

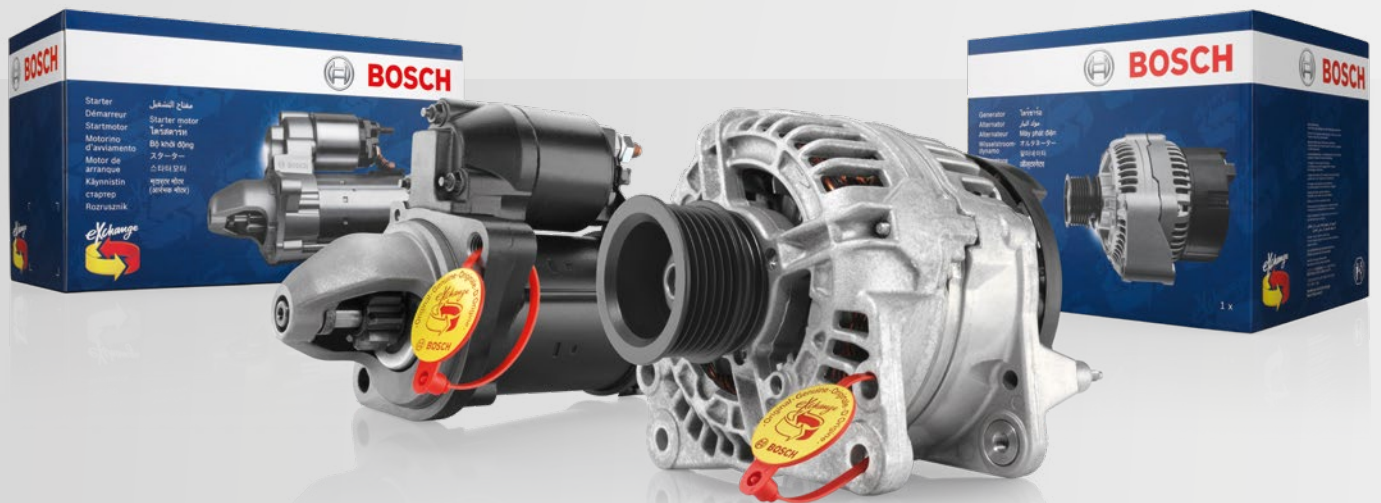


BOSCH

Invented for life

Bosch eXchange

Starters and alternators



Bosch eXchange starters and alternators

Overview

The Bosch eXchange range of starters and alternators provides workshops with a high-quality alternative for value-based vehicle repairs on passenger cars and commercial vehicles. These exchange products are tested according to the same quality standards as original parts but they are much more economical. Workshops can thus offer their customers attractive repair solutions based on the current vehicle value.

Comprehensive range

Bosch provides car and commercial vehicle workshops with an extensive exchange program of starters and alternators from various manufacturers. This program is continually being updated and further developed to meet the needs of workshops and their customers. It includes a high proportion of remanufactured products and can be supplemented with new products if necessary to ensure a high degree of market coverage and supply availability.

Certified series remanufacturing

The series remanufacturing process takes place at certified Bosch plants and in line with the same standards applied to original equipment. This ensures the high quality and reliability of Bosch eXchange products.

More than 50 years of experience

Bosch bears decades of experience in remanufacturing automotive parts. For more than 50 years now, Bosch has been offering workshops industrially remanufactured starters and alternators.

High market coverage

With a market coverage exceeding 90% on all relevant reman markets, the Bosch eXchange range suits almost all vehicle makes.

Proven quality

The Bosch eXchange original seal identifies starters and alternators that have undergone an intensive testing process as part of the exchange program.



Did you know?



In 2019 alone, Bosch saved 2,700 tons of different metals by remanufacturing starters and alternators – which equates to 7,400 tons of CO₂ equivalent (CO₂ e)*. This is about the same amount that would have been generated by the new production of the saved metal parts.

To absorb this volume of CO₂ e per year would require approximately

590,000 beech trees.

* own calculation, 2019

Bosch eXchange starters and alternators

Product range & details

Whether reliable engine starting or power supply for the electrical on-board system, in both cases you can fully rely on Bosch eXchange starters and alternators. Specialized engineers ensure compliance with the stringent quality requirements also throughout the remanufacturing process. The result: convincing products providing high performance even under tough conditions.



	Bosch eXchange starters	Bosch eXchange alternators
	High starting performance: Bosch eXchange starters enable reliable starts even under extremely adverse conditions such as heat, cold or moisture.	Reliable power supply: Bosch eXchange alternators ensure outstanding power supply even in case of high demands placed on the electrical on-board system.
Power	12 V/24 V	14 V/28 V
Technology	Conventional; start/stop	Conventional 3-phase/5-phase winding; high-efficiency diodes
Scope of application		

Advantages at a glance

- ▶ **High reliability for starting and power supply:** Bosch eXchange products are tested to the same standards as original parts and need to pass strict functional and quality tests
- ▶ **Long service life:** Critical components and wearing parts in the remanufactured starters and alternators are replaced by high-quality new parts. All other components are checked, professionally remanufactured or replaced with new parts if necessary
- ▶ **Immediately ready for operation:** The exchange products are ready for installation and precisely matched to the corresponding application



Outstanding price-performance ratio

Featuring a **price advantage** of up to

30 %

in comparison with comparable products from new parts programs, Bosch eXchange products are an outstanding solution for value-based vehicle repair

And they come with the same warranty as in the new parts program.



Easy core return via CoremanNet

Clear return criteria, quick pick-up and immediate deposit value crediting ensure trouble-free core returning.

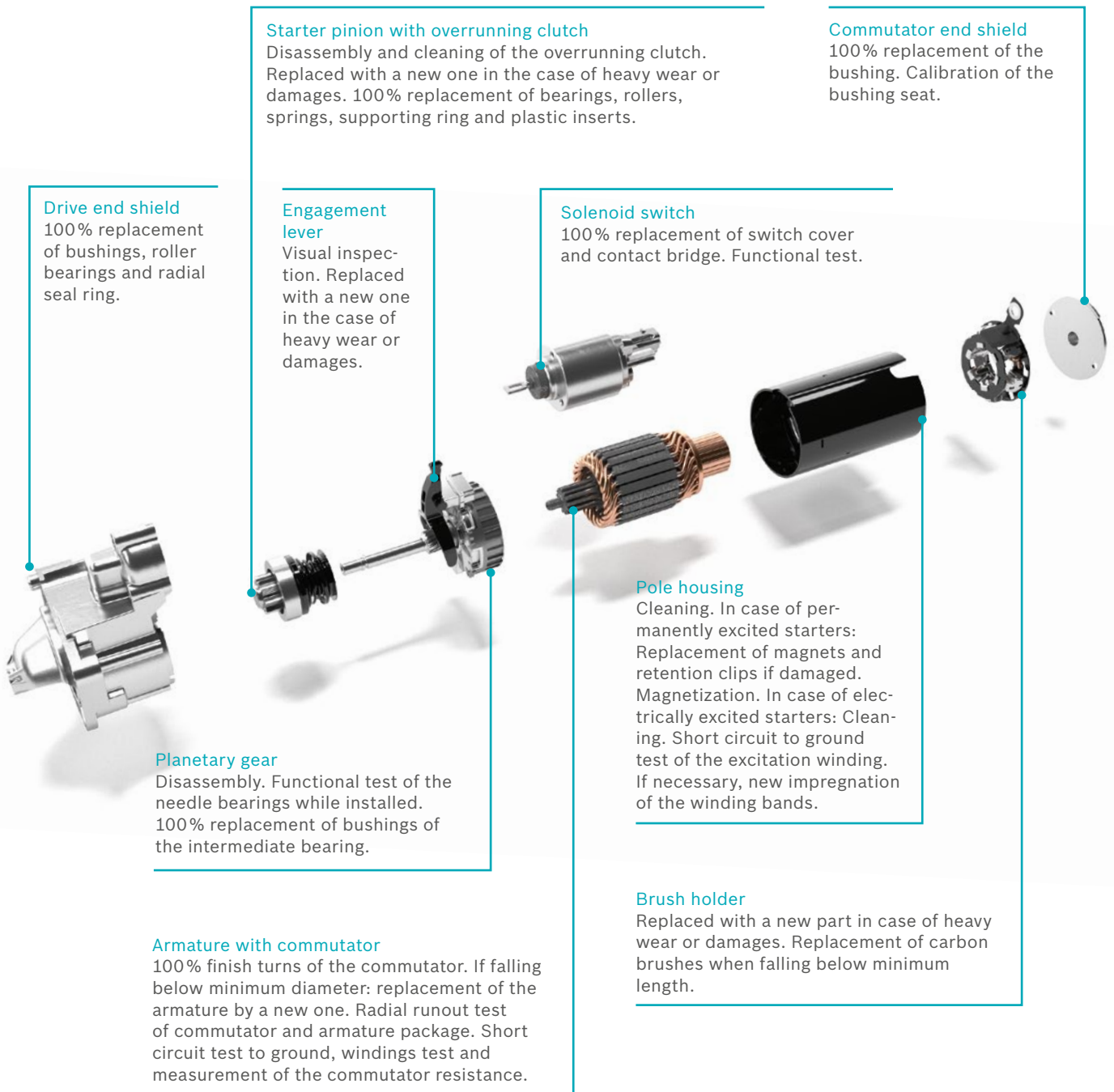


www.coremannet.com

Bosch eXchange starters

Details on series remanufacturing

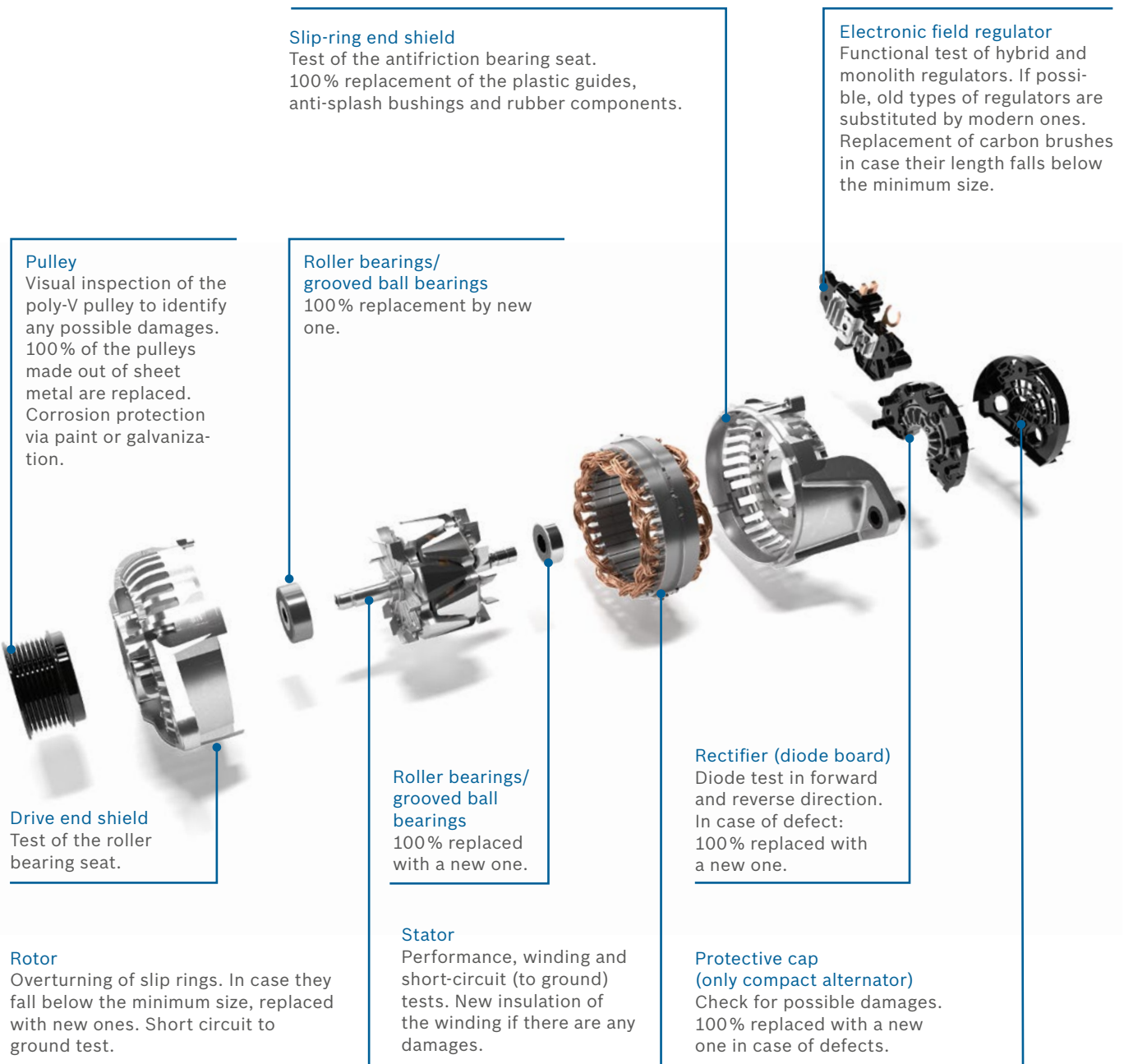
At the certified series remanufacturing process, all of the individual starter components are tested with regard to their functionality. Depending on the test results, they are remanufactured by means of different measures.



Bosch eXchange alternators

Details on series remanufacturing

At the series remanufacturing of alternators, all assemblies are tested and revised in line with clearly defined specifications. Doing so, certain components are replaced 100% by new ones.



Pulley
Visual inspection of the poly-V pulley to identify any possible damages. 100% of the pulleys made out of sheet metal are replaced. Corrosion protection via paint or galvanization.

Slip-ring end shield
Test of the antifriction bearing seat. 100% replacement of the plastic guides, anti-splash bushings and rubber components.

Electronic field regulator
Functional test of hybrid and monolith regulators. If possible, old types of regulators are substituted by modern ones. Replacement of carbon brushes in case their length falls below the minimum size.

Drive end shield
Test of the roller bearing seat.

Roller bearings/ grooved ball bearings
100% replacement by new one.

Roller bearings/ grooved ball bearings
100% replaced with a new one.

Stator
Performance, winding and short-circuit (to ground) tests. New insulation of the winding if there are any damages.

Rectifier (diode board)
Diode test in forward and reverse direction. In case of defect: 100% replaced with a new one.

Protective cap (only compact alternator)
Check for possible damages. 100% replaced with a new one in case of defects.

Rotor
Overturning of slip rings. In case they fall below the minimum size, replaced with new ones. Short circuit to ground test.

Bosch eXchange starters and alternators

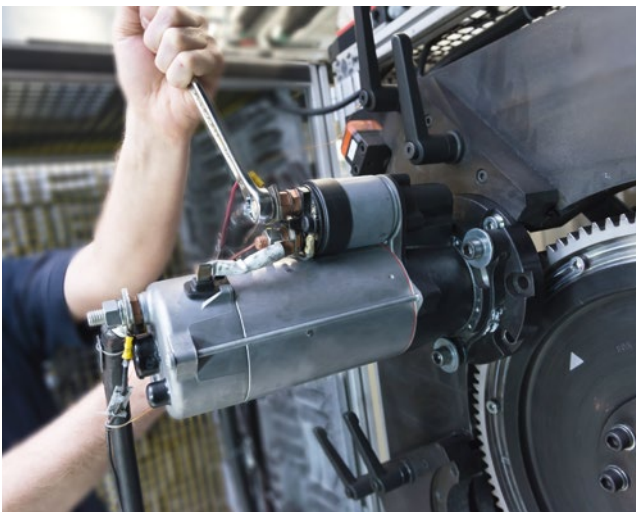
Quality standards

Not all exchange products are created equal. Certified plants and processes, as well as stringent testing, ensure premium Bosch quality at the same level as new parts production, even during series remanufacturing.



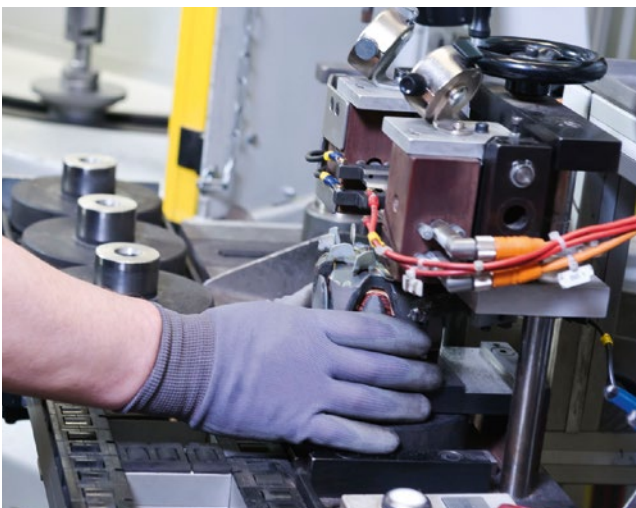
Certified plants

The Bosch plants remanufacturing Bosch eXchange starters and alternators are audited in accordance with IATF 16949. That is, the complete industrial remanufacturing process is certified and performed in line with the stringent standards applied to original equipment.



Stringent product approval procedures

Yet before their remanufacturing even begins, all products have to pass an approval process based on OE standards. Therefore, they are subject to extreme conditions while their service life, vibration resistance, resilience to environmental influences and leakproofness are checked at different test procedures. As a result, only those products meeting the high quality demands of Bosch are added to the range of exchange parts.



Uncompromising quality

At the series remanufacturing, all wearing parts are systematically replaced by high-quality parts approved by Bosch. The remaining components are meticulously checked to make sure they precisely meet the permissible tolerances. If required, they are reconditioned or replaced by new parts. Finally, the performance and functionality of each and every remanufactured starter or alternator is tested in accordance with OE standards. Only those units which passed 100% of these tests are released and can leave the plant. This ensures the high quality and reliability of series-remanufactured Bosch eXchange products.

Bosch eXchange starters and alternators

Quality comparison

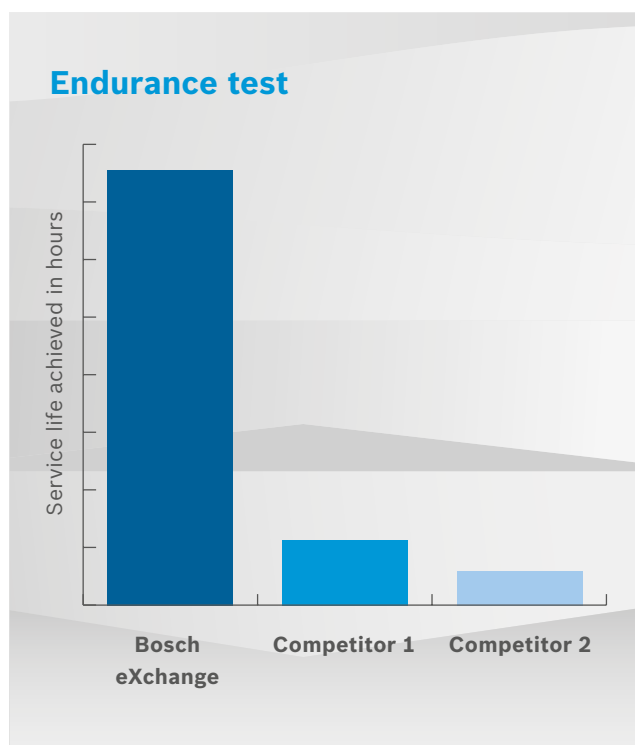
In case of starter or alternator defects, shall it be repaired at the workshop, replaced by a replicated product or by a exchange unit? At first glance, the result may seem to be the same. Comparing the options in detail, however, the differences quickly become apparent.

Bosch eXchange in comparison to replicated products

Clear benefits of Bosch eXchange

The quality of the unit to be installed matters. It is an important criterion, even in case of value-based repairs on older vehicles. After all, the vehicle owners want to rely on their vehicle at any time. Bosch tests performed in line with OE standards have shown: Bosch eXchange starters and alternators achieve better results than remake products.

For example, whilst comparing a 150 A Bosch eXchange compact alternator with two competitor products, the latter only accomplished 16% and 9% of the service life of the Bosch alternator – which is a significant difference lucidly proving the quality advantage of Bosch eXchange.



Series-remanufactured Bosch eXchange part in comparison with the repair of the unit

A lot of advantages in favor of Bosch eXchange

Series-remanufactured exchange unit	Unit repair
Restoring the original condition	Restoring the usability
Standardized and IATF 16949-certified industrial series remanufacturing process	Individual repair procedure
The unit is disassembled, components are replaced, and both the individual components and the whole unit are checked to make sure the required specifications are met	Only the defective component is repaired, other components and parts are not checked
The series-remanufactured part comes with the same warranty as in the new parts program	The warranty is usually restricted to the repaired component. The period is usually shorter than with new or series-remanufactured parts
The quality of the series-remanufactured product compares to the quality of a new one	After the repair, the functionality of the product is restored. Warranty promises are usually restricted to the repaired component

Driven by efficiency

Bosch technologies are used worldwide in almost all vehicles. People, and assuring their mobility, is what we are focused on.

Therefore, we have dedicated the last 130 years of pioneering spirit and expertise in research and manufacturing to achieving this.

We continue to work on our unique combination of solutions for spare parts, diagnostic devices, workshop equipment and services:

- ▶ Solutions for efficient vehicle repairs
- ▶ Innovative workshop equipment and software
- ▶ One of the world's most comprehensive range of new and replacement parts
- ▶ Large network of wholesale customers, for quick and reliable parts supply
- ▶ Competent hotline support
- ▶ Comprehensive educational and training offers
- ▶ Targeted sales and marketing support

For additional information, please visit:

boschaftermarket.com

What drives you, drives us

Robert Bosch GmbH
Automotive Aftermarket

Auf der Breit 4
76227 Karlsruhe
Germany

www.bosch-workshop-world.com



BOSCH
Invented for life

