



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH50M 077508
Component
Front Right Wheel Hub
Fluid
GEAR OIL SAE 80 (--- GAL)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL SAE 80. Please confirm.

WEAR

Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

CONTAMINATION

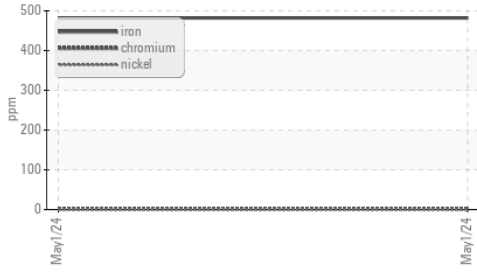
There is no indication of any contamination in the oil.

FLUID CONDITION

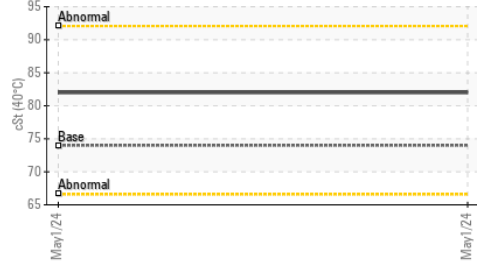
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|--------|---------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | LH | --- | --- |
| Sample Date | | Client Info | | 01 May 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 16364 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | N/A | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |
| PQ | | ASTM D8184* | >700 | 29 | --- | --- |
| Iron | ppm | ASTM D5185(m) | >325 | ▲ 482 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >3 | 2 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >4 | <1 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >10 | 1 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >3 | 0 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >70 | 4 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| White Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Silicon | ppm | ASTM D5185(m) | >70 | 9 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 2 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Silt | scalar | Visual* | NONE | NONE | --- | --- |
| Debris | scalar | Visual* | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | --- | --- |
| Appearance | scalar | Visual* | NORML | NORML | --- | --- |
| Odor | scalar | Visual* | NORML | NORML | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | 5 | --- | --- |
| Boron | ppm | ASTM D5185(m) | 400 | 120 | --- | --- |
| Barium | ppm | ASTM D5185(m) | 200 | <1 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 12 | 0 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | 4 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 12 | 4 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 150 | 24 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1650 | 1165 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 125 | 91 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 22500 | 20641 | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | 74 | 82.0 | --- | --- |

▲ Ferrous Alloys



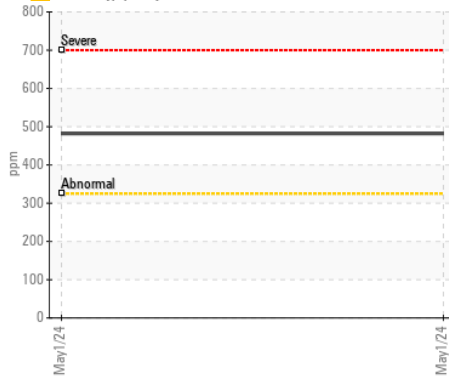
Viscosity @ 40°C



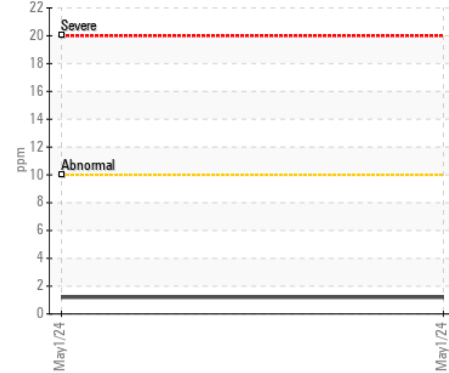
PQ



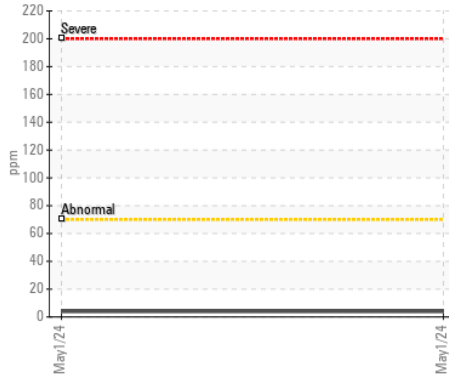
▲ Iron (ppm)



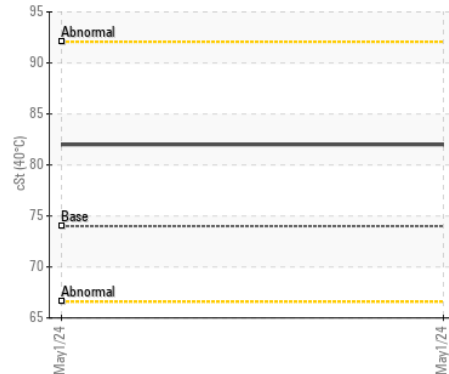
Aluminum (ppm)



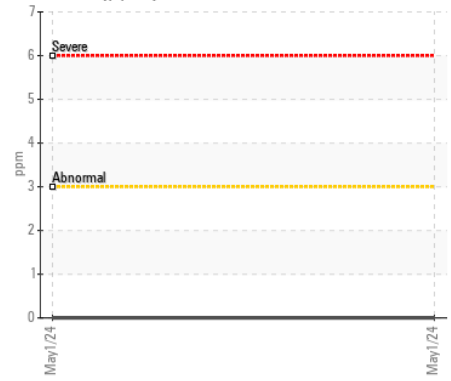
Copper (ppm)



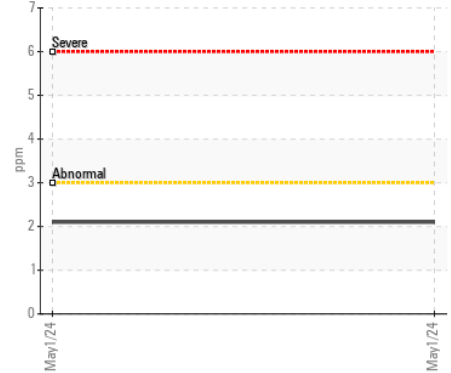
Viscosity @ 40°C



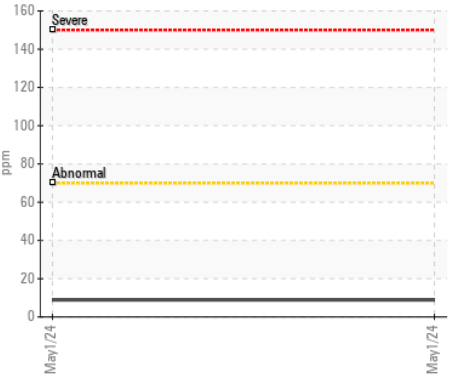
Lead (ppm)



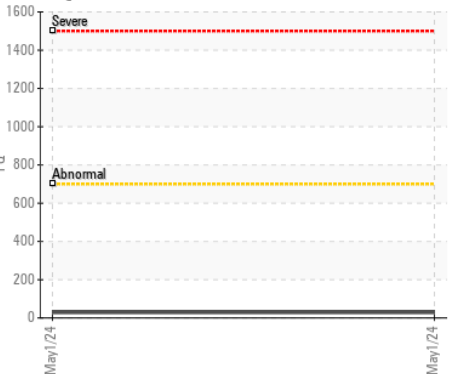
Chromium (ppm)



Silicon (ppm)



PQ



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH **Received** : 13 May 2024
Lab Number : 02635011 **Tested** : 14 May 2024
Unique Number : 5776164 **Diagnosed** : 14 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PQ)

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.

J.M. BASTILLE ACIER INC
 396 RUE TEMISCOUATA,, CP 744
 RIVIERE DU LOUP, QC
 CA G5R 3Z3
 Contact: MANAGER SERVICE

T: (418)862-3346
 F: