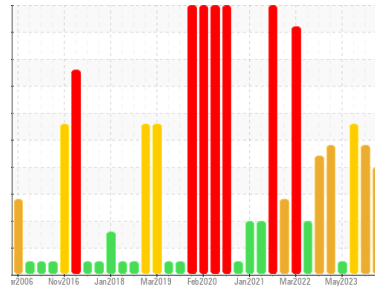




FUEL REPORT

Sample Rating Trend



WATER



Area
System 61 - Diesel
 Machine Id
F-6102A Treated Diesel Tank
 Component
Diesel Fuel
 Fluid
No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- LTR)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. We advise that you filter this fluid before use. We advise that you follow the water drain-off procedure for this component. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Contaminants

There is a moderate amount of particulates (2 to 100 microns in size) present in the fuel. Free water present. There is no bacteria or fungus (yeast and/or mold) present in the sample. Small amount of bacteria present. No reportable mold present. No reportable yeast present.

Fuel Condition

The fuel is still serviceable provided that the contaminant(s) can be reduced to acceptable levels. 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 | PP | PP | PP |
| Sample Date | Client Info | 14 Oct 2023 | 23 Jul 2023 | 07 Jun 2023 |
| Machine Age | hrs Client Info | 0 | 0 | 1930 |
| Sample Status | | ABNORMAL | ABNORMAL | ABNORMAL |

PHYSICAL PROPERTIES

| method | limit/base | current | history1 | history2 | |
|----------------------------|---------------------|---------|---------------|----------|--------|
| Specific Gravity | ASTM D1298* | 0.839 | 0.837 | 0.837 | 0.837 |
| Fuel Color | text Visual Screen* | Yellow | Yellow | Yellow | Yellow |
| Visc @ 40°C | cSt ASTM D7279(m) | 3.0 | 2.7 | 2.7 | 2.7 |
| Pensky-Martens Flash Point | °C ASTM D7215* | 52 | 64.7 | 64.4 | 63.9 |
| Cloud Point | °C ASTM D2500* | | -15 | -17 | -16 |

SULFUR CONTENT

| method | limit/base | current | history1 | history2 | |
|--------|-------------------|---------|----------|----------|---|
| Sulfur | ppm ASTM D5185(m) | 10 | 7 | 6 | 6 |

DISTILLATION

| method | limit/base | current | history1 | history2 | |
|------------------------|----------------|---------|------------|----------|-----|
| Initial Boiling Point | °C ASTM D2887* | 165 | 175 | 175 | 175 |
| 5% Distillation Point | °C ASTM D2887* | | 196 | 196 | 196 |
| 10% Distill Point | °C ASTM D2887* | 201 | 207 | 207 | 207 |
| 15% Distillation Point | °C ASTM D2887* | | 216 | 216 | 216 |
| 20% Distill Point | °C ASTM D2887* | 216 | 224 | 225 | 225 |
| 30% Distill Point | °C ASTM D2887* | 230 | 240 | 241 | 240 |
| 40% Distill Point | °C ASTM D2887* | 243 | 253 | 254 | 254 |
| 50% Distill Point | °C ASTM D2887* | 255 | 266 | 267 | 267 |
| 60% Distill Point | °C ASTM D2887* | 267 | 280 | 281 | 281 |
| 70% Distill Point | °C ASTM D2887* | 280 | 294 | 295 | 295 |
| 80% Distill Point | °C ASTM D2887* | 295 | 310 | 310 | 311 |
| 85% Distillation Point | °C ASTM D2887* | | 321 | 321 | 322 |
| 90% Distill Point | °C ASTM D2887* | 310 | 332 | 332 | 333 |
| 95% Distillation Point | °C ASTM D2887* | | 350 | 349 | 351 |
| Final Boiling Point | °C ASTM D2887* | 341 | 368 | 366 | 374 |

IGNITION QUALITY

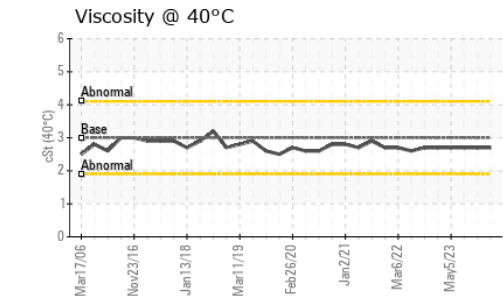
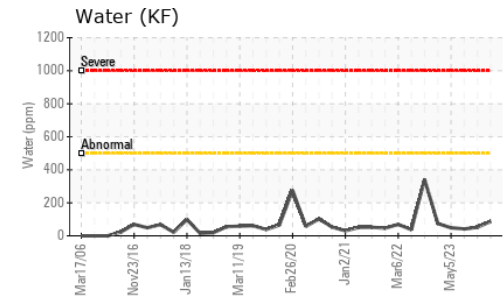
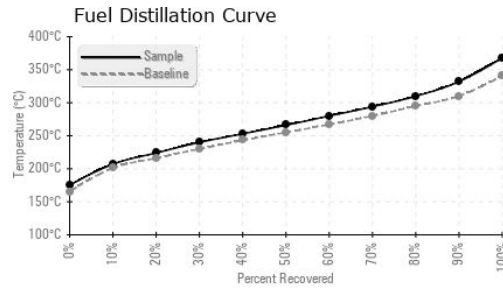
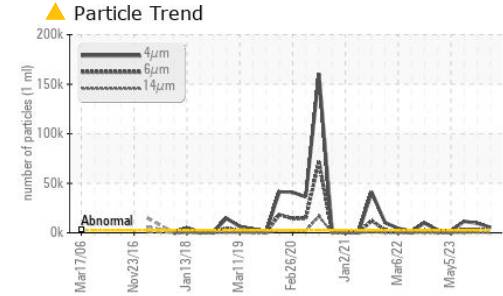
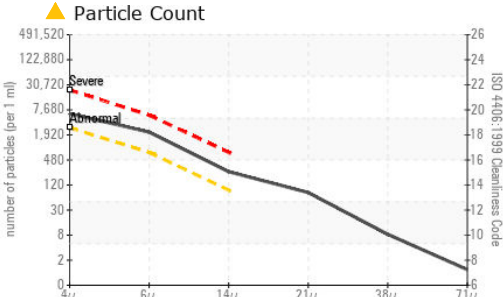
| method | limit/base | current | history1 | history2 | |
|--------------|-------------|---------|-----------|----------|----|
| API Gravity | ASTM D1298* | 37.7 | 37 | 37 | 37 |
| Cetane Index | ASTM D4737* | <40.0 | 51 | 51 | 51 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|-------------------|---------|--------------|----------|-------|
| Silicon | ppm ASTM D5185(m) | <1.0 | 0 | 0 | 0 |
| Sodium | ppm ASTM D5185(m) | <0.1 | 0 | 0 | 0 |
| Potassium | ppm ASTM D5185(m) | <0.1 | <1 | <1 | <1 |
| Water | % ASTM D6304* | <0.05 | 0.008 | 0.005 | 0.004 |
| ppm Water | ppm ASTM D6304* | <500 | 87.3 | 51.6 | 41.8 |
| Sediment | % ASTM D1796(e)* | <0.05 | 0.021 | 0.074 | 0.002 |



FUEL REPORT

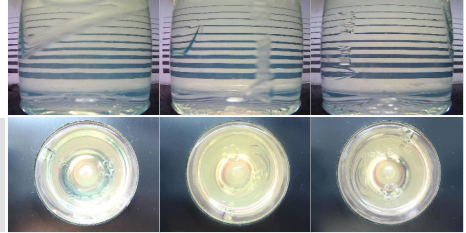


| FLUID CLEANLINESS | method | limit/base | current | history1 | history2 |
|-------------------|--------------|------------|------------|------------|------------|
| Particles >4µm | ASTM D7647 | >2500 | ▲ 5432 | ▲ 9531 | ▲ 11638 |
| Particles >6µm | ASTM D7647 | >640 | ▲ 1959 | ▲ 3531 | ▲ 3311 |
| Particles >14µm | ASTM D7647 | >80 | ▲ 221 | ▲ 468 | ▲ 171 |
| Particles >21µm | ASTM D7647 | >20 | ▲ 70 | ▲ 202 | ● 33 |
| Particles >38µm | ASTM D7647 | >4 | ● 7 | ▲ 27 | 1 |
| Particles >71µm | ASTM D7647 | >3 | 1 | 1 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >18/16/13 | ▲ 20/18/15 | ▲ 20/19/16 | ▲ 21/19/15 |

| MICROBIAL | method | limit/base | current | history1 | history2 |
|-----------|----------------------|------------|---------|----------|-----------|
| Bacteria | CFU/ml ASTM D6469* | >=100000 | 100 | 100 | ▲ 1000000 |
| Yeast | CFU/ml ASTM D6469* | >=100000 | 0 | 0 | 100 |
| Mold | Colonies ASTM D6469* | MODER | NONE | NONE | NONE |

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

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color | | | | | |
| Bottom | | | | | |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **HIBERNIA MGMT & DEVELOPMENT CO. LTD**
Sample No. : PP **Received** : 30 Oct 2023 **SUITE 1000,, 100 NEW GOWER STREET**
Lab Number : 02592775 **Tested** : 03 Nov 2023 **ST.JOHNS, NL**
Unique Number : 5669854 **Diagnosed** : 03 Nov 2023 - Kevin Marson **CA A1C 6K3**
Test Package : FUEL (Additional Tests: Bacteria, CC Flash, CldPt, GC-PercFuel, PrtCount, Sediment) **Contact: Sam Nash**
Contact: Sam Nash **samantha.m.nash@exxonmobil.com**

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.