

Remanufactured Starters

LIKE-NU
Like-Nu Quality
Like-Nu Performance

Built tough and backed with confidence.

- Heavy-duty remanufactured starters for all applications.
- Every part is factory remanufactured to meet or exceed new performance levels.
- Backed by Haldex one-year/100,000 mile warranty protection, honored by an extensive network of heavy-duty distributors.
- 100% functional tested under a full load and simulated operating conditions to ensure consistent quality.

Armatures are visually inspected and electrically tested. The shaft and splines are gauged to assure straightness and dimensional integrity.

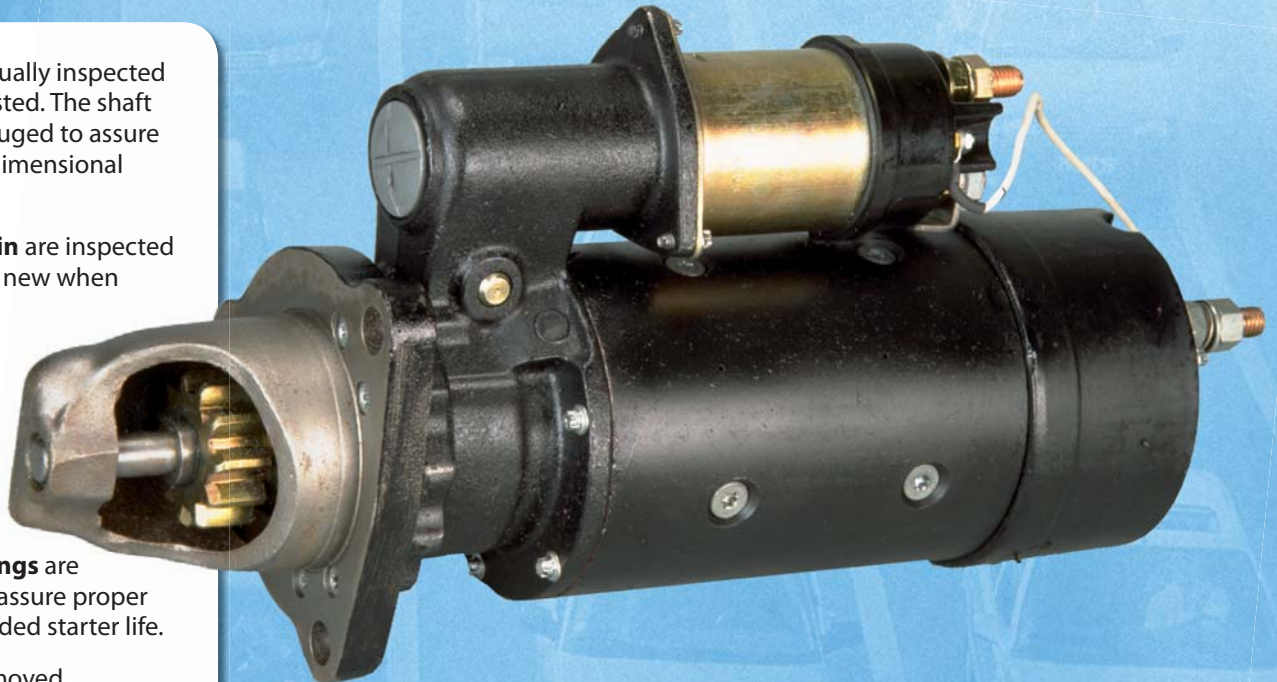
Shift Lever and Pin are inspected and replaced with new when necessary.

Housings are inspected and gauged to assure like-new component operation.

Brushes and Springs are replaced 100% to assure proper contact and extended starter life.

Field Coils are removed, visually inspected and re-insulated. Only parts that meet or exceed OEM performance levels are used in the remanufacturing process.

New Bushings are installed and sized to achieve proper clearance with the armature shaft. Oil wicks are replaced 100%.



All solenoids are replaced 100% with new units. Solenoids are then tested to meet or exceed all OEM specifications.

Commutators are gauged, machined and polished to assure proper brush contact and longer service life.

Starter drives and the following listed parts are always replaced 100% during the remanufacturing process.

Bearings, brushes, brush springs, bushings, gaskets, hardware, lubricating wicks, o-rings, regulators, sealing boots, seals, solenoids and starter drives.

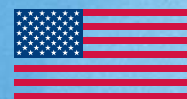
Haldex

For further details contact your Haldex Representative.

See Reverse Side for Helpful Starter Installation Tips.



REMANUFACTURED IN THE USA



Remanufactured Starters

The Haldex logo consists of the word "Haldex" in a white, bold, sans-serif font, centered within a blue rounded rectangular border.

Innovative Vehicle Solutions

Do's and Don'ts of Starter Installations

General Information

Always block the vehicle wheels before working on any part of an air brake system. Place the vehicle in neutral and disconnect batteries before working on the electrical system.

Installation Instructions

- 1. Test the batteries before installing the starter.** Batteries must be in good condition, have the proper capacity and be fully charged. A defective or discharged battery will result in low voltage which will stress the starter and may result in early failure. This will also cause early failure of the series parallel switch. Batteries with insufficient capacity will result in poor starter performance especially in colder temperatures.
- 2. Inspect all wire and battery cables.** Battery cables and starter wiring must be of the proper size and free of corrosion. High resistance in the starter circuit will result in slow or sluggish starter performance due to low flow. This may result in starter failure. **Many starters are needlessly replaced for this reason.**
- 3. Inspect for loose and corroded connections.** All cable clamps and terminal ends must be clean and tight to minimize circuit resistance.
- 4. Check starter amperage draw.** Excessive starter current draw will cause slow cranking and starter failure. This will also cause excessive arcing and burning in the series parallel switch and solenoid. This may be caused by a defective starter, improper starter application or engine problems.
- 5. Inspect the flywheel ring gear.** Excessive wear on the ring gear will result in premature drive wear and in some conditions poor drive engagement into the ring gear.
- 6. Use proper mounting hardware.** Use grade 5 cap screws and lock washers to mount the starter to the engine housing.
- 7. Rotatable drive housing.**

Your starter may be equipped with a 24 position rotatable drive housing. Read these instructions before changing the position of this housing.

In order to match the solenoid position of the original starter, it may be necessary to rotate the drive housing of the starter. To change the position of the drive end housing remove the six socket screws from the housing mounting flange and rotate the housing to the correct position. Make sure that the gasket that seals the drive housing to the starter is still in proper position. When the housing is properly positioned reattach the six socket screws and tighten to 13-17 ft. lbs. torque. Place the rubber plugs provided in the blank bolt holes to properly seal the housing flange when the unit is mounted to the engine.

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