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Doubling the Oil and Fuel Filter Change Interval

By Jim Wilkins
STN Technical Editor

Diesel engines have two types of oil filtration systems. One for lubricating oil and the other for fuel oil. The efficiency and effectiveness of either type system is directly related to the size or capacity of the filter and its micron rating. And they are not the same on all engines. In fact, they vary considerably in size and capacity rating among the available mid-range class engines. The quality of the system will have a direct effect on engine service life before an overhaul or replacement is required. It also has a direct effect on the quality of exhaust gas emission output.



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For lubricating oil, the Society of Automotive Engineers (SAE) has set a maximum of 40 microns as an acceptable level for primary filtration. Ten microns is the maximum acceptable level for secondary filtration. A micron is a linear measurement defined as 1/1,000,000th of a meter in length. A meter is 39.37 inches. Particles less than 10 microns in size are not visible to the best human eyes.

For fuel oil, the SAE has set a maximum of 30 microns as an acceptable level for primary filtration, 10 microns for secondary filtration and two microns for final stage filtration. Due to extremely high fuel injection pressures of 21,000-to-28,000-PSI, final stage filtration is recommended for electronically controlled engines.

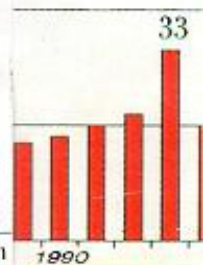
When selecting an engine for purchase, buyers should learn about the filtration system offered with the engine, focusing on size in terms of quarts and micron rating. Also, buyers should review the change interval set by the engine manufacturer, which varies

greatly among different engine manufacturers.

These factors all contribute to operating costs.

For fuel oil, the one auxiliary filtration system on the market that can extend the filter change interval is the RCI Diesel Fuel Purifier. This is a simple, patented product with a very high contaminant capacity and no filters to change or internal screens requiring cleaning. It is easily drained during regular PM service. RCI claims that the unit removes solid particles down to 10 microns in size, which meets both primary and secondary requirements. It is also highly efficient at removing water from the fuel. In the school bus industry, where virtually all vehicles operate less than 25,000 miles per year, owners can extend their fuel oil filter change interval to once annually with the RCI product. A single two-micron rated final stage fuel filter requiring an annual change has to be most attractive. Extended oil and filter change intervals also reduce expensive hazardous waste disposal and documentation costs!

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