



# FUEL REPORT

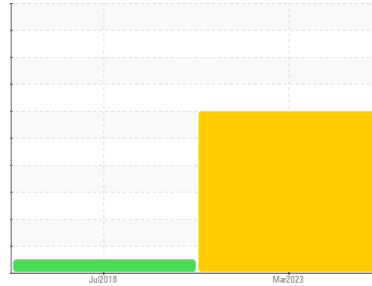
Sample Rating Trend

WEAR



Area  
**[6100129539]**  
Machine Id  
**DETROIT GD10689B**

Component  
**Diesel Fuel**  
Fluid  
**No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)**



## DIAGNOSIS

### Recommendation

Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

### Corrosion

La concentration des métaux est élevée indiquant la présence de corrosion dans le système.

### Contaminants

La propreté du système est acceptable pour votre objectif de propreté ISO 4406. La teneur en eau est négligeable. Il n'y a aucun indice de contamination dans le carburant diesel.

### Fuel Condition

Tous les essais en laboratoire indiquent que cet échantillon satisfait aux spécifications pour le carburant diesel à ultra-faible teneur de soufre No.2 (US EPA/CGSB-3.517-3 type B).

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info |             | <b>GD0005910</b>   | WC113114    | ---      |
| Sample Date   | Client Info |             | <b>22 Mar 2023</b> | 16 Jul 2018 | ---      |
| Machine Age   | yrs         | Client Info | <b>0</b>           | 30          | ---      |
| Sample Status |             |             | <b>SEVERE</b>      | NORMAL      | ---      |

## PHYSICAL PROPERTIES

|                            | method      | limit/base     | current      | history1 | history2 |
|----------------------------|-------------|----------------|--------------|----------|----------|
| Specific Gravity           | ASTM D1298* | 0.839          | <b>0.833</b> | 0.830    | ---      |
| Fuel Color                 | text        | Visual Screen* | <b>Pink</b>  | Pink     | ---      |
| Visc @ 40°C                | cSt         | ASTM D7279(m)  | <b>2.3</b>   | 2.0      | ---      |
| Pensky-Martens Flash Point | °C          | ASTM D7215*    | <b>56.5</b>  | 56       | ---      |

## SULFUR CONTENT

|        | method | limit/base    | current  | history1 | history2 |
|--------|--------|---------------|----------|----------|----------|
| Sulfur | ppm    | ASTM D5185(m) | <b>5</b> | 2        | ---      |

## DISTILLATION

|                        | method | limit/base   | current    | history1 | history2 |
|------------------------|--------|--------------|------------|----------|----------|
| Initial Boiling Point  | °C     | ASTM D2887*  | <b>167</b> | 160      | ---      |
| 5% Distillation Point  | °C     | ASTM D2887*  | <b>187</b> | 183      | ---      |
| 10% Distill Point      | °C     | ASTM D2887*  | <b>197</b> | 190      | ---      |
| 15% Distillation Point | °C     | ASTM D2887*  | <b>204</b> | 197      | ---      |
| 20% Distill Point      | °C     | ASTM D2887*  | <b>211</b> | 204      | ---      |
| 30% Distill Point      | °C     | ASTM D2887*  | <b>225</b> | 216      | ---      |
| 40% Distill Point      | °C     | ASTM D2887*  | <b>238</b> | 228      | ---      |
| 50% Distill Point      | °C     | ASTM D2887*  | <b>251</b> | 240      | ---      |
| 60% Distill Point      | °C     | ASTM D2887*  | <b>266</b> | 253      | ---      |
| 70% Distill Point      | °C     | ASTM D2887*  | <b>281</b> | 267      | ---      |
| 80% Distill Point      | °C     | ASTM D2887*  | <b>297</b> | 284      | ---      |
| 85% Distillation Point | °C     | ASTM D2887*  | <b>309</b> | 294      | ---      |
| 90% Distill Point      | °C     | ASTM D2887*  | <b>321</b> | 306      | ---      |
| 95% Distillation Point | °C     | ASTM D2887*  | <b>341</b> | 324      | ---      |
| Final Boiling Point    | °C     | ASTM D2887*  | <b>364</b> | 337      | ---      |
| Distillation Residue   | %      | ASTM D86(e)* | <b>---</b> | 1.4      | ---      |
| Distillation Loss      | %      | ASTM D86(e)* | <b>---</b> | 0.7      | ---      |

## IGNITION QUALITY

|              | method      | limit/base | current   | history1 | history2 |
|--------------|-------------|------------|-----------|----------|----------|
| API Gravity  | ASTM D1298* | 37.7       | <b>38</b> | 39.0     | ---      |
| Cetane Index | ASTM D4737* | <40.0      | <b>49</b> | 47.3     | ---      |

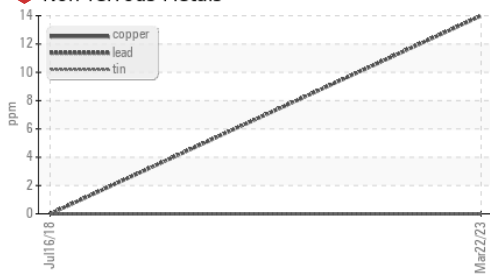
## CONTAMINANTS

|           | method | limit/base    | current      | history1 | history2 |
|-----------|--------|---------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185(m) | <b>0</b>     | 0        | ---      |
| Sodium    | ppm    | ASTM D5185(m) | <b>0</b>     | <1       | ---      |
| Potassium | ppm    | ASTM D5185(m) | <b>0</b>     | 0        | ---      |
| Water     | %      | ASTM D6304*   | <b>0.001</b> | 0.001    | ---      |
| ppm Water | ppm    | ASTM D6304*   | <b>14.6</b>  | 15.4     | ---      |



# FUEL REPORT

### Non-ferrous Metals



| FLUID CLEANLINESS | method       | limit/base | current         | history1 | history2 |
|-------------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm    | ASTM D7647   | >2500      | <b>1212</b>     | 238      | ---      |
| Particles >6µm    | ASTM D7647   | >640       | <b>387</b>      | 53       | ---      |
| Particles >14µm   | ASTM D7647   | >80        | <b>27</b>       | 7        | ---      |
| Particles >21µm   | ASTM D7647   | >20        | <b>7</b>        | 2        | ---      |
| Particles >38µm   | ASTM D7647   | >4         | <b>0</b>        | 0        | ---      |
| Particles >71µm   | ASTM D7647   | >3         | <b>0</b>        | 0        | ---      |
| Oil Cleanliness   | ISO 4406 (c) | >18/16/13  | <b>17/16/12</b> | 15/13/10 | ---      |

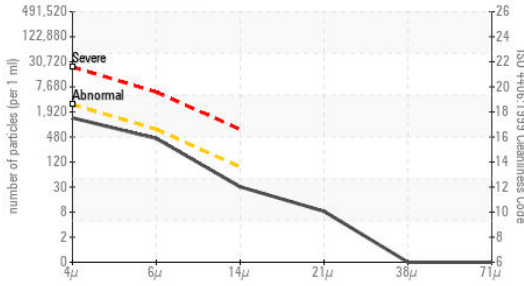
| HEAVY METALS | method | limit/base    | current | history1     | history2 |     |
|--------------|--------|---------------|---------|--------------|----------|-----|
| Aluminum     | ppm    | ASTM D5185(m) | <0.1    | <b>0</b>     | 0        | --- |
| Nickel       | ppm    | ASTM D5185(m) | <0.1    | <b>0</b>     | 0        | --- |
| Lead         | ppm    | ASTM D5185(m) | <0.1    | <b>14</b>    | 0        | --- |
| Vanadium     | ppm    | ASTM D5185(m) | <0.1    | <b>0</b>     | 0        | --- |
| Iron         | ppm    | ASTM D5185(m) | <0.1    | <b>&lt;1</b> | 0        | --- |
| Calcium      | ppm    | ASTM D5185(m) | <0.1    | <b>&lt;1</b> | <1       | --- |
| Magnesium    | ppm    | ASTM D5185(m) | <0.1    | <b>&lt;1</b> | 0        | --- |
| Phosphorus   | ppm    | ASTM D5185(m) | <0.1    | <b>&lt;1</b> | 0        | --- |
| Zinc         | ppm    | ASTM D5185(m) | <0.1    | <b>&lt;1</b> | 0        | --- |

### SAMPLE IMAGES

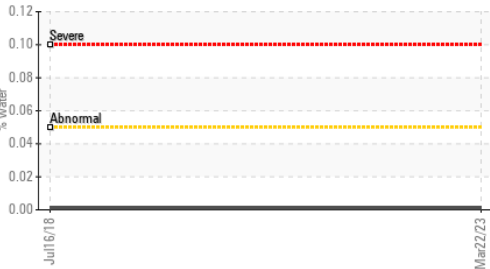
| method | limit/base | current | history1 | history2 |
|--------|------------|---------|----------|----------|
| Color  |            |         |          | no image |
| Bottom |            |         |          | no image |

### GRAPHS

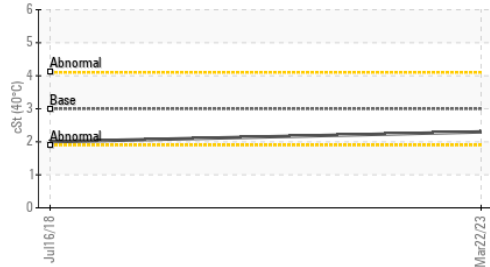
### Particle Count



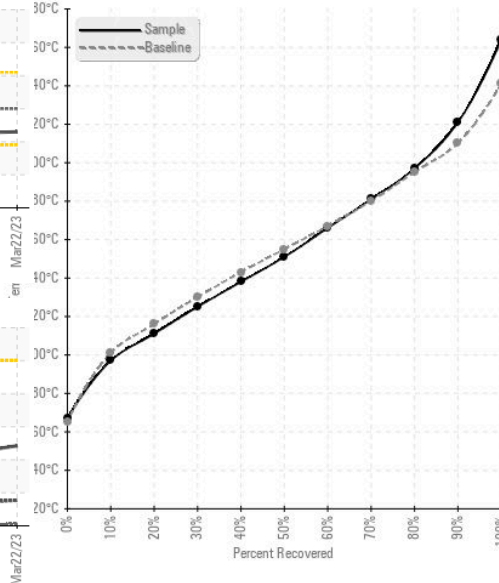
### Water



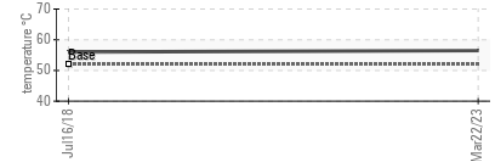
### Viscosity @ 40°C



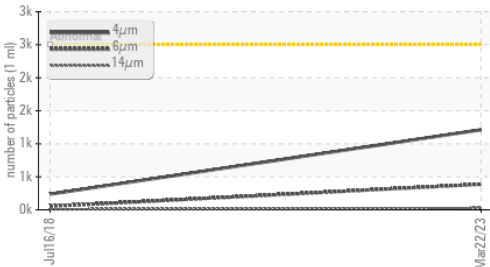
### Fuel Distillation Curve



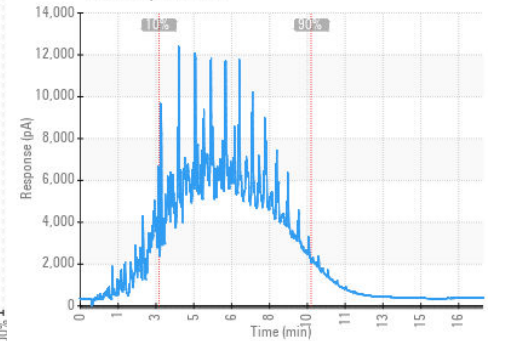
### Pensky-Martens Flash Point (°C)



### Particle Trend



### GCD Spectrum



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GD0005910      **Received** : 28 Mar 2023  
**Lab Number** : **02548224**      **Diagnosed** : 03 Apr 2023  
**Unique Number** : 5553234      **Diagnostician** : Kevin Marson  
**Test Package** : FUEL ( Additional Tests: CC Flash, GC-PercFuel, PrtCount )

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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.