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# Fascinating Technology

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*Dear Reader,*

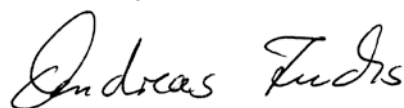
The technology used in off-road commercial vehicles is fascinating, but presents huge challenges for designers and developers. And these challenges are becoming ever greater. In the past engineers were able to develop products on the basis of their experience, but nowadays they have to focus their development expertise on complete systems. The engineering service provider IAV, for example, makes use of a systematic pre-development process which comes to grips with complex systems at an early stage. You can find out more about this process in our first cover story from page 6 onwards.

Alongside customer requirements, legislation is one of the main driving forces behind the growing complexity of vehicles. In recent years, increasingly stringent exhaust emissions regulations have led to the need for a whole series of new engine compartment designs. The result of these regulations is that more and more components have to be squeezed into the engine compartment or, where this is not possible, fitted outside it, which leads to new problems. This in turn has an impact on other components. In concrete mixer trucks, for example, the space available for the drum drive is becoming increasingly restricted because of the size of the exhaust gas treatment systems. In addition, these new systems are increasing the weight of vehicles when this in fact needs to be reduced in order to keep the fuel consumption as low as possible. The latest generation of ZF mixer transmissions meets these and other requirements. Our second cover story from page 18 onwards describes how ZF has achieved this.

The forthcoming EU Stage V emissions standard will increase the problems in this area even further. The new standard is very similar to Euro VI. Because it limits the absolute number of particles, it requires particulate filters to be installed in already overcrowded engine compartments. In our interview with Dr. Carsten Intra, which begins on page 14, you will discover how leading manufacturers such as MAN Truck & Bus are overcoming these challenges.

As I mentioned above, commercial vehicles and the technology they make use of are nothing if not fascinating. This is why I always look forward to the big motor shows where I can find out at first hand about the latest technical solutions and, of course, meet up with old friends and make new contacts. I hope to see you at the next IAA Commercial Vehicles in Hannover at the end of September.

With best regards



**Andreas Fuchs**  
Chief Correspondent

