

Mobile Equipment Fuel Operational & Component Improvement

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Problem

Regulations are calling for tighter limits on fuel efficiency and exhaust contaminants. To reach the new standards equipment manufacturers are providing engines with tighter injector clearances. Traditional filtration on bulk fuel and fuel distribution can create issues involving short “on-board” fuel filter life and worse, injector failure.

Solution

Traditional filters used on fuel are from the hydraulic industry. They are designed to be used in a “multi-pass” arrangement where the same fluid passes through the media over and over. This isn't effective in fuel applications as the fuel is typically only filtered in and out of the tank. Our systems are designed with Pall Corporation filter media that can achieve well below manufacturers cleanliness specifications in a single pass.

Results

We recently worked with a mining operation that commissioned 18 new CAT 793F style trucks. We designed and installed filter systems for the inlet and outlet of the bulk tanks. The tanks held 20,000 gallons. The first truck lost an injector almost immediately but investigation found that it had been fuelled by a lube truck that wasn't loaded from the filtered tanks. Once this operational issue was corrected the fleet has operated 14 months without an additional injector failure.

The key is the filter media used. It is designed for “single pass” performance. We consistently maintain fuel cleanliness in the ISO range of 15/13/11 or below. The systems are also designed to provide several months service life between filter changes.

The results are greater equipment availability and lower maintenance cost.



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