

S2.4.3 UPDATE RELATIVE TO ISO 16332 DETERMINATION OF THE WATER FUEL REMOVAL EFFICIENCY OF DIESEL FUEL FILTER

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The new common rail technologies require the fuel circuit to be as clean as possible and free of water especially just upstream to the fuel nozzles of the injection system. That is the reason why the main diesel fuel filter manufacturers (MAHLE, MANN+HUMMEL, DONALDSON, HENGST, UFI, CUMMINS) are requested to propose the most efficient fuel water separators to the FEI manufacturers (such as BOSCH). These automotive suppliers have developed, with the help of IFTS an independent filter test laboratory, a new fuel water separation efficiency standard referred as ISO 16332.

This standard is designed to be as much representative as possible of the reality. That is the reason why it is now requested to measure on line the droplet sizes of the water to be injected upstream the fuel water separator (FWS), to titrate on line the water content upstream and downstream to the FWS, to qualify the diesel fuel in terms of IFT after 10 sec of contact between fuel and water, to standardize a reference diesel fuel to be considered as more stable as possible and as severe as possible to discriminate at best diesel fuel filters between each other's.

The paper to be presented will give an overview of the existing way to comply with these new requests from the updated ISO 16332 procedures in terms of quantification of the water content in the standard reference fuel. It will introduce some slight changes relative to the preconditioning of the diesel fuel in order to improve the reproducibility of the test procedure.