

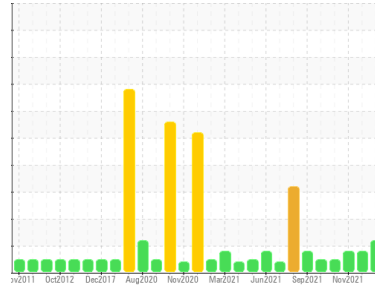
FUEL REPORT

Sample Rating Trend

ISO

Area
[450169728]
Machine Id
TB-71001A

Component
Diesel Fuel
Fluid
MARINE DIESEL DMA (--- GAL)



DIAGNOSIS

Recommendation

Laboratory test indicate that this fuel is suitable for use and meets all test requirements. We advise that you filter this fluid before use. We recommend you service the filters on this component. Resample at the next service interval to monitor.

Corrosion

{not applicable}

Contaminants

There is a light amount of silt (particulates < 14 microns in size) present in the fuel. The water content is negligible.

Fuel Condition

The condition of the fuel is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | PC | PC | PC |
| Sample Date | Client Info | | | 17 Jul 2023 | 14 Mar 2023 | 30 Nov 2021 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Sample Status | | | | ATTENTION | ATTENTION | ABNORMAL |

| PHYSICAL PROPERTIES | | method | limit/base | current | history1 | history2 |
|----------------------------|-------------|----------------|--------------|--------------|----------|----------|
| Specific Gravity | ASTM D1298* | 0.869 | 0.856 | 0.857 | 0.847 | |
| Fuel Color | text | Visual Screen* | Clear | Orang | Purpl | Yellow |
| Visc @ 40°C | cSt | ASTM D7279(m) | 5.74 | 3.6 | 3.9 | 2.9 |
| Pensky-Martens Flash Point | °C | ASTM D7215* | 73.0 | 67.2 | 70.6 | 60.7 |

| SULFUR CONTENT | | method | limit/base | current | history1 | history2 |
|----------------|-----|---------------|------------|------------|----------|----------|
| Sulfur | ppm | ASTM D5185(m) | 730 | 273 | 363 | 7 |

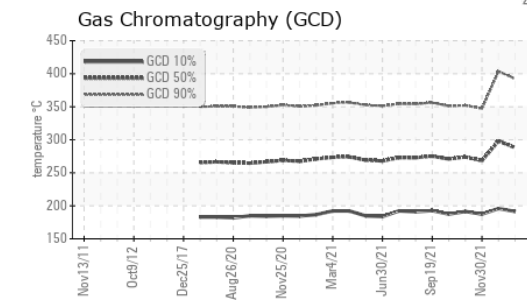
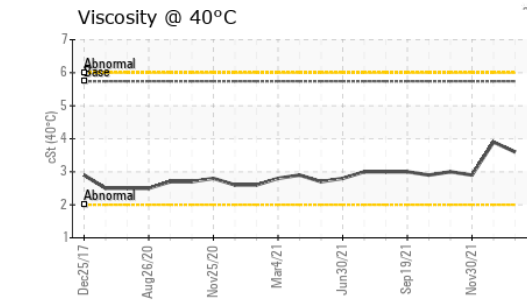
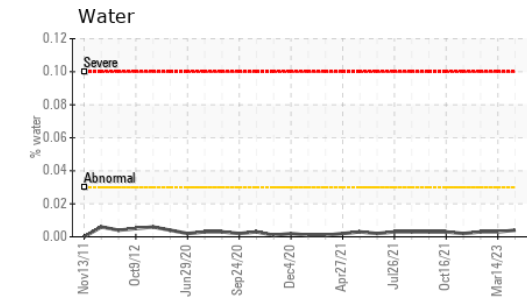
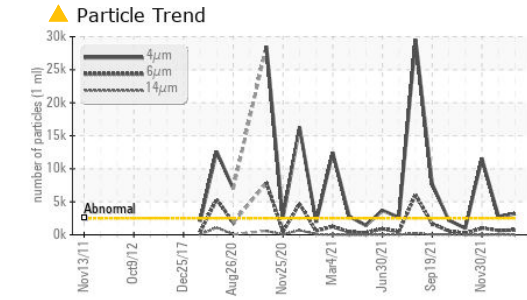
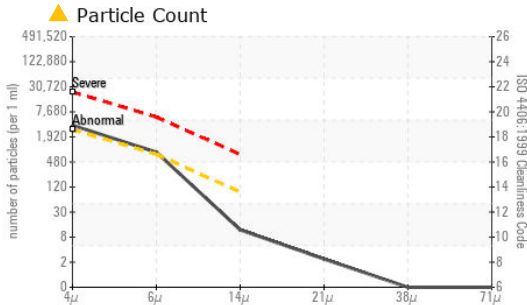
| DISTILLATION | | method | limit/base | current | history1 | history2 |
|------------------------|----|-------------|------------|------------|----------|----------|
| Initial Boiling Point | °C | ASTM D2887* | 171 | 178 | 180 | 157 |
| 5% Distillation Point | °C | ASTM D2887* | | 203 | 207 | 191 |
| 10% Distill Point | °C | ASTM D2887* | 214 | 216 | 220 | 204 |
| 15% Distillation Point | °C | ASTM D2887* | | 226 | 231 | 213 |
| 20% Distill Point | °C | ASTM D2887* | | 236 | 241 | 221 |
| 30% Distill Point | °C | ASTM D2887* | | 254 | 261 | 235 |
| 40% Distill Point | °C | ASTM D2887* | | 270 | 278 | 249 |
| 50% Distill Point | °C | ASTM D2887* | 323 | 285 | 294 | 261 |
| 60% Distill Point | °C | ASTM D2887* | | 302 | 313 | 274 |
| 70% Distill Point | °C | ASTM D2887* | | 320 | 331 | 288 |
| 80% Distill Point | °C | ASTM D2887* | | 340 | 352 | 306 |
| 85% Distillation Point | °C | ASTM D2887* | | 355 | 365 | 315 |
| 90% Distill Point | °C | ASTM D2887* | 398 | 369 | 379 | 326 |
| 95% Distillation Point | °C | ASTM D2887* | | 394 | 402 | 340 |
| Final Boiling Point | °C | ASTM D2887* | 415 | 413 | 417 | 347 |

| IGNITION QUALITY | | method | limit/base | current | history1 | history2 |
|------------------|--|-------------|------------|-----------|----------|----------|
| API Gravity | | ASTM D1298* | | 33 | 33 | 35 |
| Cetane Index | | ASTM D4737* | <40.0 | 47 | 48 | 46 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|---------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) | <1.0 | 0 | 0 | 0 |
| Sodium | ppm | ASTM D5185(m) | <0.1 | <1 | 0 | <1 |
| Potassium | ppm | ASTM D5185(m) | <0.1 | 0 | 0 | 0 |
| Water | % | ASTM D6304* | <0.05 | 0.004 | 0.003 | 0.003 |
| ppm Water | ppm | ASTM D6304* | <500 | 47.4 | 36.8 | 28.3 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-------------------|------------|------------|
| Particles >4µm | | ASTM D7647 | >2500 | ▲ 3193 | ▲ 2794 | ▲ 11573 |
| Particles >6µm | | ASTM D7647 | >640 | ▲ 724 | 640 | ▲ 1026 |
| Particles >14µm | | ASTM D7647 | >80 | 10 | 54 | 12 |
| Particles >21µm | | ASTM D7647 | >20 | 2 | 21 | 0 |
| Particles >38µm | | ASTM D7647 | >4 | 0 | 2 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >18/16/13 | ▲ 19/17/10 | ▲ 19/16/13 | ▲ 21/17/11 |

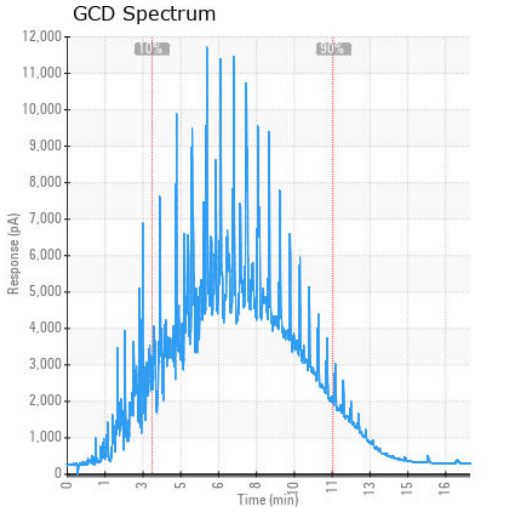
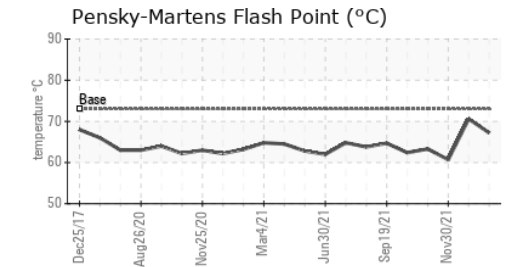
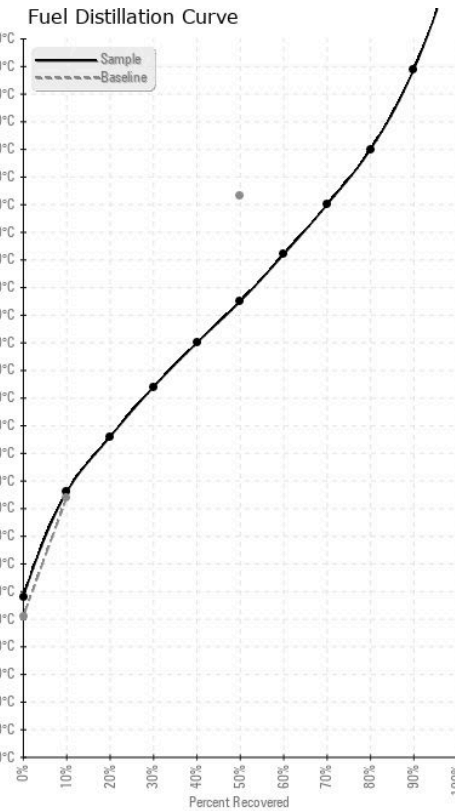
FUEL REPORT



| 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 | <1 | 0 |
| Magnesium | ppm | ASTM D5185(m) | <0.1 | 0 | <1 | <1 |
| Phosphorus | ppm | ASTM D5185(m) | <0.1 | 0 | 0 | 0 |
| Zinc | ppm | ASTM D5185(m) | <0.1 | 0 | <1 | 0 |

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

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Received : 18 Jul 2023
Lab Number : 02570782
Diagnosed : 20 Jul 2023
Unique Number : 5607828
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.