



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH40C 155775-1527
Component
Hydraulic System
Fluid
{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | LH0289729 | LH0270545 | --- |
| Sample Date | | Client Info | | 13 May 2024 | 27 Feb 2024 | --- |
| Machine Age | hrs | Client Info | | 1026 | 447 | --- |
| Oil Age | hrs | Client Info | | 0 | 0 | --- |
| Filter Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | Not Changd | Not Changd | --- |
| Filter Changed | | Client Info | | N/A | N/A | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185(m) | >50 | 44 | 26 | --- |
| Chromium | ppm | ASTM D5185(m) | >15 | 0 | 0 | --- |
| Nickel | ppm | ASTM D5185(m) | >5 | 0 | 0 | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) | >8 | <1 | <1 | --- |
| Lead | ppm | ASTM D5185(m) | >5 | 0 | <1 | --- |
| Copper | ppm | ASTM D5185(m) | >15 | 2 | 1 | --- |
| Tin | ppm | ASTM D5185(m) | >5 | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| White Metal | scalar | Visual* | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | --- |

CONTAMINATION

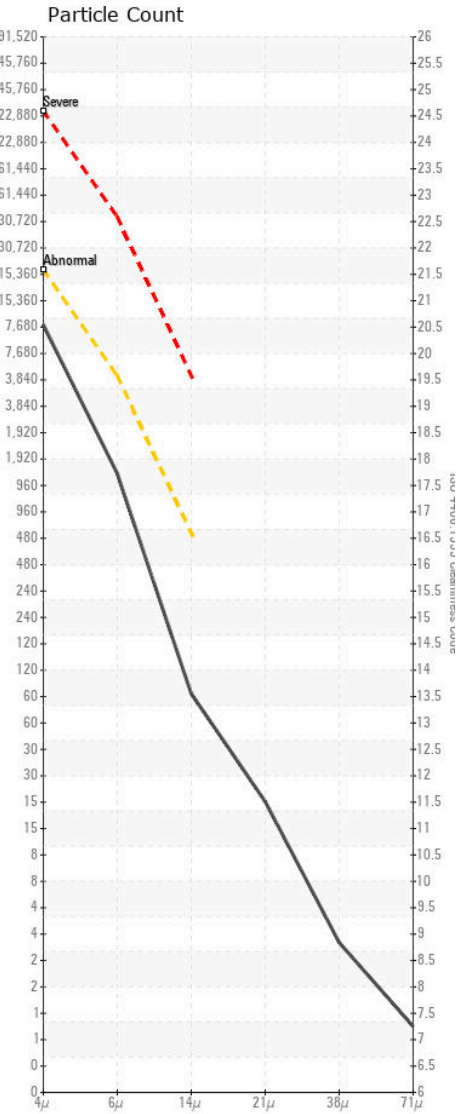
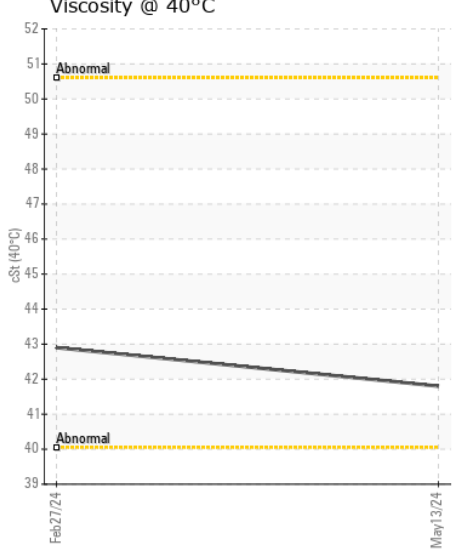
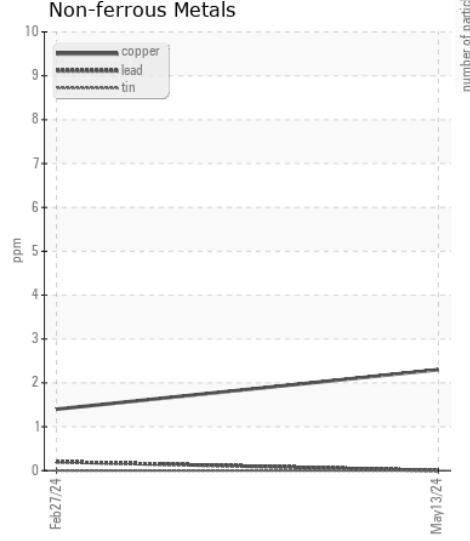
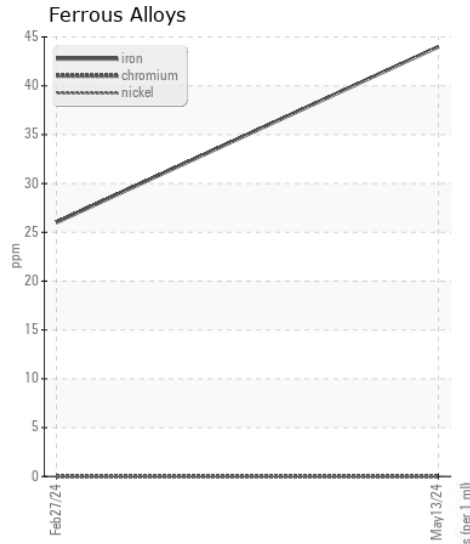
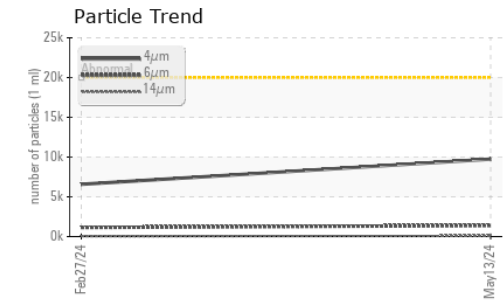
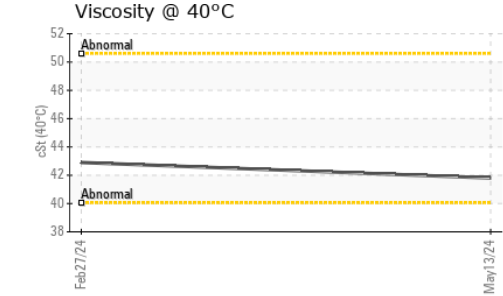
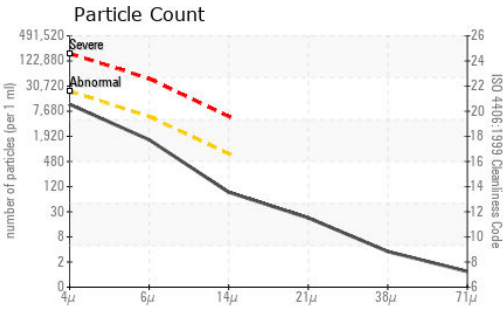
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

| | | | | | | |
|------------------|--------|---------------|-----------|-----------------|----------|-----|
| Silicon | ppm | ASTM D5185(m) | >25 | 2 | 2 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | <1 | --- |
| Water | | WC Method | >0.1 | NEG | NEG | --- |
| Particles >4µm | | ASTM D7647 | >20000 | 9742 | 6578 | --- |
| Particles >6µm | | ASTM D7647 | >5000 | 1388 | 1139 | --- |
| Particles >14µm | | ASTM D7647 | >640 | 78 | 42 | --- |
| Particles >21µm | | ASTM D7647 | >160 | 19 | 10 | --- |
| Particles >38µm | | ASTM D7647 | >40 | 3 | 2 | --- |
| Particles >71µm | | ASTM D7647 | >10 | 1 | 1 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | 20/18/13 | 20/17/13 | --- |
| Silt | scalar | Visual* | NONE | NONE | NONE | --- |
| Debris | scalar | Visual* | NONE | VLITE | NONE | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE | --- |
| Appearance | scalar | Visual* | NORML | NORML | NORML | --- |
| Odor | scalar | Visual* | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | Visual* | >0.1 | NEG | NEG | --- |

FLUID CONDITION

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

| | | | | | | |
|-------------|-----|---------------|--|--------------|------|-----|
| Sodium | ppm | ASTM D5185(m) | | 1 | <1 | --- |
| Boron | ppm | ASTM D5185(m) | | <1 | <1 | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Manganese | ppm | ASTM D5185(m) | | <1 | 0 | --- |
| Magnesium | ppm | ASTM D5185(m) | | 7 | 7 | --- |
| Calcium | ppm | ASTM D5185(m) | | 1214 | 1201 | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 597 | 594 | --- |
| Zinc | ppm | ASTM D5185(m) | | 673 | 655 | --- |
| Sulfur | ppm | ASTM D5185(m) | | 3914 | 4044 | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | | 41.8 | 42.9 | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0289729 **Received** : 14 May 2024
Lab Number : 02635308 **Tested** : 15 May 2024
Unique Number : 5776461 **Diagnosed** : 15 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

BEN-MET STEEL & METAL INC.
 415 ELIZABETH STREET
 GUELPH, ON
 CA N1E 2Y2
 Contact: Andy Sakool
 asakool@benmetsteel.com
 T: (519)763-1209
 F: (519)763-9174

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.