

Company: Borg Automotive A/S
Location: Silkeborg, Denmark
Type: Contracted / Independent Remanufacturer
In reman: Since 1985
Contact: Sören Toft-Jensen (President)
Phone: +45-40-608777
E-mail: stj@borgautomotive.com
Web: www.borgautomotive.com



Product

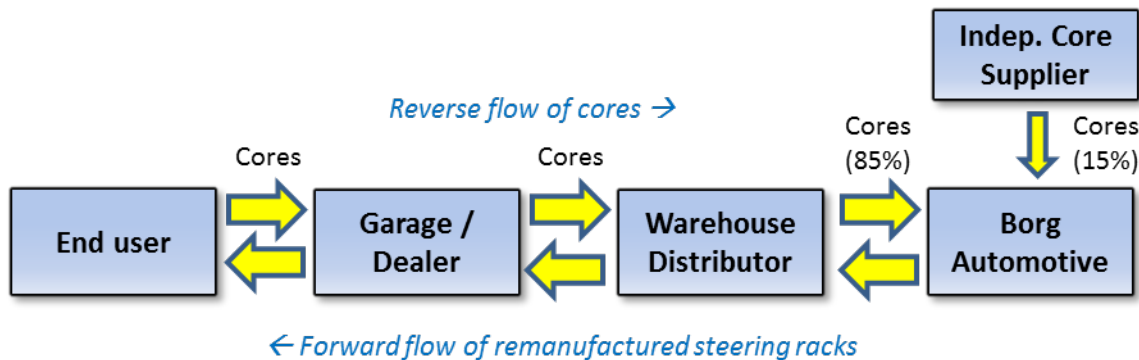
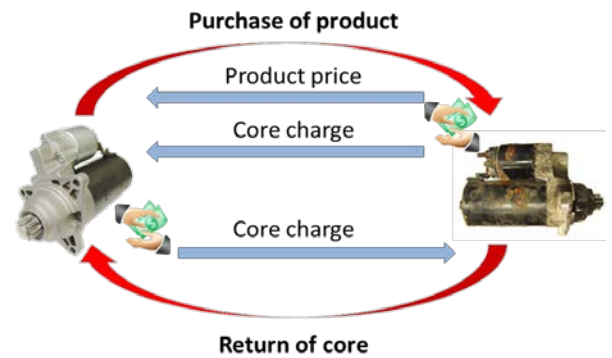
Hydraulic and electric steering racks

Core Sourcing

The main source for getting cores for the production is a surcharge model, where customers are charged a deposit, which are credited when the customer return the same type of unit. On average, the surcharge model brings 85% of the cores back. The other 15% are purchased from independent core suppliers to cover for growing demand, lost cores in the trade, and cores being scrapped in the remanufacturing process.

Business Model

Borg Automotive (BA) is primarily serving the European aftermarket through the major Warehouse Distributors (WD) and buying groups, but has also some OES contracts with major OEM suppliers. The value chain and material flows of used and remanufactured steering racks:



Drivers for BA: Remanufacturing in general gives a number of advantages and solves a lot of socioeconomic problems (irrespective of what product line), but the main driver for this business model is to create value out of worn out products.

Challenges for BA: The main challenge for Borg Automotive (and all companies in remanufacturing) is the core handling issue, and the costs around that. Receiving and sorting the huge volume and variety of cores returned to BAs factories (> 1.3 mio units annually) is a major challenge, which requires a very dedicated set-up. Cores that are lost in the supply chain must be sourced outside of the standard supply chain, and that is also the case for cores needed for sales growth. Not always are certain cores available on the market and therefore it are needed to buy certain cores no matter if they are currently required. That is a major cash drain to the operation, and is increasing the total balance of the business. Because without cores which is the raw material, there can be no remanufacturing.

Also the huge variety of reference numbers not only for each car, but sometimes various OEM producers for the same car, requires an unseen volume of OEM and cross reference numbers to be dealt with on a daily bases.

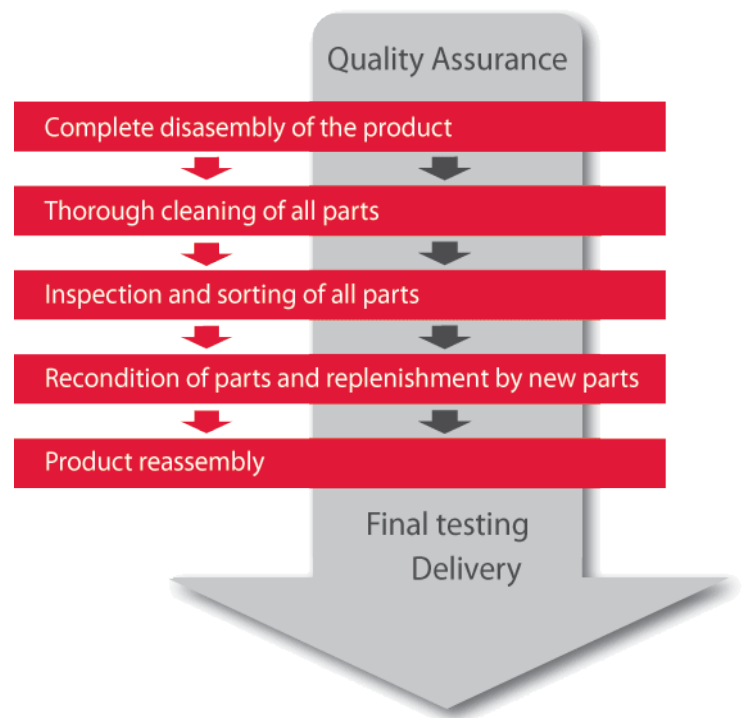
As previously described BA is partly marketing its products via Warehouse Distributors (WDs), and partly through OES agreements with OEM producers. WDs will stock a selected range of the steering racks in question, in order to be able to answer market demand with a same day delivery for most popular numbers. The competition in this market on fast moving units is mainly units produced in Asia since they are sold without a core charge. Fortunately for BA, most WDs prefer one supplier with a full coverage program, which remanufacturing companies, like BA, can offer.

As the car manufacturers cover the warranty period for the vehicle, BA is mainly meeting a demand from 3-15 year old cars. For these cars new original spare parts are often not available (or very expensive) meaning that the main competition is between various remanufacturing companies. Therefore the remanufactured part is not only a cheaper solution, but it is in many cases also the only solution available on a day to day bases. Furthermore the Remanufacturing process is often revealing weaknesses in the original product, which then, in many cases, can be eliminated during the remanufacturing process. Most customers are not even asked if they want a new spare part or a remanufactured part, because that alternative is often not available or not economic for the customer. In addition, the appearance of the Remanufactured units is very much like a brand new unit.

Key resources for BA: access to cores. That is why there with the sale of a remanufactured part, is also invoiced a surcharge to motivate the customer(s) (garage, dealership and DW) to return the old worn out core.

Remanufacturing process at BA: The steering racks are remanufactured according to the following process:
 1) Disassembly, 2) Cleaning, 3) Inspection and sorting, 4) Reconditioning and replenishment of parts, 5) Reassembly, 6) Final testing (see figure to the right).

Bringing old cores a new lease of life

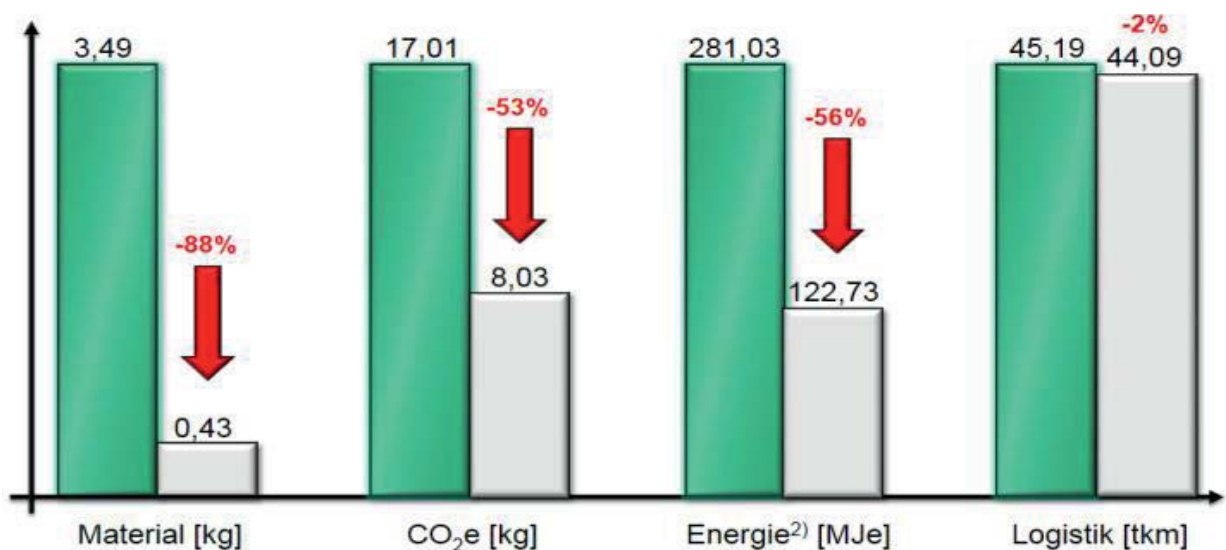


Environmental and Social Benefits

BA is the 3rd largest remanufacturing group in Europe, producing 1.3 mio units annually (of various products), from 3 factories, employing a total of 1200 people. Today Remanufacturing has gained a lot of steam and awareness as one of the key players in the circular economy trend. Remanufacturing is not only requiring a lot of hands, as it is very labor intensive, due to the short series and huge variety, but is also saving very substantial amounts of metal like aluminum, copper, iron and rare earth metals, energy and CO₂, and this is contributing big time to a sustainable industrial growth (see figure below).

Advanced Materials Recovery

The materials recovered by the steering rack remanufacturing process are aluminum, copper, iron and rare earth metals. The rare earth metals are deriving from the permanent magnets used in the steering racks.



1) Alle Werte über Masseverhältnis auf einen kompletten Starter skaliert
 2) Wirkabschätzung mit der Methode: Cumulative Energy Demand Version 1.05

■ Neuproduktion ■ Remanufacturing