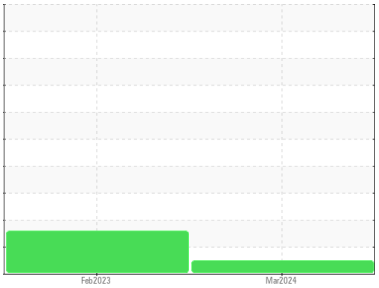
# FUEL REPORT

Sample Rating Trend




NORMAL

Area
**[45831]**
Machine Id
## KIOTI James D (S/N YY8800033)
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.

**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 | | **KT0000987** | KT0000410 | --- |
| Sample Date | | Client Info | | **27 Mar 2024** | 24 Feb 2023 | --- |
| Machine Age | hrs | Client Info | | **0** | 0 | --- |
| Sample Status | | | | **NORMAL** | ABNORMAL | --- |

| PHYSICAL PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Specific Gravity | | ASTM D1298* | 0.839 | **0.823** | 0.819 | --- |
| Fuel Color | text | Visual Screen* | Yllow | **Yllow** | Yllow | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | 3.0 | **1.9** | ▲ 1.7 | --- |
| Pensky-Martens Flash Point | °C | ASTM D7215* | 52 | **48.4** | ▲ 45 | --- |

| SULFUR CONTENT | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sulfur | ppm | ASTM D5185(m) | 10 | **7** | 12 | --- |

| DISTILLATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Initial Boiling Point | °C | ASTM D2887* | 165 | **154** | 153 | --- |
| 5% Distillation Point | °C | ASTM D2887* | | **175** | 170 | --- |
| 10% Distill Point | °C | ASTM D2887* | 201 | **182** | 176 | --- |
| 15% Distillation Point | °C | ASTM D2887* | | **189** | 182 | --- |
| 20% Distill Point | °C | ASTM D2887* | 216 | **196** | ▲ 188 | --- |
| 30% Distill Point | °C | ASTM D2887* | 230 | **208** | 200 | --- |
| 40% Distill Point | °C | ASTM D2887* | 243 | **220** | 213 | --- |
| 50% Distill Point | °C | ASTM D2887* | 255 | **233** | ▲ 225 | --- |
| 60% Distill Point | °C | ASTM D2887* | 267 | **247** | 238 | --- |
| 70% Distill Point | °C | ASTM D2887* | 280 | **262** | 251 | --- |
| 80% Distill Point | °C | ASTM D2887* | 295 | **280** | 267 | --- |
| 85% Distillation Point | °C | ASTM D2887* | | **293** | 278 | --- |
| 90% Distill Point | °C | ASTM D2887* | 310 | **306** | 289 | --- |
| 95% Distillation Point | °C | ASTM D2887* | | **328** | 307 | --- |
| Final Boiling Point | °C | ASTM D2887* | 341 | **358** | 326 | --- |

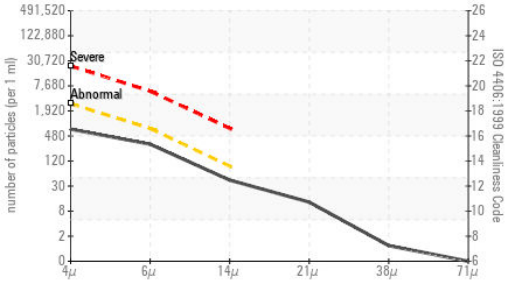
| IGNITION QUALITY | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| API Gravity | | ASTM D1298* | 37.7 | **40** | 41 | --- |
| Cetane Index | | ASTM D4737* | <40.0 | **47** | 47 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | <1.0 | **0** | 0 | --- |
| Sodium | ppm | ASTM D5185(m) | <0.1 | **<1** | <1 | --- |
| Potassium | ppm | ASTM D5185(m) | <0.1 | **0** | 0 | --- |
| Water | % | ASTM D6304* | <0.05 | **0.002** | 0.002 | --- |
| ppm Water | ppm | ASTM D6304* | <500 | **16** | 23.3 | --- |

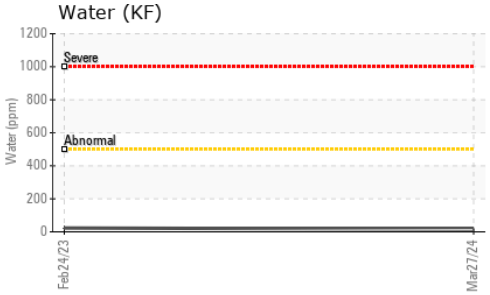
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >2500 | **614** | 354 | --- |
| Particles >6µm | | ASTM D7647 | >640 | **268** | 100 | --- |
| Particles >14µm | | ASTM D7647 | >80 | **37** | 7 | --- |
| Particles >21µm | | ASTM D7647 | >20 | **11** | 2 | --- |
| Particles >38µm | | ASTM D7647 | >4 | **1** | 0 | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >18/16/13 | **16/15/12** | 16/14/10 | --- |

# FUEL REPORT

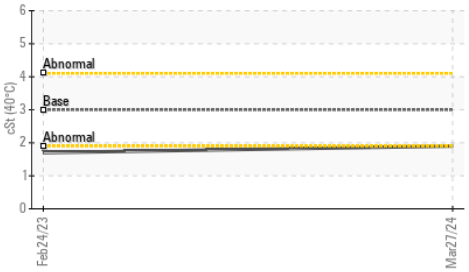
Particle Count



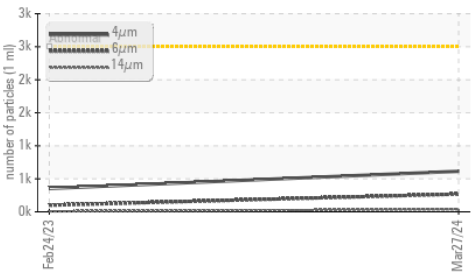

Water (KF)



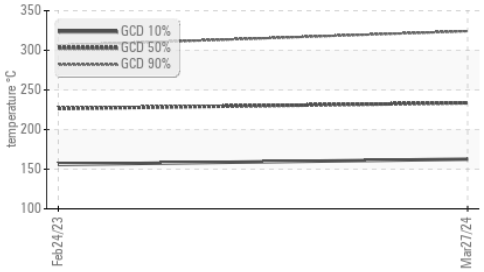

Viscosity @ 40°C



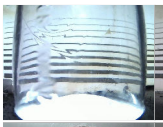
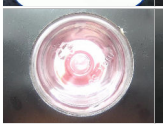

Particle Trend




Gas Chromatography (GCD)

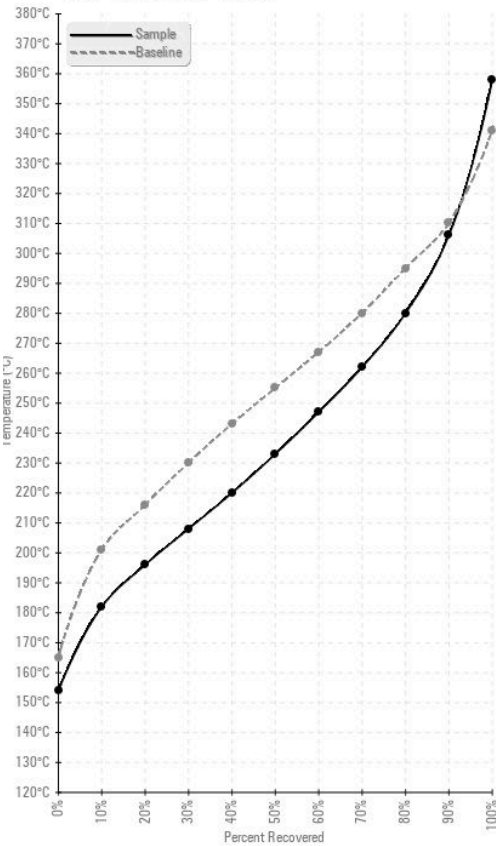



| HEAVY METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Aluminum | ppm | ASTM D5185(m) | <0.1 | **0** | 0 | --- |
| Nickel | ppm | ASTM D5185(m) | <0.1 | **0** | 0 | --- |
| Lead | ppm | ASTM D5185(m) | <0.1 | **0** | 0 | --- |
| Vanadium | ppm | ASTM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

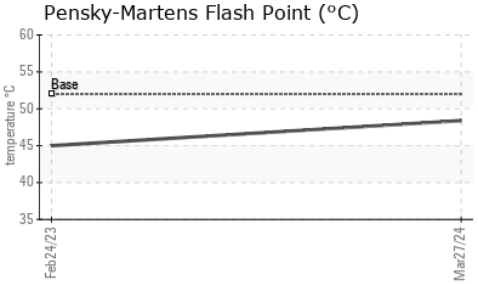
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | *no image* |
| Bottom | | |  | | *no image* |

GRAPHS

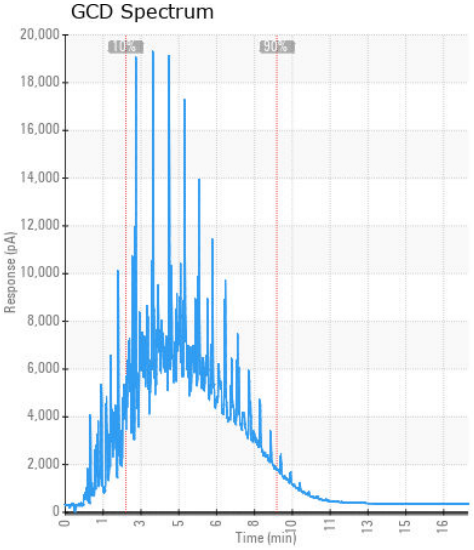
Fuel Distillation Curve




Pensky-Martens Flash Point (°C)




GCD Spectrum




**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : KT0000987 **Received** : 02 Apr 2024
**Lab Number** : 02626240 **Tested** : 03 Apr 2024
**Unique Number** : 5759372 **Diagnosed** : 03 Apr 2024 - Kevin Marson
**Test Package** : FUEL ( Additional Tests: CC Flash, PrtCount )

ISO 17025:2017 Accredited Laboratory

*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.*

**GG Hache et Freres Ltee**
4002 Boulevard des Fondateurs
Saint-Isidore, NB
CA E8M 1E8
Contact: Charles Le Bouthillier
charles_le_bouthillier@hotmail.com
T: (506)358-2203
F: