



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

Machine Id
DALE ROBINS
Component
Starboard Reduction Gear
Fluid
CHEVRON URSA SUPER PLUS 40 (25 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | MW0059476 | MW0047402 | MW0036435 |
| Sample Date | | Client Info | | 16 Apr 2024 | 31 Jan 2024 | 11 Jul 2023 |
| Machine Age | hrs | Client Info | | 6944 | 6336 | 5824 |
| Oil Age | hrs | Client Info | | 1300 | 736 | 160 |
| Filter Age | hrs | Client Info | | 1300 | 736 | 160 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >150 | 13 | 12 | 12 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | <1 | 0 | 3 |
| Lead | ppm | ASTM D5185m | >100 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | 0 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

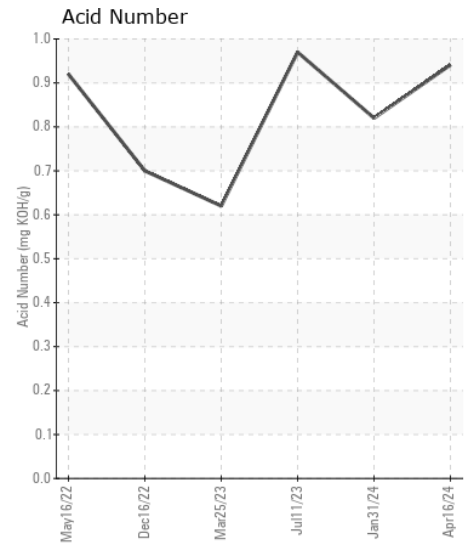
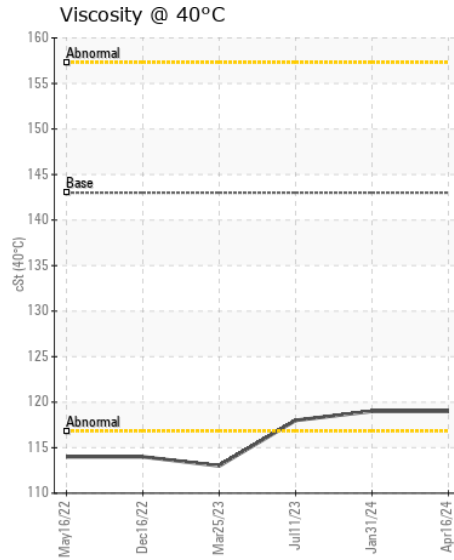
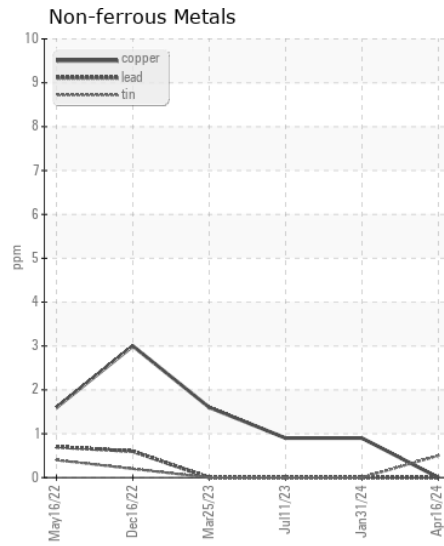
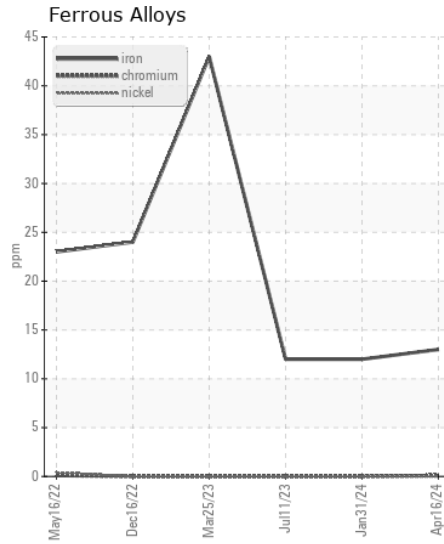
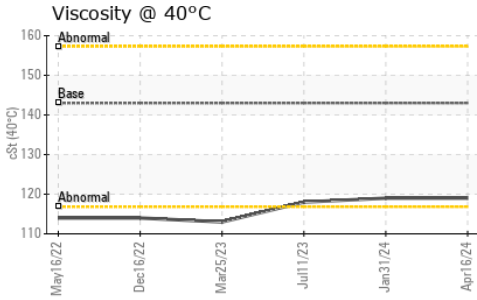
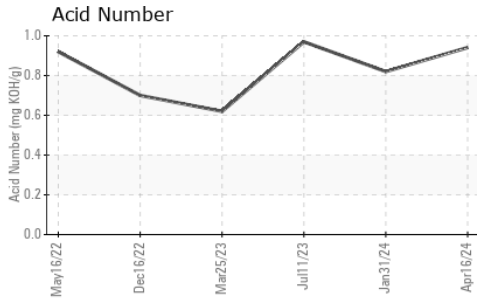
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >50 | 4 | 4 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Silt | scalar | *Visual | NONE | NONE | NONE | LIGHT |
| 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 3 | 2 | 0 |
| Boron | ppm | ASTM D5185m | | 259 | 253 | 305 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 30 | 30 | 31 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 70 | 65 | 75 |
| Calcium | ppm | ASTM D5185m | | 2315 | 2154 | 2326 |
| Phosphorus | ppm | ASTM D5185m | 1000 | 663 | 649 | 640 |
| Zinc | ppm | ASTM D5185m | 1090 | 712 | 721 | 743 |
| Sulfur | ppm | ASTM D5185m | | 3135 | 2722 | 3048 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.941 | 0.82 | 0.97 |
| Visc @ 40°C | cSt | ASTM D445 | 143 | 119 | 119 | 118 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW0059476

Lab Number : 06157825

Unique Number : 10993248

Test Package : MAR 2

Received : 23 Apr 2024

Tested : 24 Apr 2024

Diagnosed : 24 Apr 2024 - Wes Davis

OSAGE MARINE

750 E DAVIS ST

ST LOUIS, MO

US 63111

Contact: MIKE KESSLER

mike.kessler@osagemarine.com

T:

F:

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)