The Bosch Long Haul Alternator Road Tests

The Field Trial

The BX525085, a genuine Bosch alternator, was installed in a Kenworth “T” series prime mover, one of a fleet of trucks operated by a large transport company, carrying general freight. All trucks average between 250,000-300,000 km per year. Each truck is serviced fortnightly, and subjected to a CAT extra engine analysis each month. The independent analysis made in January 2007, with the Bosch alternator fitted, showed an overall fuel economy of 1.53 km per litre of fuel. Six months earlier, the same engine in the same truck, with the previous alternator, recorded a fuel economy of 1.43 km per litre. In both instances, the truck exceeded 300 driving hours during the test period.

A spokesman for the company commented:

“Since the installation of the Bosch alternator there has been a reduction in fuel consumption which equates to substantial dollar savings over the year”.

The driver made the observation:

“The voltage gauge did not waiver at all when the lights went on, or when I hooked up…”

The Bosch Long Haul Alternator 160 A and 200 A - Range Extension

Increased Battery Life

Features

• 160/200 Amp operating output and higher output at engine idle
• Temperature and vibration-resistant materials and components
• Exclusive Bosch self-protection voltage regulator
• Dual internal cooling fans, and externally mounted weather and regulator
• Exclusive Bosch long-life bearing technology
• Advanced, high efficiency design and operation
• 4 part numbers with unique terminal configuration
• 24 months/250,000 km warranty

Benefits

• Increased battery life for maximum power under all vehicle conditions
• Unmatched reliability over longer service life
• Protects internal components from excessive heat
• Virtually eliminates heat damage, promoting long life
• Reliable performance and increased service life
• Increased fuel economy
• Replace over 200 OE part numbers
• Best-in-class warranty

Replacement Units

The Bosch Long Haul series can replace the following:

Delco Series
21SI, 22SI, 24SI, 25SI and 30SI

Prestolite/Leece-Neville Series
Load Handler - 555 and 555 High Temperature
### Bosch Long Haul Series - Reducing the breakdown rates.

**Bosch Heavy-Duty Output Alternators**

Bosch long haul alternators are revolutionizing the industry with high efficiency alternator technology that has delivered increased operating power and greater efficiency than competitive alternators. Bosch’s higher charge rate at idle helps maximize battery life by reducing battery cycling.

### Self Protection Regulator

Bosch regulators equipped with exclusive Bosch self-protection technology automatically begin to reduce amperage output when under hood temperatures exceed 125°C, allowing output to return to normal levels when the temperature drops below 125°C. Competitive units typically fail at temperatures above 110°C. This feature allows the alternator to continue to provide maximum charging power through millions of tough stop-and-go km’s worldwide. With only 4 part numbers replacing over 200 original equipment part numbers, inventory commitment can be greatly reduced, saving both time and money. In addition, Bosch experienced a charge rate at idle helps maximize battery life and reduce frequency of battery cycling due to the alternator's self-protection system.

### High Temperature Resistance

Bosch long haul alternators are designed specifically for the high electrical loads of today’s heavy vehicle transport industry. harsh operating conditions. Bosch long haul alternators can withstand operating temperatures up to 130°C higher than competitive units. Dual internal cooling fans optimise the amount of cooling air being pulled through the unit. Air is drawn in from both the front and the rear of the alternator forcing heat out through the vents circling the housing. Exclusive Bosch long life bearing technology couples special heat treated, long life steel bearings with heat resistant lubricant to withstand heat and wear for km’s of reliable service.

### Advanced Performance Technology

The Bosch long haul alternators represent the next generation of heavy vehicle charging technology, delivering more power and greater efficiency than competitive alternators. Bosch’s higher charge rate at idle helps maximize battery life by reducing battery cycling.

### Advanced Temperature-resistant Electronics

Advanced temperature-resistant electronics, like the integrated circuit regulator and high amperage rectifier, are designed and manufactured by Bosch to meet the needs of the most demanding long haul applications. Exclusive Bosch long life bearing technology couples special heat treated, long life steel bearings with heat resistant lubricant to withstand heat and wear for km’s of reliable service. Bosch long haul alternators are designed specifically for the high electrical loads of today’s heavy vehicle transport industry.

### Built for the Long Haul

Bosch long haul alternators are designed specifically for the high electrical loads of today’s heavy vehicle transport industry. Their unique ability to replace hundreds of original equipment part numbers makes them ideal for service replacement and upgrade to existing equipment. Only 4 part numbers replacing over 200 original equipment part numbers, inventory commitment can be greatly reduced, saving both time and money. In addition, Bosch high efficiency winding technology uses 30% more copper than competitive units for increased efficiency resulting in fuel savings and heavy duty slip battery cycling.

### 2-Year Warranty

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### Bosch Long Haul Series - Torque and Performance

<table>
<thead>
<tr>
<th>Bosch Long Haul</th>
<th>Conventional OE Replacement Unit</th>
<th>Bosch Heavy-Duty Output Alternator</th>
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</thead>
<tbody>
<tr>
<td>160 A</td>
<td>120 Amps at idle</td>
<td>120 Amps at idle</td>
</tr>
<tr>
<td>180 A</td>
<td>145 Amps at idle</td>
<td>160 Amps at idle</td>
</tr>
<tr>
<td>200 A</td>
<td>160 Amps at idle</td>
<td>200 Amps at idle</td>
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<tr>
<td></td>
<td>15% more output</td>
<td>80% efficiency</td>
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### Bosch Long Haul Series - Performance Curve at 1700 RPM (engine operating temperature)

- Bosch Long Haul series alternators provide a 30% more output at idle speed.

### Bosch Long Haul Series - Self Protection Regulator

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