

FUEL REPORT

Sample Rating Trend



HF DIST 500

Diesel Fuel

Fluid No.2 DIESEL FUEL (ULTRALOW SULPHUR) (500 GAL)

DIAGNOSIS

Recommendation

All laboratory tests indicate that this sample meets specifications for No.2 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.

Fuel Condition

Sulfur value derived by ASTM D5453 method for ULSD validation.

| R) (500 GAL) | | Mar2018 | Apr2019 Mar2021 May20 | 21 Mar2022 Jun2022 Mar202 | Mar2024 | |
|---|---------------|-------------------------------|-----------------------|---------------------------|-------------------------|--------------------------|
| SAMPLE INFORM | 1ATION | method | limit/base | current | history1 | history2 |
| Sample Number Sample Date | | Client Info Client Info | | WCDF4540 12 Mar 2024 | WCDF4360 16 Mar 2023 | WCDF04650 06 Jun 2022 |
| Machine Age | mls | Client Info | | 0 | 0 | 0 |
| Sample Status | | | | NORMAL | SEVERE | NORMAL |
| PHYSICAL PROP | FRTIES | method | limit/base | current | history1 | history2 |
| | | | | | | |
| Specific Gravity | 4 | *ASTM D1298 | 0.839 | De d | 0.838 | |
| Fuel Color ASTM Color | text | *Visual Screen *ASTM D1500 | Yllow | Red L4.5 | Red L4.0 | L5.5 |
| Visc @ 40°C | scalar cSt | ASTM D1500 ASTM D445 | 3.0 | 2.53 | 2.63 | 2.7 |
| Pensky-Martens Flash Point | °C | *PMCC Calculated | 52 | 62.6 | 57 | 2.1 |
| Cloud Point | °C | ASTM D5771 | JZ | -11 | -11 | |
| | _ | | | | | |
| SULFUR CONTER | NI | method | limit/base | current | history1 | history2 |
| Sulfur | ppm | ASTM D5185m | 10 | 91 | 0 | 198 |
| Sulfur (UVF) | ppm | ASTM D5453 | | 95 | 21 | 199 |
| DISTILLATION | | method | limit/base | current | history1 | history2 |
| Initial Boiling Point | °C | ASTM D86 | 165 | 174 | 158 | |
| 5% Distillation Point | °C | ASTM D86 | | 197 | 193 | |
| 10% Distill Point | °C | ASTM D86 | 201 | 206 | 206 | |
| 15% Distillation Point | °C | ASTM D86 | | 214 | 214 | |
| 20% Distill Point | °C | ASTM D86 | 216 | 222 | 221 | |
| 30% Distill Point | °C | ASTM D86 | 230 | 237 | 235 | |
| 40% Distill Point | °C | ASTM D86 | 243 | 251 | 248 | |
| 50% Distill Point | °C | ASTM D86 | | 264 | 262 | |
| 60% Distill Point | °C | ASTM D86 | 267 | 278 | 276 | |
| 70% Distill Point | °C | ASTM D86 | | 292 | 290 | |
| 80% Distill Point | °C | ASTM D86 | 295 | 309 | 305 | |
| 85% Distillation Point | °C | ASTM D86 | | 319 | 314 | |
| 90% Distill Point | °C | ASTM D86 | 310 | 329 | 325 | |
| 95% Distillation Point | °C | ASTM D86 | 0.4.4 | 344 | 341 | |
| Final Boiling Point | °C | ASTM D86 | 341 | 356 | 350 | |
| Distillation Residue Distillation Loss | % | ASTM D86 ASTM D86 | 3.0 3.0 | | 1.4 0.3 | |
| | | | limit/base | | | |
| | | method | | current | history1 | history2 |
| API Gravity Cetane Index | | ASTM D7777 ASTM D4737 | 37.7 <40.0 | 37.3 50 | 37.4 50.0 | |
| | | | | | | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Sodium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Potassium | ppm | ASTM D5185m | <0.1 | <1 | 0 | 0 |
| Water | % | ASTM D6304 | | 0.005 | 0.016 | 0.008 |
| ppm Water | ppm | ASTM D6304 | <500 | 55 | 162.4 | 80.9 |
| % Gasoline | % | *In-House | <0.50 | 0.0 | 0.0 | 0.0 |
| % Biodiesel | % | *In-House | <20.0 | 1.7 | 0.0 | 0.0 |



Water (KF)

Aar11/21

1200

1000

800

600

400

200

Water

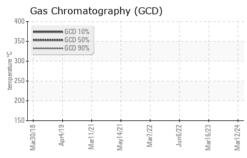
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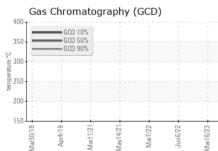
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| | HEAVY METALS | | method | |
|--|--------------|-----|-------------|------|
| | Aluminum | ppm | ASTM D5185m | <0.1 |
| | Nickel | ppm | ASTM D5185m | <0.1 |
| | Lead | ppm | ASTM D5185m | <0.1 |
| | Vanadium | ppm | ASTM D5185m | <0.1 |
| | Iron | ppm | ASTM D5185m | <0.1 |
| | Calcium | ppm | ASTM D5185m | <0.1 |
| May14/21 Mar7/22 Jun6/22 Mar16/23 | Magnesium | ppm | ASTM D5185m | <0.1 |
| May Juu Mar | Phosphorus | ppm | ASTM D5185m | <0.1 |
| 0°C | Zinc | ppm | ASTM D5185m | <0.1 |
| | | | | |

Bottom

Viscosity @ 40°C



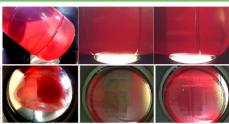


 Phosphorus
 ppm
 ASTM D5185m
 <0.1</th>
 0

 Zinc
 ppm
 ASTM D5185m
 <0.1</th>
 0

 SAMPLE IMAGES
 method
 limit/base
 control

 Color
 Imit/base
 Imit/base
 Imit/base



<1

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4

7

0

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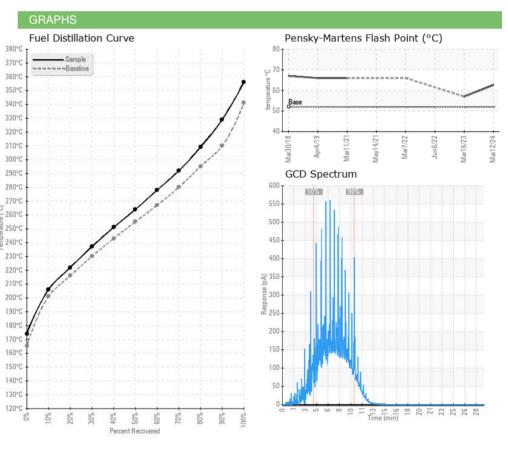
<1

0

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TANK WIZARDS Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : WCDF4540 Received 1511 MASTERS RD NW : 18 Mar 2024 Lab Number : 06121318 PALM BAY, FL Tested :01 Apr 2024 Unique Number : 10930151 : 01 Apr 2024 - Doug Bogart US 32907 Diagnosed Test Package : DF-2 (Additional Tests: CldPt, Fuel, Screen) Contact: WENDALL STRODERD Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. wendall@tankwizards.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (321)427-5149 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (321)574-4131

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