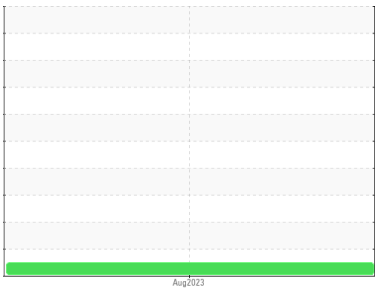
# FUEL REPORT

Sample Rating Trend




NORMAL

Area
**[99354]**
Machine Id
**25453454**
Component
**Diesel Fuel**
Fluid
**No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)**

## DIAGNOSIS

**Recommendation**
Laboratory test indicate that this fuel is suitable for use and meets all test requirements. Resample at the next service interval to monitor.

**Corrosion**
{not applicable}

**Contaminants**
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. There is no indication of any contamination in the diesel fuel.

**Fuel Condition**
All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel (US EPA/CGSB-3.517-3 type B).

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **CU0019853** | --- | --- |
| Sample Date | | Client Info | | **15 Aug 2023** | --- | --- |
| Machine Age | hrs | Client Info | | **0** | --- | --- |
| Sample Status | | | | **NORMAL** | --- | --- |

| PHYSICAL PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Specific Gravity | | ASTM D1298* | 0.839 | **0.829** | --- | --- |
| Fuel Color | text | Visual Screen* | Yllow | **Red** | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | 3.0 | **2.1** | --- | --- |
| Pensky-Martens Flash Point | °C | ASTM D7215* | 52 | **54** | --- | --- |

| SULFUR CONTENT | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sulfur | ppm | ASTM D5185(m) | 10 | **6** | --- | --- |

| DISTILLATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Initial Boiling Point | °C | ASTM D2887* | 165 | **165** | --- | --- |
| 5% Distillation Point | °C | ASTM D2887* | | **188** | --- | --- |
| 10% Distill Point | °C | ASTM D2887* | 201 | **197** | --- | --- |
| 15% Distillation Point | °C | ASTM D2887* | | **203** | --- | --- |
| 20% Distill Point | °C | ASTM D2887* | 216 | **210** | --- | --- |
| 30% Distill Point | °C | ASTM D2887* | 230 | **221** | --- | --- |
| 40% Distill Point | °C | ASTM D2887* | 243 | **232** | --- | --- |
| 50% Distill Point | °C | ASTM D2887* | 255 | **243** | --- | --- |
| 60% Distill Point | °C | ASTM D2887* | 267 | **256** | --- | --- |
| 70% Distill Point | °C | ASTM D2887* | 280 | **270** | --- | --- |
| 80% Distill Point | °C | ASTM D2887* | 295 | **288** | --- | --- |
| 85% Distillation Point | °C | ASTM D2887* | | **300** | --- | --- |
| 90% Distill Point | °C | ASTM D2887* | 310 | **313** | --- | --- |
| 95% Distillation Point | °C | ASTM D2887* | | **334** | --- | --- |
| Final Boiling Point | °C | ASTM D2887* | 341 | **353** | --- | --- |

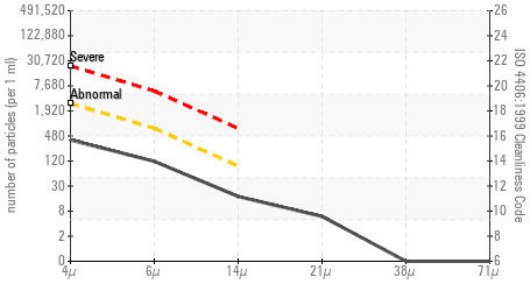
| IGNITION QUALITY | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| API Gravity | ASTM D1298* | 37.7 | **39** | --- | --- |
| Cetane Index | ASTM D4737* | <40.0 | **48** | --- | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | <1.0 | **0** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | <0.1 | **<1** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |
| Water | % | ASTM D6304* | <0.05 | **0.003** | --- | --- |
| ppm Water | ppm | ASTM D6304* | <500 | **27.4** | --- | --- |

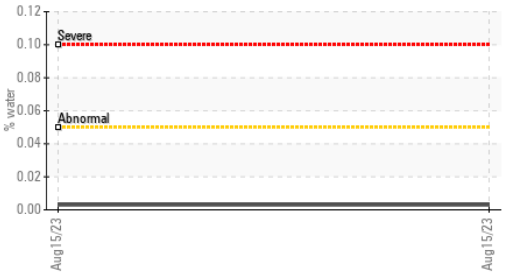
| FLUID CLEANLINESS | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Particles >4µm | ASTM D7647 | >2500 | **338** | --- | --- |
| Particles >6µm | ASTM D7647 | >640 | **104** | --- | --- |
| Particles >14µm | ASTM D7647 | >80 | **15** | --- | --- |
| Particles >21µm | ASTM D7647 | >20 | **5** | --- | --- |
| Particles >38µm | ASTM D7647 | >4 | **0** | --- | --- |
| Particles >71µm | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | ISO 4406 (c) | >18/16/13 | **16/14/11** | --- | --- |

# FUEL REPORT

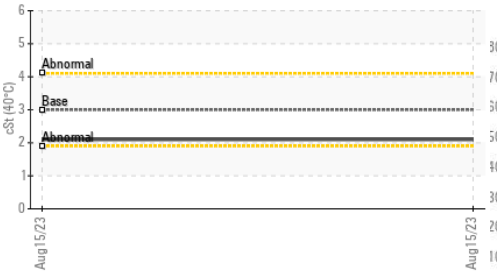
Particle Count



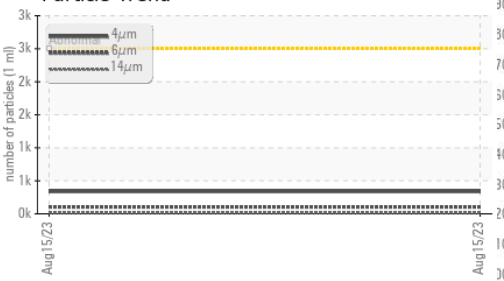

Water



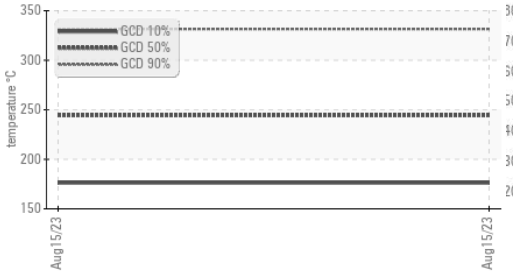

Viscosity @ 40°C



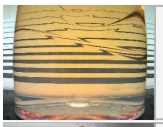

Particle Trend




Gas Chromatography (GCD)

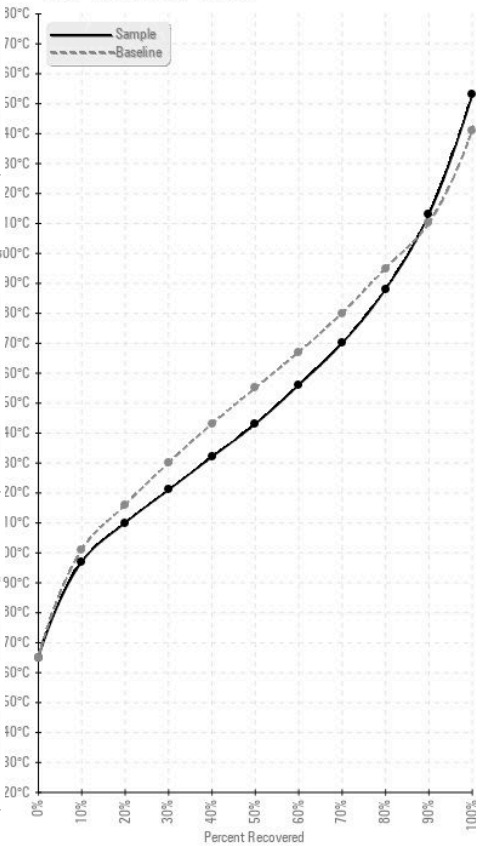



| HEAVY METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Aluminum | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |
| Lead | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |
| Iron | ppm | ASTM D5185(m) | <0.1 | **<1** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | <0.1 | **0** | --- | --- |

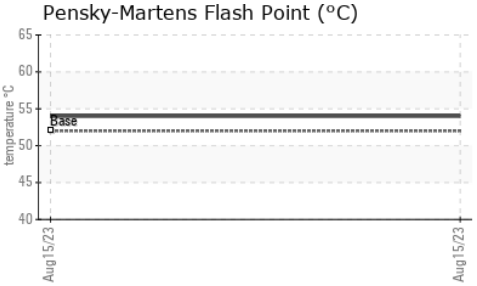
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | *no image* | *no image* |
| Bottom | | |  | *no image* | *no image* |

GRAPHS

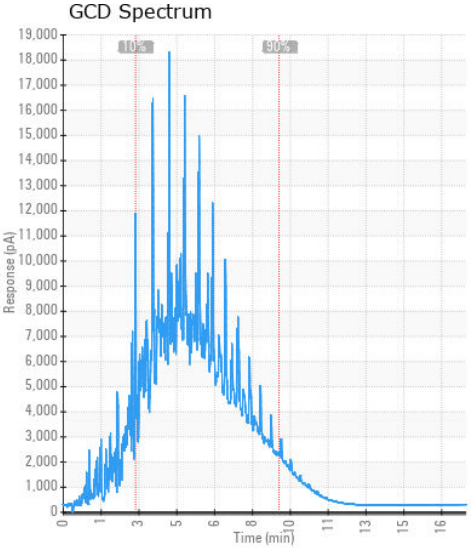
Fuel Distillation Curve




Pensky-Martens Flash Point (°C)




GCD Spectrum




CALA
ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : CU0019853 **Received** : 17 Aug 2023
**Lab Number** : 02576598 **Diagnosed** : 21 Aug 2023
**Unique Number** : 5629658 **Diagnostician** : Kevin Marson
**Test Package** : FUEL ( Additional Tests: CC Flash, GC-PercFuel, PrtCount )

*To discuss this sample report, contact Customer Service at 1-800-268-2131.*
*Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.*
*Validity of results and interpretation are based on the sample and information as supplied.*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