



OIL ANALYSIS REPORT

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

Machine Id  
**MRC-326**  
 Component  
**Natural Gas Engine**  
 Fluid  
**TULCO LUBSOIL GEO XL LOW ASH 40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>TO60001990</b>  | TO60001932  | TO60001710  |
| Sample Date    |     | Client Info |           | <b>10 Jan 2024</b> | 02 Dec 2023 | 05 Nov 2023 |
| Machine Age    | hrs | Client Info |           | <b>5440</b>        | 4230        | 4418        |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | Not Changd  | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | Not Changd  | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >50  | <b>7</b>     | 6    | 5    |
| Chromium     | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >9   | <b>1</b>     | <1   | <1   |
| Lead         | ppm    | ASTM D5185m | >30  | <b>24</b>    | 20   | 14   |
| Copper       | ppm    | ASTM D5185m | >35  | <b>3</b>     | 3    | 3    |
| Tin          | ppm    | ASTM D5185m | >4   | <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**

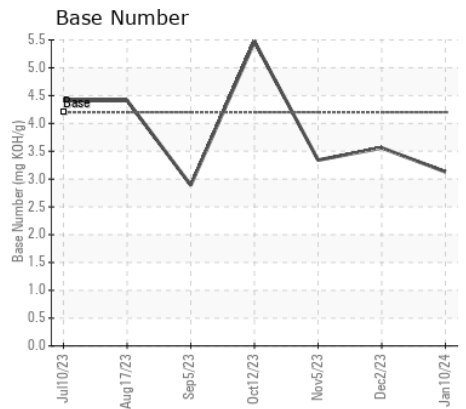
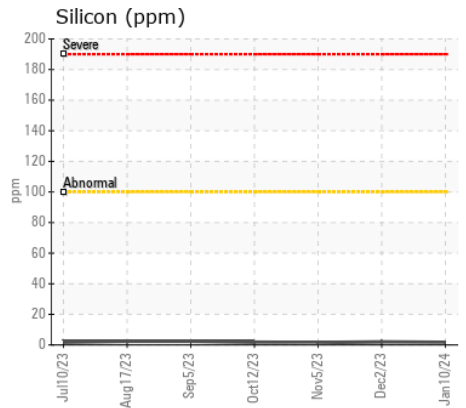
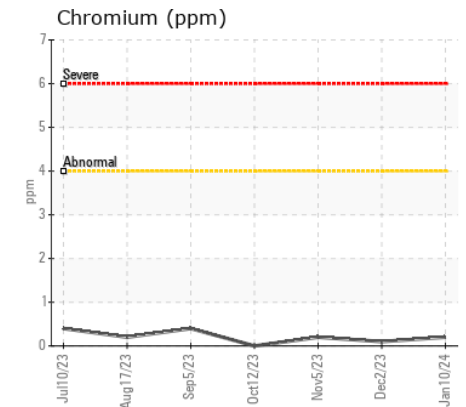
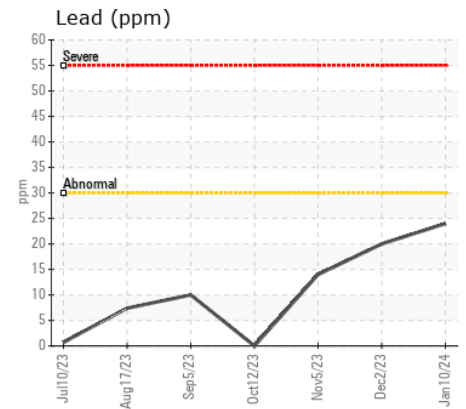
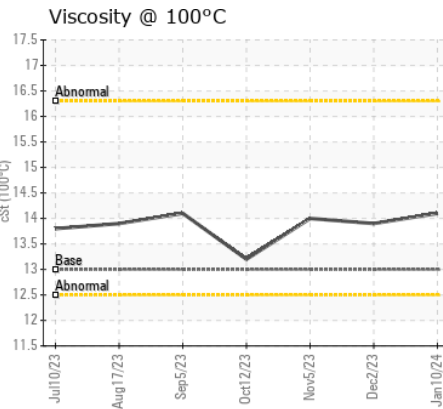
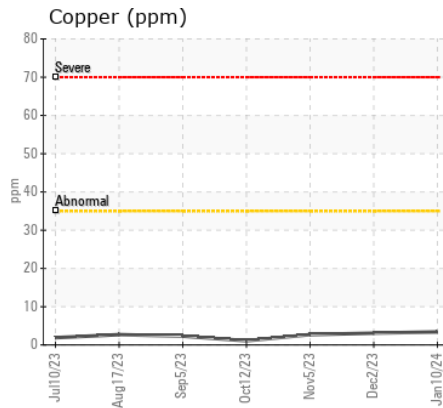
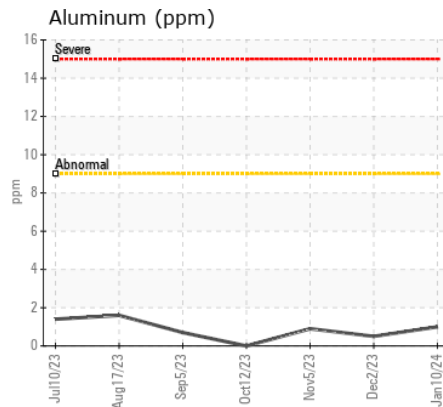
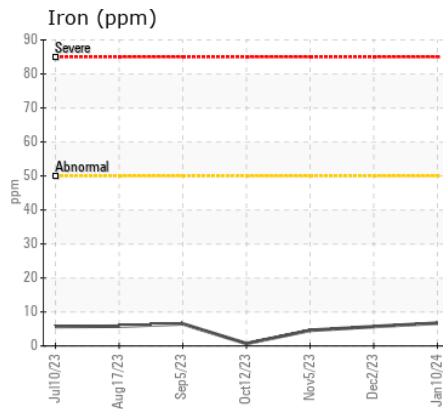
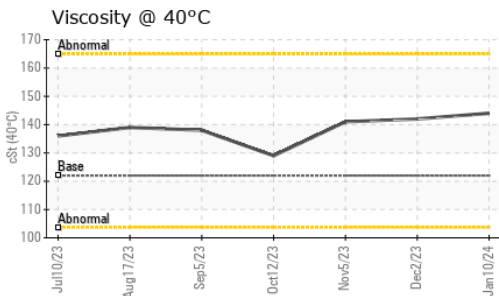
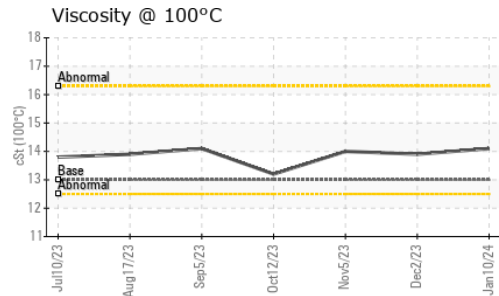
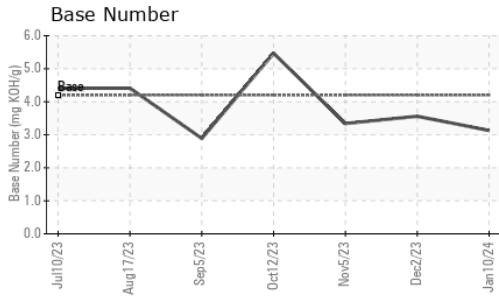
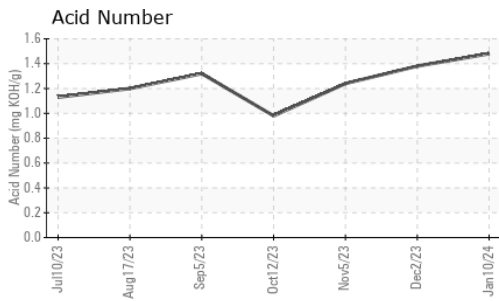
There is no indication of any contamination in the oil.

|                  |          |             |       |              |       |       |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >+100 | <b>2</b>     | 2     | 2     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>1</b>     | 0     | 0     |
| Water            |          | WC Method   | >0.1  | <b>NEG</b>   | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 |       | <b>0</b>     | 0     | 0     |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.7</b>   | 9.5   | 9.5   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.4</b>  | 18.9  | 19.1  |
| 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

|                      |          |             |      |              |      |      |
|----------------------|----------|-------------|------|--------------|------|------|
| Sodium               | ppm      | ASTM D5185m |      | <b>2</b>     | 2    | 2    |
| Boron                | ppm      | ASTM D5185m | 100  | <b>72</b>    | 80   | 70   |
| Barium               | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| Molybdenum           | ppm      | ASTM D5185m | 1    | <b>1</b>     | <1   | <1   |
| Manganese            | ppm      | ASTM D5185m |      | <b>0</b>     | <1   | <1   |
| Magnesium            | ppm      | ASTM D5185m | 10   | <b>11</b>    | 10   | 11   |
| Calcium              | ppm      | ASTM D5185m | 1150 | <b>1376</b>  | 1440 | 1240 |
| Phosphorus           | ppm      | ASTM D5185m | 290  | <b>280</b>   | 298  | 198  |
| Zinc                 | ppm      | ASTM D5185m | 272  | <b>319</b>   | 330  | 291  |
| Sulfur               | ppm      | ASTM D5185m | 1900 | <b>1537</b>  | 1456 | 1241 |
| Oxidation            | Abs/.1mm | *ASTM D7414 | >25  | <b>20.8</b>  | 20.3 | 20.2 |
| Acid Number (AN)     | mg KOH/g | ASTM D8045  |      | <b>1.48</b>  | 1.38 | 1.24 |
| Base Number (BN)     | mg KOH/g | ASTM D2896  | 4.2  | <b>3.13</b>  | 3.56 | 3.34 |
| Visc @ 40°C          | cSt      | ASTM D445   | 122  | <b>144</b>   | 142  | 141  |
| Visc @ 100°C         | cSt      | ASTM D445   | 13   | <b>14.1</b>  | 13.9 | 14.0 |
| Viscosity Index (VI) | Scale    | ASTM D2270  | 103  | <b>94</b>    | 93   | 95   |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO60001990 **Received** : 17 Jan 2024  
**Lab Number** : 06063765 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10835147 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: KV40, VI )

**MIDLAND - EOG RESOURCES INC.**  
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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)