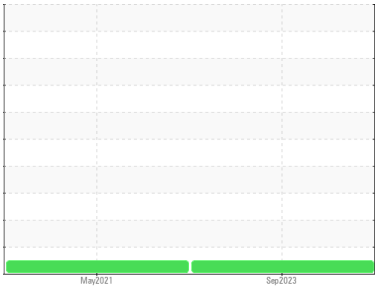
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
**Haul Truck**
Machine Id
**HT5028**
Component
**Rear Left Wheel Hub**
Fluid
**PETRO CANADA TRAXON 85W140 (13 LTR)**

## DIAGNOSIS

**Recommendation**
Confirm the source of the lubricant being utilized for top-up/fill. 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**
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PC0051332** | PC0047108 | --- |
| Sample Date | | Client Info | | **19 Sep 2023** | 31 May 2021 | --- |
| Machine Age | hrs | Client Info | | **6528** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **NORMAL** | NORMAL | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >500 | **131** | 161 | --- |
| Chromium | ppm | ASTM D5185(m) | >8 | **1** | 1 | --- |
| Nickel | ppm | ASTM D5185(m) | >5 | **<1** | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| Silver | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| Aluminum | ppm | ASTM D5185(m) | >5 | **<1** | 1 | --- |
| Lead | ppm | ASTM D5185(m) | >5 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185(m) | >50 | **3** | 6 | --- |
| Tin | ppm | ASTM D5185(m) | | **0** | <1 | --- |
| 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 | --- |

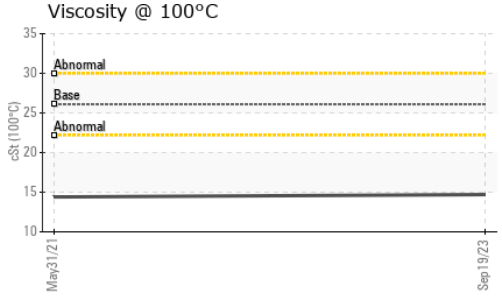
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 243 | **29** | 47 | --- |
| Barium | ppm | ASTM D5185(m) | 0 | **1** | <1 | --- |
| Molybdenum | ppm | ASTM D5185(m) | | **<1** | <1 | --- |
| Manganese | ppm | ASTM D5185(m) | | **1** | 2 | --- |
| Magnesium | ppm | ASTM D5185(m) | 0 | **<1** | <1 | --- |
| Calcium | ppm | ASTM D5185(m) | 0 | **18** | 27 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 988 | **682** | 650 | --- |
| Zinc | ppm | ASTM D5185(m) | 0 | **14** | 15 | --- |
| Sulfur | ppm | ASTM D5185(m) | 24530 | **21181** | 19736 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **3** | 6 | --- |
| Sodium | ppm | ASTM D5185(m) | | **<1** | 2 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **0** | 3 | --- |

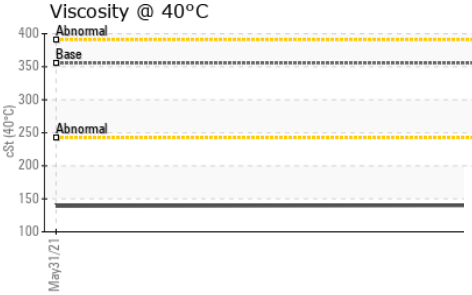
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | LIGHT | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Silt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

# OIL ANALYSIS REPORT

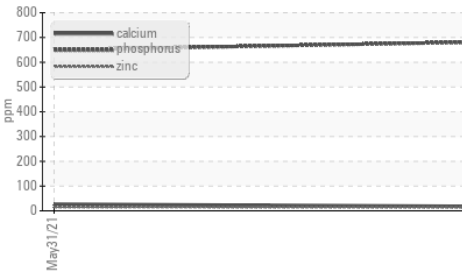
Viscosity @ 100°C



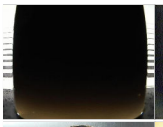
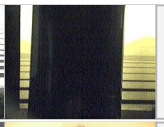

Viscosity @ 40°C




Additives

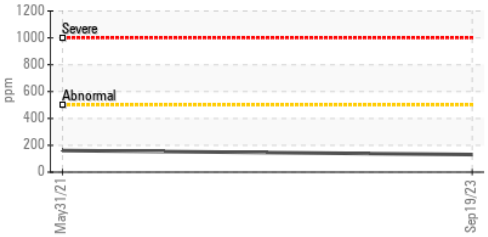



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 355.4 | **140** | 139 | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 26.1 | **14.7** | 14.4 | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | 97 | **104** | 101 | --- |

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

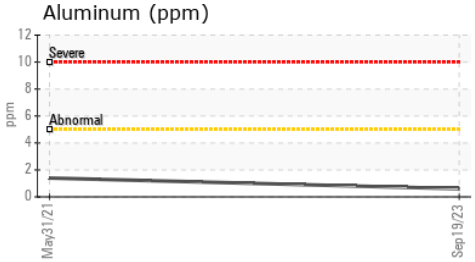
## GRAPHS

Iron (ppm)

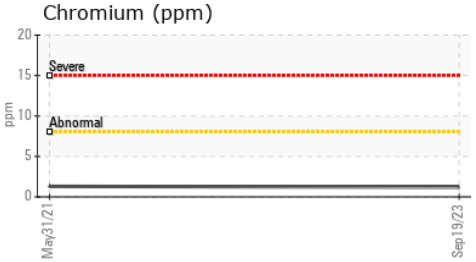



Lead (ppm)

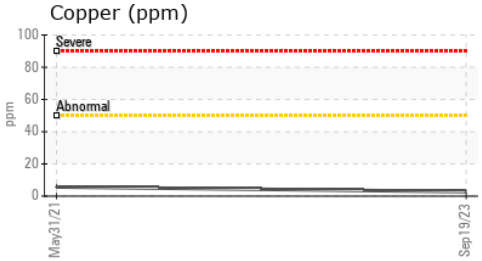

Aluminum (ppm)



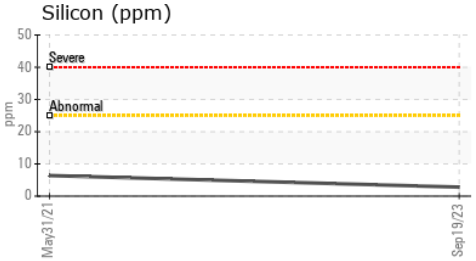

Chromium (ppm)



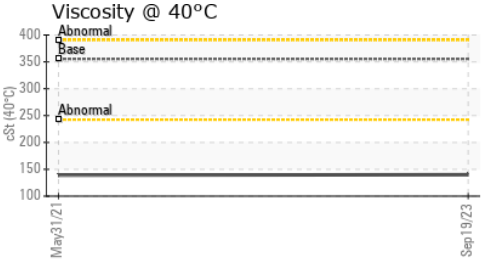

Copper (ppm)



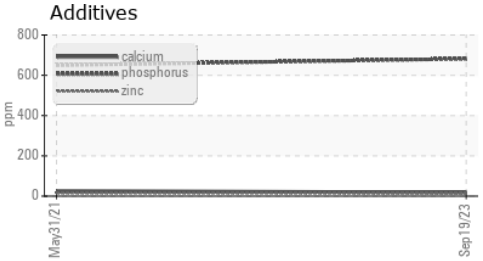

Silicon (ppm)




Viscosity @ 40°C




Additives




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : PC0051332 **Received** : 22 Sep 2023
**Lab Number** : 02584730 **Diagnosed** : 22 Sep 2023
**Unique Number** : 5645795 **Diagnostician** : Wes Davis
**Test Package** : MOB 1 ( Additional Tests: KV100, VI )

*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.*

**Lakeshore Gold Timmins West**

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Report Id: LAKTIM [WCAMIS] 02584730 (Generated: 09/22/2023 13:32:07) Rev: 1

Submitted By: Luc Belanger