

ZF SERVICES BREMEN/GERMANY





THE CUSTOMER

ZF is a worldwide leading automotive supplier for driveline and chassis technology with 121 production companies in 26 countries. With about 75,000 employees ZF had a turnover of 17.4 billion Euros in 2012.

ZF Services consistently continues the system expertise of ZF in the after sales market. With integrated solutions as well as the complete ZF product range, the division ensures the performance and efficiency of vehicles and their whole life cycle. Driveline and chassis technology from ZF are provided in retail shops under the product brands Sachs, Lemförder, Boge and ZF Parts.



Lemförder tie rod – one of 10,000 spare parts stored at ZF Services Bremen.

99 % AVAILABILITY

100 % CUSTOMER SATISFACTION

When in 2008 ZF Services Bremen starts with the planning process for an automated high-bay warehouse, future maintenance already plays an important role in considerations. “As After-Sales-Specialists for the ZF Group we know all about customer service – and that from both sides”, in-house logistics planner Mascha Krauss explains.

On the one hand, an intensive increase in the sales output, as well as the customer demands at ZF Services, raises awareness for the risks of delivery failure.

On the other hand, after twelve years of operating a mini-load system, positive experiences for the connection of

preventive maintenance, performance and operating costs are on hand.

USE OF SYNERGIES

Accompanied by the Miebach Consulting Group, the planning leads to project discussions with LTW and three further providers in September 2010. In this process the basic points of an all-inclusive maintenance contract are drawn up: 24-hour-hotline, six days a week with one hour reaction time – and guaranteed availability of 99 %.

This demand requires a well-thought-out spare parts management. At this point synergies of a sister project, which has been in use at the headquarters of



Maintenance engineer Martin Könnecke and logistics planner Mascha Krauss: “Before we have to afford expensive breakdowns, we would rather invest in preventive maintenance.”



Even when designing the high-bay warehouse, safe and ergonomic work must be provided for service, e.g. with rugged maintenance cages on the rack.

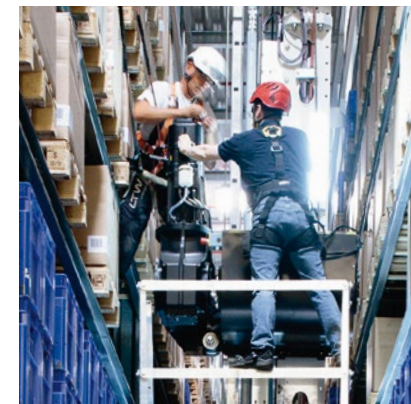
ZF Services in Schweinfurt since the beginning of 2010, become interesting – and for which LTW stood the test for delivering six stacker cranes.

Indeed the construction height of the two logistics centers differs distinctively: While the stacker cranes in Schweinfurt with a height of 44 meters belong to the highest in Europe, 12 meters are the maximum in Bremen due to the neighboring airport.

Nevertheless LTW is able to plan many components that suit both systems. Critical spare parts, but also corresponding know-how, can be rapidly transferred later between the two locations.

Thanks not least to such permanent advantages the award in February 2011 goes to LTW. The general contractor for intralogistics finishes the project in April 2012 as scheduled.

What comes to the fore with this new horizon: the life cycle. Mascha Krauss: “LTW takes care of maintenance and repair work for all trades in the long run. One installation – one contact partner. So far we have had very good experience with this concept.”



Maintenance job: LTW service technician and ZF maintenance engineer work together hand in hand and are able to exchange useful experiences.



The eight aisle-bound LTW stacker cranes are equipped with service friendly details – such as a lifting assistance for changing heavy components or a video camera on the lifting device for quick and goal-oriented fault analysis.

TRANSFER OF KNOWLEDGE

Shortly before the start of operation, an LTW training expert acquaints the team of six maintenance engineers from ZF Services with the installation. “Directly on-site, very practical, with fictitious faults”, ZF maintenance engineer Martin Könnecke remembers. “Thanks to this, we are able to manage many scenarios on our own today.”

Planned maintenance jobs follow a clear pattern: Two weekends twice a year, two technicians from the LTW service center in Bielefeld together with two maintenance engineers from ZF Services in mixed teams.

This close cooperation allows short dwell times and encourages knowledge transfer. “It’s a reciprocal learning process: LTW benefits from our observations from everyday operations – we gain insight into system components

which we never disassemble ourselves during the year”, Martin Könnecke explains. He adds: “Knowledge is the only resource which multiplies when sharing. LTW lives this principle.”



As general contractor for intralogistics LTW maintains all trades – the correspondent transfer of knowledge also takes place in the cooperation with sub-suppliers.

PROJECT OUTLINE

YEAR OF CONSTRUCTION 2012



HIGH-BAY WAREHOUSE

- ▶ Steel rack with silo structure
- ▶ L x B x H: 110 x 35 x 12 m
- ▶ 8 rack aisles
- ▶ Single-deep storage
- ▶ Approx. 16,900 pallet spaces
- ▶ Payload: 1,000 kg
- ▶ Temperature range: +5 to +35 °C



STACKER CRANES

- ▶ 8 aisle-bound stacker cranes
- ▶ Driving speed: 225 m/min
- ▶ Driving acceleration: 0.5 m/s²
- ▶ Lifting speed: 20 m/min
- ▶ Lifting acceleration: 0.4 m/s²
- ▶ Load handling device:
Telescopic fork single-deep



CONVEYOR SYSTEM

- On 2 levels with storage and retrieval stations and order picking area on the ground floor including
- ▶ 2 vertical lifts
 - ▶ 2 lifting assistances/overhead cranes
 - ▶ 1 strapping machine
 - ▶ 2 fire protection gates with UPS



SOFTWARE

- ▶ Interface to SAP LES/TRM
- ▶ Interface to customer's central system visualization