



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

Machine Id
EMILY DAVIS
Component
Port Main Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (150 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | MW0061896 | MW0061856 | MW0049410 |
| Sample Date | | Client Info | | 15 Jan 2024 | 30 Nov 2023 | 06 Nov 2023 |
| Machine Age | hrs | Client Info | | 4222 | 3302 | 2790 |
| Oil Age | hrs | Client Info | | 1203 | 283 | 1040 |
| Filter Age | hrs | Client Info | | 0 | 283 | 249 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | N/A | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >120 | 4 | 2 | 3 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 13 | 13 | 14 |
| Silver | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 1 | 1 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 1 | 0 |
| Copper | ppm | ASTM D5185m | >300 | 2 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

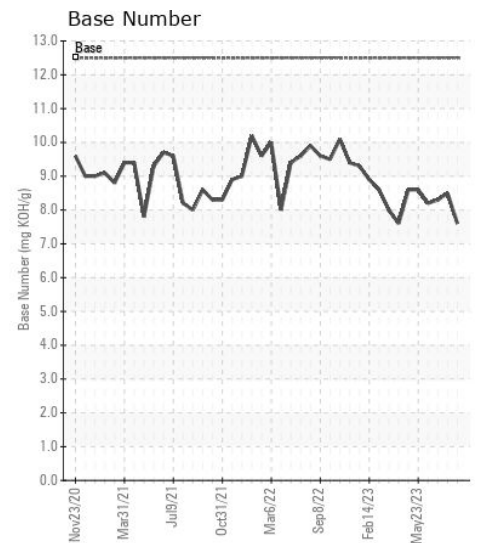
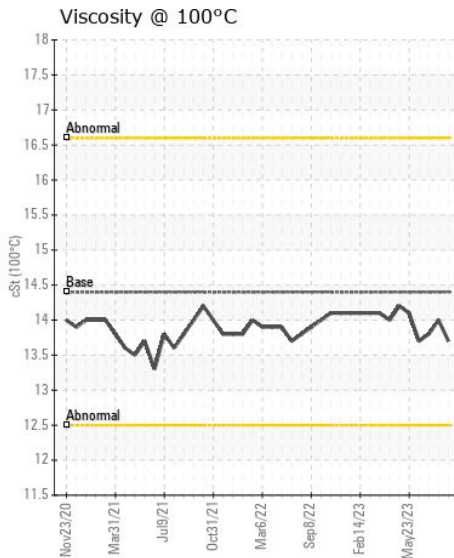
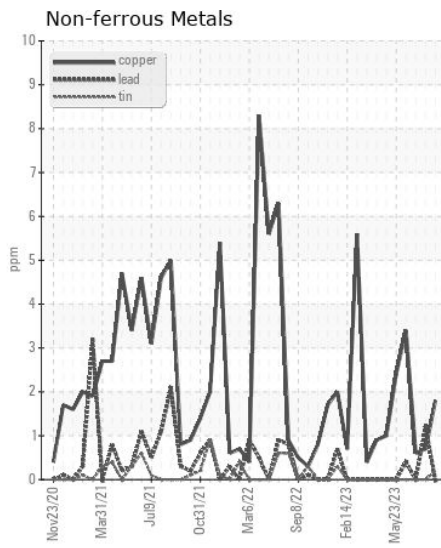
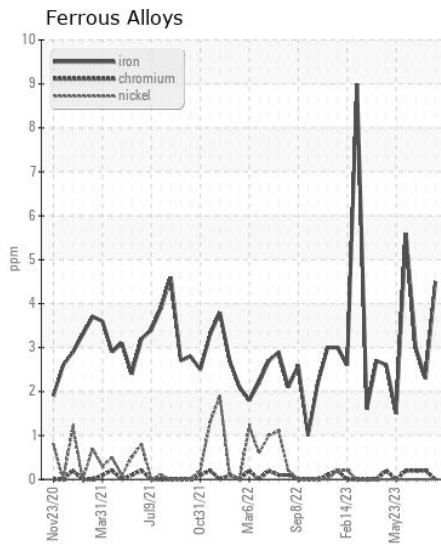
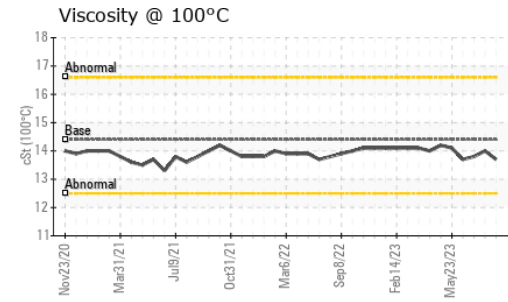
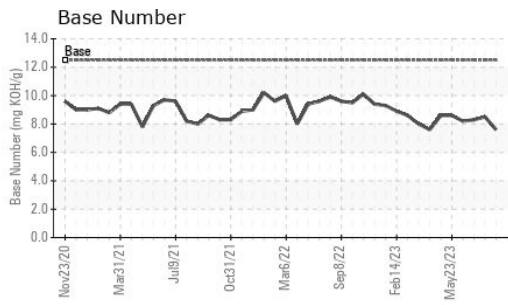
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 4 | 4 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 3 | 4 |
| Fuel | | WC Method | >4.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | | 0.1 | 0.1 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.4 | 7.7 | 7.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.7 | 18.3 | 18.4 |
| 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 2 | 5 | <1 |
| Boron | ppm | ASTM D5185m | 151 | 86 | 104 | 103 |
| Barium | ppm | ASTM D5185m | 0.4 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 250 | 27 | 33 | 31 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 0 | 684 | 700 | 664 |
| Calcium | ppm | ASTM D5185m | 2046 | 1503 | 1463 | 1418 |
| Phosphorus | ppm | ASTM D5185m | 1043 | 670 | 676 | 654 |
| Zinc | ppm | ASTM D5185m | 943 | 808 | 814 | 760 |
| Sulfur | ppm | ASTM D5185m | 5012 | 2993 | 3060 | 3212 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.8 | 12.7 | 12.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 12.5 | 7.6 | 8.5 | 8.3 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.7 | 14.0 | 13.8 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0061896 **Recieved** : 30 Jan 2024
Lab Number : 06074491 **Diagnosed** : 31 Jan 2024
Unique Number : 10856582 **Diagnostician** : Wes Davis
Test Package : MAR 2

MAGNOLIA MARINE TRANSPORT
 697 HAINING ROAD
 VICKSBURG, MS
 US 39183
 Contact: MMT MAINTENANCE PLANNERS
 mmtmaintenanceplanners@ergon.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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