



ZF cPOWER – continuously variable transmissions for wheel loaders

- **ZF premiere at the Munich Bauma**
- **Fuel savings up to 30 %**
- **Technological leap in construction machinery by fully powersplit CVT from ZF**

For the first time, ZF will be presenting a continuously variable transmission for construction machinery - ZF cPOWER - at the Munich Bauma in April 2010. (fig. 2)

As technological leader, ZF is setting the trends, states Hermann Beck, Vice President of Business Unit Construction Machinery Systems of the Corporate Division Off-Road Driveline Technology and Axle Systems located at ZF Passau. cPOWER is the beginning of a new technological era in construction machinery. With the cPOWER transmission range we will ensure and extend our market position for construction machinery.

The fully powersplit, continuously variable technology benefits from the long-term experience gained on the agricultural machinery sector and offers significant consumption benefits and productivity increases for the vehicle owner. In short – the perfect solution for any application.

Because of rising fuel prices and a raising awareness of CO₂-emissions the market asks for more efficient drive systems. New emission guidelines (USA-EPA and EU directives) implicate technological restrictions and constraints with diesel engines that would be hardly achievable in the future.

High loads at low speeds in combination with high dynamic are the outstanding requirements for construction machinery. These criteria are met optimally by the new ZF CVT transmission technology in an up to now unthinkable degree of efficiency.

Searching for the ideal transmission concept it became clear that other technologies and mixed hydrostatic and power-split concepts

had considerable disadvantages and were only compromises with constraints in performance and efficiency.

The rising demands for fuel reduction and productivity increase require new technologies in construction machines, such as the CVT.

A trend towards lower engine speeds and the demand for engine stabilization by a constant speed concept are the future challenges on the construction machinery market. The continuously variable cPOWER from ZF meets both requirements.

In wheel loader applications, hydrostatic-powersplit transmissions ensure significant consumption benefits compared to hydrodynamic transmissions and purely hydrostatic concepts.

The continuously variable transmissions clearly demonstrate their benefits in all ranges of the typical wheel loader operating cycle, i.e. during bucket filling, transporting and loading.

In this process the percentage of hydrostatic power is kept low whereby an optimal degree of efficiency can be achieved.

Already in the start-up process the bigger part of output comes from the mechanical part of the transmission and even in very short loading cycles the utility of the CVT technology becomes noticeable in reduced fuel consumption.

The application of an elaborate hydraulic transmission-control unit and transmission integrated on-board electronic optimally completes driving functions in reference to sensitivity and driving comfort and realizes an aligned power management.

The cPower transmission series deploys well known and proven construction kit modules and benefits from ZF competence in transmission and vehicle system engineering.

Main features of the new ZF cPOWER:

- Continuously variable drive over the whole range
- Hydrostatic-mechanical powersplitting in all driving ranges, including the frequently used range up to 10 km/h
- Reduction of diesel motor speed independent of driving speed
- Up to 30 % less consumption
- Up to 20 % more efficiency



- Installation-compatible with ZF ERGOPOWER
- Identical driving performance in forward and reverse

Picture caption:

2.) ZF cPower – continuous variable transmission

Picture: ZF

Press contact:

Gernot Hein, Head of Marketing and Communications

Tel.: +49 (8 51) 4 94-24 80, Fax: +49 (8 51) 4 94-90 24 80

E-mail: gernot.hein@zf.com

Wolfgang Wohlgemuth, Team Manager Market Communications

Tel.: +49 (8 51) 4 94-27 03, Fax: +49 (8 51) 4 94-90 27 03

E-mail: wolfgang.wohlgemuth@zf.com

The ZF Division Off-Road Driveline Technology and Axle Systems 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 7,000 employees the division generated a preliminary turnover of 1.1 billion euros in 2009.

ZF is one of the world's leading automotive industry suppliers specializing in driveline and chassis technologies. With a workforce of 59,900 employees, the company operates 125 plants in 26 countries. ZF Group revenues in 2009 a preliminary turnover of €9.3 billion. ZF ranks as one of the top-10 automotive industry suppliers worldwide.

For photo material and further press information go to: www.zf.com/presscenter