The Crucial Question

Dear Reader,

I have often spoken out against the imposition of punitive taxes on powerful vehicles in my editorials. I still remain convinced that we should rely above all on market forces when it comes to the introduction of environmentally friendly drive systems – and not carelessly jeopardise Germany's position as a world leader in powertrain engineering.

However, our Engine Conference, which opened today in Munich, provided me with a new perspective: the higher costs that are to be expected as a result of the CO_2 tax can also be used by car makers as a development budget. If an additional \in 3,000 is spent on innovative technologies in an upper mid-size vehicle, this means that new, innovative approaches can now be pursued that would previously have been rejected as being too expensive.

For example, the University of Stuttgart has presented a mixture formation process that replaces common rail injection by additional fuel injection into the intake manifold – of a diesel engine! In this system, the fuel is vaporised in a heated capillary to produce an aerosol with a minimal droplet diameter. This fuel spray is fed into the combustion chamber via the intake manifold, thus eliminating the need for direct fuel injection in the lower part-load range. Due to the good mixture quality, this has significantly positive effects on particulates and NO_x engine-out emissions.

It is impossible to predict at this stage whether this external mixture formation process, which has so far only been applied in stationary operation, will actually be successful in transient operation. But what is important is that a new field of vision is opened up and unconventional approaches at least have the opportunity of a more substantiated assessment.

Apart from the first two decades of automotive engineering, this is certainly the most exciting period in the history of vehicle drive systems. We are facing the crucial question: what will the powertrain of the future be like when the world no longer has enough oil at its disposal?

Personally, I am very proud that we can be part of this exciting period with MTZ. I look forward to seeing you at the Automotive Engineering Conference in 2009.

Best regards,

laus U Iohannes Winterhagen Munich, 3 June 2008



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