



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH50M 077508
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- 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) DIESEL ENGINE OIL SAE 40. Please confirm.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | LH0289774 | --- | --- |
| 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 | --- | --- |

WEAR

Aluminum ppm levels are abnormal. Piston wear is indicated.

| | | | | | | |
|----------|-----|---------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185(m) | >100 | 35 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >5 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >5 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >15 | ▲ 17 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >30 | 0 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >125 | 2 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >5 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |

CONTAMINATION

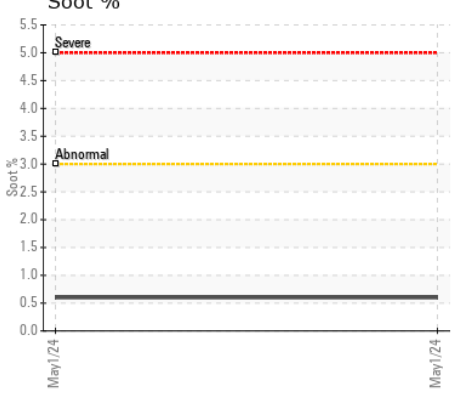
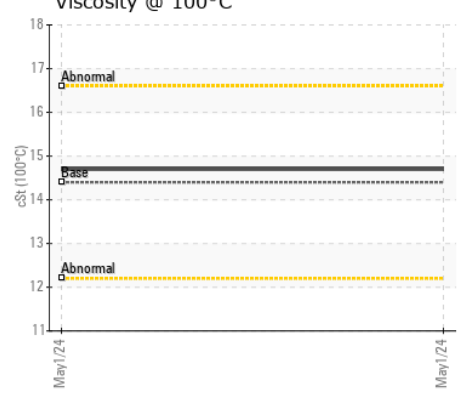
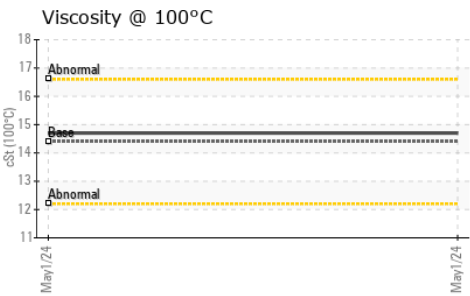
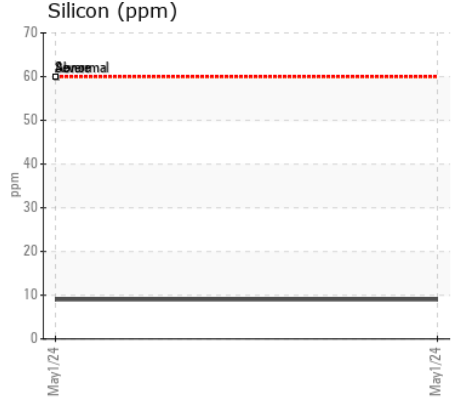
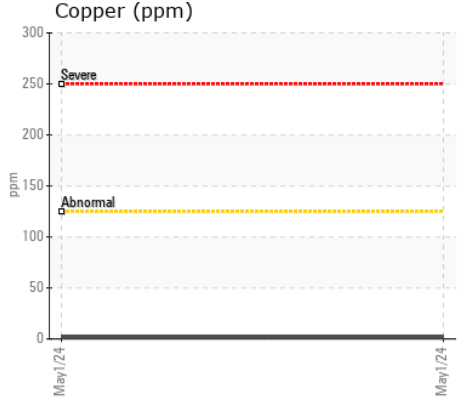
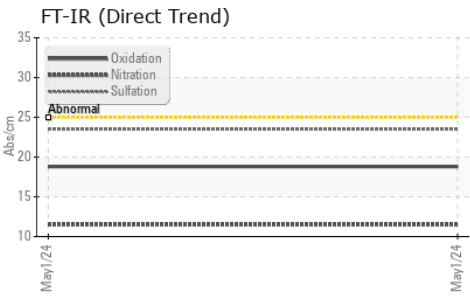
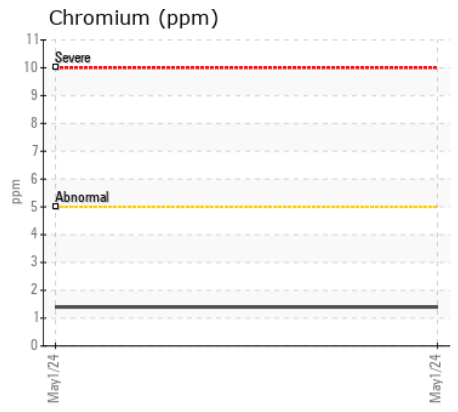
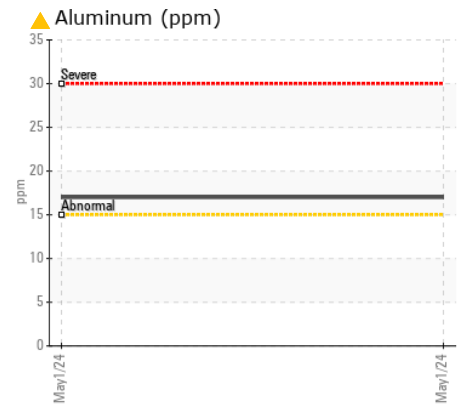
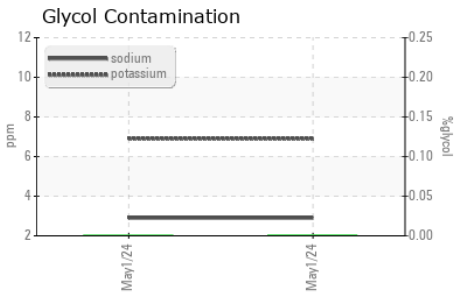
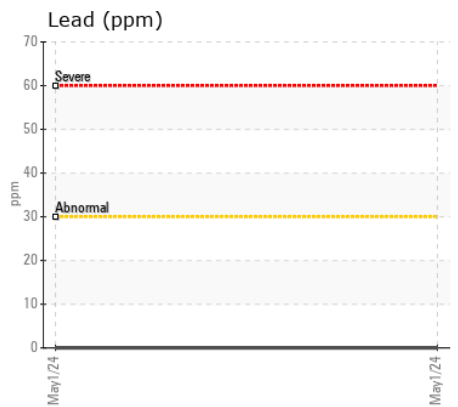
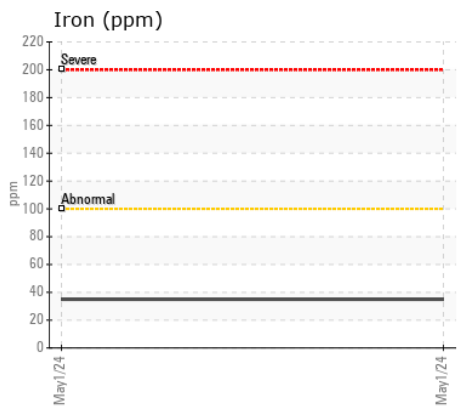
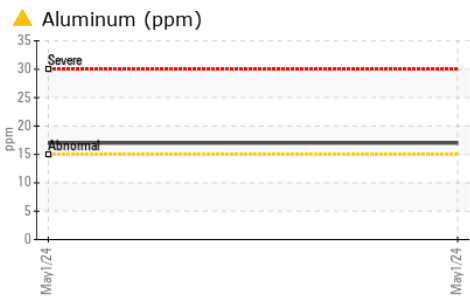
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|-----|-----|
| Silicon | ppm | ASTM D5185(m) | >60 | 9 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 7 | --- | --- |
| Fuel | | WC Method | >5 | <1.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | % | ASTM D7922* | | 0.0 | --- | --- |
| Soot % | % | ASTM D7844* | >3 | 0.6 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 11.5 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 23.5 | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |

FLUID CONDITION

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

| | | | | | | |
|--------------|----------|---------------|------|--------------|-----|-----|
| Sodium | ppm | ASTM D5185(m) | >216 | 3 | --- | --- |
| Boron | ppm | ASTM D5185(m) | 250 | 95 | --- | --- |
| Barium | ppm | ASTM D5185(m) | 10 | <1 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 100 | 0 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 450 | 27 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 3000 | 2240 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 998 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 1350 | 1189 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 4250 | 2984 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 18.8 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.4 | 14.7 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0289774 **Received** : 13 May 2024
Lab Number : 02634852 **Tested** : 13 May 2024
Unique Number : 5776005 **Diagnosed** : 13 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol)

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

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: (418)862-3346
 F: