

## **FUEL REPORT**

Sample Rating Trend

# ISO

Machine Id

# 

Diesel Fuel

Fluid No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)

### DIAGNOSIS

### A Recommendation

We advise that you filter this fluid before use. All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel.

### Corrosion

All metal levels are normal indicating no corrosion in the system.

### Contaminants

There is a high amount of particulates present in the fuel. Moderate concentration of visible dirt/debris present in the fuel. The water content is negligible. There is no bacteria or fungus (yeast and/or mold) indicated in the sample.

### **Fuel Condition**

Sulfur value derived by ASTM D5453 method for ULSD validation. Sulfur level is acceptable for ULSD specification.

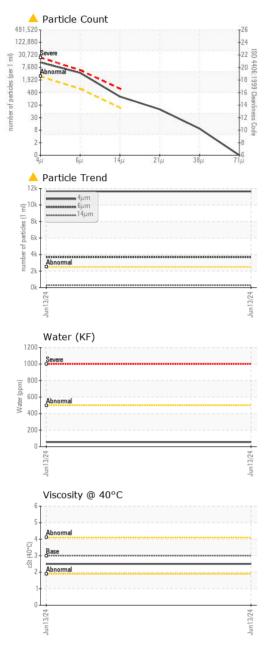
Sample Number         Client Info         WC0901           Sample Date         Client Info         13 Jun 2           Machine Age         hrs         Client Info         0           Sample Status         Image Info         0         ABNORN           PHYSICAL PROPERTIES         method         limit/base         curr           ASTM Color         scalar         'ASTM D1500         L4.0           Visc @ 40°C         cSt         ASTM D445         3.0         2.5           SULFUR CONTENT         method         limit/base         curr           Sulfur         ppm         ASTM D5185m         10         0           Sulfur (UVF)         ppm         ASTM D5185m         <1.0         0           Sodium         ppm         ASTM D5185m         <0.1         2           Potassium         ppm         ASTM D5185m         <0.1         2           Water         %         ASTM D6304         <0.05         0.00           % Gasoline         %         'In-House         <0.0         <0           % Gasoline         %         'In-House         <20.0         <0         <0           % Gasoline         %         'In-House         <20.0 <td< th=""><th>ent history1</th><th>history2</th></td<>	ent history1	history2
Machine Age Sample Status         hrs         Client Info         0           PHYSICAL PROPERTIES         method         limit/base         curr           ASTM Color         scalar         'ASTM D1500         L4.0           Visc @ 40°C         cSt         ASTM D445         3.0         2.5           SULFUR CONTENT         method         limit/base         curr           Sulfur (UVF)         ppm         ASTM D5185m         10         0           Sulfur (UVF)         ppm         ASTM D5185m         <1.0	771	
Sample StatusABNORNPHYSICAL PROPERTIESmethodlimit/basecumASTM Colorscalar'ASTM D1500L4.0Visc @ 40°CcStASTM D4453.02.5SULFUR CONTENTmethodlimit/basecumSulfurppmASTM D5185m100Sulfur (UVF)ppmASTM D5185m100SoliconppmASTM D5185m<1.0	024	
Sample StatusABNORIPHYSICAL PROPERTIESmethodlimit/basecurrASTM Colorscalar'ASTM D1500L4.0Visc @ 40°CcStASTM D4453.02.5SULFUR CONTENTmethodlimit/basecurrSulfurppmASTM D5185m100Sulfur (UVF)ppmASTM D5185m1.00Solfur (UVF)ppmASTM D5185m<1.0		
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Silicon         ppm         ASTM D5185m         <1.0         0           Sodium         ppm         ASTM D5185m         <0.1	ant biotonut	biotom/0
Sodium         ppm         ASTM D5185m         <0.1         2           Potassium         ppm         ASTM D5185m         <0.1	ent history1	history2
Potassium         ppm         ASTM D5185m         <0.1         2           Water         %         ASTM D6304         <0.05		
Water         %         ASTM D6304         <0.05         0.005           ppm Water         ppm         ASTM D6304         <500		
ppm         Water         ppm         ASTM D6304         <500         56           % Gasoline         %         *In-House         <0.50		
% Gasoline       %       *In-House       <0.50		
% Biodiesel % *In-House <20.0 0.0 FLUID CLEANLINESS method limit/base curre Particles >4µm ASTM D7647 >2500 ▲ 11641 Particles >6µm ASTM D7647 >640 ▲ 3672 Particles >14µm ASTM D7647 >640 ▲ 3672 Particles >14µm ASTM D7647 >80 ▲ 270 Particles >21µm ASTM D7647 >20 ▲ 67 Particles >38µm ASTM D7647 >4 ▲ 8 Particles >71µm ASTM D7647 >3 0 Oil Cleanliness ISO 4406 (c) >18/16/13 ▲ 21/19/ HEAVY METALS method limit/base curre Aluminum ppm ASTM D5185m <0.1 0 Nickel ppm ASTM D5185m <0.1 0 Nickel ppm ASTM D5185m <0.1 0 Vanadium ppm ASTM D5185m <0.1 0 Iron ppm ASTM D5185m <0.1 0 Magnesium ppm ASTM D5185m <0.1 0 Magnesium ppm ASTM D5185m <0.1 1 Phosphorus ppm ASTM D5185m <0.1 1 SAMPLE IMAGES method limit/base curre		
FLUID CLEANLINESSmethodlimit/basecurredParticles >4µmASTM D7647>250011641Particles >6µmASTM D7647>6403672Particles >14µmASTM D7647>80270Particles >21µmASTM D7647>2067Particles >21µmASTM D7647>2067Particles >38µmASTM D7647>48Particles >38µmASTM D7647>48Particles >71µmASTM D7647>30Oil CleanlinessISO 4406 (c)>18/16/1321/19/HEAVY METALSmethodlimit/basecurredAluminumppmASTM D5185m<		
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Particles >14µm       ASTM D7647       >80       ▲ 270         Particles >21µm       ASTM D7647       >20       ▲ 67         Particles >38µm       ASTM D7647       >4       ▲ 8         Particles >71µm       ASTM D7647       >3       0         Oil Cleanliness       ISO 4406 (c)       >18/16/13       ▲ 21/19/         HEAVY METALS       method       limit/base       currention         Aluminum       ppm       ASTM D5185m       <0.1		
Particles >21µm       ASTM D7647       >20       ▲ 67         Particles >38µm       ASTM D7647       >4       ▲ 8         Particles >71µm       ASTM D7647       >3       0         Oil Cleanliness       ISO 4406 (c)       >18/16/13       ▲ 21/19/         HEAVY METALS       method       limit/base       curred         Aluminum       ppm       ASTM D5185m       <0.1		
Particles >38µm       ASTM D7647       >4       ▲ 8         Particles >71µm       ASTM D7647       >3       0         Oil Cleanliness       ISO 4406 (c)       >18/16/13       ▲ 21/19/         HEAVY METALS       method       limit/base       curre         Aluminum       ppm       ASTM D5185m       <0.1		
Particles >71µm         ASTM D7647         >3         0           Oil Cleanliness         ISO 4406 (c)         >18/16/13         ▲ 21/19/           HEAVY METALS         method         limit/base         curre           Aluminum         ppm         ASTM D5185m         <0.1		
Oil Cleanliness       ISO 4406 (c)       >18/16/13       ▲ 21/19/         HEAVY METALS       method       limit/base       curre         Aluminum       ppm       ASTM D5185m       <0.1		
HEAVY METALSmethodlimit/basecurredAluminumppmASTM D5185m<0.1		
Aluminum         ppm         ASTM D5185m         <0.1         0           Nickel         ppm         ASTM D5185m         <0.1	15	
Nickel         ppm         ASTM D5185m         <0.1         <1           Lead         ppm         ASTM D5185m         <0.1	ent history1	history2
Lead         ppm         ASTM D5185m         <0.1         0           Vanadium         ppm         ASTM D5185m         <0.1		
VanadiumppmASTM D5185m<0.10IronppmASTM D5185m<0.1		
IronppmASTM D5185m<0.1OCalciumppmASTM D5185m<0.1		
Calcium       ppm       ASTM D5185m       <0.1		
CalciumppmASTM D5185m<0.10MagnesiumppmASTM D5185m<0.1		
Magnesium       ppm       ASTM D5185m       <0.1       <1         Phosphorus       ppm       ASTM D5185m       <0.1       0         Zinc       ppm       ASTM D5185m       <0.1       <1         SAMPLE IMAGES       method       limit/base       current		
Phosphorus     ppm     ASTM D5185m     <0.1     0       Zinc     ppm     ASTM D5185m     <0.1		
Zinc ppm ASTM D5185m <0.1 <1 SAMPLE IMAGES method limit/base curre		
	ent history1	history2
	no image	no image
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ontact/Location: PAIGE ? - CARSHE

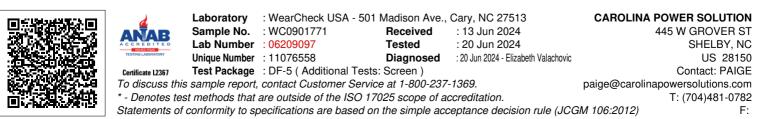


# **FUEL REPORT**

GRAPHS



# Pensky-Martens Flash Point (°C)



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