



|                 |                 |
|-----------------|-----------------|
| WEAR            | <b>NORMAL</b>   |
| CONTAMINATION   | <b>ABNORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b>   |

Machine Id  
**GERALD SHREVE**  
Component  
**Steering**  
Fluid  
**CHEVRON RANDO HD 68 (163 GAL)**

**RECOMMENDATION**

We recommend you service the filters on this component. Resample at the next service interval to monitor.

| Test           | UOM  | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|------|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |      | Client Info |           | <b>MW0066699</b>   | MW0066680   | MW0050337   |
| Sample Date    |      | Client Info |           | <b>01 Jul 2024</b> | 27 Feb 2024 | 30 Jan 2024 |
| 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         | Not Changd  |
| Filter Changed |      | Client Info |           | <b>N/A</b>         | N/A         | Not Changd  |
| Sample Status  |      |             |           | <b>ABNORMAL</b>    | ABNORMAL    | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|              |        |             |      |             |      |      |
|--------------|--------|-------------|------|-------------|------|------|
| Iron         | ppm    | ASTM D5185m | >50  | <b>28</b>   | 32   | 28   |
| Chromium     | ppm    | ASTM D5185m | >15  | <b>2</b>    | 3    | 2    |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>0</b>    | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>    | <1   | 0    |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>    | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >5   | <b>0</b>    | 2    | 0    |
| Lead         | ppm    | ASTM D5185m | >10  | <b>3</b>    | 4    | 3    |
| Copper       | ppm    | ASTM D5185m | >50  | <b>6</b>    | 4    | 4    |
| Tin          | ppm    | ASTM D5185m | >5   | <b>0</b>    | <1   | 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**

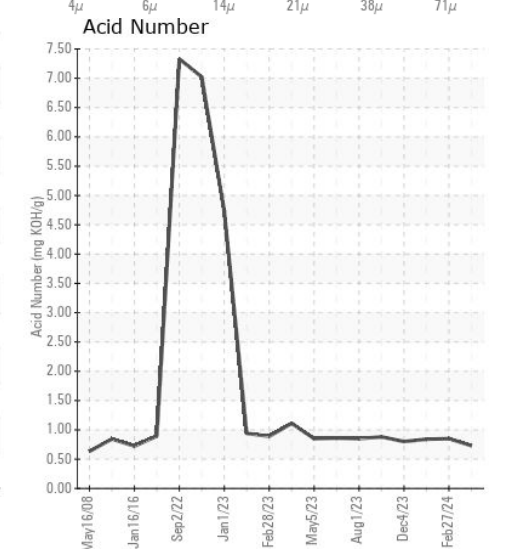
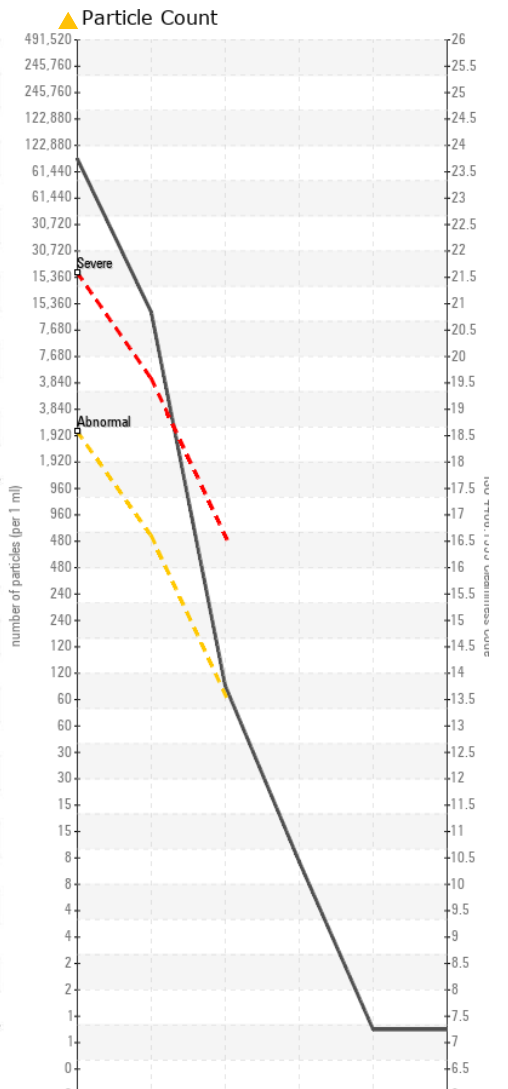
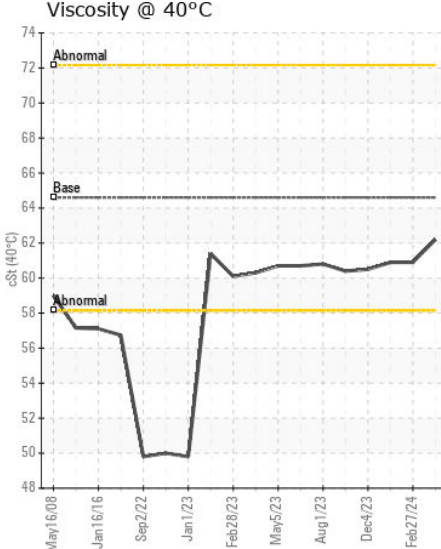
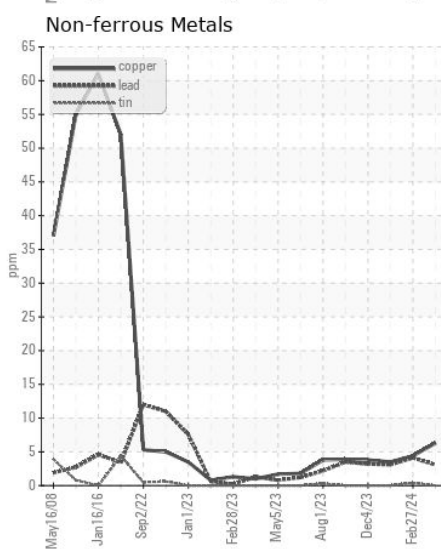
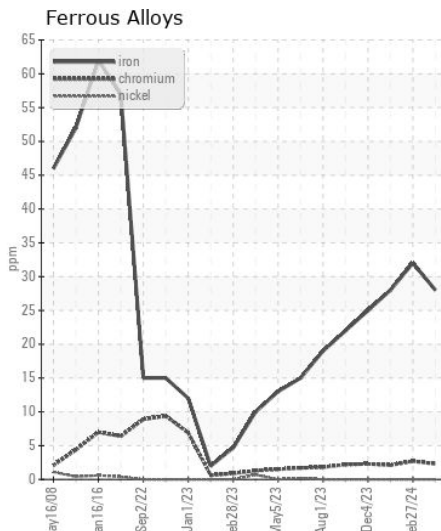
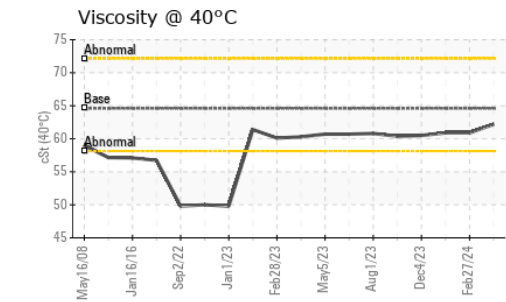
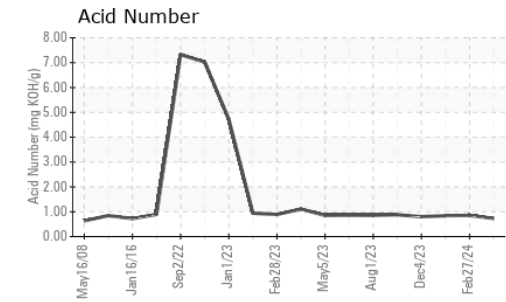
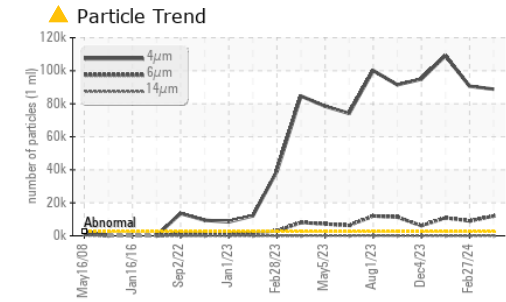
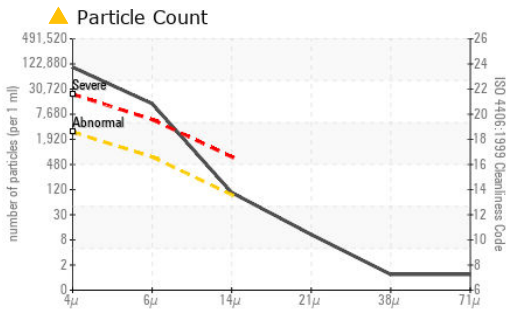
There is a high amount of particulates present in the fluid.

|                  |        |              |           |                   |            |            |
|------------------|--------|--------------|-----------|-------------------|------------|------------|
| Silicon          | ppm    | ASTM D5185m  | >15       | <b>&lt;1</b>      | <1         | <1         |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>0</b>          | 1          | 0          |
| Water            |        | WC Method    | >0.2      | <b>NEG</b>        | NEG        | NEG        |
| Particles >4µm   |        | ASTM D7647   | >2500     | <b>▲ 88801</b>    | ▲ 90626    | ▲ 109081   |
| Particles >6µm   |        | ASTM D7647   | >640      | <b>▲ 11931</b>    | ▲ 9047     | ▲ 10908    |
| Particles >14µm  |        | ASTM D7647   | >80       | <b>▲ 90</b>       | 46         | 67         |
| Particles >21µm  |        | ASTM D7647   | >20       | <b>9</b>          | 8          | 8          |
| Particles >38µm  |        | ASTM D7647   | >4        | <b>1</b>          | 1          | 0          |
| Particles >71µm  |        | ASTM D7647   | >3        | <b>1</b>          | 0          | 0          |
| Oil Cleanliness  |        | ISO 4406 (c) | >18/16/13 | <b>▲ 24/21/14</b> | ▲ 24/20/13 | ▲ 24/21/13 |
| 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      | >0.2      | <b>NEG</b>        | NEG        | NEG        |

**FLUID CONDITION**

The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>&lt;1</b> | 0    | <1   |
| 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>0</b>     | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| Calcium          | ppm      | ASTM D5185m |      | <b>28</b>    | 33   | 30   |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>355</b>   | 337  | 360  |
| Zinc             | ppm      | ASTM D5185m |      | <b>343</b>   | 310  | 319  |
| Sulfur           | ppm      | ASTM D5185m |      | <b>964</b>   | 862  | 857  |
| Acid Number (AN) | mg KOH/g | ASTM D8045  |      | <b>0.73</b>  | 0.85 | 0.84 |
| Visc @ 40°C      | cSt      | ASTM D445   | 64.6 | <b>62.2</b>  | 60.9 | 60.9 |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0066699  
**Lab Number** : 06239108  
**Unique Number** : 11127942  
**Test Package** : MAR 2 ( Additional Tests: PrtCount )

**Received** : 17 Jul 2024  
**Tested** : 18 Jul 2024  
**Diagnosed** : 19 Jul 2024 - Don Baldrige

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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)