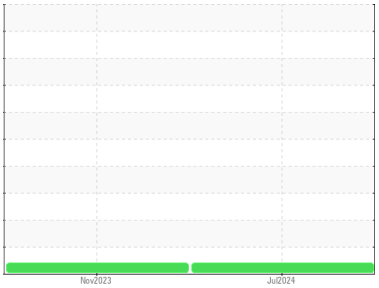
# OIL ANALYSIS REPORT

Machine Id
## CATERPILLAR 1600G SCOOP 213
Component
**Front Differential**
Fluid
**DIESEL ENGINE OIL SAE 50 (--- GAL)**

Sample Rating Trend




**VISCOSITY**

## 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 oil.

**Fluid Condition**
Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0952480** | WC0879708 | --- |
| Sample Date | | Client Info | | **03 Jul 2024** | 22 Nov 2023 | --- |
| Machine Age | hrs | Client Info | | **18405** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | Changed | --- |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | --- |

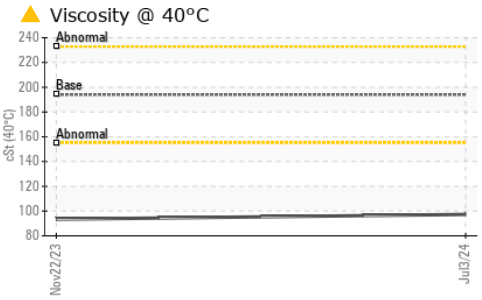
| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >.2 | **NEG** | NEG | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >500 | **5** | 20 | --- |
| Chromium | ppm | ASTM D5185(m) | >3 | **0** | 0 | --- |
| Nickel | ppm | ASTM D5185(m) | >3 | **<1** | 0 | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | **0** | 0 | --- |
| Silver | ppm | ASTM D5185(m) | >2 | **0** | <1 | --- |
| Aluminum | ppm | ASTM D5185(m) | >30 | **1** | 2 | --- |
| Lead | ppm | ASTM D5185(m) | >13 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185(m) | >103 | **<1** | 4 | --- |
| Tin | ppm | ASTM D5185(m) | >5 | **0** | 0 | --- |
| Antimony | ppm | ASTM D5185(m) | >5 | **0** | 0 | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 250 | **41** | 24 | --- |
| Barium | ppm | ASTM D5185(m) | 10 | **0** | <1 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 100 | **24** | 30 | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Magnesium | ppm | ASTM D5185(m) | 450 | **296** | 431 | --- |
| Calcium | ppm | ASTM D5185(m) | 3000 | **1699** | 1479 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | **666** | 747 | --- |
| Zinc | ppm | ASTM D5185(m) | 1350 | **777** | 866 | --- |
| Sulfur | ppm | ASTM D5185(m) | 4250 | **4025** | 4042 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

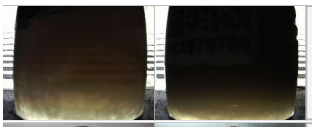
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >100 | **6** | 7 | --- |
| Sodium | ppm | ASTM D5185(m) | | **2** | 2 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **0** | <1 | --- |

# OIL ANALYSIS REPORT

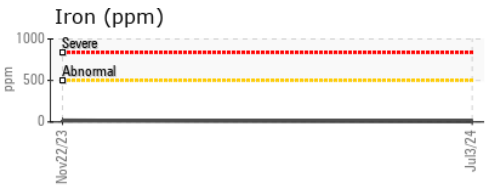


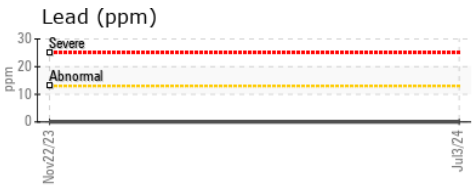

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Silt | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Debris | scalar | Visual* | NONE | **VLITE** | NONE | --- |
| Sand/Dirt | scalar | Visual* | NONE | **VLITE** | NONE | --- |
| Appearance | scalar | Visual* | NORML | **NORML** | NORML | --- |
| Odor | scalar | Visual* | NORML | **NORML** | NORML | --- |
| Emulsified Water | scalar | Visual* | >.2 | **NEG** | NEG | --- |
| Free Water | scalar | Visual* | | **NEG** | NEG | --- |

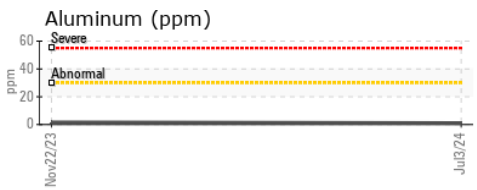
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 194 | ▲ **97.3** | ▲ 93.4 | --- |

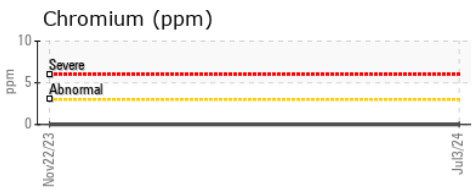
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | *no image* |
| Bottom | | |  | | *no image* |

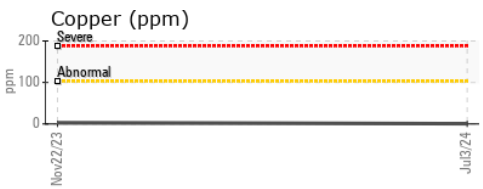
## GRAPHS

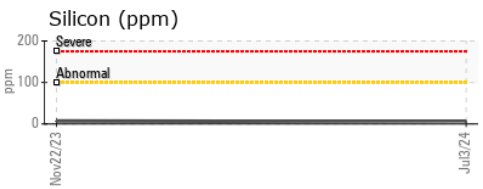


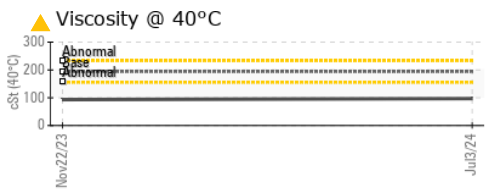



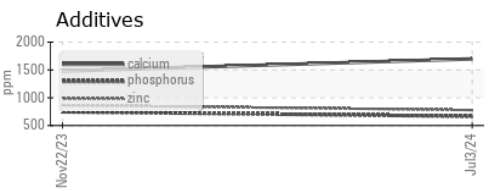




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0952480
**Lab Number** : 02645568
**Unique Number** : 5803107
**Test Package** : MOB 1

**Received** : 04 Jul 2024
**Tested** : 04 Jul 2024
**Diagnosed** : 05 Jul 2024 - Kevin Marson

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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.*