



LIEBHERR

OIL ANALYSIS REPORT

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



Machine Id
LIEBHERR LH30M 155056

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (170 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | LH0288108 | --- | --- |
| Sample Date | | Client Info | | 22 May 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 552 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | Not Changd | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185(m) | >50 | 7 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >5 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >4 | 0 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >10 | 1 | --- | --- |
| 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 | --- | --- |

CONTAMINATION

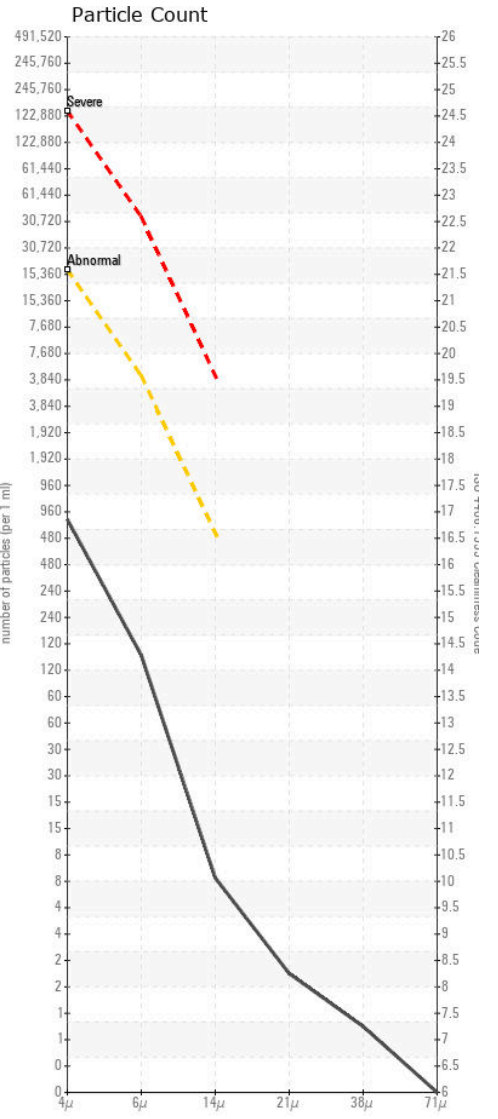
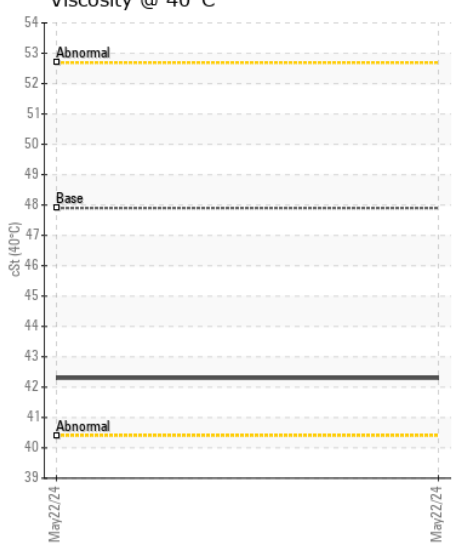
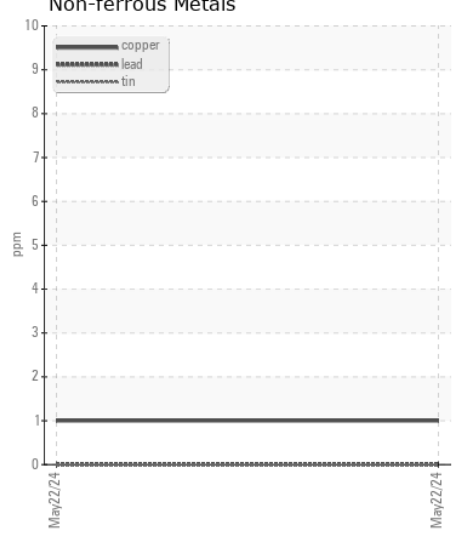
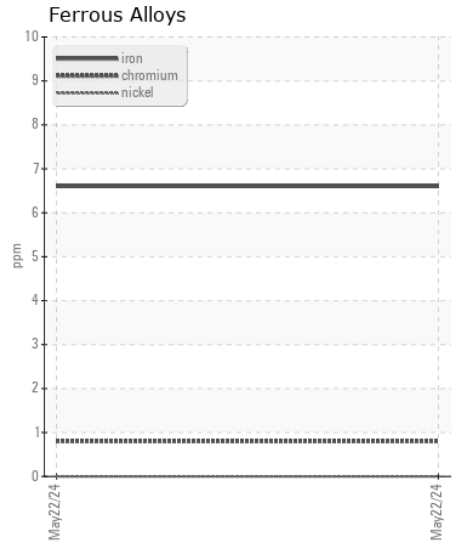
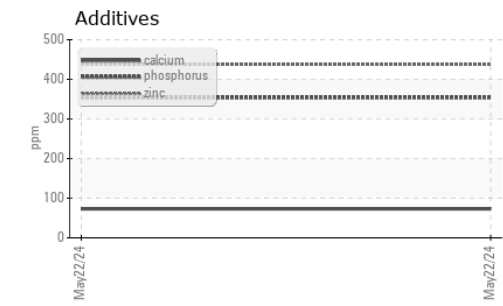
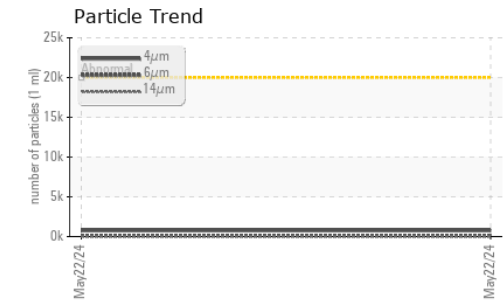
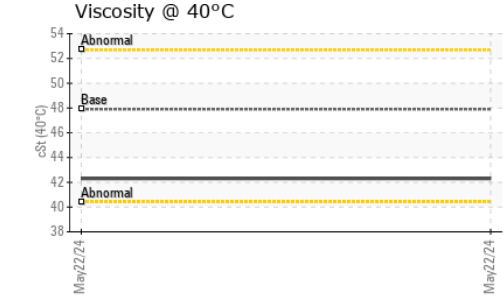
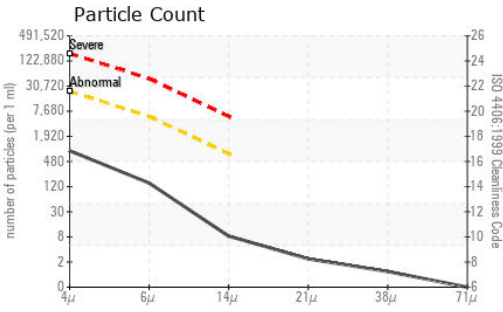
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

| | | | | | | |
|------------------|--------|---------------|-----------|-----------------|-----|-----|
| Silicon | ppm | ASTM D5185(m) | >17 | 0 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | --- | --- |
| Water | | WC Method | >0.1 | NEG | --- | --- |
| Particles >4µm | | ASTM D7647 | >20000 | 763 | --- | --- |
| Particles >6µm | | ASTM D7647 | >5000 | 129 | --- | --- |
| Particles >14µm | | ASTM D7647 | >640 | 7 | --- | --- |
| Particles >21µm | | ASTM D7647 | >160 | 2 | --- | --- |
| Particles >38µm | | ASTM D7647 | >40 | 1 | --- | --- |
| Particles >71µm | | ASTM D7647 | >10 | 0 | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | 17/14/10 | --- | --- |
| 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* | >0.1 | NEG | --- | --- |

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil.
The condition of the oil is acceptable for the time in service.

| | | | | | | |
|-------------|-----|---------------|------|--------------|-----|-----|
| Sodium | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Boron | ppm | ASTM D5185(m) | 0 | <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) | 0 | 3 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 100 | 73 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 670 | 354 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 850 | 437 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 1600 | 954 | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | 47.9 | 42.3 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288108 **Received** : 29 May 2024
Lab Number : 02638516 **Tested** : 31 May 2024
Unique Number : 5787678 **Diagnosed** : 31 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

Goodies Trading Ltd.
 8150 Aitken Road
 Chilliwack, BC
 CA V2R 4H5
 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.

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F: