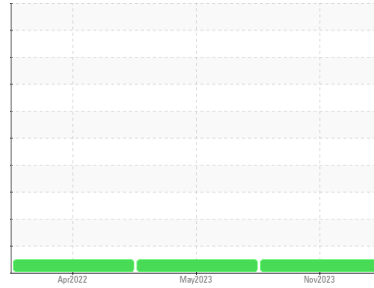




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
015-0068 - TROLLEY

Component
Gearbox

Fluid
SCHAEFFER 112 HTC OIL ISO 46 (--- GAL)

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | WC0868431 | WC0815161 | WC0548323 |
| Sample Date | Client Info | | 01 Nov 2023 | 19 May 2023 | 04 Apr 2022 |
| Machine Age | mths | Client Info | 0 | 0 | 0 |
| Oil Age | mths | 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 | 22 | 11 | 13 |
| Chromium | ppm | ASTM D5185m >10 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m >10 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m >25 | <1 | 0 | <1 |
| Lead | ppm | ASTM D5185m >50 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m >200 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185m >10 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | 0 | <1 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m 0 | <1 | 6 | 15 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 334 | 221 | 240 | 236 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 0 | <1 | <1 | 8 |
| Calcium | ppm | ASTM D5185m 54 | 42 | 35 | 50 |
| Phosphorus | ppm | ASTM D5185m 900 | 492 | 582 | 613 |
| Zinc | ppm | ASTM D5185m 880 | 515 | 547 | 530 |
| Sulfur | ppm | ASTM D5185m 2200 | 1625 | 2015 | 1861 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >50 | 11 | 10 | 11 |
| Sodium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 1 | 0 |

VISUAL

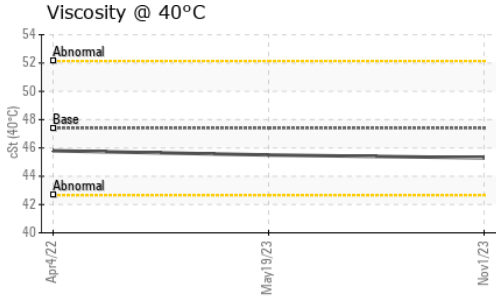
| | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|--------------|----------|----------|
| White Metal | scalar | *Visual NONE | NONE | NONE | MODER |
| Yellow Metal | scalar | *Visual NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual NONE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

FLUID PROPERTIES

| | method | limit/base | current | history1 | history2 |
|-------------|--------|----------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 47.4 | 45.3 | 45.5 | 45.8 |

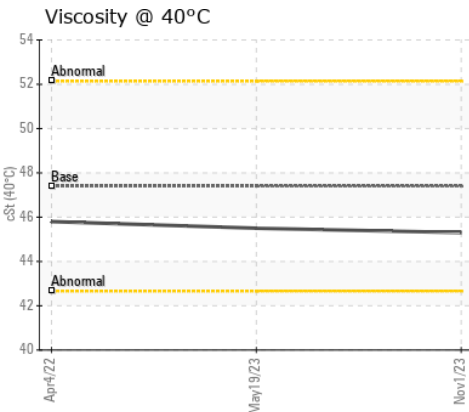
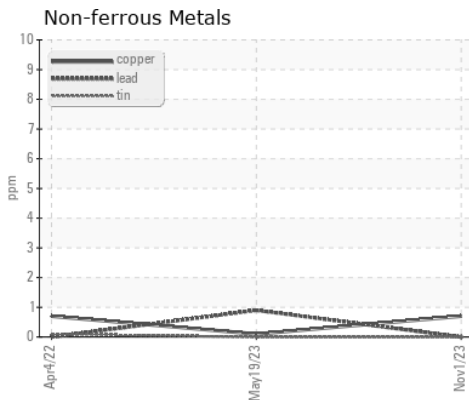
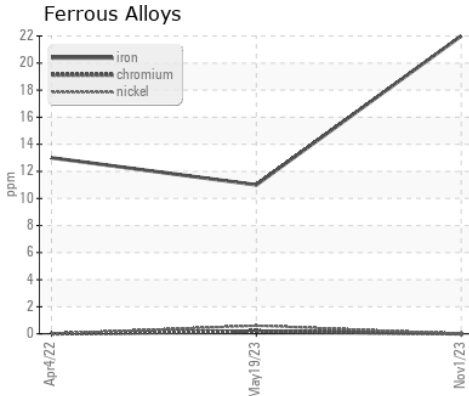


OIL ANALYSIS REPORT



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

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0868431 **Received** : 06 Nov 2023
Lab Number : 06000140 **Diagnosed** : 08 Nov 2023
Unique Number : 10728500 **Diagnostician** : Sean Felton
Test Package : CONST

SHIMMICK CONSTRUCTION
 5535 TRAILHEAD DRIVE
 CHATTANOOGA, TN
 US 37415
 Contact: DANIEL LISELLA
 daniel.lisella@shimmick.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)

T:
F: