



# OIL ANALYSIS REPORT

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

Area  
**Kerr**  
 Machine Id  
**KER03 Governor (S/N 304258)**  
 Component  
**Tank Hydraulic System**  
 Fluid  
**ISO 68 (1166 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM  | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|------|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |      | Client Info |           | <b>WC0897720</b>   | WC0483334   | WC0483335   |
| Sample Date    |      | Client Info |           | <b>14 May 2024</b> | 21 Jan 2024 | 07 Dec 2023 |
| Machine Age    | mths | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Age        | mths | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | mths | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |      | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Filter Changed |      | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |      |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >20  | <b>3</b>     | 2    | 2    |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| Nickel       | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 0    | 0    |
| Lead         | ppm    | ASTM D5185m | >20  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 0    | 0    |
| Tin          | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 0    | 0    |
| 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

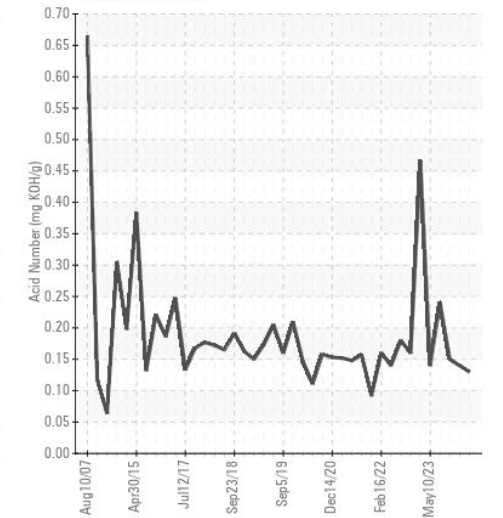
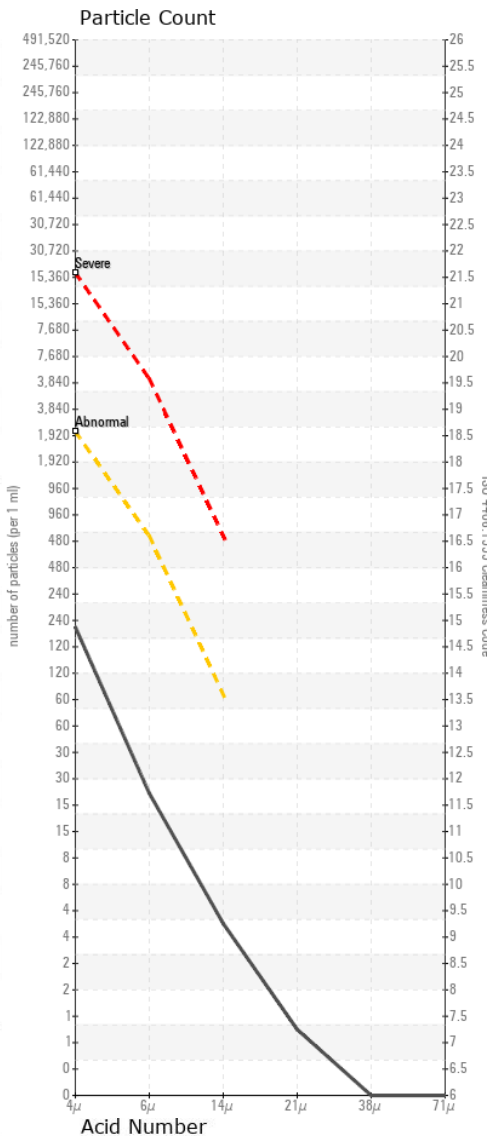
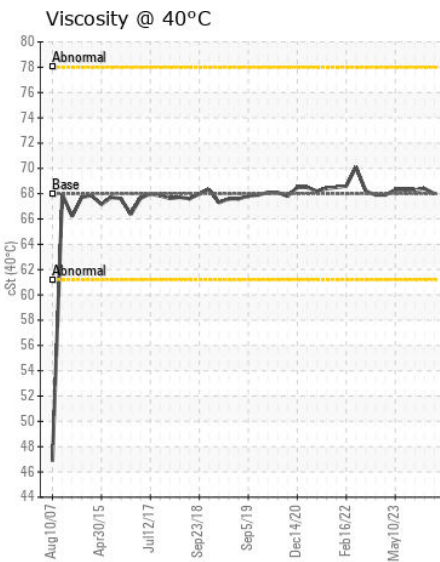
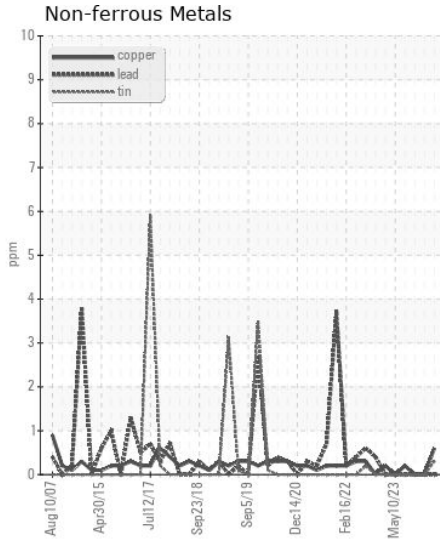
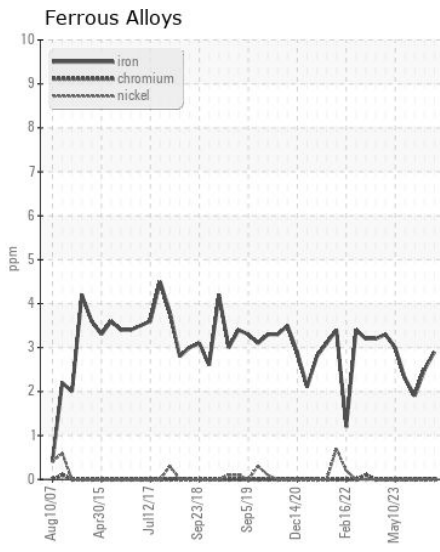
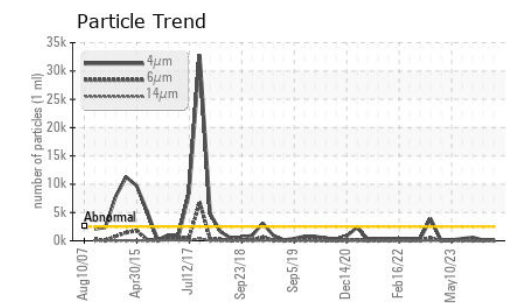
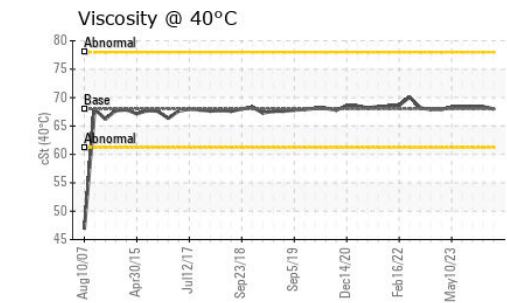
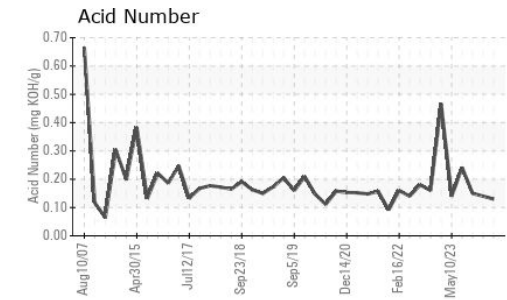
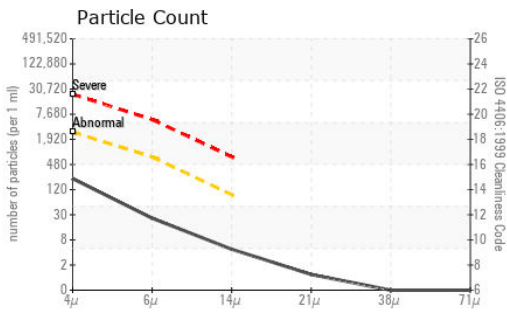
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

|                  |        |              |           |                |          |          |
|------------------|--------|--------------|-----------|----------------|----------|----------|
| Silicon          | ppm    | ASTM D5185m  | >15       | <b>&lt;1</b>   | 0        | 0        |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>2</b>       | 0        | 0        |
| Water            | %      | ASTM D6304   | >0.05     | <b>NEG</b>     | NEG      | NEG      |
| Particles >4µm   |        | ASTM D7647   | >2500     | <b>194</b>     | 120      | 617      |
| Particles >6µm   |        | ASTM D7647   | >640      | <b>22</b>      | 36       | 73       |
| Particles >14µm  |        | ASTM D7647   | >80       | <b>4</b>       | 5        | 6        |
| Particles >21µm  |        | ASTM D7647   | >20       | <b>1</b>       | 2        | 1        |
| Particles >38µm  |        | ASTM D7647   | >4        | <b>0</b>       | 0        | 0        |
| Particles >71µm  |        | ASTM D7647   | >3        | <b>0</b>       | 0        | 0        |
| Oil Cleanliness  |        | ISO 4406 (c) | >18/16/13 | <b>15/12/9</b> | 14/12/10 | 16/13/10 |
| 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      | >0.05     | <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>1</b>     | 2    | 0    |
| Boron            | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| Magnesium        | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 2    |
| Calcium          | ppm      | ASTM D5185m |      | <b>102</b>   | 95   | 113  |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>156</b>   | 125  | 167  |
| Zinc             | ppm      | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Sulfur           | ppm      | ASTM D5185m |      | <b>1414</b>  | 981  | 1408 |
| Acid Number (AN) | mg KOH/g | ASTM D8045  |      | <b>0.13</b>  | 0.14 | 0.15 |
| Visc @ 40°C      | cSt      | ASTM D445   | 68.0 | <b>68.0</b>  | 68.4 | 68.3 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0897720  
**Lab Number** : 06187636  
**Unique Number** : 11044388  
**Test Package** : PLANT

**Received** : 22 May 2024  
**Tested** : 24 May 2024  
**Diagnosed** : 24 May 2024 - Don Baldrige

**ENERGY KEEPERS INC**  
 110 MAIN ST, SUITE 304  
 POLSON, MT  
 US 59860

Contact: GARY PETERSON  
 gary.peterson@energykeepersinc.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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