



FUEL REPORT

Sample Rating Trend



NORMAL



Area
QTS ATLANTA GA DC1 [4784]
 Machine Id
[QTS ATLANTA GA DC1] GH5 ENC5
 Component
Diesel Fuel
 Fluid
No.2 DIESEL FUEL (ULTRALOW SULPHUR) (10500 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

There is no bacteria or fungus (yeast and/or mold) indicated in the sample. The water content is negligible. There is no indication of any contamination in the fuel. 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 | | | WC0953923 | --- | --- |
| Sample Date | Client Info | | | 22 May 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 0 | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

| PHYSICAL PROPERTIES | | method | limit/base | current | history1 | history2 |
|----------------------------|--------|------------------|------------|-------------|----------|----------|
| Fuel Color | text | *Visual Screen | Yellow | Red | --- | --- |
| ASTM Color | scalar | *ASTM D1500 | | L4.5 | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | 3.0 | 2.46 | --- | --- |
| Pensky-Martens Flash Point | °C | *PMCC Calculated | 52 | 61.2 | --- | --- |

| SULFUR CONTENT | | method | limit/base | current | history1 | history2 |
|----------------|-----|-------------|------------|----------|----------|----------|
| Sulfur | ppm | ASTM D5185m | 10 | 0 | --- | --- |
| Sulfur (UVF) | ppm | ASTM D5453 | | 8 | --- | --- |

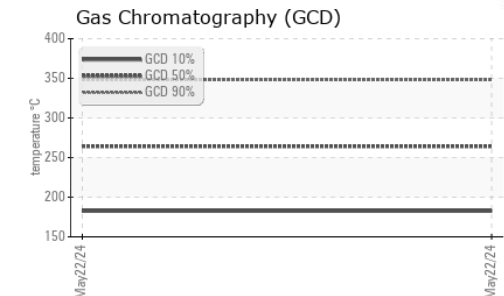
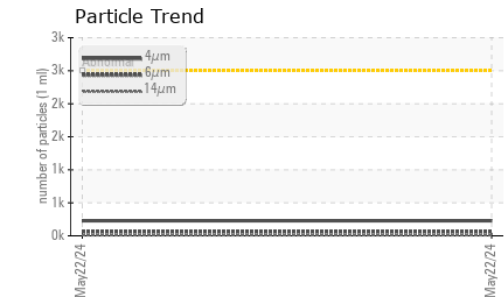
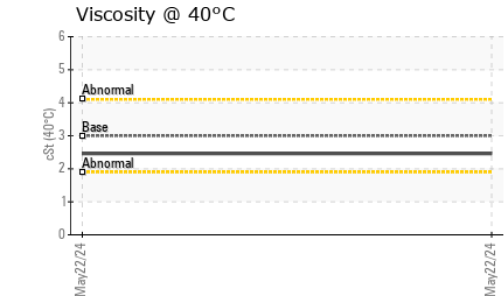
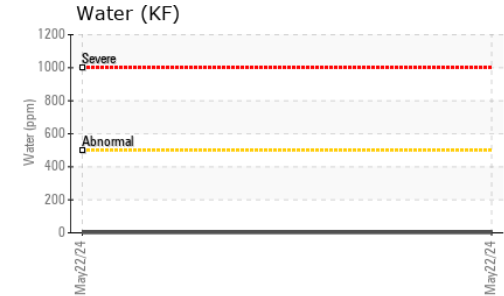
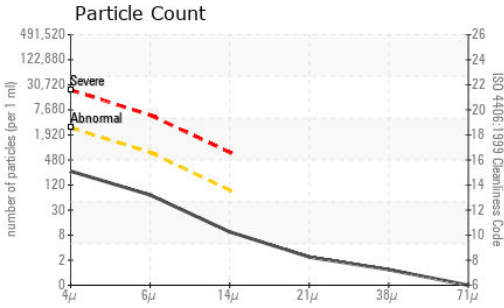
| DISTILLATION | | method | limit/base | current | history1 | history2 |
|------------------------|----|----------|------------|------------|----------|----------|
| Initial Boiling Point | °C | ASTM D86 | 165 | 172 | --- | --- |
| 5% Distillation Point | °C | ASTM D86 | | 195 | --- | --- |
| 10% Distill Point | °C | ASTM D86 | 201 | 204 | --- | --- |
| 15% Distillation Point | °C | ASTM D86 | | 212 | --- | --- |
| 20% Distill Point | °C | ASTM D86 | 216 | 220 | --- | --- |
| 30% Distill Point | °C | ASTM D86 | 230 | 235 | --- | --- |
| 40% Distill Point | °C | ASTM D86 | 243 | 248 | --- | --- |
| 50% Distill Point | °C | ASTM D86 | 255 | 261 | --- | --- |
| 60% Distill Point | °C | ASTM D86 | 267 | 276 | --- | --- |
| 70% Distill Point | °C | ASTM D86 | 280 | 290 | --- | --- |
| 80% Distill Point | °C | ASTM D86 | 295 | 305 | --- | --- |
| 85% Distillation Point | °C | ASTM D86 | | 316 | --- | --- |
| 90% Distill Point | °C | ASTM D86 | 310 | 327 | --- | --- |
| 95% Distillation Point | °C | ASTM D86 | | 345 | --- | --- |
| Final Boiling Point | °C | ASTM D86 | 341 | 360 | --- | --- |

| IGNITION QUALITY | | method | limit/base | current | history1 | history2 |
|------------------|--|------------|------------|-----------|----------|----------|
| API Gravity | | ASTM D7777 | 37.7 | 36 | --- | --- |
| Cetane Index | | ASTM D4737 | <40.0 | 48 | --- | --- |

| 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 | 2 | --- | --- |
| Water | % | ASTM D6304 | <0.05 | 0.001 | --- | --- |
| ppm Water | ppm | ASTM D6304 | <500 | 2 | --- | --- |
| % Gasoline | % | *In-House | <0.50 | 0.0 | --- | --- |
| % Biodiesel | % | *In-House | <20.0 | 0.0 | --- | --- |



FUEL REPORT

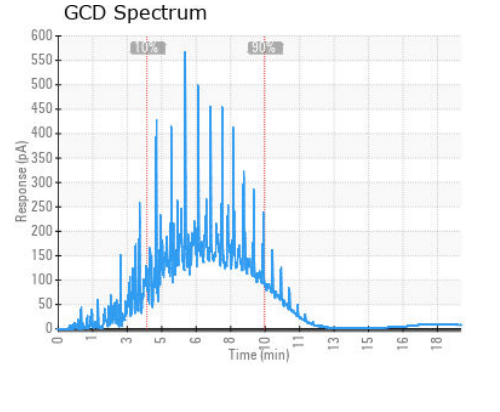
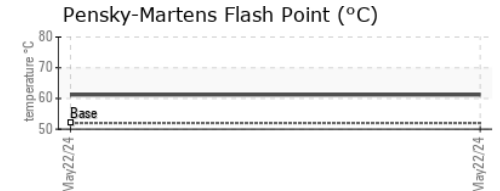
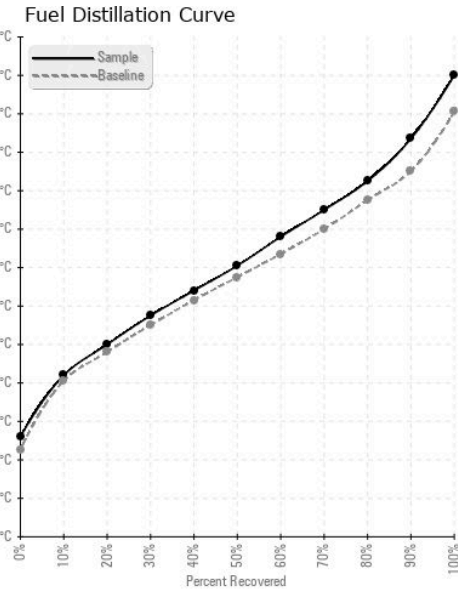


| FLUID CLEANLINESS | method | limit/base | current | history1 | history2 |
|-------------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | >2500 | 228 | --- | --- |
| Particles >6µm | ASTM D7647 | >640 | 61 | --- | --- |
| Particles >14µm | ASTM D7647 | >80 | 8 | --- | --- |
| Particles >21µm | ASTM D7647 | >20 | 2 | --- | --- |
| Particles >38µm | ASTM D7647 | >4 | 1 | --- | --- |
| Particles >71µm | ASTM D7647 | >3 | 0 | --- | --- |
| Oil Cleanliness | ISO 4406 (c) | >18/16/13 | 15/13/10 | --- | --- |

| HEAVY METALS | method | limit/base | current | history1 | history2 |
|--------------|--------|------------------|--------------|----------|----------|
| Aluminum | ppm | ASTM D5185m <0.1 | 0 | --- | --- |
| 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 | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185m <0.1 | 0 | --- | --- |
| Phosphorus | ppm | ASTM D5185m <0.1 | 0 | --- | --- |
| Zinc | ppm | ASTM D5185m <0.1 | 4 | --- | --- |

| 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. : WC0953923
Lab Number : **06203238**
Unique Number : 11070699
Test Package : DF-2 (Additional Tests: Fuel, Screen)
Received : 07 Jun 2024
Tested : 14 Jun 2024
Diagnosed : 14 Jun 2024 - Doug Bogart

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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)