Test proposal for Cummins Surveillance panel with PC 10 fuel from an alternate supplier

Cummins panel – ISB test

- Valve train wear test- Camshaft Wear, Tappet Weight Loss (additional measurements on Crossheads and Push Rods)

Test Proposal

Conduct two tests with reference oil and Candidate fuel and verify whether the test data falls within the current range of the current test database.

Submit the data to the panel for approval of the candidate fuel.

Test duration: 350 hours
Oil qty: 20 gallons/test
Fuel qty: 2250 gallons of PC-10 per test
Measurements: Camshaft wear and tappet weight loss

Cummins panel – ISM test

- ASTM D7468 test- ISM engine test procedure conducted under high soot conditions to evaluate oil performance with regards to valve train wear, top ring wear, sludge deposits, and oil filter plugging in an EGR environment

Test Proposal

Conduct two tests with reference oil and Candidate fuel and verify whether the test data falls within the current range of the current test database.

Submit the data to the panel for approval of the candidate fuel.

Test duration: 200 hours
Oil qty: 25 gallons/test
Fuel qty: 3550 gallons of PC-10 per test
Measurements: filter plugging, sludge, wt. loss of top ring, cross head, Injector adj. screw etc.

Haltermann Solutions Diesel fuels (PC-9 & 10) and Combustion Behavior

- We will provide Chemical analysis of our fuels to show that our fuels will not only meet the specifications but are similar.

- Diesel fuel combustion is characterized by diffusion flames in an oxygen rich environment where chemical kinetics play a significantly lesser role. Most diesel engine lube tests worldwide do not consider fuel to be a major factor as long as the fuel meets the specs. We do not think ISB/ISM panel tests are any different in this regard.

- Since the industry has developed a large database over the years with only one fuel source, we are willing to verify the data with limited testing that shows the data we develop is within the range of the existing dataset.