



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH30M 153769-1253
Component
Front Differential
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 30 Transmission/Drive Train Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.

WEAR

Iron ppm levels are severe. A sharp increase in the iron level is noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

CONTAMINATION

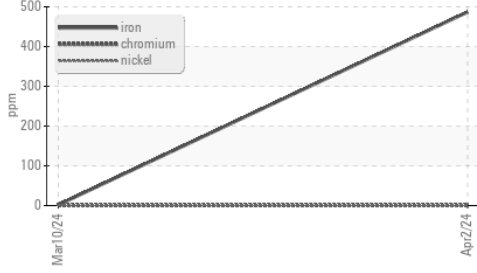
There is a moderate concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

FLUID CONDITION

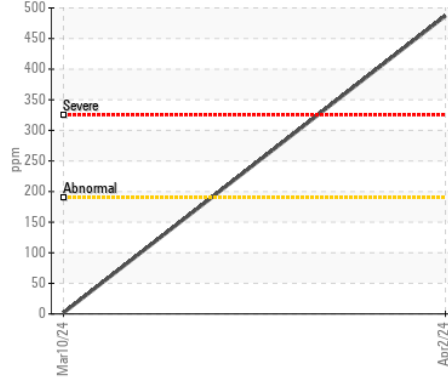
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|--------|---------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | LH0278095 | LH0278091 | --- |
| Sample Date | | Client Info | | 02 Apr 2024 | 10 Mar 2024 | --- |
| Machine Age | hrs | Client Info | | 2000 | 2000 | --- |
| Oil Age | hrs | Client Info | | 0 | 0 | --- |
| Filter Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | Changed | N/A | --- |
| Filter Changed | | Client Info | | None | N/A | --- |
| Sample Status | | | | SEVERE | NORMAL | --- |
| PQ | | ASTM D8184* | >630 | 239 | --- | --- |
| Iron | ppm | ASTM D5185(m) | >190 | ▲ 487 | 2 | --- |
| Chromium | ppm | ASTM D5185(m) | >2 | <1 | 0 | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | 0 | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | | 4 | 0 | --- |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) | >5 | 3 | 1 | --- |
| Lead | ppm | ASTM D5185(m) | >15 | <1 | 0 | --- |
| Copper | ppm | ASTM D5185(m) | >70 | 2 | <1 | --- |
| 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 | VLITE | NONE | --- |
| Silicon | ppm | ASTM D5185(m) | >20 | ▲ 37 | 10 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | <1 | --- |
| Water | | WC Method | >.2 | NEG | NEG | --- |
| Silt | scalar | Visual* | NONE | VLITE | NONE | --- |
| Debris | scalar | Visual* | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | Visual* | NONE | VLITE | NONE | --- |
| Appearance | scalar | Visual* | NORML | NORML | NORML | --- |
| Odor | scalar | Visual* | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | Visual* | >.2 | NEG | NEG | --- |
| Sodium | ppm | ASTM D5185(m) | | 2 | 2 | --- |
| Boron | ppm | ASTM D5185(m) | | 3 | 61 | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 2 | 36 | --- |
| Manganese | ppm | ASTM D5185(m) | | 2 | 0 | --- |
| Magnesium | ppm | ASTM D5185(m) | | 15 | 463 | --- |
| Calcium | ppm | ASTM D5185(m) | | 4113 | 1595 | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 854 | 870 | --- |
| Zinc | ppm | ASTM D5185(m) | | 1018 | 977 | --- |
| Sulfur | ppm | ASTM D5185(m) | | 4981 | 2533 | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | | 94.0 | 76.2 | --- |

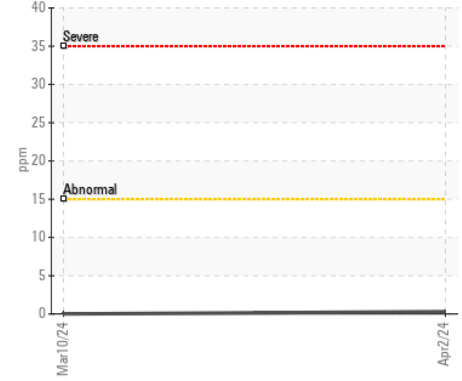
▲ Ferrous Alloys



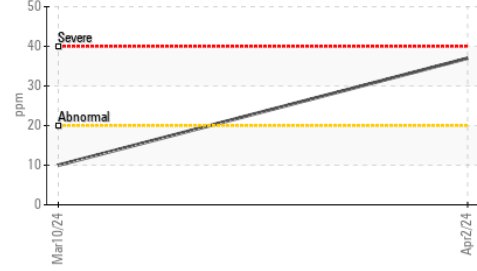
▲ Iron (ppm)



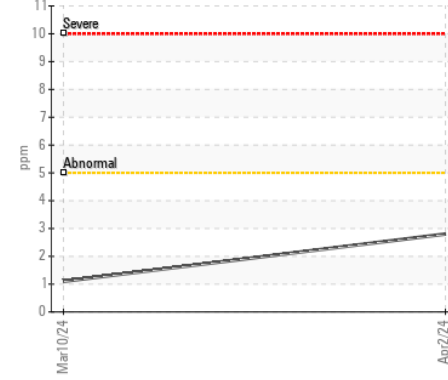
Lead (ppm)



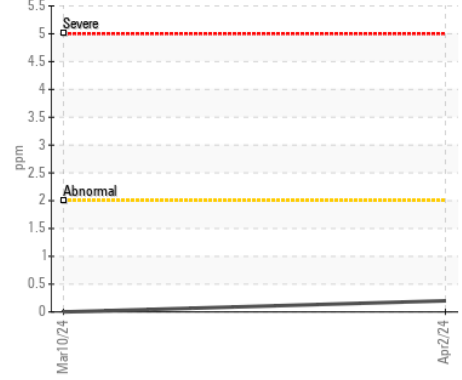
▲ Silicon (ppm)



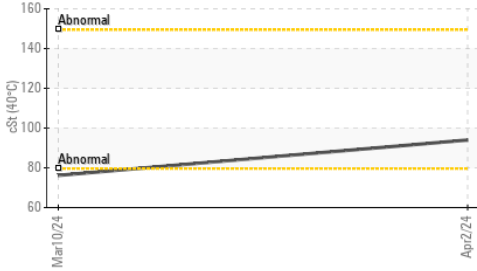
Aluminum (ppm)



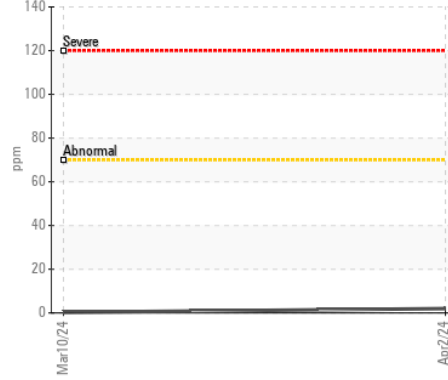
Chromium (ppm)



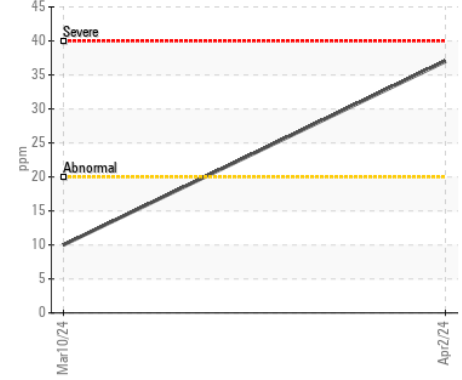
Viscosity @ 40°C



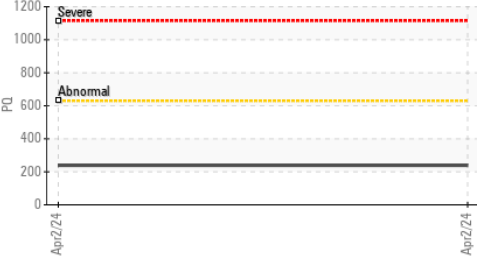
Copper (ppm)



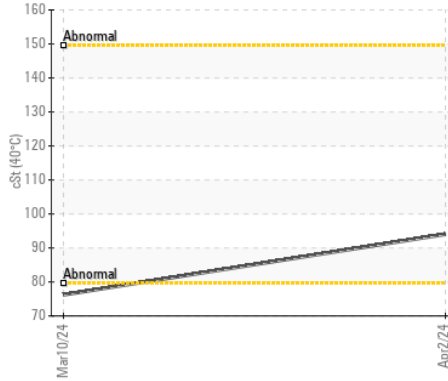
▲ Silicon (ppm)



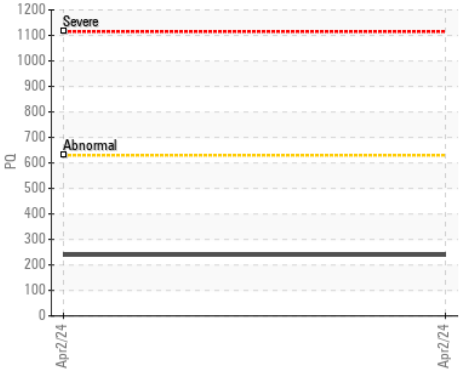
PQ



Viscosity @ 40°C



PQ



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0278095 **Received** : 05 Apr 2024
Lab Number : 02627077 **Tested** : 08 Apr 2024
Unique Number : 5760209 **Diagnosed** : 08 Apr 2024 - Kevin Marson
Test Package : MOBCE (Additional Tests: PQ, Visual)

9262-1408 Quebec Inc.
 13125 Rue Industrielle
 Sorel-Tracy, QC
 CA J3R 0E8
 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: