

## **ZF redefines drive trains for harvesters**

- **New continuously variable hydrostatic drive for combine harvesters and self-propelled harvesting machines**
- **Stepless driving without compromise in field operation as well as during transport – simply drive**

**ZF offers for the first time a continuously variable hydrostatic direct drive (fig. 11) for self-propelled harvesting machines allowing a more precise operation and working as well as a sensitive stepless driving at low fuel consumption. Whether as single wheel drive, or as a central axle drive module or as a combination of both versions, the hydrostatic drive by ZF helps to find the perfect drive solution for any harvesting machine.**

**ZF has developed the continuously variable drive especially for self-propelled agricultural harvesting machines. It can now be used also in combine and forage harvesters. The hydrostatic drive has been designed for operating weights of up to 35 tons and is fitted with up to 2 crankshaft radial piston motors. Thereby, higher efficiency is achieved, while fuel consumption is considerably reduced. Furthermore, speeds up to 50 km/h are possible.**

### **Continuously variable hydrostatic drive for self-propelled harvesting machines**

#### **Features and advantages:**

- **Hydrostatic transmissions applicable for operating gross vehicle weights up to 35 tons.**
- **Used as main drive in the form of a highly integrated single wheel drive, it allows more flexibility at the same time optimizing the material flow and the working process in the harvesting machine**
- **In combination with an axle drive module for the steering axle, an extension as all-wheel drive is possible.**
- **Fitted with 1 or 2 crankshaft radial piston motors. This results in a higher efficiency while fuel consumption is reduced**

- Continuously variable driving speeds of 0 up to 50 km/h – ultimate driving convenience
- The lack of shift operations, tractive effort interruption and downtimes improve harvesting output and quality.
- Low start-up speeds due to electronically controlled driveline management

Both a stepless matching of the driving speed to the harvesting conditions, and a sensitive, precise maneuvering play a key role in all fields of applications of self-propelled harvesting machines. Thanks to the hydrostatic drive, this is possible at full tractive effort throughout the complete speed range.

### **Integrated crankshaft radial piston motors**

As compared to other hydrostatic driveline solutions with bent-axis axial piston motors ZF installs crankshaft radial piston motors

Essential features of this crankshaft radial piston motor are:

- Wide range of displacement variation and compact design
- Variable displacement down to 0 ccm, integrated in the crankshaft
- Speeds up to 2500 1/min with high pressure
- High starting torque
- High efficiency and high power density
- Low noise level due to low frequencies
- Low susceptibility against oil contamination

Fig.:

11.) New stepless hydrostatic ground drive for combines and other self-propelled harvesting machines.

Picture: ZF



Presseinformation  
Press Information

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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 7,500 employees the division generated a turnover of 1.9 billion euros in 2008.

ZF is a leading worldwide automotive supplier for driveline and chassis technology with approx. 60,000 employees at 119 locations in 25 countries. In 2008 the Group generated a turnover of 12.5 billion euros. ZF is among the top fifteen companies on the ranking list of the largest automotive suppliers worldwide.