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Check of Injection nozzles — All types

The fuel consumption of a diesel engine depends more or less on an exact atomization of the injected fuel. The nozzle elements being used nowadays, have been especially improved for short injection times at high injection pressures.

Unfortunately this dynamic process cannot be realized any more during an inspection of the nozzles. That is to say, an inspection proving the perfect nozzle condition by means of usual testers is only possible to a certain degree. The normally existing pressure testers can, therefore, only be used for adjustment of the opening pressure, for checking of the nozzle bores, i.e. their non-clogged condition and, to a certain extent, for leakage tests of the needles.

For a secure judgment of the nozzle condition only the behaviour of the exhaust gas temperature of each cylinder is decisive.

Nozzle inspections should, therefore, only be effected if the exhaust gas temperature obviously deviates from the mean value of all cylinders in the specific load range. Inspections by pressure-testing, dependent on time intervals, will not provide any valid insights knowledge because also the distinctive nozzle buzzing of earlier times is no longer existing.

Due to the long-term wear it is, however, recommendable to exchange the nozzle elements after 6000 running hours (old C-Engines, M 332 to 601) and 8000 running hours (new engine generation, M 20 to M 43) respectively at latest.

Corresponding job cards of the Operating and Maintenance Instructions can be obtained by request from your local Service Station.

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