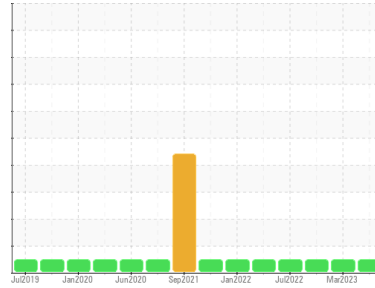




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
AGITATOR A-307.1

Component
Gearbox

Fluid
MOBIL DTE OIL EXTRA HEAVY (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | HPL0004016 | HPL0002170 | HPL0001549 |
| Sample Date | Client Info | | | 04 Oct 2023 | 08 Mar 2023 | 14 Oct 2022 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | Client Info | | | Not Changed | Not Changed | Not Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >200 | 36 | 40 | 38 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185m | >50 | 11 | 10 | 11 |
| Copper | ppm | ASTM D5185m | >200 | 5 | 6 | 6 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 3 | 3 | 4 |
| Barium | ppm | ASTM D5185m | | 1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 19 | 13 | 11 |
| Calcium | ppm | ASTM D5185m | | 67 | 63 | 60 |
| Phosphorus | ppm | ASTM D5185m | | 397 | 354 | 387 |
| Zinc | ppm | ASTM D5185m | | 362 | 328 | 319 |
| Sulfur | ppm | ASTM D5185m | | 14475 | 15348 | 16147 |

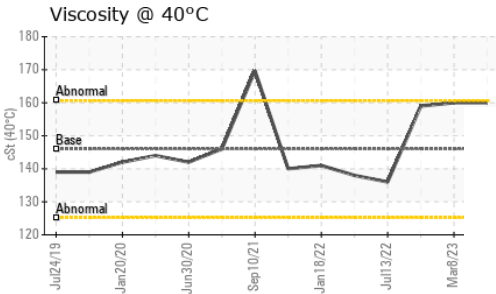
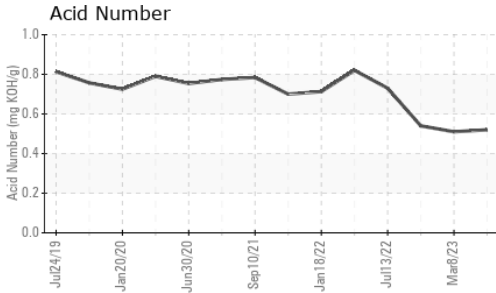
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185m | >50 | 4 | 3 | 4 |
| Sodium | ppm | ASTM D5185m | | 2 | 2 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | 17 | 17 | 15 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.52 | 0.51 | 0.54 |

| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | LIGHT | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | LIGHT |
| 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 |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |



OIL ANALYSIS REPORT



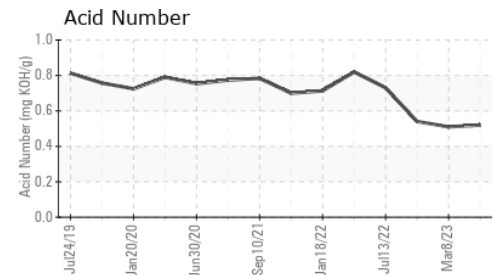
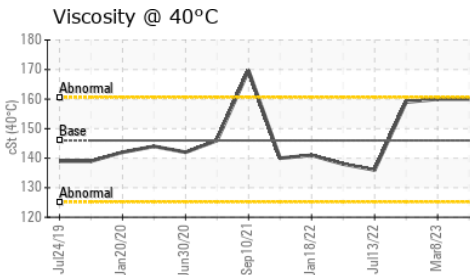
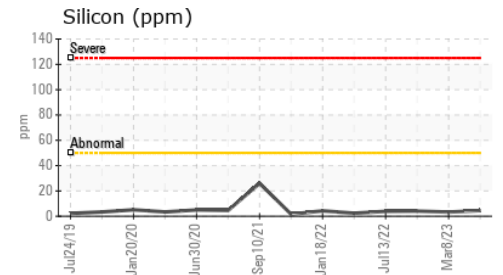
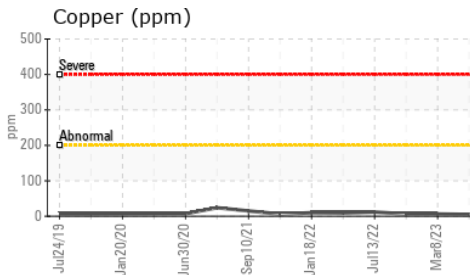
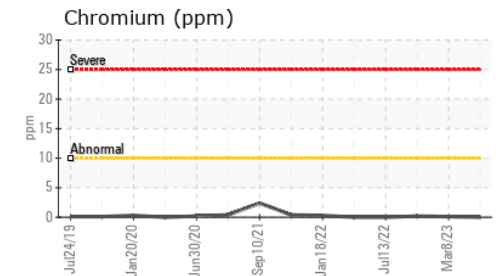
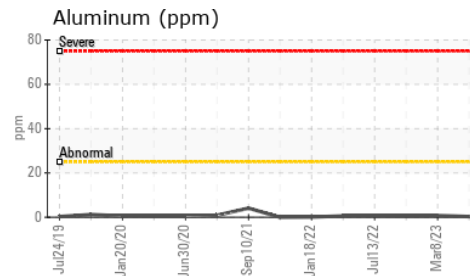
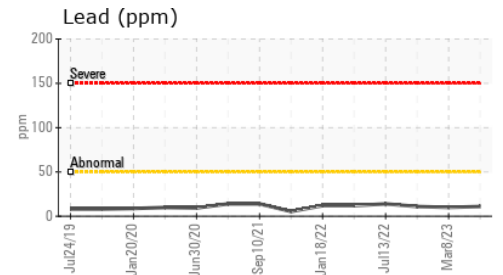
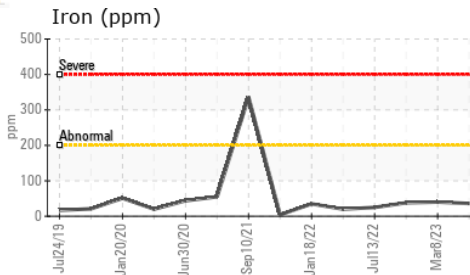
FLUID PROPERTIES

| method | limit/base | current | history1 | history2 |
|-------------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt ASTM D445 | 146 | 160 | 160 |

SAMPLE IMAGES

| method | limit/base | current | history1 | history2 |
|--------|------------|----------|----------|----------|
| Color | | no image | | no image |
| Bottom | | no image | | no image |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HPL0004016 **Received** : 18 Oct 2023
Lab Number : 05982533 **Diagnosed** : 20 Oct 2023
Unique Number : 10699828 **Diagnostician** : Jonathan Hester
Test Package : MOB 2

STEPAN - MILLSDALE PLANT
 22500W. Millsdale Rd.
 Elwood, IL
 US 60421
 Contact: Gregory Brooker
 gbrooker@stepan.com
 T: (815)774-5265
 F: (815)774-5427

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)