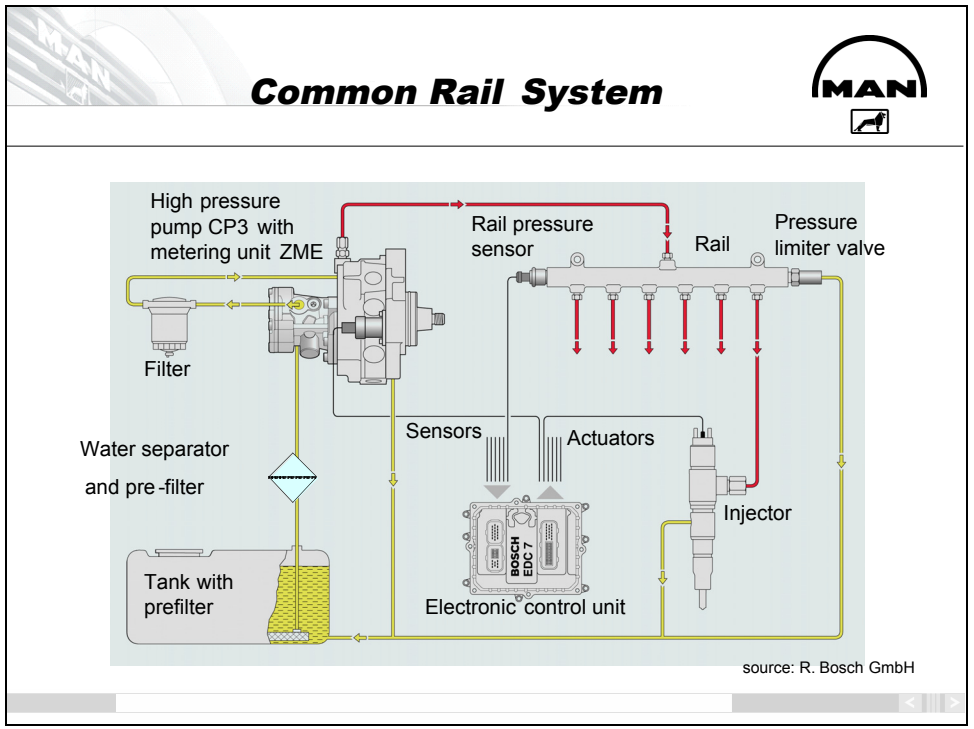
What is Common Rail ?

Common Rail refers to a type of injection system which has been used for years in larger, higher powered engines as well as in commercial truck application where lower exhaust emissions were mandated.

In a common rail engine the traditional fuel injection pump has been replaced by a simple high pressure pump, driven of the engine camshaft.

The fuel is picked up from the tank by the delivery pump which sends it through a series of fuel filters. Once the fuel has reached the high pressure pump it is pressurized to between 6000 and 23000 PSI. This highly pressurized fuel is then stored in a pipe our “Rail” from which it is send to the injector when needed.

The injector is operated by an electronic control unit which decides on the amount



of fuel injected, the injection timing, the number of injections per power stroke and a number other factors based on a pre-programmed fuel map and a number of sensory inputs which, when put together, result in a more powerful, smoke free and softer (smoother) combustion.

Common Rail engines are the ultimate electronic engines because their function can be controlled very precisely through the use of computers. The benefit for the customer is an engine with a multitude of information available for display on digital bridge panels. But it is also one of the safest engines. The same sensors which help operate the engines also monitor it for potential technical problems and protect them from severe damage, should one of the support systems (sea water flow, fuel supply, oil pressure, coolant temperature etc.) fail.

Common Rail engines have established themselves today as the engine technology of choice for years to come.