



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH30M 1253-118648
Component
Front Left Wheel Hub
Fluid
LIEBHERR GEAR BASIC 90 LS (3 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | LH0272218 | LH0244504 | LH0207386 |
| Sample Date | | Client Info | | 17 Jun 2024 | 07 Mar 2023 | 09 Nov 2021 |
| Machine Age | hrs | Client Info | | 1690 | 1690 | 952 |
| Oil Age | hrs | Client Info | | 1690 | 738 | 952 |
| Filter Age | hrs | Client Info | | 0 | 0 | 952 |
| Oil Changed | | Client Info | | N/A | Changed | Changed |
| Filter Changed | | Client Info | | N/A | N/A | None |
| Sample Status | | | | NORMAL | NORMAL | ATTENTION |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-------|
| Iron | ppm | ASTM D5185m | >450 | 57 | 13 | 17 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185m | >4 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >75 | 18 | 2 | 37 |
| Tin | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | MODER |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

There is no indication of any contamination in the oil.

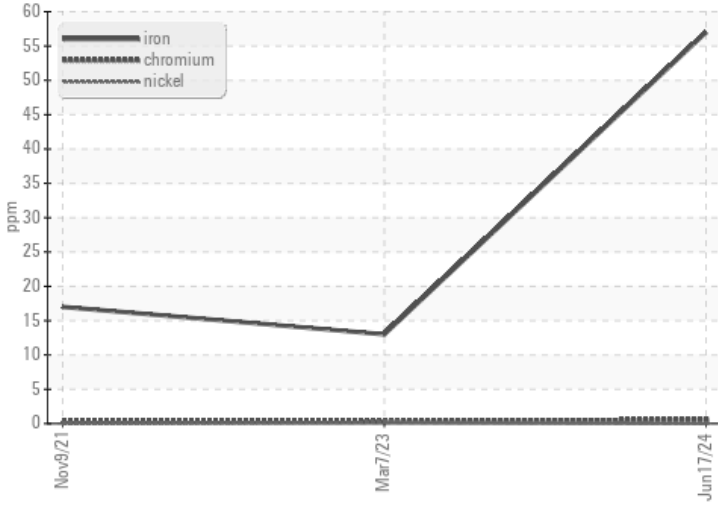
| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >60 | 4 | 3 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 1 | <1 | <1 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

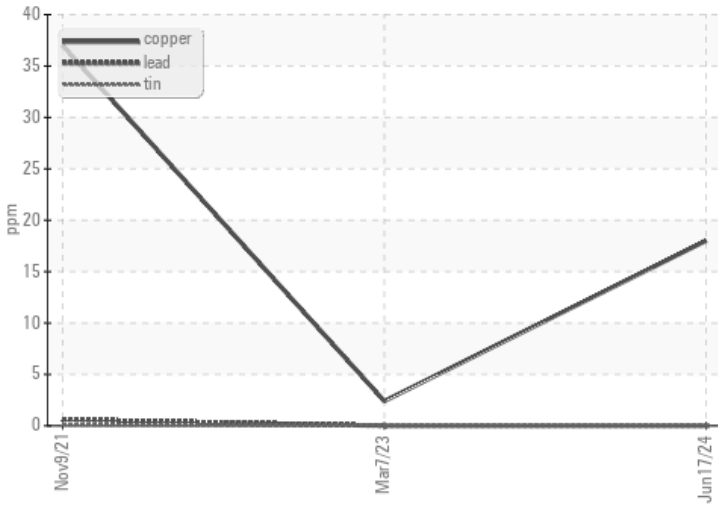
The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------|-----|-------------|-------|--------------|-------|------|
| Sodium | ppm | ASTM D5185m | | 14 | 8 | 19 |
| Boron | ppm | ASTM D5185m | 0 | 2 | 7 | 110 |
| Barium | ppm | ASTM D5185m | 0 | 1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | 0 | 1 | 2 | <1 |
| Magnesium | ppm | ASTM D5185m | <1 | <1 | 4 | 11 |
| Calcium | ppm | ASTM D5185m | <1 | 372 | 470 | 3487 |
| Phosphorus | ppm | ASTM D5185m | 2143 | 2147 | 2218 | 1102 |
| Zinc | ppm | ASTM D5185m | <1 | 106 | 202 | 1407 |
| Sulfur | ppm | ASTM D5185m | 23468 | 30002 | 35185 | 3176 |

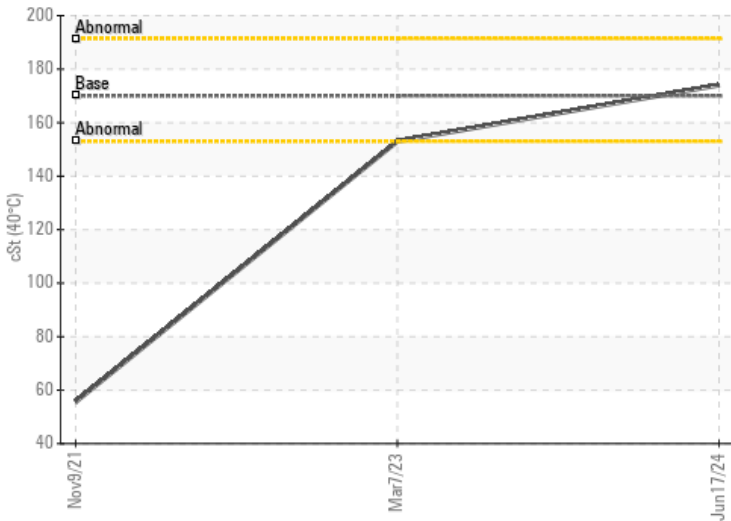
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0272218
Lab Number : 06220442
Unique Number : 11098639
Test Package : CONST
Received : 25 Jun 2024
Tested : 26 Jun 2024
Diagnosed : 26 Jun 2024 - Wes Davis

JR VINAGRO
 2208 PLAINFIELD PIKE
 JOHNSTON, RI
 US 02919
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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