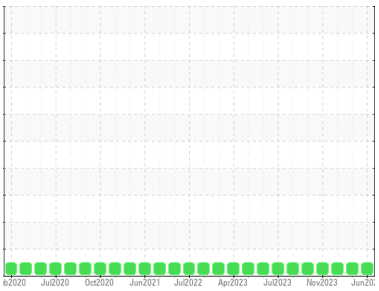
# OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
**CATERPILLAR D10T 15105048 (S/N CCAT0D10THRJG01478)**
Component
**Left Final Drive**
Fluid
**CHEVRON 50WT (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

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

**Contamination**
The water content is negligible. There is no indication of any contamination in the oil.

**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 | | **RP0040755** | RP0036872 | RP0036207 |
| Sample Date | | Client Info | | **04 Jun 2024** | 07 May 2024 | 19 Dec 2023 |
| Machine Age | hrs | Client Info | | **71327** | 70999 | 70375 |
| Oil Age | hrs | Client Info | | **328** | 565 | 1713 |
| Oil Changed | | Client Info | | **Not Changd** | Changed | Not Changd |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >800 | **24** | 101 | 14 |
| Chromium | ppm | ASTM D5185m | >10 | **<1** | 2 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | **0** | <1 | <1 |
| Titanium | ppm | ASTM D5185m | >15 | **<1** | 2 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >75 | **2** | 7 | <1 |
| Lead | ppm | ASTM D5185m | >10 | **0** | <1 | <1 |
| Copper | ppm | ASTM D5185m | >75 | **1** | 3 | 8 |
| Tin | ppm | ASTM D5185m | >8 | **<1** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **<1** | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **1** | <1 | <1 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **3** | 3 | 2 |
| Manganese | ppm | ASTM D5185m | | **<1** | 1 | 0 |
| Magnesium | ppm | ASTM D5185m | | **18** | 22 | 19 |
| Calcium | ppm | ASTM D5185m | | **3454** | 3117 | 3258 |
| Phosphorus | ppm | ASTM D5185m | | **862** | 1139 | 887 |
| Zinc | ppm | ASTM D5185m | | **1099** | 1275 | 1105 |

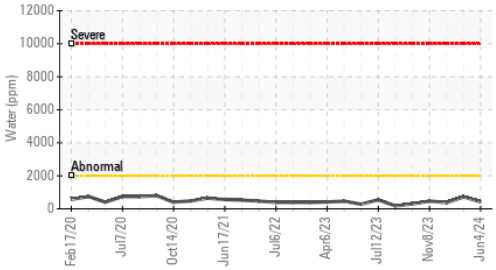
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >400 | **20** | 25 | 16 |
| Sodium | ppm | ASTM D5185m | | **2** | 17 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 4 | 0 |
| Water | % | ASTM D6304 | >0.2 | **0.042** | 0.072 | 0.036 |
| ppm Water | ppm | ASTM D6304 | >2000 | **427** | 722 | 370 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **1.05** | 1.53 | 1.27 |

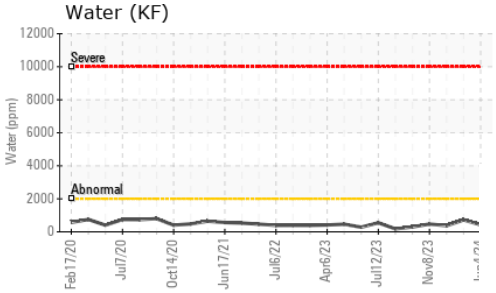
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | LIGHT | 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 | >0.2 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

# OIL ANALYSIS REPORT

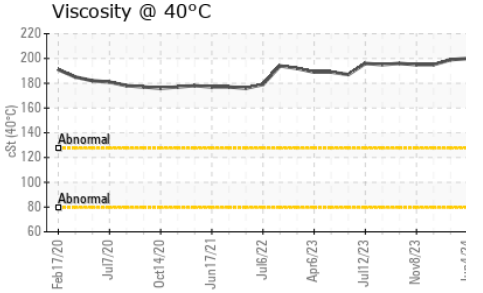
Water (KF)




Water (KF)

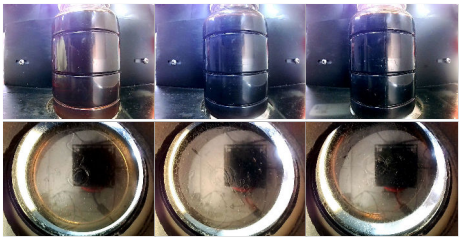



Viscosity @ 40°C



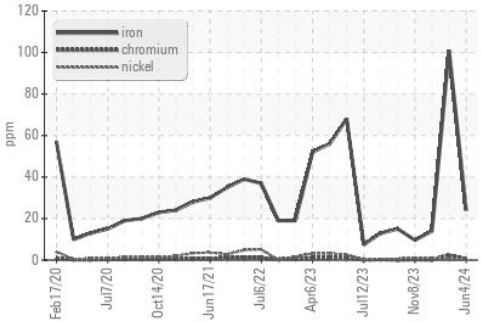

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | | **200** | 199 | 195 |

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

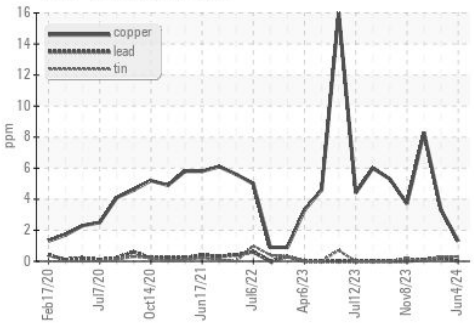


## GRAPHS

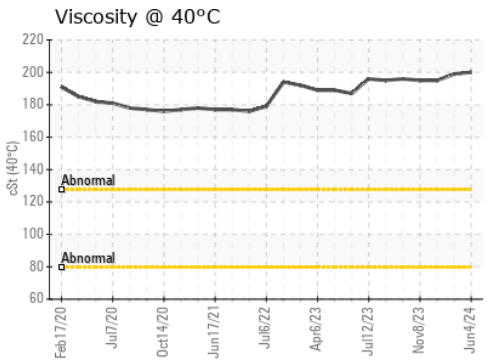
Ferrous Alloys



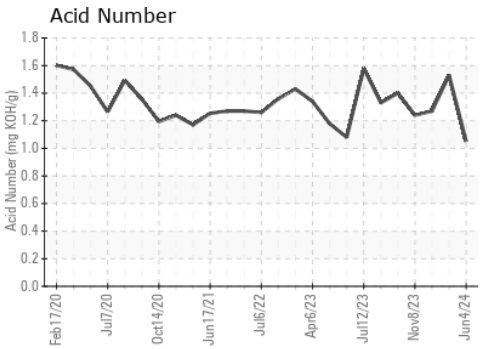

Non-ferrous Metals




Viscosity @ 40°C




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : RP0040755
**Lab Number** : 06206620
**Unique Number** : 11074081
**Test Package** : IND 2

**Received** : 11 Jun 2024
**Tested** : 13 Jun 2024
**Diagnosed** : 13 Jun 2024 - Wes Davis

*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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