



FUEL REPORT

Sample Rating Trend

WATER



Machine Id
BLYTHE CHAPEL HILL RD - DARK RED

Component
Diesel Fuel
Fluid
NOT GIVEN (--- QTS)



DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. All other laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Corrosion

The iron level is abnormal.

Contaminants

Appearance is hazy. There is a light concentration of water present in the fuel. Moderate concentration of visible dirt/debris present in the fuel. 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 value derived by ASTM D5453 method for ULSD validation.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|----------|----------|
| Sample Number | Client Info | | | WC05905080 | --- | --- |
| Sample Date | Client Info | | | 20 Jul 2023 | --- | --- |
| Machine Age | hrs | Client Info | | 0 | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |

| PHYSICAL PROPERTIES | | method | limit/base | current | history1 | history2 |
|----------------------------|--------|------------------|------------|--------------|----------|----------|
| Specific Gravity | | *ASTM D1298 | | 0.846 | --- | --- |
| Fuel Color | text | *Visual Screen | | Red | --- | --- |
| ASTM Color | scalar | *ASTM D1500 | | L7.5 | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | | 2.64 | --- | --- |
| Pensky-Martens Flash Point | °C | *PMCC Calculated | | 61 | --- | --- |

| SULFUR CONTENT | | method | limit/base | current | history1 | history2 |
|----------------|-----|-------------|------------|----------|----------|----------|
| Sulfur | ppm | ASTM D5185m | | 0 | --- | --- |
| Sulfur (UVF) | ppm | ASTM D5453 | | 9 | --- | --- |

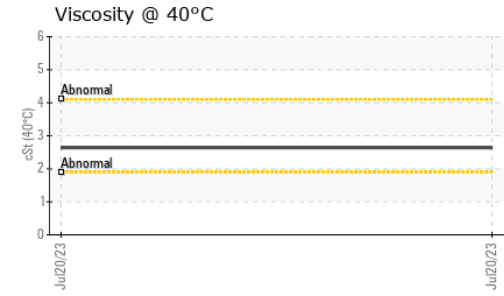
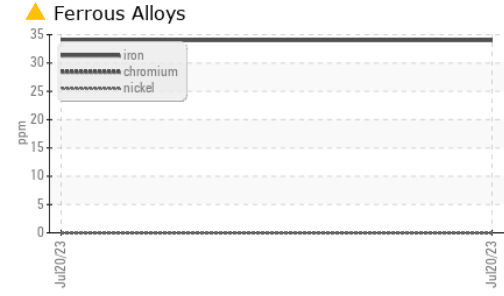
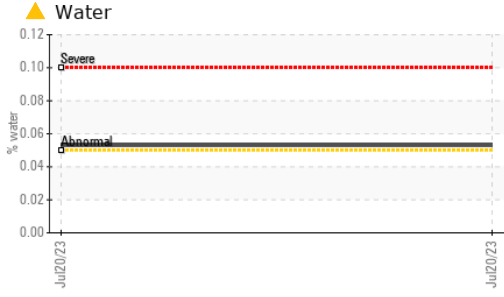
| DISTILLATION | | method | limit/base | current | history1 | history2 |
|------------------------|----|----------|------------|------------|----------|----------|
| Initial Boiling Point | °C | ASTM D86 | | 169 | --- | --- |
| 5% Distillation Point | °C | ASTM D86 | | 196 | --- | --- |
| 10% Distill Point | °C | ASTM D86 | | 206 | --- | --- |
| 15% Distillation Point | °C | ASTM D86 | | 216 | --- | --- |
| 20% Distill Point | °C | ASTM D86 | | 224 | --- | --- |
| 30% Distill Point | °C | ASTM D86 | | 238 | --- | --- |
| 40% Distill Point | °C | ASTM D86 | | 253 | --- | --- |
| 50% Distill Point | °C | ASTM D86 | | 267 | --- | --- |
| 60% Distill Point | °C | ASTM D86 | | 281 | --- | --- |
| 70% Distill Point | °C | ASTM D86 | | 296 | --- | --- |
| 80% Distill Point | °C | ASTM D86 | | 312 | --- | --- |
| 85% Distillation Point | °C | ASTM D86 | | 320 | --- | --- |
| 90% Distill Point | °C | ASTM D86 | | 330 | --- | --- |
| 95% Distillation Point | °C | ASTM D86 | | 345 | --- | --- |
| Final Boiling Point | °C | ASTM D86 | | 352 | --- | --- |
| Distillation Residue | % | ASTM D86 | | 1.4 | --- | --- |
| Distillation Loss | % | ASTM D86 | | 0.8 | --- | --- |

| IGNITION QUALITY | | method | limit/base | current | history1 | history2 |
|------------------|--|------------|------------|-------------|----------|----------|
| API Gravity | | ASTM D7777 | | 35.8 | --- | --- |
| Cetane Index | | ASTM D4737 | <40.0 | 47.7 | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | <1.0 | 1 | --- | --- |
| Sodium | ppm | ASTM D5185m | <0.1 | 1 | --- | --- |
| Potassium | ppm | ASTM D5185m | <0.1 | 0 | --- | --- |
| Water | % | ASTM D6304 | <0.05 | ▲ 0.053 | --- | --- |
| ppm Water | ppm | ASTM D6304 | <500 | ▲ 533.6 | --- | --- |
| % Gasoline | % | *In-House | <0.50 | 0.0 | --- | --- |
| % Biodiesel | % | *In-House | <20.0 | 3.9 | --- | --- |



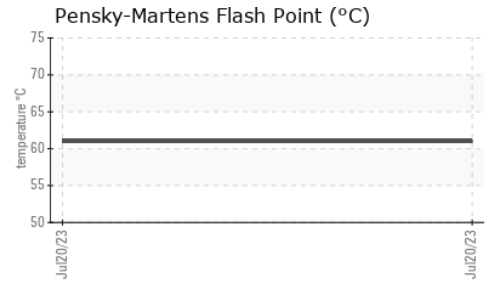
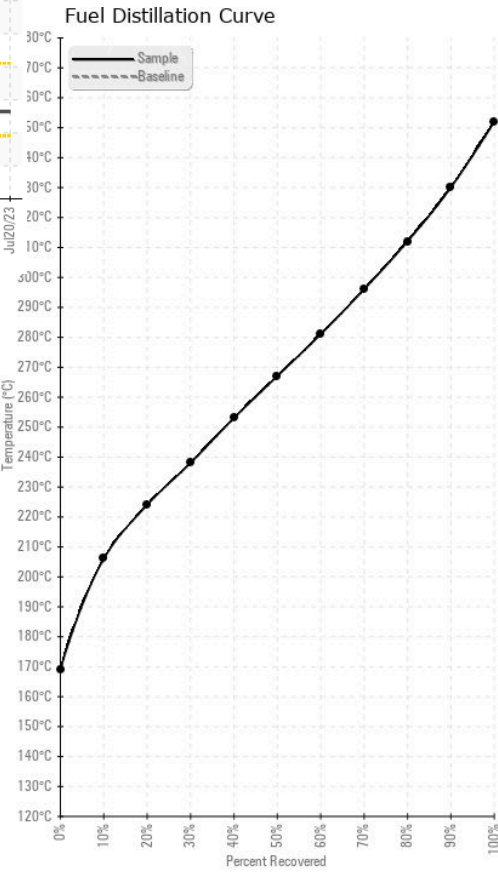
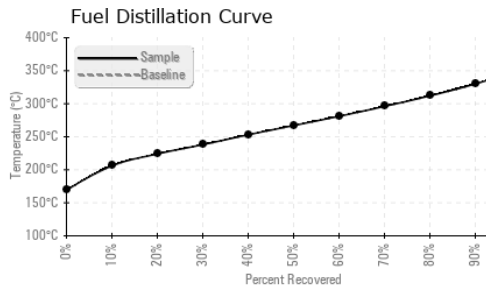
FUEL REPORT



| 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 | <1 | --- | --- |
| Iron | ppm | ASTM D5185m | <0.1 | ▲ 34 | --- | --- |
| Calcium | ppm | ASTM D5185m | <0.1 | 2 | --- | --- |
| Magnesium | ppm | ASTM D5185m | <0.1 | 1 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | <0.1 | 0 | --- | --- |
| Zinc | ppm | ASTM D5185m | <0.1 | 0 | --- | --- |

| 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. : WC05905080 **Received** : 21 Jul 2023
Lab Number : 05905080 **Diagnosed** : 02 Aug 2023
Unique Number : 10566436 **Diagnostician** : Doug Bogart
Test Package : DF-2 (Additional Tests: Screen)

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Certificate L2367
 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)