



LIEBHERR

OIL ANALYSIS REPORT

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

Machine Id
141701-HW
Component
Gearbox
Fluid
LIEBHERR GEAR HYPOID 90 EP (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|----------|----------|
| Sample Number | | Client Info | | LM0000445 | --- | --- |
| Sample Date | | Client Info | | 03 Jan 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 10943 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | Not Chngd | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|-----|-----|
| Iron | ppm | ASTM D5185m | >200 | 5 | --- | --- |
| Chromium | ppm | ASTM D5185m | >10 | 0 | --- | --- |
| Nickel | ppm | ASTM D5185m | >10 | 0 | --- | --- |
| Titanium | ppm | ASTM D5185m | | <1 | --- | --- |
| Silver | ppm | ASTM D5185m | | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | --- | --- |
| Lead | ppm | ASTM D5185m | >50 | 0 | --- | --- |
| Copper | ppm | ASTM D5185m | >200 | 2 | --- | --- |
| Tin | ppm | ASTM D5185m | >10 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

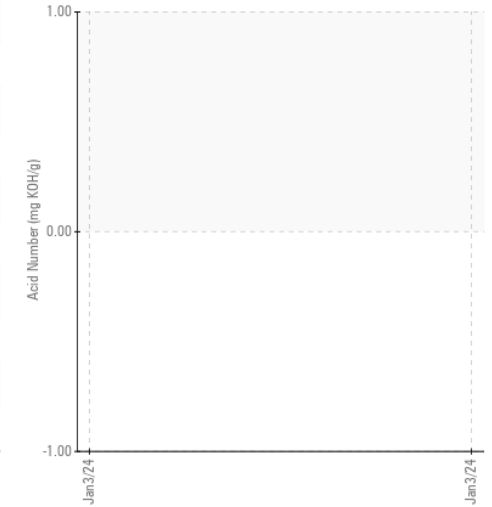
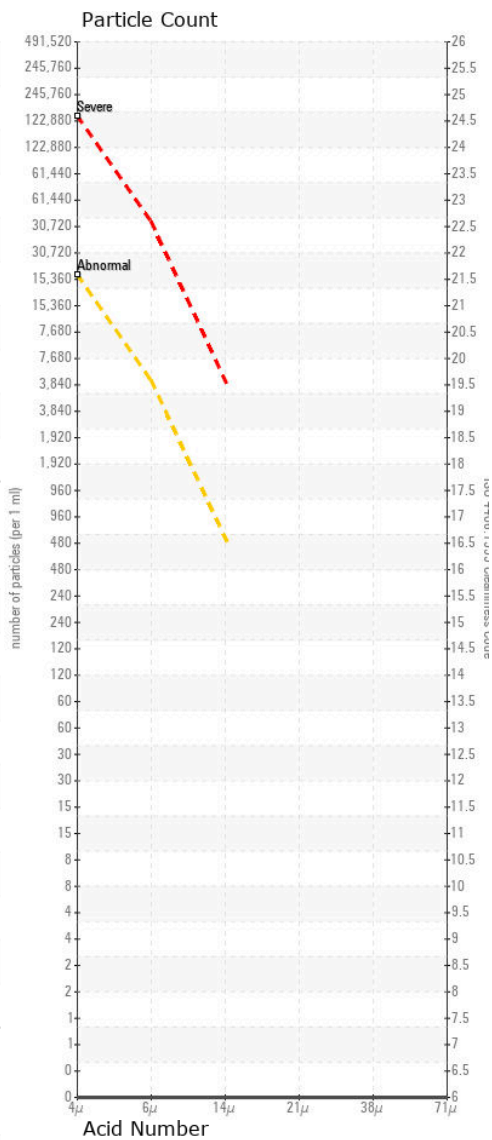
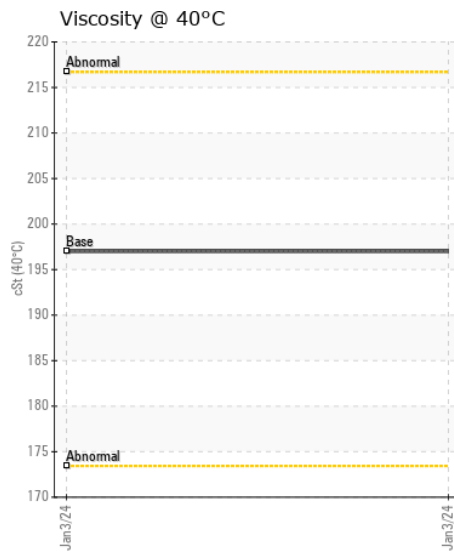
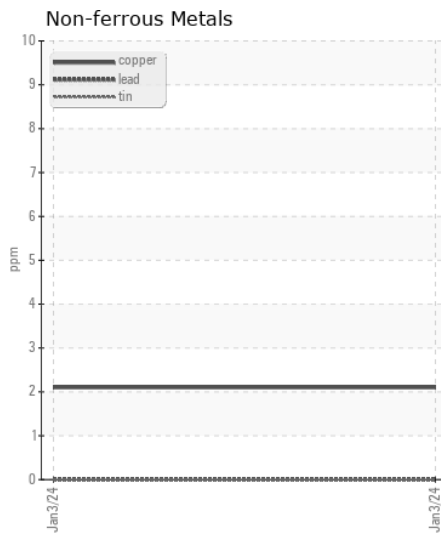
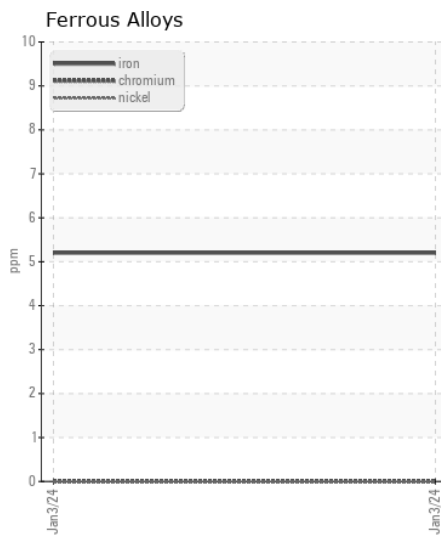
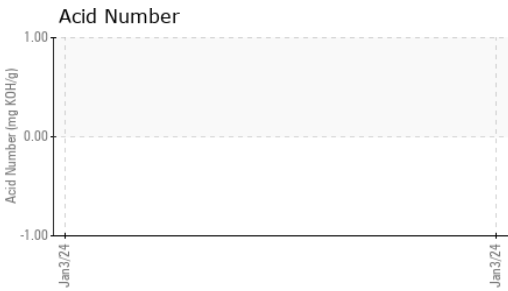
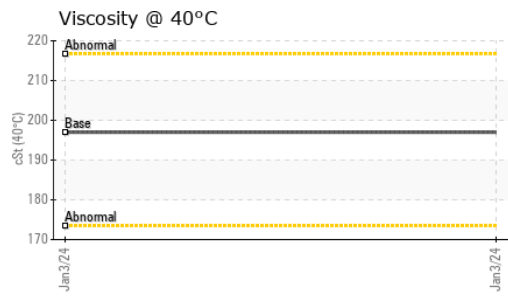
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|-------------|-------|-------|-----|-----|
| Silicon | ppm | ASTM D5185m | >50 | 1 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 2 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| 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 | >0.2 | NEG | --- | --- |

FLUID CONDITION

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

| | | | | | | |
|-------------|-----|-------------|-----|-------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 0 | --- | --- |
| Boron | ppm | ASTM D5185m | | 0 | --- | --- |
| Barium | ppm | ASTM D5185m | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 0 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 0 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | <1 | --- | --- |
| Calcium | ppm | ASTM D5185m | | 5 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | 1189 | --- | --- |
| Zinc | ppm | ASTM D5185m | | 0 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 29220 | --- | --- |
| Visc @ 40°C | cSt | ASTM D445 | 197 | 197 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LM0000445 **Received** : 10 Jan 2024
Lab Number : 06057337 **Diagnosed** : 12 Jan 2024
Unique Number : 10823286 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: PrtCount)

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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)