MOB I

# LIEBHERR

OIL ANALYSIS REPORT

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

Machine Id
## LIEBHERR LH50 14791
Component
## Hydraulic System
Fluid
## IRVING HYDRAULIC OIL LP 46 (--- GAL)

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

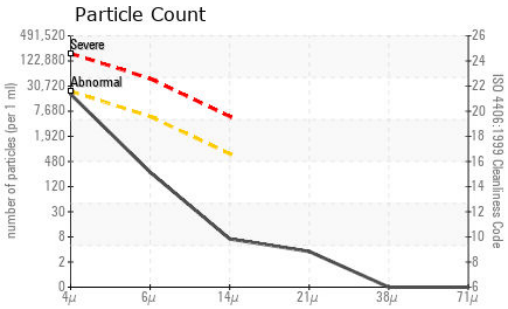
## CONTAMINATION

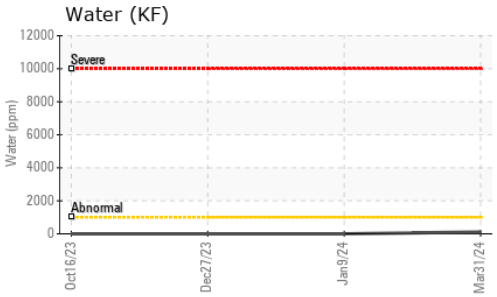
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

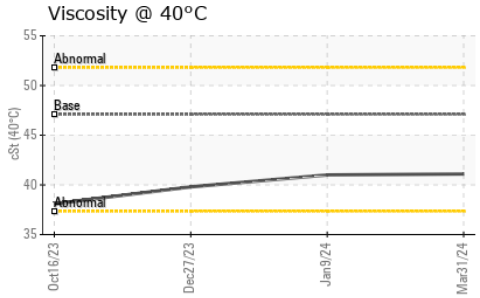
## FLUID CONDITION

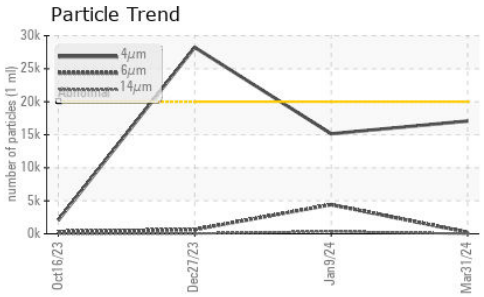
The condition of the oil is acceptable for the time in service.

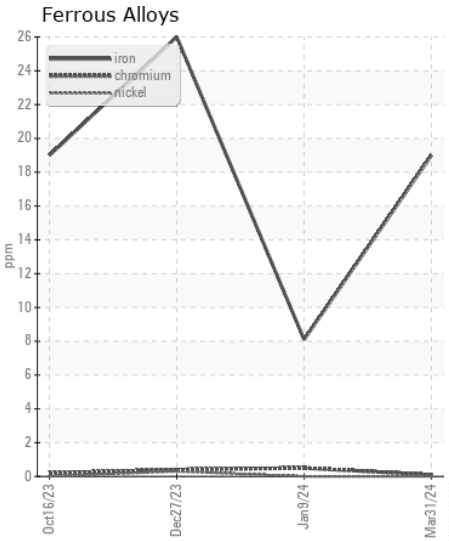
| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | LH | LH0180268 | LH |
| Sample Date | | Client Info | | 31 Mar 2024 | 09 Jan 2024 | 27 Dec 2023 |
| Machine Age | hrs | Client Info | | 23000 | 16000 | 22000 |
| Oil Age | 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 | SEVERE |
| Iron | ppm | ASTM D5185(m) | >50 | 19 | 8 | 26 |
| Chromium | ppm | ASTM D5185(m) | >5 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >2 | <1 | 2 | 1 |
| Lead | ppm | ASTM D5185(m) | >4 | 0 | <1 | ▲ 28 |
| Copper | ppm | ASTM D5185(m) | >10 | 1 | 2 | 2 |
| Tin | ppm | ASTM D5185(m) | >2 | 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 |
| Silicon | ppm | ASTM D5185(m) | >17 | 0 | 2 | 2 |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | <1 | 1 |
| Water | % | ASTM D6304* | >0.1 | 0.011 | --- | --- |
| ppm Water | ppm | ASTM D6304* | >1000 | 110 | --- | --- |
| Particles >4µm | | ASTM D7647 | >20000 | 17075 | 15145 | ● 28232 |
| Particles >6µm | | ASTM D7647 | >5000 | 234 | 4412 | 636 |
| Particles >14µm | | ASTM D7647 | >640 | 6 | 357 | 38 |
| Particles >21µm | | ASTM D7647 | >160 | 3 | 76 | 6 |
| Particles >38µm | | ASTM D7647 | >40 | 0 | 2 | 0 |
| Particles >71µm | | ASTM D7647 | >10 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | 21/15/10 | 21/19/16 | ● 22/16/12 |
| Silt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | NONE | VLITE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | VLITE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | ▲ WGOIL | ▲ WGOIL |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.1 | .5% | .2% | .2% |
| Sodium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Boron | ppm | ASTM D5185(m) | | 6 | 6 | 8 |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | | <1 | 1 | 2 |
| Manganese | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | | 13 | 13 | 16 |
| Calcium | ppm | ASTM D5185(m) | | 156 | 176 | 180 |
| Phosphorus | ppm | ASTM D5185(m) | | 359 | 377 | 390 |
| Zinc | ppm | ASTM D5185(m) | 400 | 460 | 455 | 437 |
| Sulfur | ppm | ASTM D5185(m) | | 1028 | 1122 | 1192 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 47.1 | 41.1 | 41.0 | 39.8 |

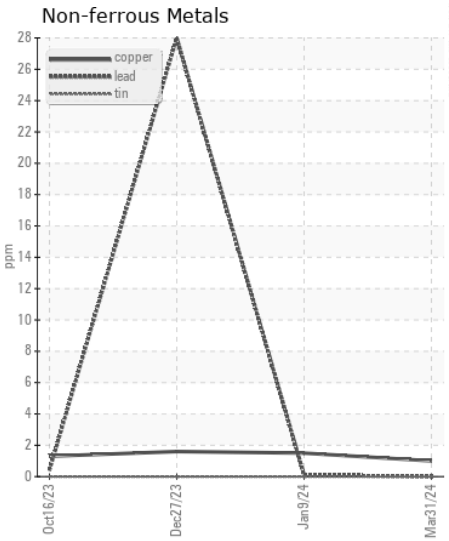


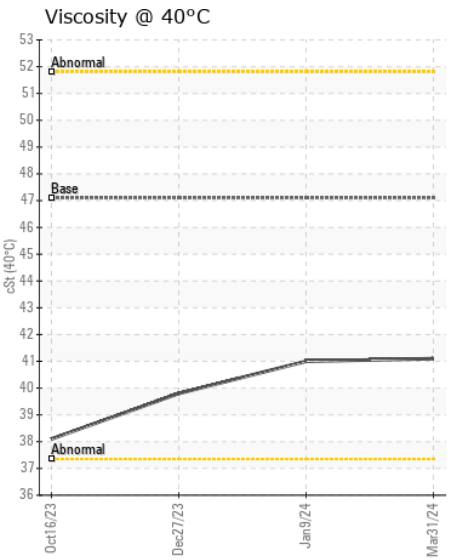



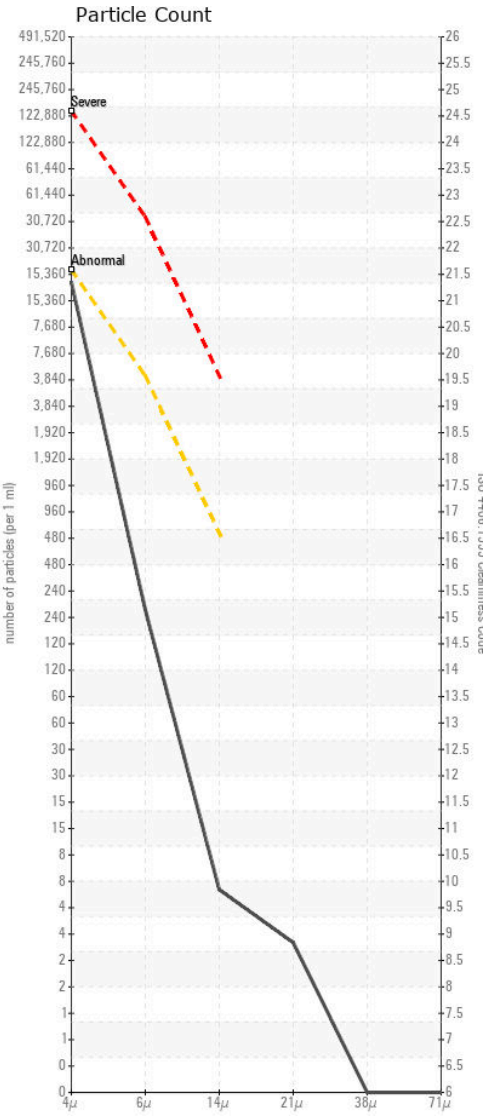




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : LH
**Lab Number** : 02627400
**Unique Number** : 5760532
**Test Package** : MOB 1 ( Additional Tests: KF, PrtCount )

**Received** : 08 Apr 2024
**Tested** : 10 Apr 2024
**Diagnosed** : 10 Apr 2024 - Wes Davis

*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.*

**INTERFOR CORP**
5060 RTE 430
BRUNSWICK MINE, NB
CA E2A 6W6
Contact: Daniel Hachey
daniel.hachey@interfor.com
T: (506)547-8700
F: (506)548-1892