



Machine Id  
**MISS ELLIE**  
Component  
**Starboard Reduction Gear**  
Fluid  
**CHEVRON DELO 400 LE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>MW0044342</b>   | MW0044338   | MW0027479   |
| Sample Date    |     | Client Info |           | <b>27 Mar 2024</b> | 02 Mar 2024 | 01 Feb 2024 |
| Machine Age    | hrs | Client Info |           | <b>39833</b>       | 39385       | 38913       |
| Oil Age        | hrs | Client Info |           | <b>912</b>         | 464         | 480         |
| Filter Age     | hrs | Client Info |           | <b>230</b>         | 464         | 480         |
| Oil Changed    |     | Client Info |           | <b>Not Changed</b> | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Not Changed</b> | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |       |
|--------------|--------|-------------|------|--------------|------|-------|
| Iron         | ppm    | ASTM D5185m | >150 | <b>5</b>     | 4    | 5     |
| Chromium     | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | <1    |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | <1    |
| Titanium     | ppm    | ASTM D5185m |      | <b>10</b>    | 10   | 5     |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0     |
| Aluminum     | ppm    | ASTM D5185m | >25  | <b>2</b>     | 2    | 1     |
| Lead         | ppm    | ASTM D5185m | >100 | <b>&lt;1</b> | 0    | <1    |
| Copper       | ppm    | ASTM D5185m | >50  | <b>1</b>     | <1   | 1     |
| Tin          | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | 0     |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0     |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | LIGHT |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE  |

**CONTAMINATION**

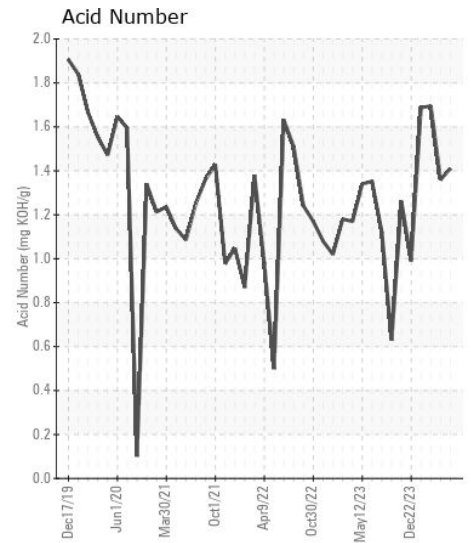
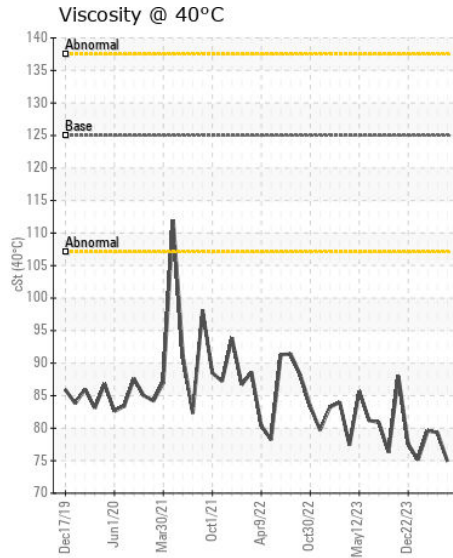
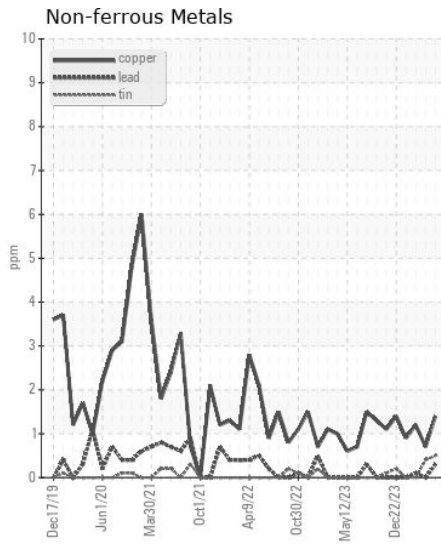
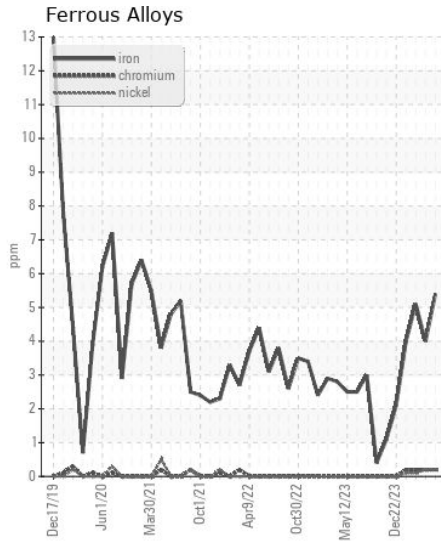
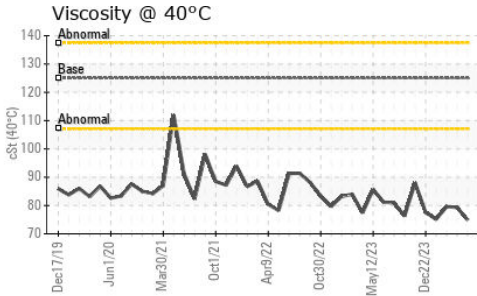
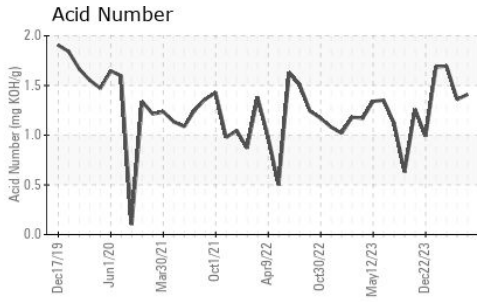
There is no indication of any contamination in the oil.

|                  |        |             |       |              |       |       |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon          | ppm    | ASTM D5185m | >50   | <b>4</b>     | 5     | 4     |
| Potassium        | ppm    | ASTM D5185m | >20   | <b>4</b>     | 3     | 2     |
| Water            |        | WC Method   | >0.1  | <b>NEG</b>   | NEG   | NEG   |
| Silt             | scalar | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Debris           | scalar | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Sand/Dirt        | scalar | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Appearance       | scalar | *Visual     | NORML | <b>NORML</b> | NORML | NORML |
| Odor             | scalar | *Visual     | NORML | <b>NORML</b> | NORML | NORML |
| Emulsified Water | scalar | *Visual     | >0.1  | <b>NEG</b>   | 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 |      | <b>0</b>     | 2    | <1    |
| Boron            | ppm      | ASTM D5185m |      | <b>253</b>   | 237  | 236   |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 6     |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>74</b>    | 71   | 76    |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0     |
| Magnesium        | ppm      | ASTM D5185m |      | <b>661</b>   | 706  | 549   |
| Calcium          | ppm      | ASTM D5185m |      | <b>1520</b>  | 1574 | 1200  |
| Phosphorus       | ppm      | ASTM D5185m | 1200 | <b>692</b>   | 776  | 631   |
| Zinc             | ppm      | ASTM D5185m | 1300 | <b>798</b>   | 859  | 717   |
| Sulfur           | ppm      | ASTM D5185m | 3200 | <b>3045</b>  | 3291 | 2454  |
| Acid Number (AN) | mg KOH/g | ASTM D8045  |      | <b>1.41</b>  | 1.36 | 1.695 |
| Visc @ 40°C      | cSt      | ASTM D445   | 125  | <b>74.9</b>  | 79.3 | 79.6  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0044342  
**Lab Number** : 06177836  
**Unique Number** : 11029162  
**Test Package** : MAR 2

**Received** : 13 May 2024  
**Tested** : 14 May 2024  
**Diagnosed** : 15 May 2024 - Angela Borella

**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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