



# FUEL REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**KIOTI VL9300324**

Component  
**Diesel Fuel**

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

## DIAGNOSIS

### Recommendation

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

The water content is negligible. The amount and size of particulates present in the system are acceptable.

### 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>KT0001564</b>   | ---      | ---      |
| Sample Date        | Client Info |             |            | <b>06 Jun 2024</b> | ---      | ---      |
| Machine Age        | hrs         | Client Info |            | <b>122</b>         | ---      | ---      |
| Sample Status      |             |             |            | <b>NORMAL</b>      | ---      | ---      |

| PHYSICAL PROPERTIES        |        | method           | limit/base | current       | history1 | history2 |
|----------------------------|--------|------------------|------------|---------------|----------|----------|
| Fuel Color                 | text   | *Visual Screen   | Yellow     | <b>Yellow</b> | ---      | ---      |
| ASTM Color                 | scalar | *ASTM D1500      |            | <b>L3.0</b>   | ---      | ---      |
| Visc @ 40°C                | cSt    | ASTM D445        | 3.0        | <b>2.42</b>   | ---      | ---      |
| Pensky-Martens Flash Point | °C     | *PMCC Calculated | 52         | <b>59</b>     | ---      | ---      |

| SULFUR CONTENT |     | method      | limit/base | current   | history1 | history2 |
|----------------|-----|-------------|------------|-----------|----------|----------|
| Sulfur         | ppm | ASTM D5185m | 10         | <b>0</b>  | ---      | ---      |
| Sulfur (UVF)   | ppm | ASTM D5453  |            | <b>11</b> | ---      | ---      |

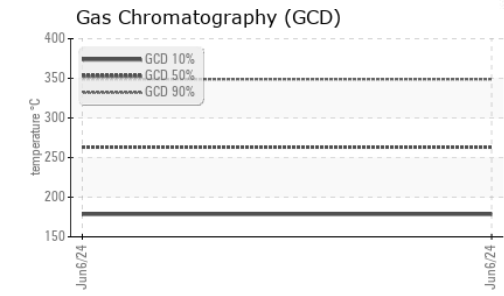
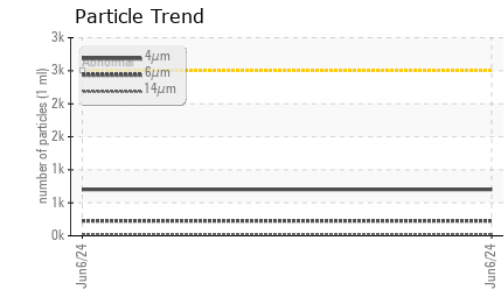
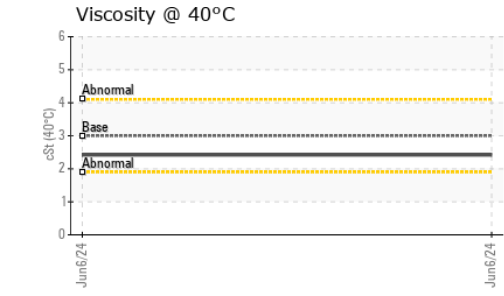
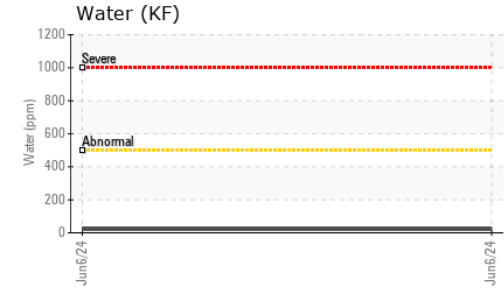
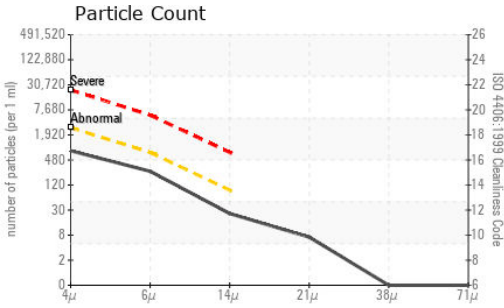
| DISTILLATION           |    | method   | limit/base | current    | history1 | history2 |
|------------------------|----|----------|------------|------------|----------|----------|
| Initial Boiling Point  | °C | ASTM D86 | 165        | <b>169</b> | ---      | ---      |
| 5% Distillation Point  | °C | ASTM D86 |            | <b>191</b> | ---      | ---      |
| 10% Distill Point      | °C | ASTM D86 | 201        | <b>200</b> | ---      | ---      |
| 15% Distillation Point | °C | ASTM D86 |            | <b>208</b> | ---      | ---      |
| 20% Distill Point      | °C | ASTM D86 | 216        | <b>216</b> | ---      | ---      |
| 30% Distill Point      | °C | ASTM D86 | 230        | <b>232</b> | ---      | ---      |
| 40% Distill Point      | °C | ASTM D86 | 243        | <b>246</b> | ---      | ---      |
| 50% Distill Point      | °C | ASTM D86 | 255        | <b>261</b> | ---      | ---      |
| 60% Distill Point      | °C | ASTM D86 | 267        | <b>275</b> | ---      | ---      |
| 70% Distill Point      | °C | ASTM D86 | 280        | <b>290</b> | ---      | ---      |
| 80% Distill Point      | °C | ASTM D86 | 295        | <b>306</b> | ---      | ---      |
| 85% Distillation Point | °C | ASTM D86 |            | <b>317</b> | ---      | ---      |
| 90% Distill Point      | °C | ASTM D86 | 310        | <b>328</b> | ---      | ---      |
| 95% Distillation Point | °C | ASTM D86 |            | <b>346</b> | ---      | ---      |
| Final Boiling Point    | °C | ASTM D86 | 341        | <b>362</b> | ---      | ---      |

| IGNITION QUALITY |  | method     | limit/base | current   | history1 | history2 |
|------------------|--|------------|------------|-----------|----------|----------|
| API Gravity      |  | ASTM D7777 | 37.7       | <b>37</b> | ---      | ---      |
| Cetane Index     |  | ASTM D4737 | <40.0      | <b>50</b> | ---      | ---      |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | <1.0       | <b>0</b>     | ---      | ---      |
| Sodium       | ppm | ASTM D5185m | <0.1       | <b>1</b>     | ---      | ---      |
| Potassium    | ppm | ASTM D5185m | <0.1       | <b>&lt;1</b> | ---      | ---      |
| Water        | %   | ASTM D6304  | <0.05      | <b>0.002</b> | ---      | ---      |
| ppm Water    | ppm | ASTM D6304  | <500       | <b>22</b>    | ---      | ---      |
| % Gasoline   | %   | *In-House   | <0.50      | <b>2.2</b>   | ---      | ---      |
| % Biodiesel  | %   | *In-House   | <20.0      | <b>0.0</b>   | ---      | ---      |



# FUEL REPORT

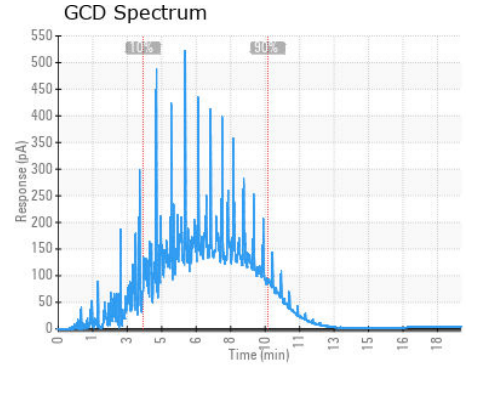
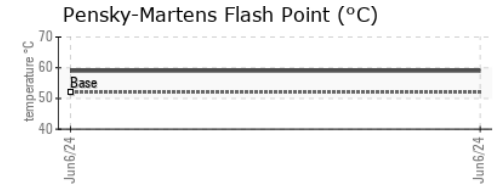
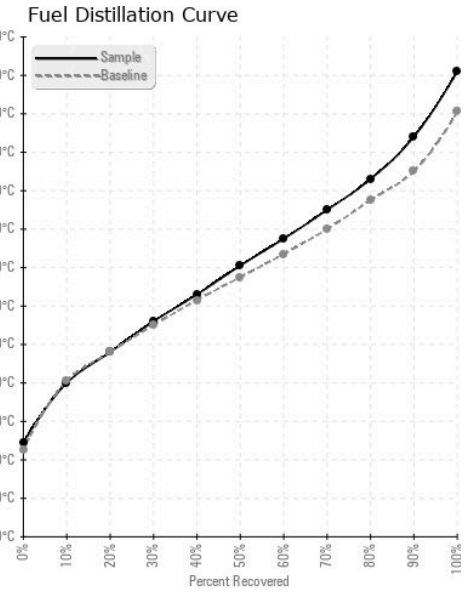


| FLUID CLEANLINESS | method       | limit/base | current         | history1 | history2 |
|-------------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm    | ASTM D7647   | >2500      | <b>701</b>      | ---      | ---      |
| Particles >6µm    | ASTM D7647   | >640       | <b>226</b>      | ---      | ---      |
| Particles >14µm   | ASTM D7647   | >80        | <b>22</b>       | ---      | ---      |
| Particles >21µm   | ASTM D7647   | >20        | <b>6</b>        | ---      | ---      |
| Particles >38µm   | ASTM D7647   | >4         | <b>0</b>        | ---      | ---      |
| Particles >71µm   | ASTM D7647   | >3         | <b>0</b>        | ---      | ---      |
| Oil Cleanliness   | ISO 4406 (c) | >18/16/13  | <b>17/15/12</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>&lt;1</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>0</b>     | ---      | ---      |
| Magnesium    | ppm    | ASTM D5185m <0.1 | <b>&lt;1</b> | ---      | ---      |
| Phosphorus   | ppm    | ASTM D5185m <0.1 | <b>0</b>     | ---      | ---      |
| Zinc         | ppm    | ASTM D5185m <0.1 | <b>0</b>     | ---      | ---      |

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

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KT0001564  
**Lab Number** : 06206043  
**Unique Number** : 11073504  
**Test Package** : DF-2 ( Additional Tests: Fuel, Screen )  
**Received** : 10 Jun 2024  
**Tested** : 18 Jun 2024  
**Diagnosed** : 18 Jun 2024 - Angela Borella

**STRAUB OUTDOOR POWER**  
 14101 BIG CYNTHIANA RD  
 EVANSVILLE, IN  
 US 47720  
 Contact: MIKE ELPERS  
 mike@strauboutdoorpower.com

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)