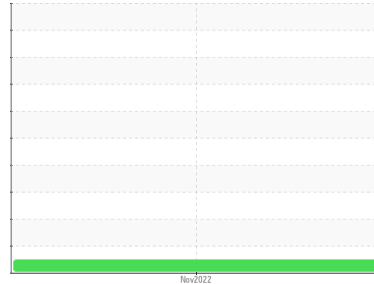




# FUEL REPORT

Sample Rating Trend



**NORMAL**



Area  
**[2022213]**  
 Machine Id  
**Caterpillar Catalent 7555 - EQ-003189**  
 Component  
**Diesel Fuel**  
 Fluid  
**diesel fuel (--- GAL)**

## DIAGNOSIS

### Recommendation

All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel. ( Customer Sample Comment: Fuel sample for EQ-003189 )

### Corrosion

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

### Contaminants

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 INFORMATION |             | method      | limit/base | current            | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|----------|----------|
| Sample Number      | Client Info |             |            | <b>DC0023866</b>   | ---      | ---      |
| Sample Date        | Client Info |             |            | <b>08 Nov 2022</b> | ---      | ---      |
| Machine Age        | hrs         | Client Info |            | <b>0</b>           | ---      | ---      |
| Sample Status      |             |             |            | <b>NORMAL</b>      | ---      | ---      |

| PHYSICAL PROPERTIES |        | method      | limit/base | current     | history1 | history2 |
|---------------------|--------|-------------|------------|-------------|----------|----------|
| ASTM Color          | scalar | *ASTM D1500 |            | <b>L4.0</b> | ---      | ---      |
| Visc @ 40°C         | cSt    | ASTM D445   |            | <b>2.45</b> | ---      | ---      |

| SULFUR CONTENT |     | method      | limit/base | current   | history1 | history2 |
|----------------|-----|-------------|------------|-----------|----------|----------|
| Sulfur         | ppm | ASTM D5185m |            | <b>10</b> | ---      | ---      |
| Sulfur (UVF)   | ppm | ASTM D5453  |            | <b>9</b>  | ---      | ---      |

| IGNITION QUALITY |  | method     | limit/base | current     | history1 | history2 |
|------------------|--|------------|------------|-------------|----------|----------|
| API Gravity      |  | ASTM D7777 |            | <b>36.9</b> | ---      | ---      |

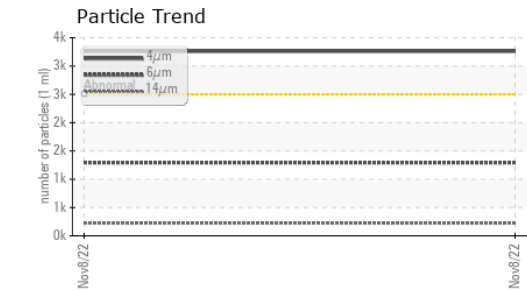
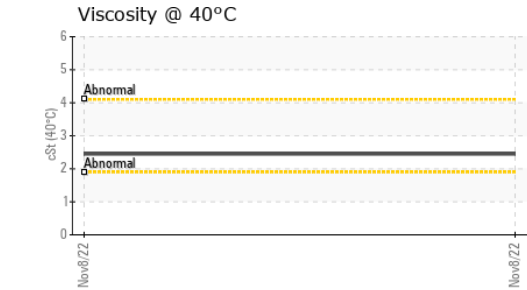
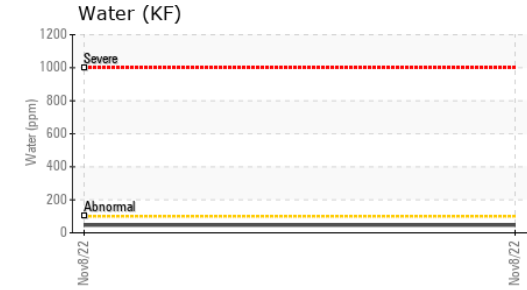
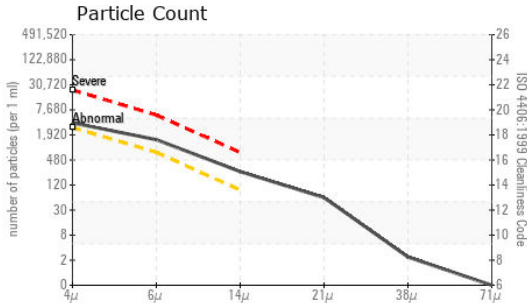
| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | <1.0       | <b>&lt;1</b> | ---      | ---      |
| Sodium       | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |
| Potassium    | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |
| Water        | %   | ASTM D6304  | <0.05      | <b>0.004</b> | ---      | ---      |
| ppm Water    | ppm | ASTM D6304  | <500       | <b>46.6</b>  | ---      | ---      |
| % Gasoline   | %   | *In-House   | <0.50      | <b>0.0</b>   | ---      | ---      |
| % Biodiesel  | %   | *In-House   | <20.0      | <b>0.0</b>   | ---      | ---      |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   | >2500      | <b>3261</b>     | ---      | ---      |
| Particles >6µm    |  | ASTM D7647   | >640       | <b>1293</b>     | ---      | ---      |
| Particles >14µm   |  | ASTM D7647   | >80        | <b>222</b>      | ---      | ---      |
| Particles >21µm   |  | ASTM D7647   | >20        | <b>53</b>       | ---      | ---      |
| Particles >38µm   |  | ASTM D7647   | >4         | <b>2</b>        | ---      | ---      |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>        | ---      | ---      |
| Oil Cleanliness   |  | ISO 4406 (c) | >18/16/13  | <b>19/17/15</b> | ---      | ---      |

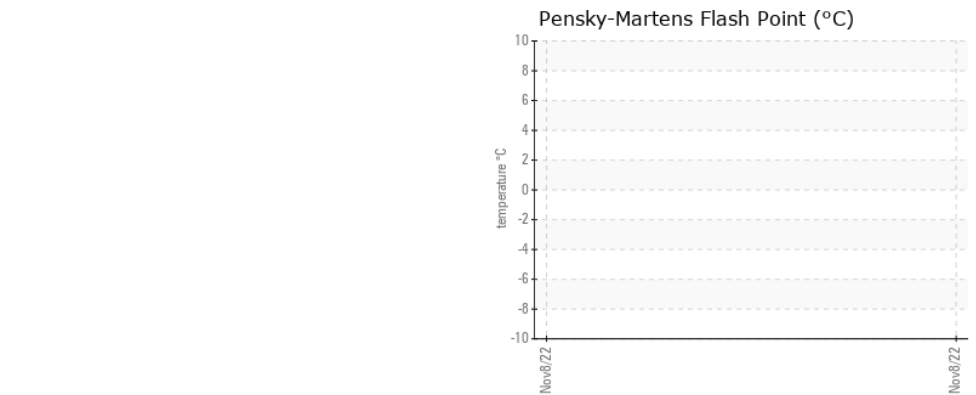
| HEAVY METALS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Aluminum     | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |
| Nickel       | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |
| Lead         | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |
| Vanadium     | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |
| Iron         | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |
| Calcium      | ppm | ASTM D5185m | <0.1       | <b>&lt;1</b> | ---      | ---      |
| Magnesium    | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |
| Phosphorus   | ppm | ASTM D5185m | <0.1       | <b>4</b>     | ---      | ---      |
| Zinc         | ppm | ASTM D5185m | <0.1       | <b>0</b>     | ---      | ---      |



# FUEL REPORT



| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        |            |         | no image | no image |
| Bottom        |        |            |         | no image | no image |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0023866      **Received** : 17 Nov 2022  
**Lab Number** : **05697194**      **Diagnosed** : 24 Nov 2022  
**Unique Number** : 10221767      **Diagnostician** : Doug Bogart  
**Test Package** : MOB 2 ( Additional Tests: API, Cetane, Color-ASTM, Fuel, GC-PerFuel, KF, PrtCount, XRF )

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

**JE RICHARDS**  
 4600 HARGROVE DR  
 LANHAM, MD  
 US 20706  
 Contact: E. NOEL  
 enoel@phalconusa.com  
 T: (240)623-4398  
 F: