



OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

| |
|-----------|
| ATTENTION |
| NORMAL |
| NORMAL |

Machine Id
A-804.1
Component
Gearbox

Fluid
HIGH PERFORMANCE LUBRICANTS Worm Gear Life 1500 (--- LTR)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

An increase in the copper level is noted. All other component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

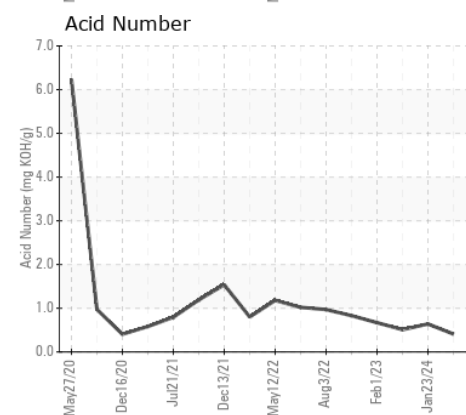
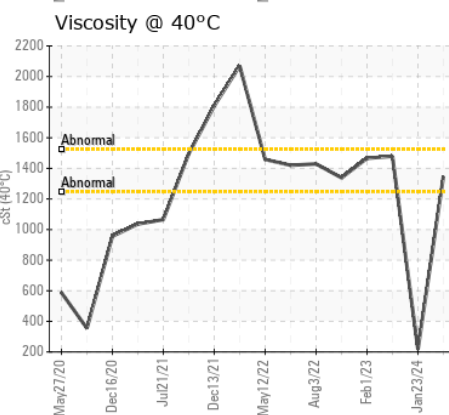
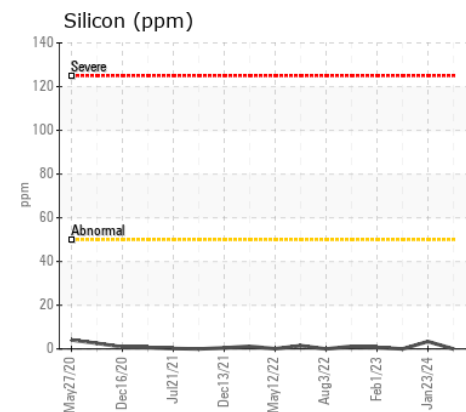
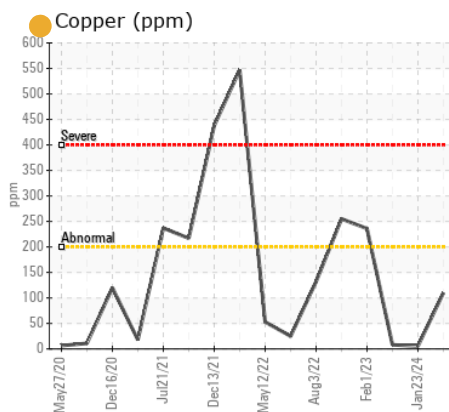
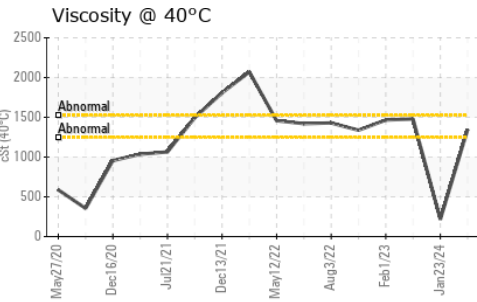
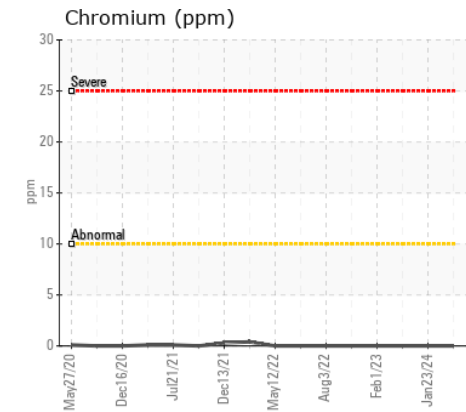
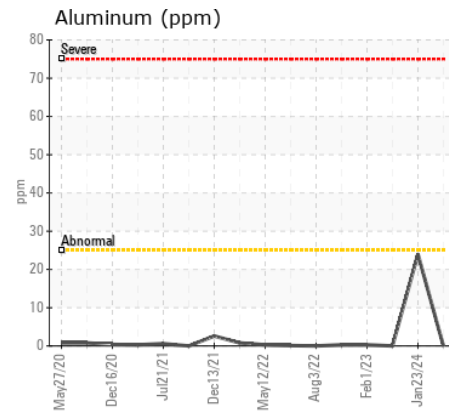
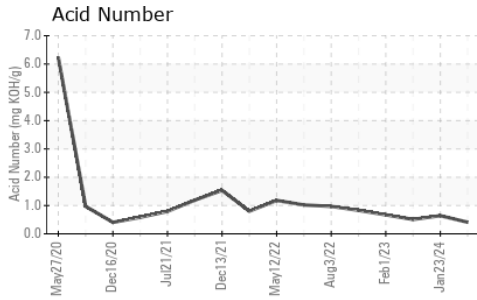
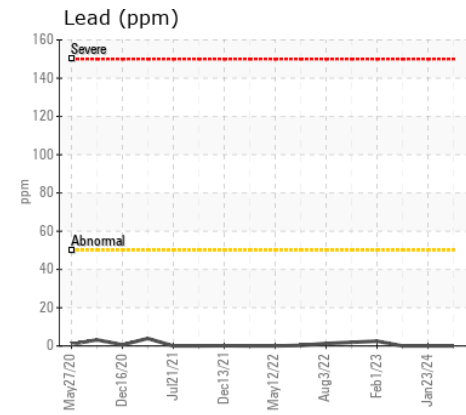
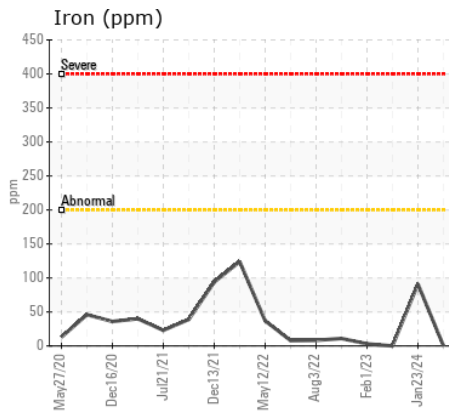
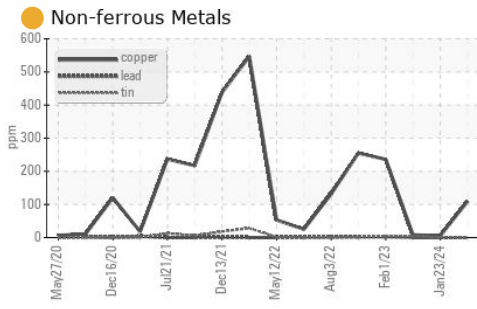
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | HPL0004476 | HPL0004110 | HPL0003164 |
| Sample Date | | Client Info | | 21 Apr 2024 | 23 Jan 2024 | 12 Oct 2023 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changed | Not Changed | Not Changed |
| Filter Changed | | Client Info | | Not Changed | Not Changed | Not Changed |
| Sample Status | | | | ATTENTION | ATTENTION | NORMAL |

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-------|
| Iron | ppm | ASTM D5185m | >200 | <1 | ● 91 | 0 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 7 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 0 | ▲ 24 | 0 |
| Lead | ppm | ASTM D5185m | >50 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >200 | ● 110 | 6 | 8 |
| Tin | ppm | ASTM D5185m | >10 | 0 | <1 | 3 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | LIGHT |

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >50 | 0 | 3 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 2 | 0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | 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 |

| | | | | | | |
|------------------|----------|-------------|--|--------------|-------|------|
| Sodium | ppm | ASTM D5185m | | 1 | 15 | 0 |
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 1 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | 1 | 0 |
| Magnesium | ppm | ASTM D5185m | | 0 | 5 | 0 |
| Calcium | ppm | ASTM D5185m | | 1 | 49 | 0 |
| Phosphorus | ppm | ASTM D5185m | | 669 | 598 | 477 |
| Zinc | ppm | ASTM D5185m | | 0 | ● 28 | <1 |
| Sulfur | ppm | ASTM D5185m | | 3010 | ● 899 | 1740 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.41 | 0.64 | 0.51 |
| Visc @ 40°C | cSt | ASTM D445 | | 1346 | ● 217 | 1479 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HPL0004476
Lab Number : 06161645
Unique Number : 10997068
Test Package : MOB 2

Received : 26 Apr 2024
Tested : 29 Apr 2024
Diagnosed : 30 Apr 2024 - Don Baldrige

STEPAN - MILLSDALE PLANT
 22500W. Millsdale Rd.
 Elwood, IL
 US 60421

Contact: Gregory Brooker
 gbrooker@stepan.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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