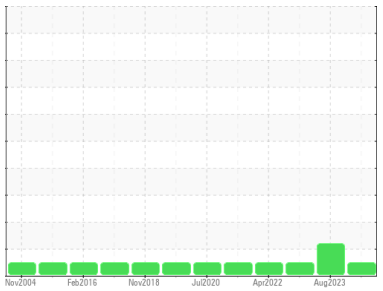
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
## Thompson Falls
Machine Id
## THF01 Governor
Component
**Case Drain Governor System**
Fluid
**LUBRICATION ENG 6802 MULTEC IND OIL 46 (40 GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

**Fluid Condition**
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0757781** | WC0757772 | WCI2326099 |
| Sample Date | | Client Info | | **23 Apr 2024** | 10 Aug 2023 | 12 Oct 2022 |
| Machine Age | yrs | Client Info | | **23** | 22 | 21 |
| Oil Age | yrs | Client Info | | **17** | 16 | 15 |
| Oil Changed | | Client Info | | **Filtered** | Filtered | Not Changd |
| Sample Status | | | | **NORMAL** | ABNORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.1 | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >50 | **2** | 1 | 2 |
| Chromium | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >3 | **0** | 0 | <1 |
| Lead | ppm | ASTM D5185m | >75 | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >15 | **<1** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >55 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 1 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | **<1** | <1 | 1 |
| Calcium | ppm | ASTM D5185m | | **141** | 112 | 121 |
| Phosphorus | ppm | ASTM D5185m | | **327** | 324 | 319 |
| Zinc | ppm | ASTM D5185m | | **195** | 181 | 201 |
| Sulfur | ppm | ASTM D5185m | | **1052** | 1025 | 1077 |

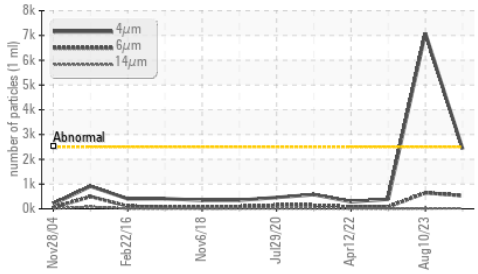
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >8 | **<1** | 0 | 0 |
| Sodium | ppm | ASTM D5185m | | **5** | 5 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | 1 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >2500 | **2415** | ▲ 7087 | 387 |
| Particles >6µm | | ASTM D7647 | >640 | **529** | ● 648 | 78 |
| Particles >14µm | | ASTM D7647 | >80 | **22** | 13 | 8 |
| Particles >21µm | | ASTM D7647 | >20 | **4** | 4 | 3 |
| Particles >38µm | | ASTM D7647 | >4 | **0** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >18/16/13 | **18/16/12** | ▲ 20/17/11 | 16/13/10 |

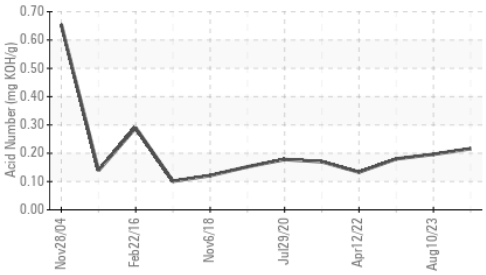
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.216** | 0.196 | 0.18 |

# OIL ANALYSIS REPORT

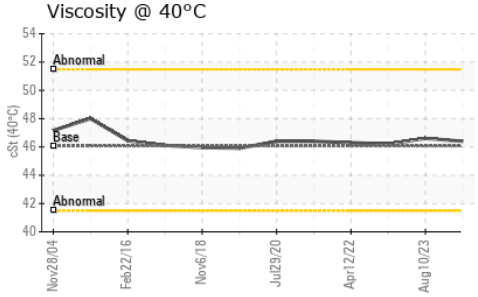
Particle Trend



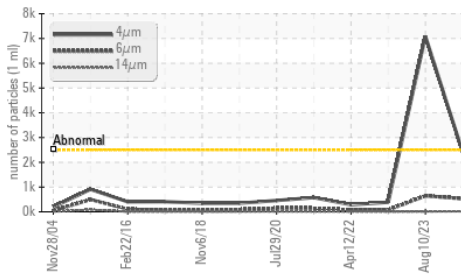

Acid Number




Viscosity @ 40°C




Particle Trend



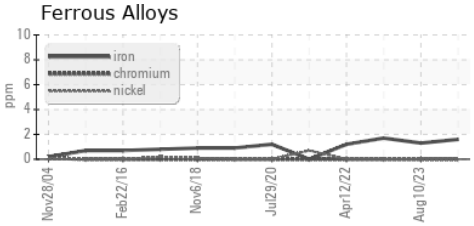

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.1 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 46.06 | **46.4** | 46.6 | 46.2 |

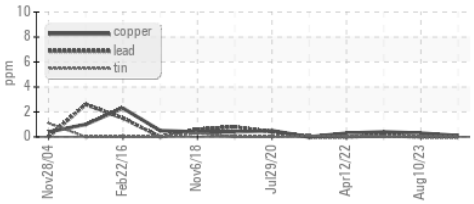
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

GRAPHS

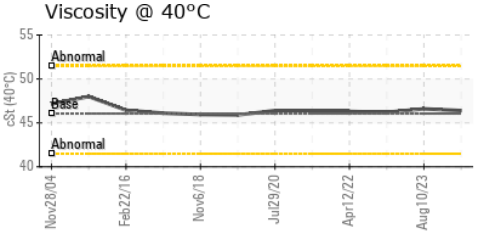
Ferrous Alloys



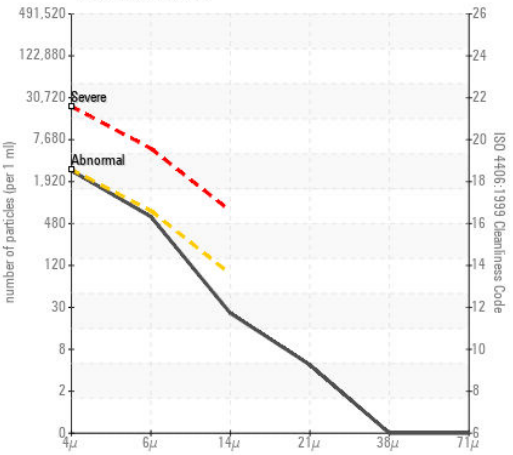

Non-ferrous Metals



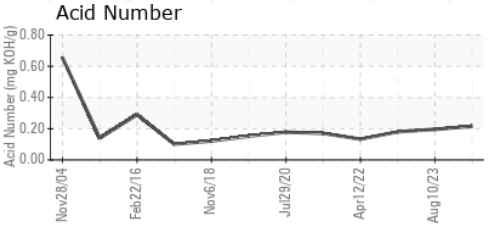

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0757781 **Received** : 11 Jun 2024
**Lab Number** : 06207067 **Tested** : 13 Jun 2024
**Unique Number** : 11074528 **Diagnosed** : 13 Jun 2024 - Angela Borella
**Test Package** : IND 2 ( Additional Tests: PrtCount )

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*

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Report Id: PPLBUT [WUSCAR] 06207067 (Generated: 06/13/2024 20:52:13) Rev: 1
Contact/Location: BRIAN WARD - PPLBUT