

## **FUEL REPORT**

#### Sample Rating Trend







|                 |               |              |            | 3602023     |          |          |
|-----------------|---------------|--------------|------------|-------------|----------|----------|
| SAMPLE INFORM   | <b>IATION</b> | method       | limit/base | current     | history1 | history2 |
| Sample Number   |               | Client Info  |            | WC0859355   |          |          |
| Sample Date     |               | Client Info  |            | 20 Sep 2023 |          |          |
| Machine Age     | hrs           | Client Info  |            | 1433        |          |          |
| Sample Status   |               |              |            | NORMAL      |          |          |
| PHYSICAL PROP   | PERTIES       | method       | limit/base | current     | history1 | history2 |
| ASTM Color      | scalar        | *ASTM D1500  |            | L4.0        |          |          |
| Visc @ 40°C     | cSt           | ASTM D445    |            | 2.46        |          |          |
| SULFUR CONTE    | NT            | method       | limit/base | current     | history1 | history2 |
| Sulfur          | ppm           | ASTM D5185m  |            | 0           |          |          |
| Sulfur (UVF)    | ppm           | ASTM D5453   |            | 10          |          |          |
| CONTAMINANTS    |               | method       | limit/base | current     | history1 | history2 |
| Silicon         | ppm           | ASTM D5185m  | <1.0       | 0           |          |          |
| Sodium          | ppm           | ASTM D5185m  | <0.1       | 2           |          |          |
| Potassium       | ppm           | ASTM D5185m  | <0.1       | -<br><1     |          |          |
| Water           | %             | ASTM D510311 | <0.05      | 0.003       |          |          |
| ppm Water       | ppm           | ASTM D6304   | <500       | 37.2        |          |          |
| % Gasoline      | %             | *In-House    | < 0.50     | 0.0         |          |          |
| % Biodiesel     | %             | *In-House    | <20.0      | 1.6         |          |          |
| FLUID CLEANLIN  | IESS          | method       | limit/base | current     | history1 | history2 |
| Particles >4µm  |               | ASTM D7647   | >2500      | 2372        |          |          |
| Particles >6µm  |               | ASTM D7647   | >640       | 716         |          |          |
| Particles >14µm |               | ASTM D7647   | >80        | 80          |          |          |
| Particles >21µm |               | ASTM D7647   | >20        | 24          |          |          |
| Particles >38µm |               | ASTM D7647   | >4         | 3           |          |          |
| Particles >71µm |               | ASTM D7647   | >3         | 1           |          |          |
| Oil Cleanliness |               | ISO 4406 (c) | >18/16/13  | 18/17/13    |          |          |
| HEAVY METALS    |               | method       | limit/base | current     | history1 | history2 |
| Aluminum        | ppm           | ASTM D5185m  | <0.1       | <1          |          |          |
| Nickel          | ppm           | ASTM D5185m  | <0.1       | 0           |          |          |
| Lead            | ppm           | ASTM D5185m  | <0.1       | 0           |          |          |
| Vanadium        | ppm           | ASTM D5185m  | <0.1       | 0           |          |          |
| Iron            | ppm           | ASTM D5185m  | <0.1       | 0           |          |          |
| Calcium         | ppm           | ASTM D5185m  | <0.1       | 0           |          |          |
| Magnesium       | ppm           | ASTM D5185m  | <0.1       | 0           |          |          |
| Phosphorus      | ppm           | ASTM D5185m  | <0.1       | 2           |          |          |
|                 |               |              |            | -           |          |          |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        | 9          |         | no image | no image |
| Bottom        |        |            |         | no image | no image |

0

ASTM D5185m <0.1

ppm

Zinc

Machine Id UTL-M0048 Component **Diesel Fuel** NOT GIVEN (--- GAL)

#### Recommendation

No corrective action is recommended at this time. 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 moderate amount of silt (particulates < 14 microns in size) 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**

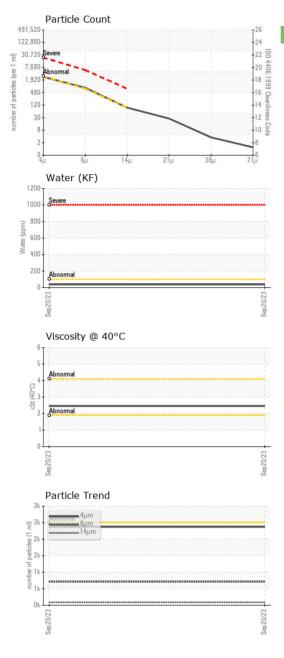
Sulfur value derived by ASTM D5453 method for ULSD validation. Sulfur level is acceptable for ULSD specification.

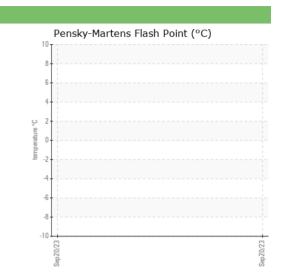


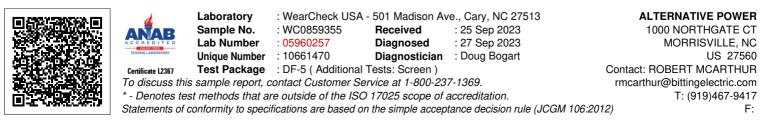
Submitted By: ROBERT MCARTHUR



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