

Innovative ZF products at the Agritechnica

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Information from ZF about its products at the Agritechnica

At the Agritechnica in Hanover from 10th to 16th November 2013 (Hall 3, Stand 03 E 19) ZF will be showing its latest product highlights. As the technological leader, ZF is continuously working on the expansion of its range of products. The power density of the new products has again been increased and the gear spread extended. This means that vehicles with ZF components work even more efficiently and more economically. Also the increased demands from users and vehicle manufacturers within the framework of the new emission directives are taken into account, in particular with regard to the forthcoming stage "Tier 4 Final".

The new developments offer the user a wide range of possible combinations and can be integrated into existing tractors without any problem. All ZF transmission variants within a performance category from synchromesh or powershift transmission through to continuously variable transmission can be combined through defined interfaces with appropriate rear and front axles without incurring a large outlay.

New TERRAMATIC transaxles TMT 09 and TMT 11

With the two new variants of the continuously variable transaxles TMT 09 and TMT 11 ZF is also rounding off its very wide power range at the bottom end. For this purpose a completely new transmission concept has been produced which takes into account the factors of reasonable production costs and high efficiency. Consequently, continuously variable driving is now also possible in the power range from 65 hp to 110 hp without having to dispense with the familiar strong points such as the power shuttle, the standstill control, or the continuously variable acceleration from standstill to maximum speed without interruption in the power flow.

The expansion of the TERRAMATIC range up to 450 hp

Now that the power range has been expanded at the bottom end with the new transaxles TMT 09 and TMT 11, the product range for standard tractors is also being extended upwards through to 450 hp. The TERRAMATIC transmission TMG 45, a further development of the ECCOM 3.0, is characterised by a higher power density and a further improved efficiency. In the familiar configuration the new hydrostats are used in the oblique disc / oblique axle designs and the modules from the ECCOM kit are employed.

New TERRAPOWER transaxle TPT 11

With the TPT 11 ZF is laying the corner stone for the modular expansion of its transaxle range for the tractor

power range between 85 and 115 hp, which is still just as important and as popular as before.

The new development includes a quick-response and conveniently tuned 4-way powershift, a smoothly acting shuttle shift as well as jerk-free and shock-free power take-off shifting. In addition the driver can choose between 32 forward and 32 reverse gears and four power take-off speeds.

With the new TPT 11 the familiar ZF convenience functions such as Comfort Shift, Automatic Power Shift (APS) and Speed Matching are now also available in the smaller power classes.

The ZF Efficiency Package for agricultural machines

ZF optimises tractor transaxles with the option Efficiency Package. With this package of measures ZF bundles its expertise from the transmission, axle and software development, thereby offering more than the sum of the constituent parts. In this way the often conflicting requirements on the components can be harmonised, such as for example, more comfort, higher productivity, less consumption and reduced wear at steady cost.

The ZF Intelligent Range Shift IRS

Along with a wide range of further developments on the ZF powershift transmissions an excellent innovation has to be mentioned. This is the IRS (Intelligent Range Shift) for automated synchronous group shifting. With the aid of an electro-hydraulic valve block and a specially developed software module for the ZF transmission control it is possible to control the synchronised group transmission of the T-7000 range and the follow-on TERRAPOWER generation fully automatically. Of course, semiautomatic shifting or a manual mode at the press of a button (shift by wire) is possible.

At 800 ms, the short shifting duration of the ZF IRS gives the driver the impression of a full powershift. The pure gear shift will happen twice as fast as when compared with a manual shifting operation.

Safety and driving comfort

ZF offers a wide selection of cab dampers from the robust steel spring module through the air spring module to the latest Cabin Air Levelling Module (CALM) with integral level regulation and electronic damper system, the Continuous Damping Control (CDC). Due to dynamic adaptation of the damping characteristic, the latter offers a constant level of comfort in varying operating conditions.

Furthermore, with its clutches ZF provides optimum power transfer, fast and reliable separation and closure of the power flow, jerk-free setting off, damping of engine oscillations, easy operability, long service life without comprising comfort and low installation space requirements.

ZF Services: Close to the customer – throughout the world!

As the technical expert, ZF Services rounds off the comprehensive range of services offered by ZF. Innovative products, fast availability and customer proximity – it is here that ZF Services wins hands down.

Source: ZF Friedrichshafen AG