

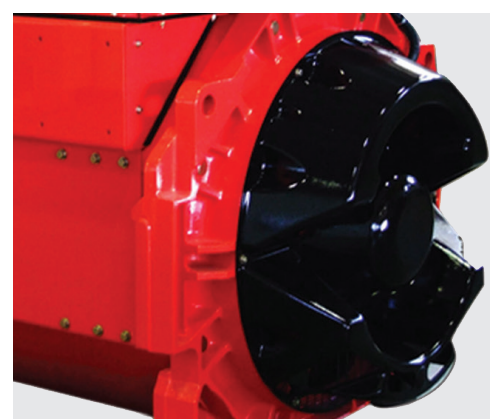
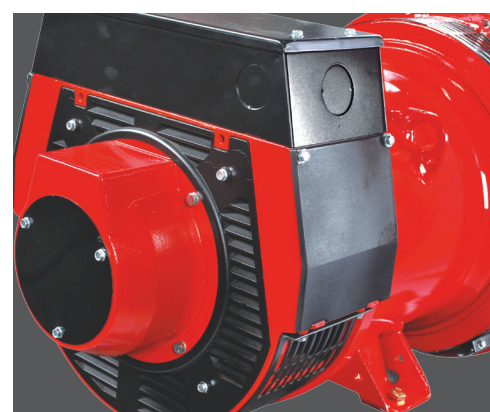
STAMFORD®
AvK®



**Generator
Technologies**

Stamford Genuine Parts

Bearings



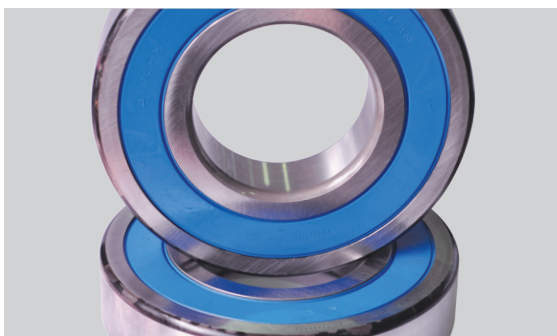


Every part of the Stamford alternator is designed and manufactured to give desired operation and performance of the alternator. So every part is crucial and important for the smooth operation of your Generator and ensures that your Generator is available when needed.

In due course of operating life, these parts need replacement as a maintenance requirement or at time of failure.

Bearings:

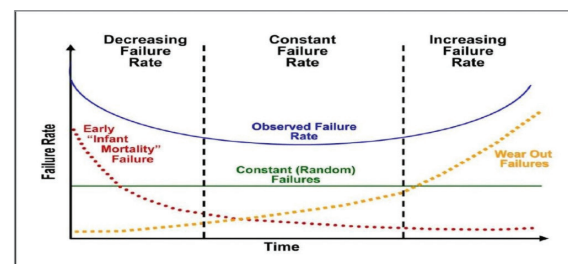
Bearings are designed and manufactured to the specifications required as per the operating speed, load, operating temperature & lubrication requirements. Sealed ball bearings are used in all Single Bearing Stamford models and double bearing models up to HC6. This style of antifriction bearing has grease sealed within the bearing, meaning the grease never needs to be replaced. Mid-range and larger Stamford alternator use re-greasable bearings. This style of antifriction bearing has regreasing pipes and removable sealing components which allow the bearing grease to be changed periodically.



Note: Picture is indicative only. Actual kit may vary based on Alternator Model.

All Stamford alternator with sealed bearings are supplied with specially designed lubricant to ensure improved operating life cycle of component at desired operating conditions.

Bathtub curve



Life of bearing depends upon number of operating hours / period considering fatigue and operational stress factors like genset and mounting vibration, genset alignment, airborne contaminants, temperature, relative humidity and atmospheric pressure during its normal operational life cycle.

The failure rate curve (bathtub curve) is typical failure rate indicator for machines during the life time of the equipment since installation.

The wear out period, is characterized by an increasing failure rate as a result of equipment

deterioration due to age or use. For example: mechanical components such as bearings will eventually wear out and fail, regardless of how well they are made. Early failures can be postponed due to good design and maintenance practices. The only way to prevent failure due to wear out is to replace or repair the deteriorating component before it fails.

Bearing failures result in progressive damage to other major components of the alternator main rotor, main stator resulting in long down time and increased cost of ownership.

Function in your Alternator:

The purpose of bearings is to minimize rotational frictional losses and support radial and axial loads at desired operating speed for the designated operational life.

Maintenance recommendation:

CGT recommends to adhere the maintenance schedule mentioned in service and maintenance section in respective owner manual. (Refer Regreasing section for Re-greasable bearings.)

What if you use non-genuine Bearings?

Bearings used in Stamford Alternators are designed and manufactured to the specifications required as per the operating speed, load, operating temperature & lubrication requirements and selected based on years of research and field experience.

Use of non-genuine bearings tends to higher the chances of risk. e.g., design differences not limited to:

- Different number of rolling elements
- Different diameter of rolling elements
- Different bearing internal clearances
- Different radial load capacities
- Different axial load capacities

- Different lubrication/grease
- Different seal material

Some of or all of the above can be seen in the following sources of bearings:

- Indigenous spurious bearings
- Imported spurious bearings
- Converted bearings

This will shorten the overall lifecycle of equipment and increase down time, cost of ownership and unplanned downtime.

Always insist on Stamford genuine parts:

When you use genuine Stamford Parts and assemblies, you get years of trouble free operation. Most importantly, you get peace of mind. Only Stamford knows what a Stamford Alternator needs. With Stamford nationwide network, you are never far from a Stamford Service Center. Stamford offers each customer a unique value package comprising product, information and support. Working round the clock, around the country, Stamford's strong network is supported by committed and dedicated professionals.

So next time your Stamford Alternator needs parts replacement, use only Genuine Stamford Parts. They are easily available whenever and wherever you need them, just a call away.

For parts and service, contact the Authorized Service Providers of Stamford Generator Technologies or CGT Parts department.

You may send your enquires on:

cgtil.csnotify@notes.cummins.com

Failure Modes



Figure 1 - Brinelling - Static Deformation of Metal Race and Wear Marks at Interface of Balls and Race



Figure 2 - Fretting – Scoring, Corrosion, Discoloration

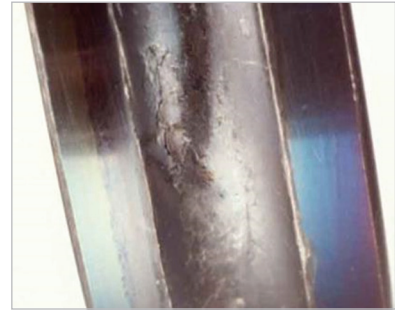
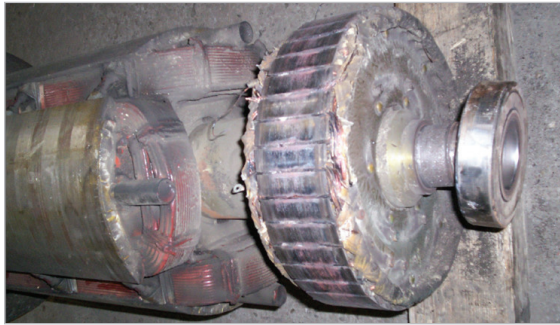


Figure 3 - Discolored Race – indicates excessive heating

Consequential failures of other major components due to bearing failure



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