MOB

# LIEBHERR

OIL ANALYSIS REPORT

| | |
|---|---|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id
## LIEBHERR LH50M 150728-1216
Component
## Hydraulic System
Fluid
## PETRO CANADA HYDREX AW 46 (--- GAL)

## 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.

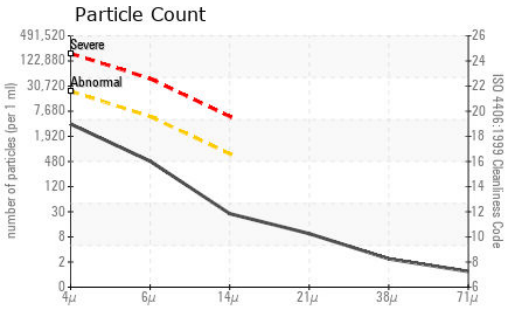
## CONTAMINATION

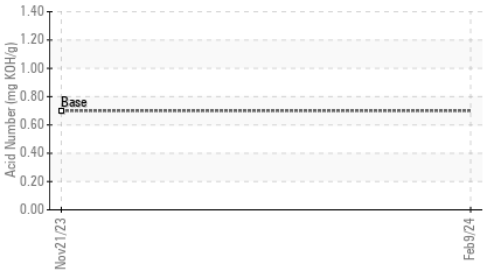
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

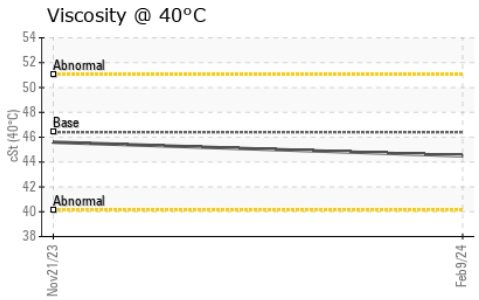
## FLUID CONDITION

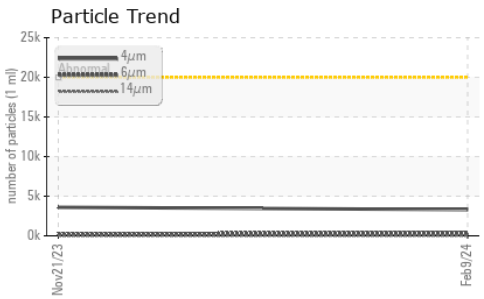
Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

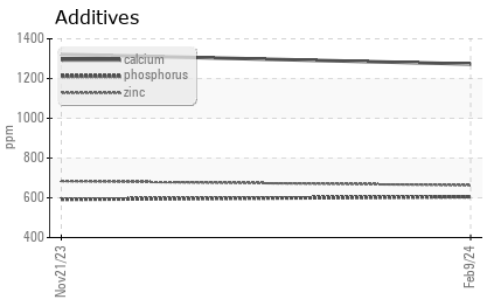
| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | LH0271866 | LH0242067 | --- |
| Sample Date | | Client Info | | 09 Feb 2024 | 21 Nov 2023 | --- |
| Machine Age | hrs | Client Info | | 1066 | 500 | --- |
| Oil Age | hrs | Client Info | | 0 | 500 | --- |
| Filter Age | hrs | Client Info | | 0 | 500 | --- |
| Oil Changed | | Client Info | | Not Changd | Not Changd | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |
| Iron | ppm | ASTM D5185(m) | >50 | 6 | 6 | --- |
| Chromium | ppm | ASTM D5185(m) | >5 | <1 | <1 | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Silver | ppm | ASTM D5185(m) | | 0 | <1 | --- |
| Aluminum | ppm | ASTM D5185(m) | >2 | <1 | <1 | --- |
| Lead | ppm | ASTM D5185(m) | >4 | <1 | <1 | --- |
| Copper | ppm | ASTM D5185(m) | >10 | 3 | 2 | --- |
| Tin | ppm | ASTM D5185(m) | >2 | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| White Metal | scalar | Visual* | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | --- |
| Silicon | ppm | ASTM D5185(m) | >17 | 3 | 3 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | <1 | --- |
| Water | | WC Method | >0.1 | NEG | NEG | --- |
| Particles >4µm | | ASTM D7647 | >20000 | 3303 | 3604 | --- |
| Particles >6µm | | ASTM D7647 | >5000 | 430 | 207 | --- |
| Particles >14µm | | ASTM D7647 | >640 | 24 | 7 | --- |
| Particles >21µm | | ASTM D7647 | >160 | 8 | 2 | --- |
| Particles >38µm | | ASTM D7647 | >40 | 2 | 0 | --- |
| Particles >71µm | | ASTM D7647 | >10 | 1 | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | 19/16/12 | 19/15/10 | --- |
| Silt | scalar | Visual* | NONE | NONE | NONE | --- |
| 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* | >0.1 | NEG | NEG | --- |
| Sodium | ppm | ASTM D5185(m) | | 1 | 2 | --- |
| Boron | ppm | ASTM D5185(m) | 0 | 0 | <1 | --- |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | <1 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 0 | --- |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | 0 | --- |
| Magnesium | ppm | ASTM D5185(m) | 0 | 5 | 4 | --- |
| Calcium | ppm | ASTM D5185(m) | 50 | 1273 | 1322 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 330 | 605 | 592 | --- |
| Zinc | ppm | ASTM D5185(m) | 430 | 663 | 684 | --- |
| Sulfur | ppm | ASTM D5185(m) | 760 | 3656 | 3523 | --- |
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.70 | 1.28 | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | 46.4 | 44.5 | 45.6 | --- |

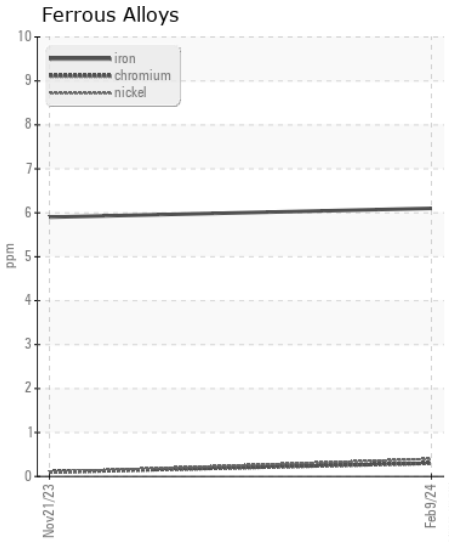


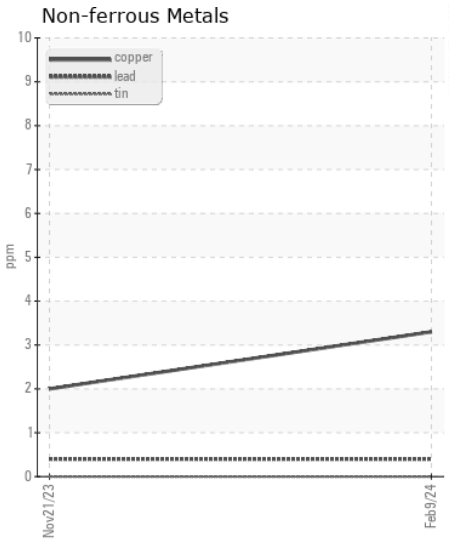



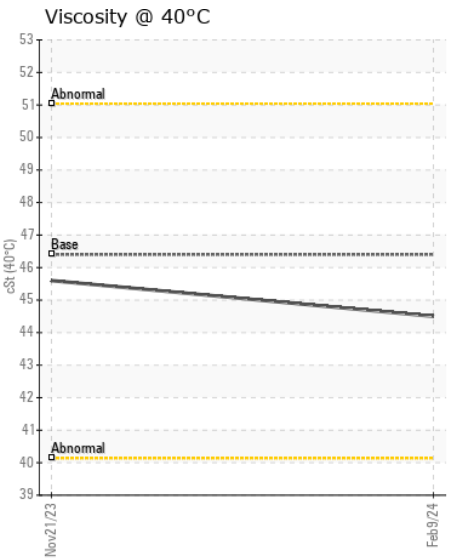



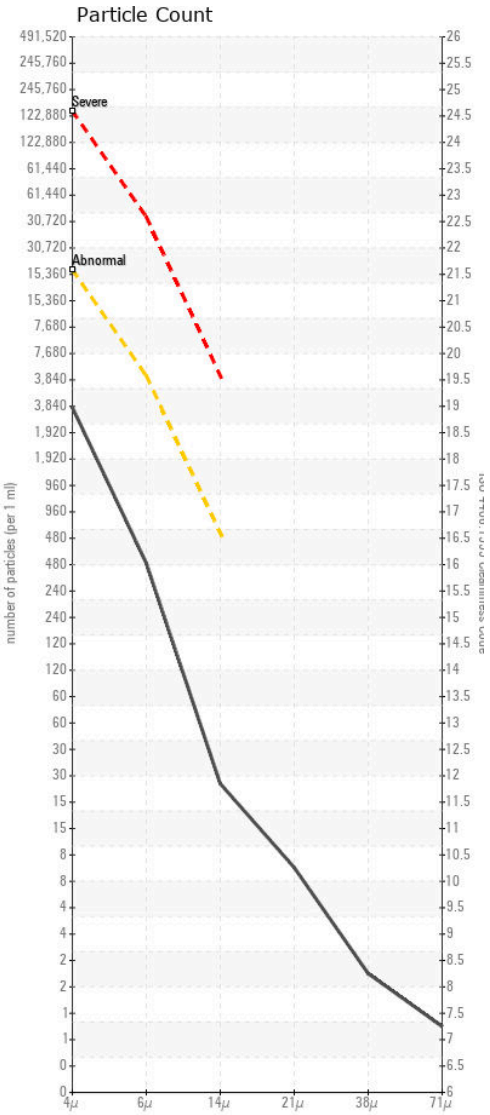



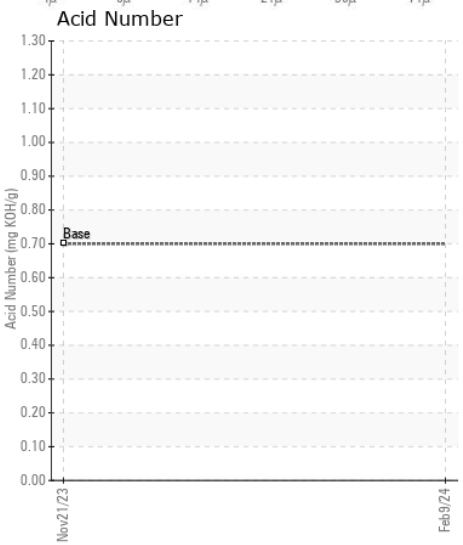





ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : LH0271866
**Lab Number** : 02618100
**Unique Number** : 5735210
**Test Package** : MOBCE

**Received** : 26 Feb 2024
**Tested** : 28 Feb 2024
**Diagnosed** : 28 Feb 2024 - Kevin Marson

**ABC RECYCLING**
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NANAIMO, BC
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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.*