# OIL ANALYSIS REPORT

Sample Rating Trend


**GLYCOL**

Machine Id
## CATERPILLAR 924K PWR3246
Component
**Diesel Engine**
Fluid
**DIESEL ENGINE OIL SAE 10W30 (--- LTR)**

## DIAGNOSIS

**Recommendation**

Check for low coolant level. No corrective action is recommended at this time. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 10W30. Please confirm.

**Wear**

All component wear rates are normal.

**Contamination**

Fuel content negligible. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative.

**Fluid Condition**

The condition of the oil is acceptable for the time in service (see recommendation).

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PC0071068** | --- | --- |
| Sample Date | | Client Info | | **01 Nov 2023** | --- | --- |
| Machine Age | hrs | Client Info | | **3077** | --- | --- |
| Oil Age | hrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **Not Changd** | --- | --- |
| Sample Status | | | | **ABNORMAL** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >100 | **18** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | **0** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | **<1** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >25 | **9** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >40 | **<1** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >330 | **14** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | **0** | --- | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 250 | **158** | --- | --- |
| Barium | ppm | ASTM D5185(m) | 10 | **<1** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 100 | **75** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 450 | **353** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 3000 | **1264** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | **870** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 1350 | **976** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 4250 | **2532** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

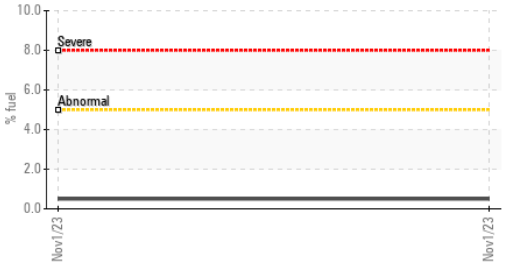
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **3** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **150** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | ▲ **63** | --- | --- |
| Fuel | % | ASTM D7593* | >5 | **0.5** | --- | --- |
| Glycol | % | ASTM D7922* | | **0.0** | --- | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0** | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **6.1** | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **17.0** | --- | --- |

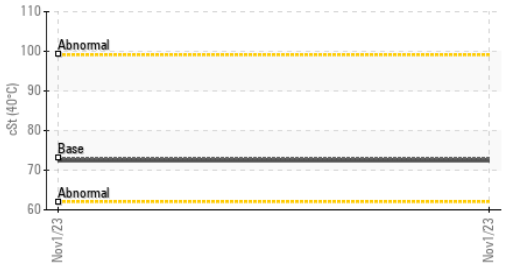
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **13.0** | --- | --- |

# OIL ANALYSIS REPORT

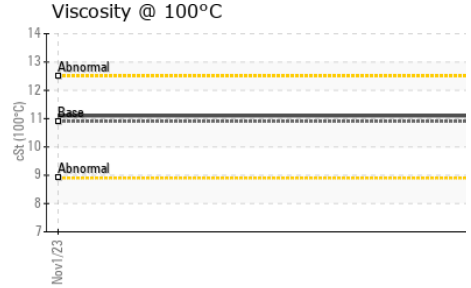
Fuel Dilution



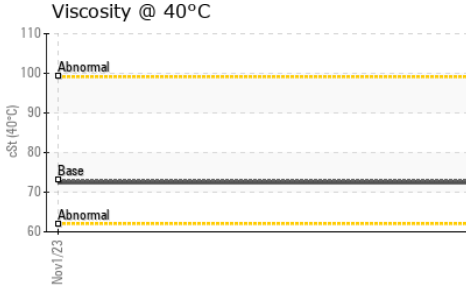

Viscosity @ 40°C




Viscosity @ 100°C




Viscosity @ 40°C




| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **VLITE** | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | --- | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | --- | --- |
| Silt | scalar | Visual* | NONE | **NONE** | --- | --- |
| Debris | scalar | Visual* | NONE | **NONE** | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | **NONE** | --- | --- |
| Appearance | scalar | Visual* | NORML | **NORML** | --- | --- |
| Odor | scalar | Visual* | NORML | **NORML** | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | **NEG** | --- | --- |
| Free Water | scalar | Visual* | | **NEG** | --- | --- |

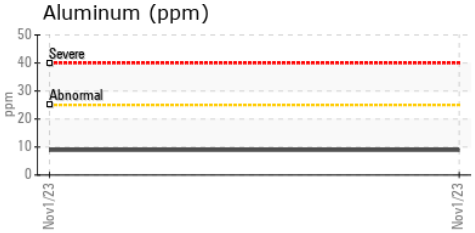
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 73 | **72.4** | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 10.9 | **11.1** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | 138 | **144** | --- | --- |

## GRAPHS

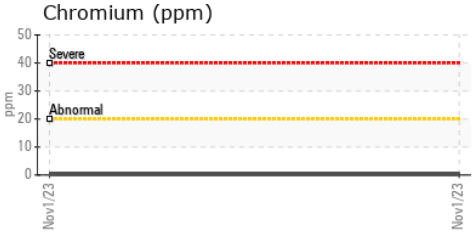
Iron (ppm)


Lead (ppm)

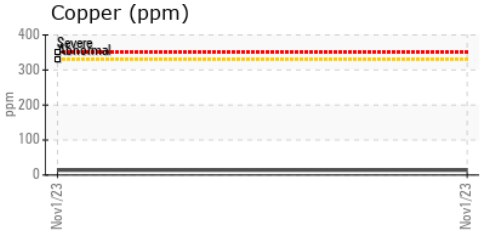

Aluminum (ppm)



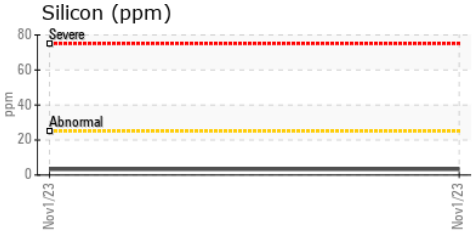

Chromium (ppm)



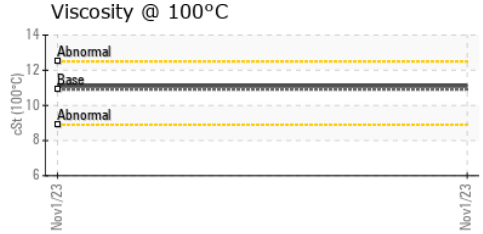

Copper (ppm)



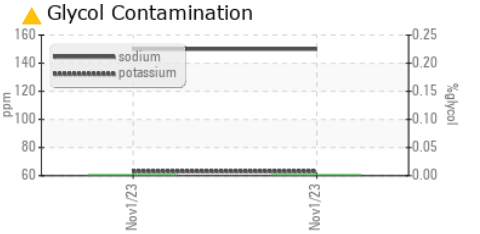

Silicon (ppm)




Viscosity @ 100°C




Glycol Contamination




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : PC0071068 **Received** : 06 Nov 2023
**Lab Number** : 02594044 **Diagnosed** : 07 Nov 2023
**Unique Number** : 5671123 **Diagnostician** : Kevin Marson
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, Glycol, KV40, PercentFuel, VI, Visual )

*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.*

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