



LIEBHERR

OIL ANALYSIS REPORT

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



Area
(349196)

Machine Id
LIEBHERR L556 059592-1332

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LH0288301 | LH0281240 | LH0265584 |
| Sample Date | | Client Info | | 23 Apr 2024 | 23 Feb 2024 | 25 Oct 2023 |
| Machine Age | hrs | Client Info | | 13157 | 12000 | 11042 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | ABNORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|-------------|------|------|
| Iron | ppm | ASTM D5185(m) | >20 | 13 | 3 | 10 |
| Chromium | ppm | ASTM D5185(m) | >10 | 9 | 2 | 7 |
| Nickel | ppm | ASTM D5185(m) | >10 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >10 | 3 | 1 | 2 |
| Lead | ppm | ASTM D5185(m) | >10 | 7 | 2 | 8 |
| Copper | ppm | ASTM D5185(m) | >75 | 4 | 1 | 4 |
| Tin | ppm | ASTM D5185(m) | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| White Metal | scalar | Visual* | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | NONE |

CONTAMINATION

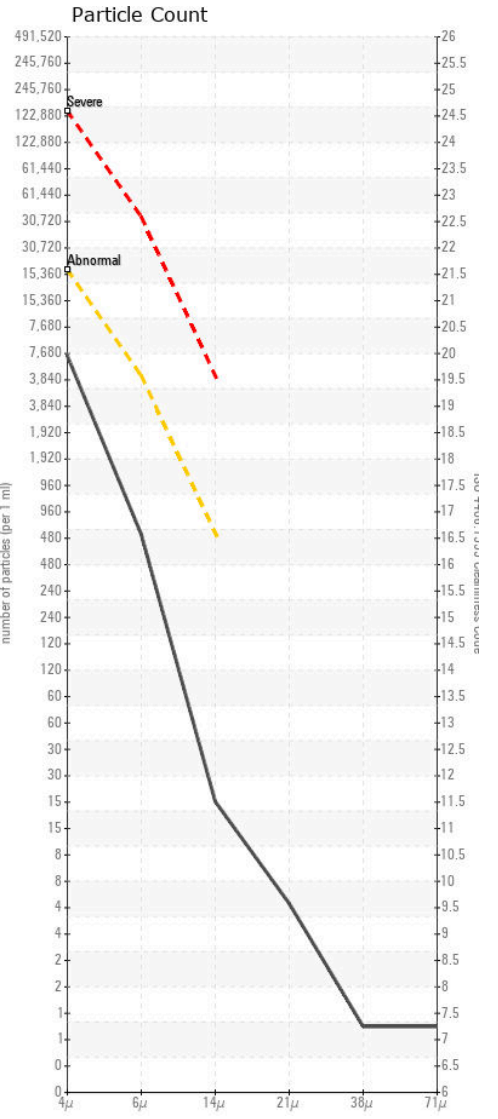
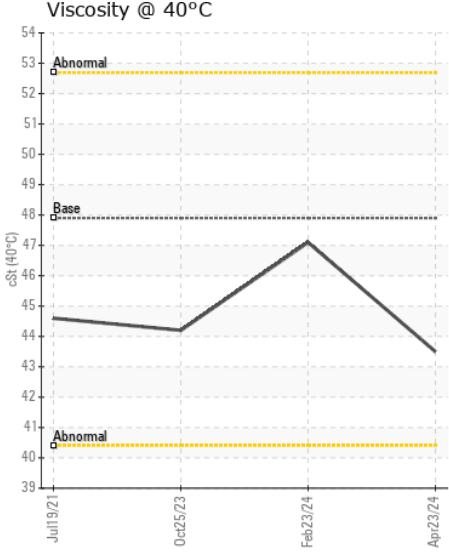
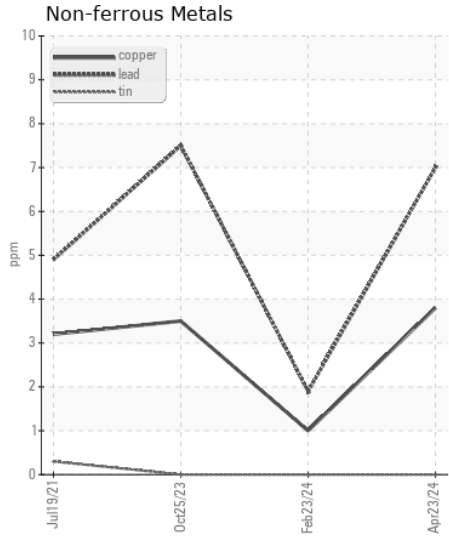
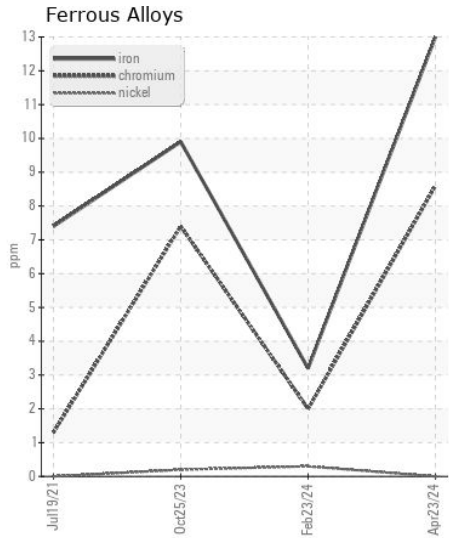
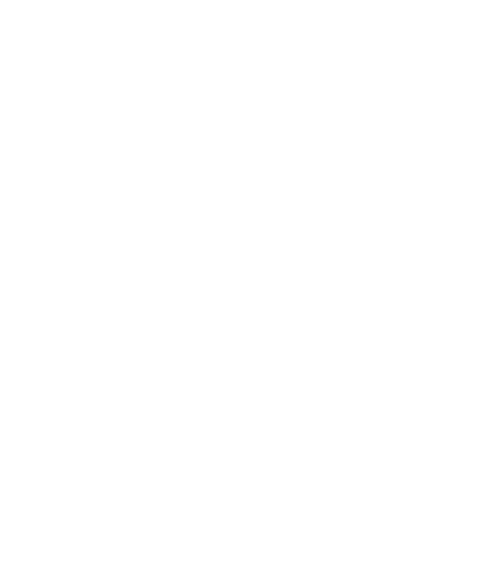
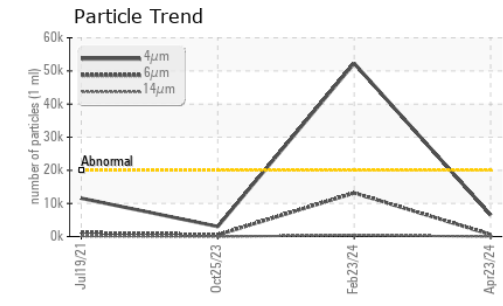
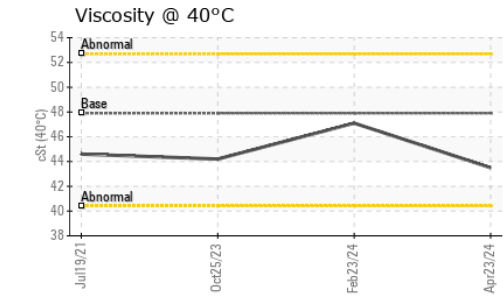
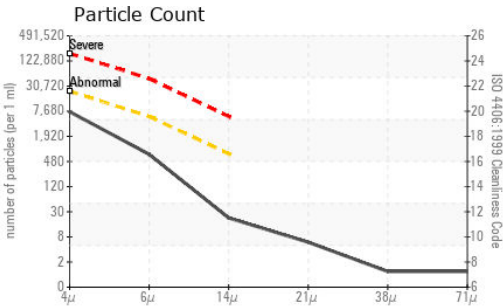
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

| | | | | | | |
|------------------|--------|---------------|-----------|-----------------|------------|----------|
| Silicon | ppm | ASTM D5185(m) | >20 | 5 | 8 | 5 |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | <1 | <1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >20000 | 6494 | ▲ 52284 | 3031 |
| Particles >6µm | | ASTM D7647 | >5000 | 626 | ▲ 13175 | 535 |
| Particles >14µm | | ASTM D7647 | >640 | 19 | 381 | 11 |
| Particles >21µm | | ASTM D7647 | >160 | 5 | 50 | 3 |
| Particles >38µm | | ASTM D7647 | >40 | 1 | 5 | 0 |
| Particles >71µm | | ASTM D7647 | >10 | 1 | 4 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | 20/16/11 | ▲ 23/21/16 | 19/16/11 |
| Silt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | VLITE | NONE | VLITE |
| 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* | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| | | | | | | |
|-------------|-----|---------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 2 | <1 | 1 |
| Boron | ppm | ASTM D5185(m) | 0 | 2 | <1 | 1 |
| Barium | ppm | ASTM D5185(m) | 0 | <1 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | 1 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 0 | 4 | 2 | 4 |
| Calcium | ppm | ASTM D5185(m) | 100 | 513 | 213 | 506 |
| Phosphorus | ppm | ASTM D5185(m) | 670 | 636 | 657 | 629 |
| Zinc | ppm | ASTM D5185(m) | 850 | 775 | 819 | 772 |
| Sulfur | ppm | ASTM D5185(m) | 1600 | 2280 | 1829 | 2264 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 47.9 | 43.5 | 47.1 | 44.2 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288301 **Received** : 28 May 2024
Lab Number : 02638142 **Tested** : 30 May 2024
Unique Number : 5787304 **Diagnosed** : 30 May 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: PrtCount)

Eacom Timber Corporation
 100 Old Nairn Centre Road
 Nairn Centre, ON
 CA P0M 2L0
 Contact: Service Manager

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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F: