



ZF in Mobile Excavators

- **Perfect mobility**
- **73,000 Nm maximum output torque**

The newly developed range of axles and transmissions, precisely matched to one another, underlines ZF's system capabilities in mobile excavator applications. Quickly moving from site to site, versatile tools for the boom - mobile excavators are characterized by high versatility in job scheduling. In this respect, both power and precision are demanded. High mobility and versatility turn mobile excavators into multifunctional working vehicles.

Apart from the skill of the excavator operator, sophisticated mechanical driveline technology is needed in the application of the machines. This includes smooth movement during swiveling and braking. With the new ZF driveline technology high power transfer and millimeter positioning are perfectly combined. In tightly spaced construction sites a precise response of the steering axle should also support accurate positioning. Depending on the field of application on the building site, the extent to which the axles are loaded is different. For all these requirements ZF has developed optimum system solutions which also relieve the excavator operator and give the highest efficiency.

2 HL 200

As with ZF axles, ZF transmissions for mobile excavators can draw from the same pool of extensive production experience. With the HL transmissions ZF is opening up higher versatility and significantly increased power ranges to modern mobile excavators. The latest product range of mobile excavators bears the name 2 HL 200 and offers a large number of advantages in three power classes. The 2HL series covers an input torque range of **550 Nm** in the 2HL 250 to 950 Nm in the top model, the 2HL 290. Through the compact design the transmissions offer very high flexibility for installation in mobile excavators. Through the optimum adaptation of the transmission ratio and a wider gear spread, the road performance of the vehicles has been enormously increased in



comparison to the previous models and to other products on the market. With a further improved efficiency the effectiveness is improved and a substantial contribution made to the reduction of emissions. The transmission can be mounted separately on the undercarriage as well as directly on the ZF axle. Reduced installation size and standardized mounting points simplify installation and lead to more design freedom for vehicle manufacturers.

MS- E 3000 Series

With over 30 years of experience in the development and production of axles for construction machines, with its MS-E 3000 series for mobile excavators ZF is offering optimum solutions for applications in the most arduous of operating conditions. The axles are intended for excavators with a weight of **13 to 25 tones**. With a huge output torque of up to **73,000 Nm** and a static axle load of up to 41 tones the axles also withstand extreme stress levels. The dynamic axle loads go up to 17 tones, i.e. for the top model, the MS-E 3070. The fabrication, which is in any case robust, provides the maximum longevity and with extended oil change intervals (2,000 h) minimizes unnecessary operating costs. With the optimized efficiency and reduced power losses not only are higher road speeds possible, but a reduction in the fuel consumption too.

Fig. 16, 17



Presseinformation
Press Information

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ZF is one of the world's leading automotive industry suppliers specializing in driveline and chassis technologies. With a workforce of 63,000 employees, the company operates 125 plants in 26 countries. To sustain its success with innovative products, ZF invests 5 percent of its annual revenues (over € 625 million from an annual total of € 12.5 billion in 2008) in research and development.

The ZF division Off-Road Driveline Technology and Axle Systems with headquarters in Passau specializes in the development and production of transmissions and axles for agricultural and construction machines as well as axle systems for buses and trucks. With approximately 7,500 employees, the division recorded a turnover of € 1.9 billion in 2008.

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