



LIEBHERR

OIL ANALYSIS REPORT

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



Area
(348279)
Machine Id
LIEBHERR LH50M 129938-1216
Component
Hydraulic System
Fluid
PETRO CANADA T32 (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | LH0284370 | LH | --- |
| Sample Date | | Client Info | | 15 Feb 2024 | 18 Jun 2023 | --- |
| Machine Age | hrs | Client Info | | 3030 | 2442 | --- |
| Oil Age | hrs | Client Info | | 0 | 0 | --- |
| Filter Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | Not Chngd | N/A | --- |
| Filter Changed | | Client Info | | N/A | Changed | --- |
| Sample Status | | | | ATTENTION | ABNORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|--------------|---------|-----|
| Iron | ppm | ASTM D5185(m) | >50 | 25 | 22 | --- |
| Chromium | ppm | ASTM D5185(m) | >5 | <1 | 0 | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | <1 | --- |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) | >2 | 1 | 1 | --- |
| Lead | ppm | ASTM D5185(m) | >4 | 1 | <1 | --- |
| Copper | ppm | ASTM D5185(m) | >10 | 5 | 3 | --- |
| Tin | ppm | ASTM D5185(m) | >2 | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| White Metal | scalar | Visual* | NONE | NONE | ▲ LIGHT | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | --- |

CONTAMINATION

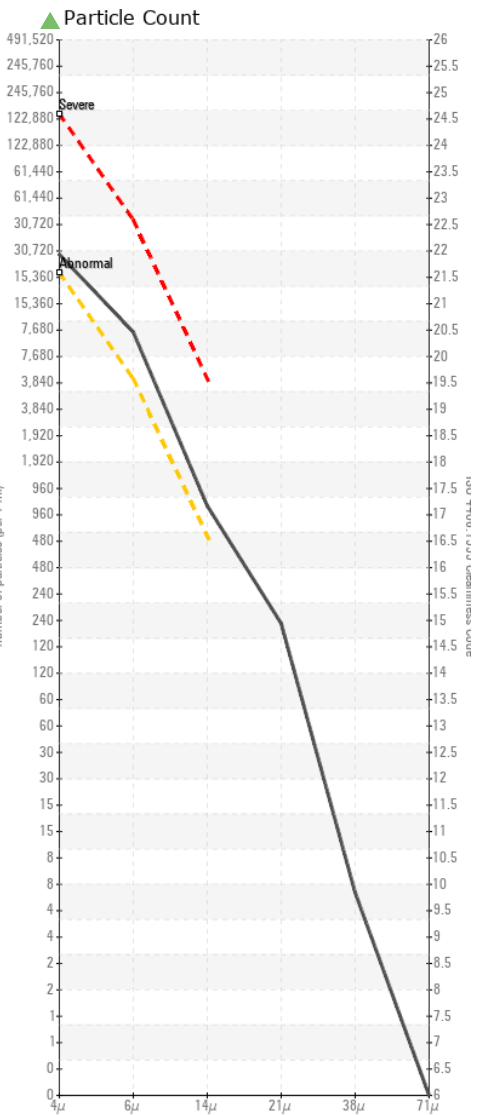
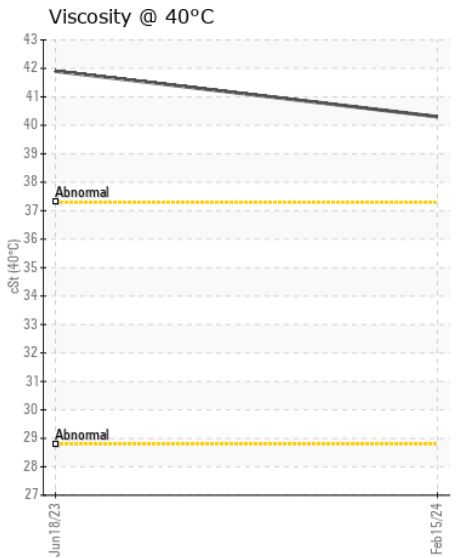
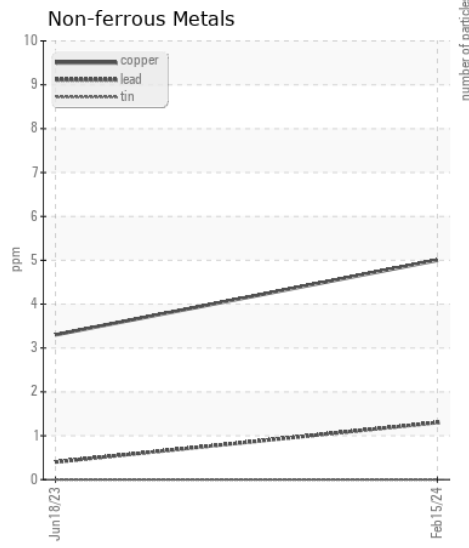
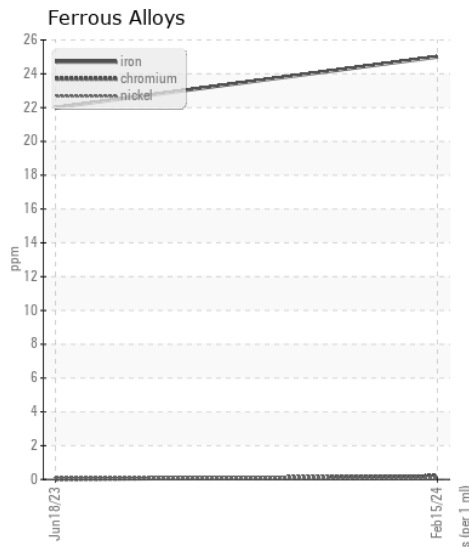
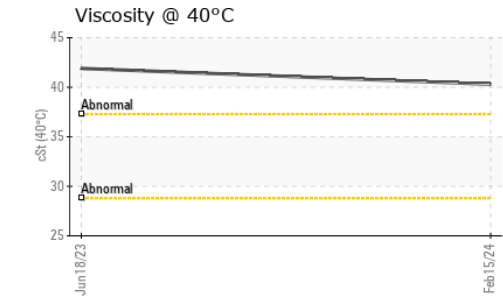
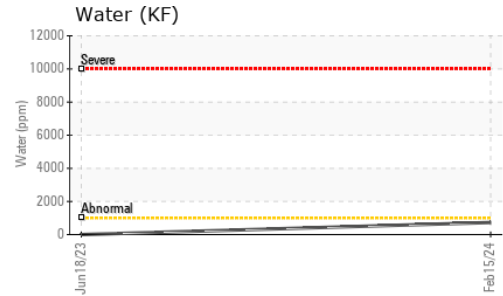
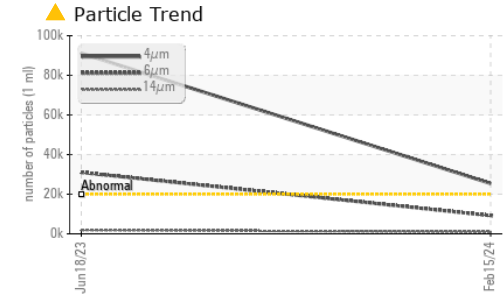
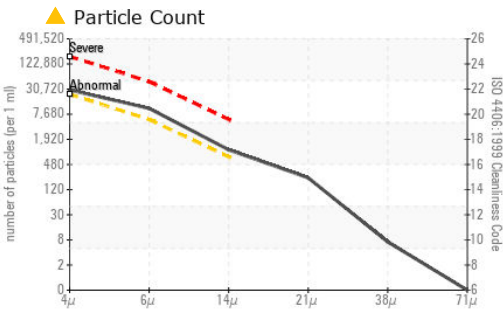
There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

| | | | | | | |
|------------------|--------|---------------|-----------|-------------------|------------|-----|
| Silicon | ppm | ASTM D5185(m) | >17 | 2 | 4 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | 1 | --- |
| Water | % | ASTM D6304* | >0.1 | 0.072 | --- | --- |
| ppm Water | ppm | ASTM D6304* | >1000 | 729 | --- | --- |
| Particles >4µm | | ASTM D7647 | >20000 | ▲ 25420 | ▲ 91182 | --- |
| Particles >6µm | | ASTM D7647 | >5000 | ▲ 9202 | ▲ 30980 | --- |
| Particles >14µm | | ASTM D7647 | >640 | ▲ 948 | ▲ 1877 | --- |
| Particles >21µm | | ASTM D7647 | >160 | 203 | ▲ 567 | --- |
| Particles >38µm | | ASTM D7647 | >40 | 6 | 37 | --- |
| Particles >71µm | | ASTM D7647 | >10 | 0 | 2 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | ▲ 22/20/17 | ▲ 24/22/18 | --- |
| Silt | scalar | Visual* | NONE | NONE | NONE | --- |
| Debris | scalar | Visual* | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | ▲ LIGHT | --- |
| Appearance | scalar | Visual* | NORML | NORML | NORML | --- |
| Odor | scalar | Visual* | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | Visual* | >0.1 | .5% | NEG | --- |

FLUID CONDITION

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

| | | | | | | |
|-------------|-----|---------------|--|--------------|------|-----|
| Sodium | ppm | ASTM D5185(m) | | 2 | 2 | --- |
| Boron | ppm | ASTM D5185(m) | | <1 | 1 | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | <1 | --- |
| Manganese | ppm | ASTM D5185(m) | | 0 | <1 | --- |
| Magnesium | ppm | ASTM D5185(m) | | 6 | 6 | --- |
| Calcium | ppm | ASTM D5185(m) | | 1642 | 1676 | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 680 | 717 | --- |
| Zinc | ppm | ASTM D5185(m) | | 747 | 755 | --- |
| Sulfur | ppm | ASTM D5185(m) | | 3853 | 3700 | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | | 40.3 | 41.9 | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0284370 **Received** : 20 Feb 2024
Lab Number : 02616692 **Tested** : 21 Feb 2024
Unique Number : 5733802 **Diagnosed** : 21 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: KF, PrtCount)

METAUX 139 INC.
 86 RTE MARIE-VICTORIN
 PIERREVILLE, QC
 CA J0G 1J0
 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.

T:
F: