



# FUEL REPORT

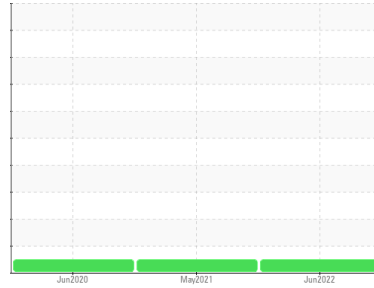
Sample Rating Trend

**NORMAL**



Area  
**[W55624]**  
Machine Id  
**MTU 95010500032**

Component  
**Diesel Fuel**  
Fluid  
**No.2 DIESEL FUEL (LOW-SULPHUR) (1000 GAL)**



## DIAGNOSIS

### Recommendation

All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel type.

### Corrosion

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

### Contaminants

The water content is negligible. There is no Bacteria, Yeast and/or Fungus indicated in the sample. There is no indication of any contamination in the fuel.

### 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>WC0633757</b>   | WCDF01836   | WCDF01341   |
| Sample Date        | Client Info |             |            | <b>24 Jun 2022</b> | 27 May 2021 | 12 Jun 2020 |
| Machine Age        | hrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Sample Status      |             |             |            | <b>NORMAL</b>      | NORMAL      | NORMAL      |

| PHYSICAL PROPERTIES |        | method      | limit/base | current     | history1 | history2 |
|---------------------|--------|-------------|------------|-------------|----------|----------|
| ASTM Color          | scalar | *ASTM D1500 |            | <b>L5.5</b> | L4.5     | L5.5     |
| Visc @ 40°C         | cSt    | ASTM D445   | 3.0        | <b>2.46</b> | 2.36     | 2.55     |

| SULFUR CONTENT |     | method      | limit/base | current   | history1 | history2 |
|----------------|-----|-------------|------------|-----------|----------|----------|
| Sulfur         | ppm | ASTM D5185m | 250        | <b>14</b> | 36       | 6        |
| Sulfur (UVF)   | ppm | ASTM D5453  |            | <b>8</b>  | 11       | 9        |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | <1.0       | <b>0</b>     | 0        | 0        |
| Sodium       | ppm | ASTM D5185m | <0.1       | <b>0</b>     | 0        | 0        |
| Potassium    | ppm | ASTM D5185m | <0.1       | <b>0</b>     | 0        | 6        |
| Water        | %   | ASTM D6304  | <0.05      | <b>0.003</b> | 0.005    | 0.003    |
| ppm Water    | ppm | ASTM D6304  | <500       | <b>35.3</b>  | 56.7     | 30.9     |
| % Gasoline   | %   | *In-House   | <0.50      | <b>0.0</b>   | 0.0      | 0.0      |
| % Biodiesel  | %   | *In-House   | <20.0      | <b>1.7</b>   | 1.9      | 1.7      |

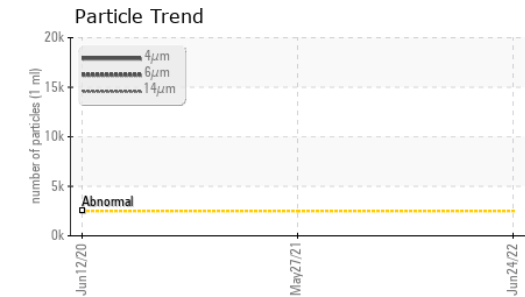
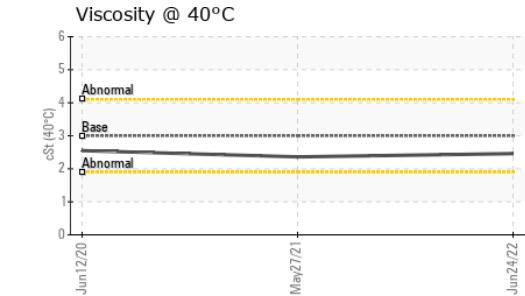
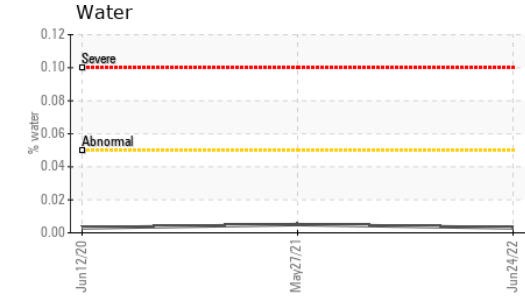
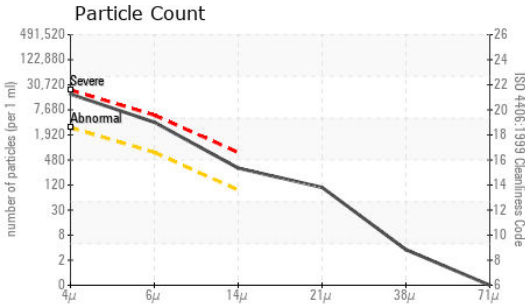
| FLUID CLEANLINESS |  | method       | limit/base | current         | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   | >2500      | <b>15949</b>    | ---      | ---      |
| Particles >6µm    |  | ASTM D7647   | >640       | <b>3385</b>     | ---      | ---      |
| Particles >14µm   |  | ASTM D7647   | >80        | <b>269</b>      | ---      | ---      |
| Particles >21µm   |  | ASTM D7647   | >20        | <b>93</b>       | ---      | ---      |
| Particles >38µm   |  | ASTM D7647   | >4         | <b>3</b>        | ---      | ---      |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>        | ---      | ---      |
| Oil Cleanliness   |  | ISO 4406 (c) | >18/16/13  | <b>21/19/15</b> | ---      | ---      |

| HEAVY METALS |     | method      | limit/base | current  | history1 | history2 |
|--------------|-----|-------------|------------|----------|----------|----------|
| Aluminum     | ppm | ASTM D5185m | <0.1       | <b>0</b> | 0        | <1       |
| Nickel       | ppm | ASTM D5185m | <0.1       | <b>0</b> | 0        | 0        |
| Lead         | ppm | ASTM D5185m | <0.1       | <b>0</b> | 0        | 0        |
| Vanadium     | ppm | ASTM D5185m | <0.1       | <b>0</b> | 0        | 0        |
| Iron         | ppm | ASTM D5185m | <0.1       | <b>0</b> | 0        | <1       |
| Calcium      | ppm | ASTM D5185m | <0.1       | <b>0</b> | 1        | 0        |
| Magnesium    | ppm | ASTM D5185m | <0.1       | <b>0</b> | 0        | <1       |
| Phosphorus   | ppm | ASTM D5185m | <0.1       | <b>0</b> | 3        | <1       |
| Zinc         | ppm | ASTM D5185m | <0.1       | <b>0</b> | 0        | <1       |

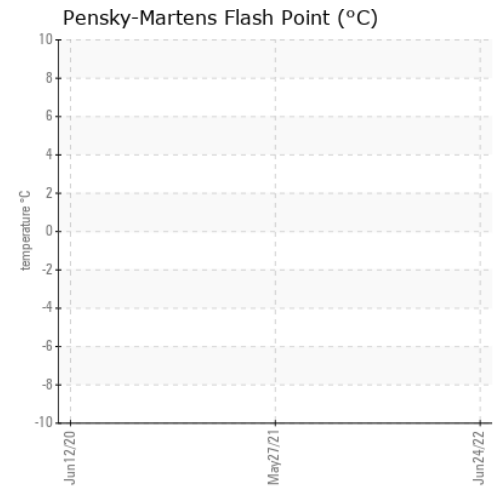
| SAMPLE IMAGES |  | method | limit/base | current | history1 | history2        |
|---------------|--|--------|------------|---------|----------|-----------------|
| Color         |  |        |            |         |          | <i>no image</i> |
| Bottom        |  |        |            |         |  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



# FUEL REPORT



## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0633757 **Received** : 26 Jul 2022  
**Lab Number** : **05600682** **Diagnosed** : 01 Aug 2022  
**Unique Number** : 10065162 **Diagnostician** : Doug Bogart  
**Test Package** : DF-5 ( Additional Tests: Screen )

**NATIONAL POWER CORP**  
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 RALEIGH, NC  
 US 27616  
 Contact: BRANDON RICE  
 brandon.rice@natpow.com  
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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)