



OIL ANALYSIS REPORT

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

Area  
**GUAY SON [CONHER]**  
 Machine Id  
**MADE IN MEXICO IBACO BM NAUTICO 4**  
 Component  
**Auxiliary Engine**  
 Fluid  
**XTRA REV 15W40 (8 LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>KL0013477</b>   | KL0013340   | KL0012836   |
| Sample Date    |     | Client Info |           | <b>20 Jan 2024</b> | 25 Oct 2023 | 20 Sep 2023 |
| Machine Age    | hrs | Client Info |           | <b>0</b>           | 3835        | 2891        |
| Oil Age        | hrs | Client Info |           | <b>250</b>         | 214         | 24          |
| Filter Age     | hrs | Client Info |           | <b>250</b>         | 214         | 24          |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>9</b>     | 10   | 13   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 0    | <1   |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | <1   |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>2</b>     | <1   | 4    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>1</b>     | <1   | 2    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>0</b>     | 0    | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

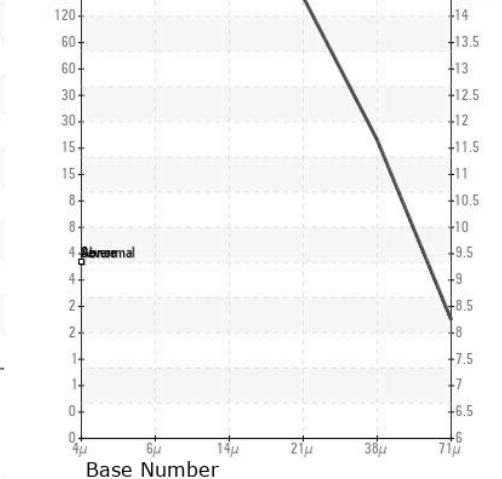
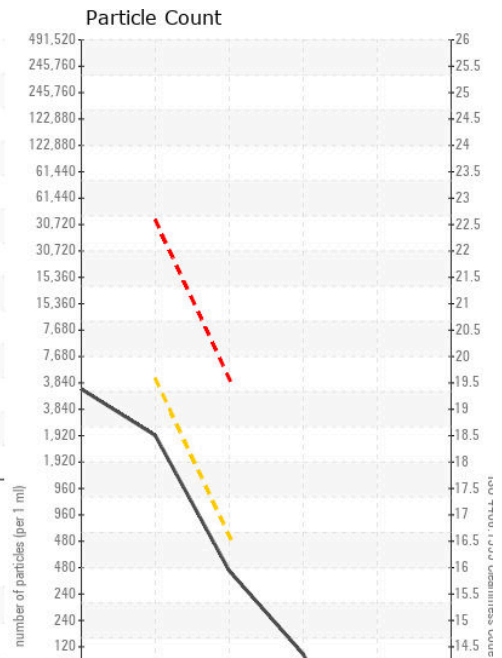
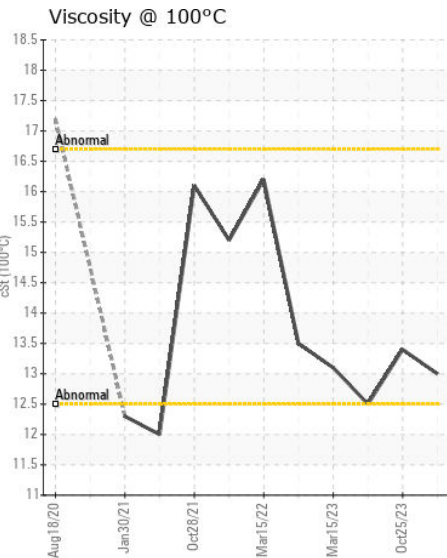
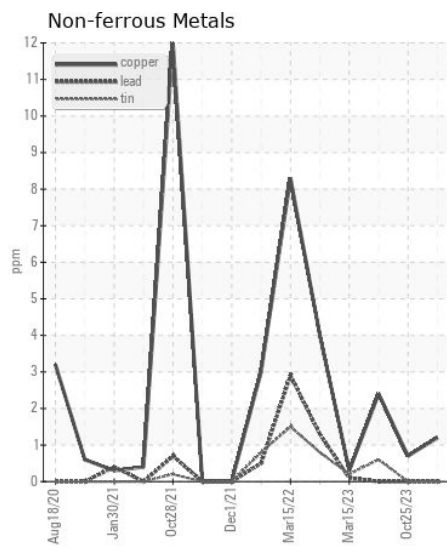
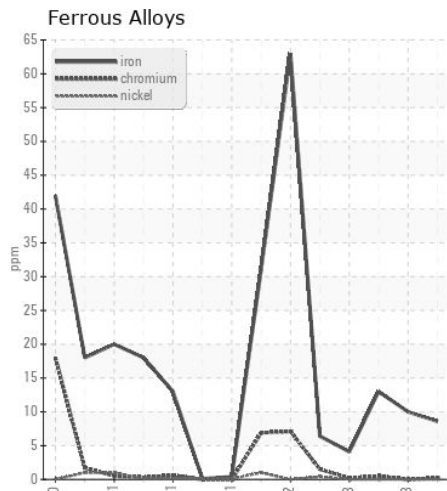
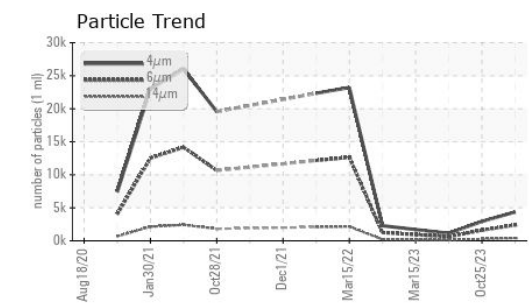
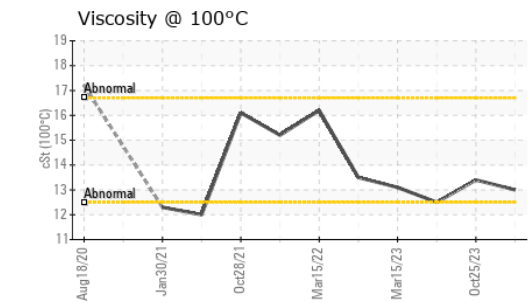
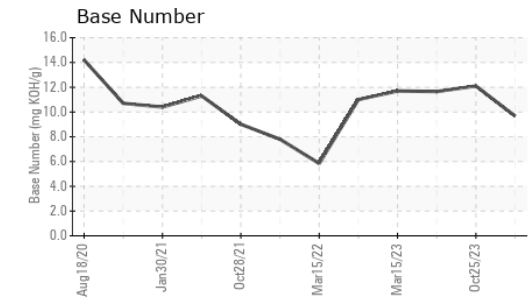
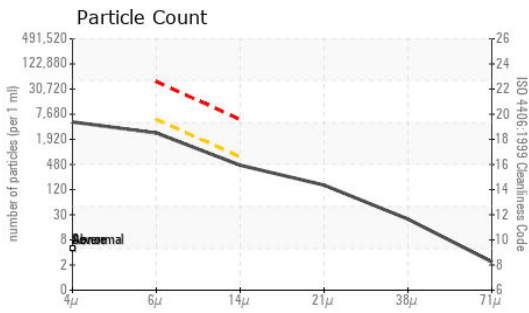
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

|                  |          |              |        |                |       |       |
|------------------|----------|--------------|--------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m  | >25    | <b>3</b>       | 3     | 5     |
| Potassium        | ppm      | ASTM D5185m  | >20    | <b>5</b>       | 0     | 0     |
| Fuel             |          | WC Method    | >4.0   | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method    | >0.1   | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method    |        | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844  |        | <b>0.1</b>     | 0.9   | 0.1   |
| Nitration        | Abs/cm   | *ASTM D7624  | >20    | <b>7.9</b>     | 12.3  | 7.8   |
| Sulfation        | Abs/.1mm | *ASTM D7415  | >30    | <b>22.7</b>    | 21.6  | 18.5  |
| Particles >4µm   |          | ASTM D7647   |        | <b>4367</b>    | 2940  | 1140  |
| Particles >6µm   |          | ASTM D7647   | >5000  | <b>2379</b>    | 1602  | 621   |
| Particles >14µm  |          | ASTM D7647   | >640   | <b>405</b>     | 273   | 106   |
| Particles >21µm  |          | ASTM D7647   | >160   | <b>136</b>     | 92    | 36    |
| Particles >38µm  |          | ASTM D7647   | >40    | <b>21</b>      | 14    | 5     |
| Particles >71µm  |          | ASTM D7647   | >10    | <b>2</b>       | 1     | 1     |
| Oil Cleanliness  |          | ISO 4406 (c) | >19/16 | <b>18/16</b>   | 18/15 | 16/14 |
| 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 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 |     | <b>0</b>     | 1     | 2     |
| Boron            | ppm      | ASTM D5185m |     | <b>49</b>    | 0     | 0     |
| Barium           | ppm      | ASTM D5185m |     | <b>&lt;1</b> | 0     | 0     |
| Molybdenum       | ppm      | ASTM D5185m |     | <b>43</b>    | 0     | <1    |
| Manganese        | ppm      | ASTM D5185m |     | <b>0</b>     | 0     | <1    |
| Magnesium        | ppm      | ASTM D5185m |     | <b>498</b>   | 20    | 18    |
| Calcium          | ppm      | ASTM D5185m |     | <b>1730</b>  | 3689  | 3889  |
| Phosphorus       | ppm      | ASTM D5185m |     | <b>990</b>   | 939   | 980   |
| Zinc             | ppm      | ASTM D5185m |     | <b>1145</b>  | 1138  | 1225  |
| Sulfur           | ppm      | ASTM D5185m |     | <b>3006</b>  | 4309  | 5070  |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25 | <b>22.6</b>  | 17.5  | 13.4  |
| Base Number (BN) | mg KOH/g | ASTM D2896  |     | <b>9.67</b>  | 12.10 | 11.65 |
| Visc @ 100°C     | cSt      | ASTM D445   |     | <b>13.0</b>  | 13.4  | 12.5  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0013477 **Received** : 30 Jan 2024  
**Lab Number** : 06075002 **Diagnosed** : 02 Feb 2024  
**Unique Number** : 10857093 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

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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