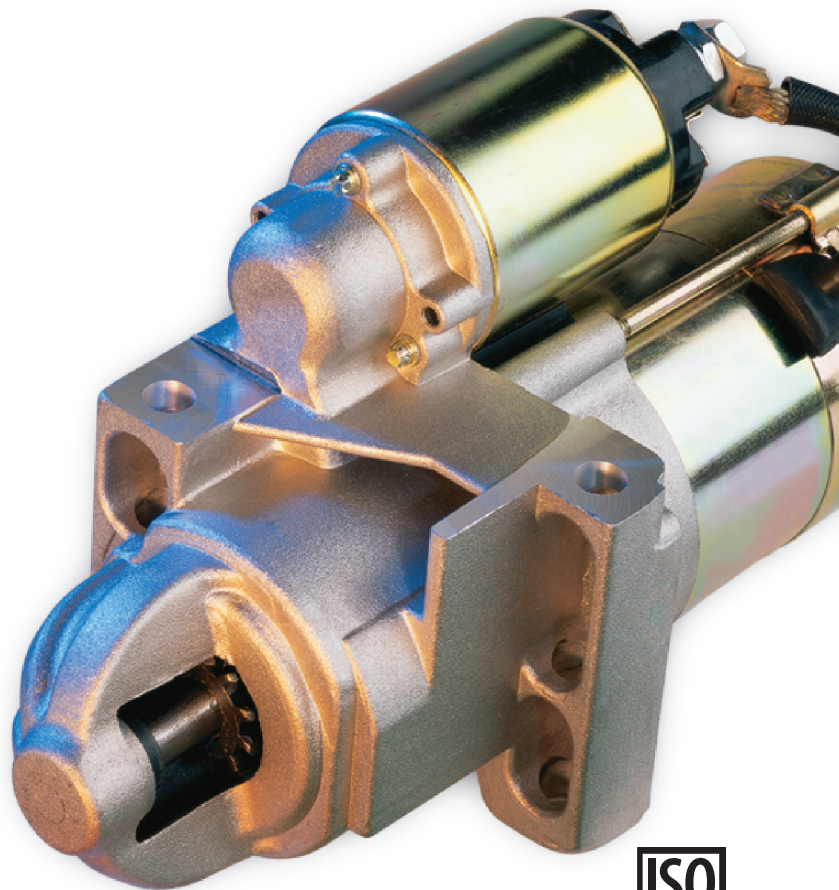
BBB Industries® Premium Remanufactured Starters

Quality and cranking performance you can count on

BBB Industries® remanufactured starters meet or exceed OE standards because they're remanufactured using processes similar to the way new starters are made. Components are gauged, sorted, tested and renewed to OE-quality specifications, and vital parts are replaced with new ones where needed. Every component and part must meet strict BBB Industries® standards.

Scheduled testing of starters from the assembly line includes loading the starter to an OE-quality specification. Instead of a "one-size-fits-all" approach, our test engineers make certain that each starter model is tested with the load specification for its particular applications.

Because of this strict adherence to OE-quality, a BBB Industries® premium remanufactured starter installs quickly and easily, and provides cranking performance you can count on.



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BBB Industries® Premium Remanufactured Starters

The remanufacturing of starters starts with a process engineered and controlled by BBB Industries® that's similar to the way new starters are made. Frequent testing of models is standard operating procedure to ensure OE-quality standards are consistently met.

How BBB Industries® remanufactures a starter:

Housing - Mounting threads, surfaces inspected and renewed as necessary

Bushings, rollers, springs, caps - All replaced throughout

Brushes - Replaced throughout where applicable

Solenoid - Renewed and tested to OE specifications

Armature - Inspected, straightened and balanced as necessary

Commutator - Machined, tested for "run out," or replaced as necessary

Drive gears - Inspected and replaced as necessary

Lubrication - All pivot and contact points inspected and lubricated

Performance testing

BBB Industries® premium remanufactured starters are tested to make certain they meet OE-quality standards for every application. BBB Industries® has laboratory facilities to support engineering and quality testing of its remanufactured starters, and production samples are performance tested based on their application. Few other remanufacturers have the capability and facilities to test products as thoroughly.



Testing steps

- Free spin (spinning at speed to make test measurements)
- Check current draw
- Check running torque
- No-load life test
- Load life test (preload starter based on application load specification)

Depend on BBB Industries® premium remanufactured starters to install easily and operate dependably, and provide a more economical repair. For those who want the extra benefits of new part, BBB Industries® also offers 100% new starters.



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