



OIL ANALYSIS REPORT

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



Area
AMR-12th Street
 Machine Id
339324 LIEBHERR LH60 1204-86896
 Component
Swing Drive
 Fluid
LIEBHERR GEAR BASIC 90 LS (3 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | DJJ0013947 | DJJ0017129 | DJJ0013877 |
| Sample Date | | Client Info | | 11 Jun 2024 | 26 Dec 2023 | 15 Sep 2023 |
| Machine Age | hrs | Client Info | | 15501 | 15052 | 14489 |
| Oil Age | hrs | Client Info | | 500 | 1000 | 0 |
| Filter Age | hrs | Client Info | | 250 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changed | Changed | Not Changed |
| Filter Changed | | Client Info | | Changed | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >350 | 241 | 168 | 113 |
| Chromium | ppm | ASTM D5185m | >15 | 2 | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >5 | 2 | 1 | <1 |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >300 | 29 | 58 | 37 |
| Tin | ppm | ASTM D5185m | >15 | 3 | 15 | 7 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

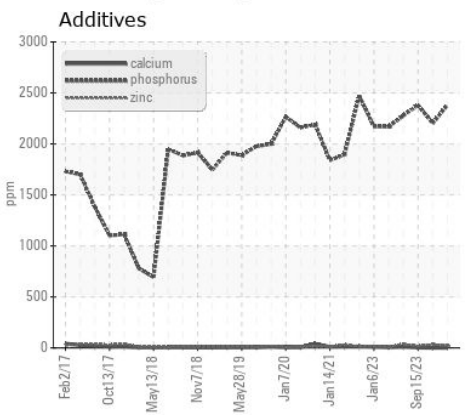
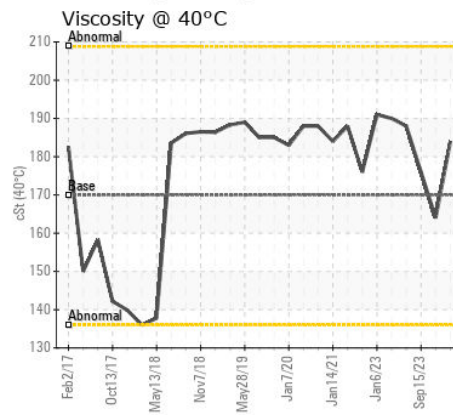
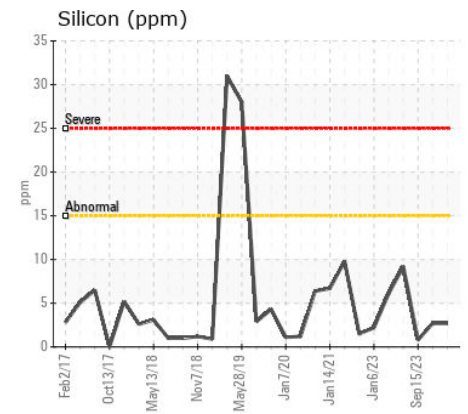
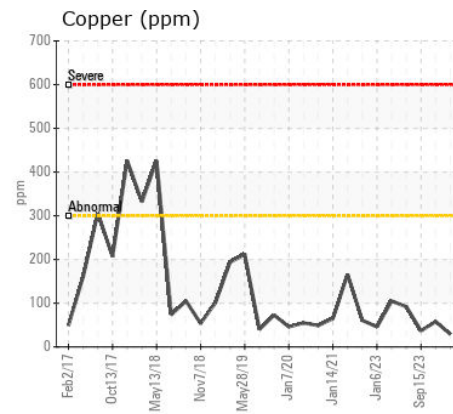
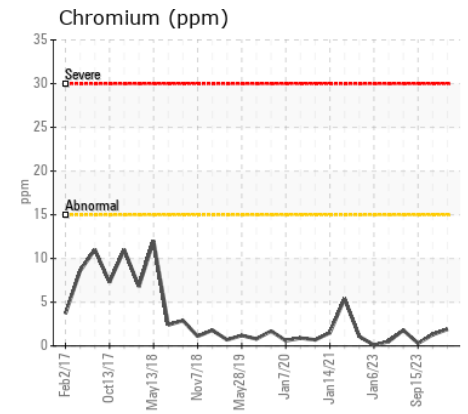
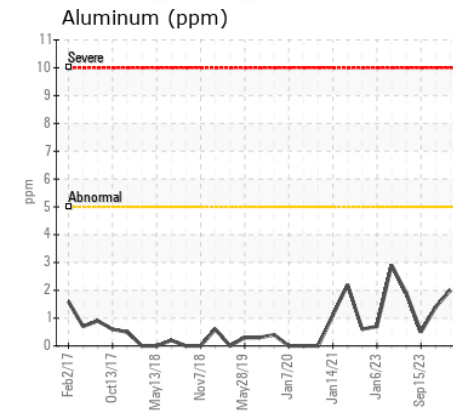
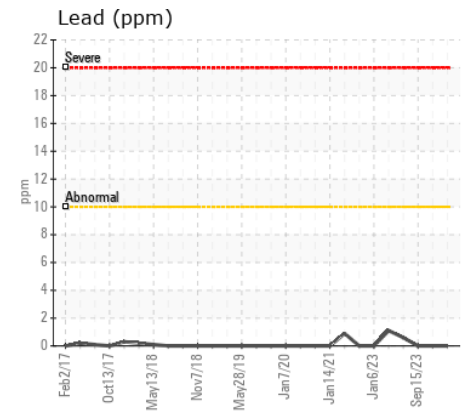
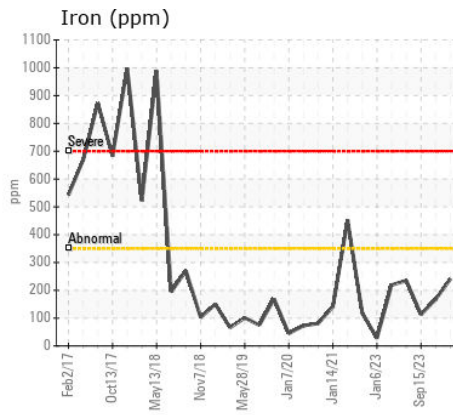
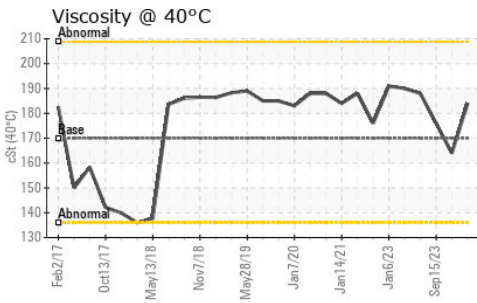
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >15 | 3 | 3 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 5 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | LIGHT | LIGHT | 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 | | 2 | 2 | 4 |
| Boron | ppm | ASTM D5185m | 0 | 2 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | 2 | 2 | <1 |
| Magnesium | ppm | ASTM D5185m | <1 | <1 | 0 | 5 |
| Calcium | ppm | ASTM D5185m | <1 | 0 | 0 | 2 |
| Phosphorus | ppm | ASTM D5185m | 2143 | 2381 | 2202 | 2381 |
| Zinc | ppm | ASTM D5185m | <1 | 22 | 34 | 19 |
| Sulfur | ppm | ASTM D5185m | 23468 | 26950 | 26983 | 27612 |
| Visc @ 40°C | cSt | ASTM D445 | 170 | 184 | 164 | 176 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0013947
Lab Number : 06216157
Unique Number : 11089021
Test Package : MOBCE

Received : 20 Jun 2024
Tested : 21 Jun 2024
Diagnosed : 21 Jun 2024 - Wes Davis

ADVANTAGE METALS RECYCLING - 12 STREET
 1153 S. 12TH STREET
 KANSAS CITY, KS
 US 66105

Contact: JOHN PEEK
 john.peek@advantagerecycling.com

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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