



PERFORMANCE  
UNDER  
PRESSURE

OIL ANALYSIS REPORT

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

Area  
**TM 5**  
Machine Id  
**TM 5 HYDRAULIC LUBE TANK**  
Component  
**Tank Hydraulic System**  
Fluid  
**AW HYDRAULIC OIL ISO 68 (--- GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>RP0038116</b>   | RP0023603   | RP05263960  |
| Sample Date    |     | Client Info |           | <b>29 Jan 2024</b> | 24 May 2023 | 25 May 2021 |
| Machine Age    | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| 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>         | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>SEVERE</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

| PQ           | UOM    | Method      | Limit/Abn | Current      | History1 | History2 |
|--------------|--------|-------------|-----------|--------------|----------|----------|
| PQ           |        | ASTM D8184  |           | <b>15</b>    | 15       | ---      |
| Iron         | ppm    | ASTM D5185m | >20       | <b>&lt;1</b> | 0        | 0        |
| Chromium     | ppm    | ASTM D5185m | >20       | <b>&lt;1</b> | 0        | 0        |
| Nickel       | ppm    | ASTM D5185m | >20       | <b>0</b>     | 0        | <1       |
| Titanium     | ppm    | ASTM D5185m |           | <b>&lt;1</b> | 0        | 0        |
| Silver       | ppm    | ASTM D5185m |           | <b>0</b>     | 0        | 0        |
| Aluminum     | ppm    | ASTM D5185m | >20       | <b>2</b>     | <1       | 0        |
| Lead         | ppm    | ASTM D5185m | >20       | <b>&lt;1</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**

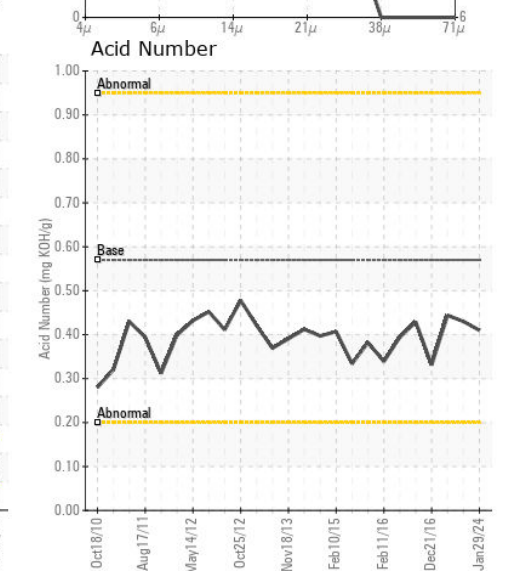
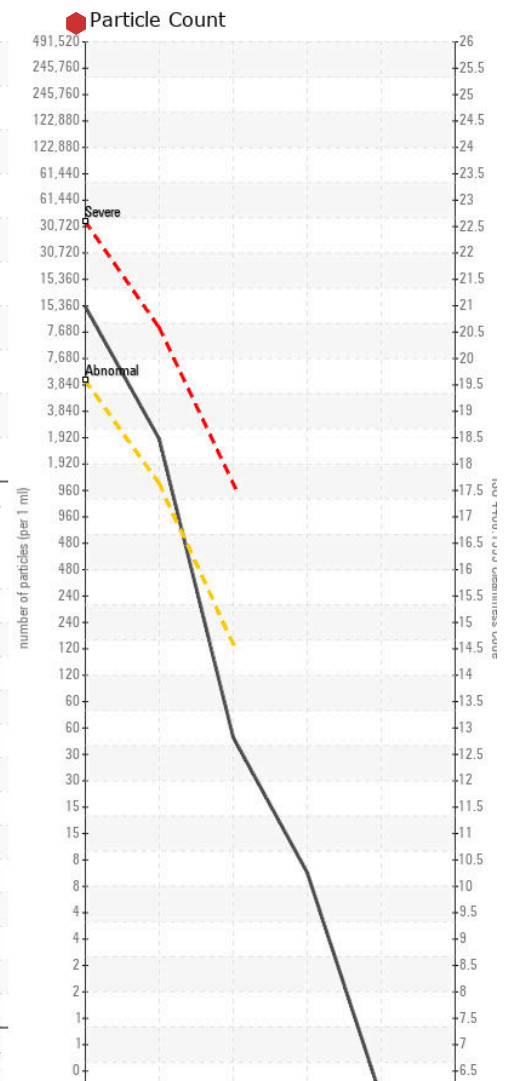
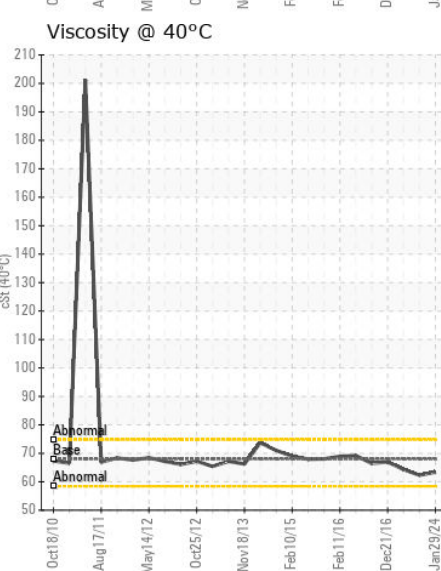
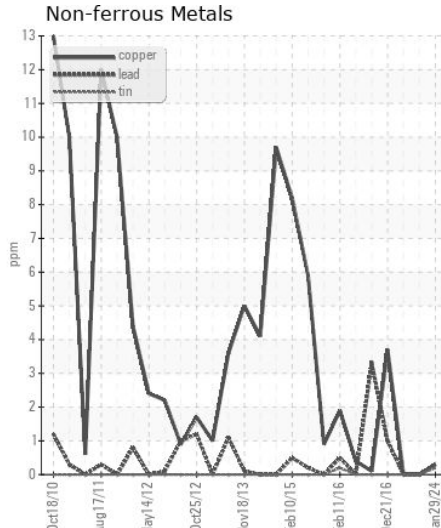
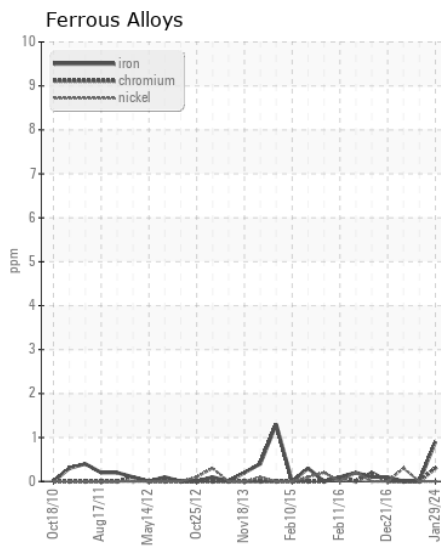
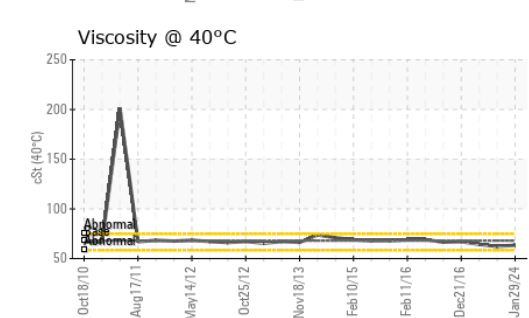
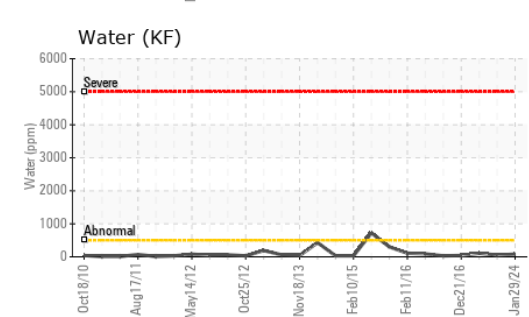
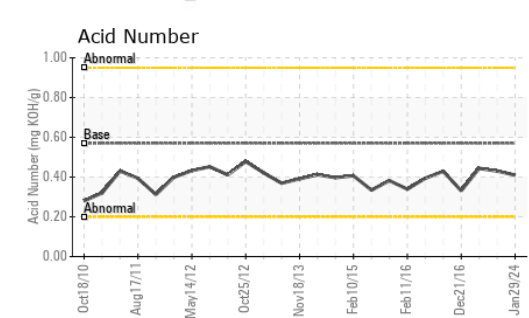
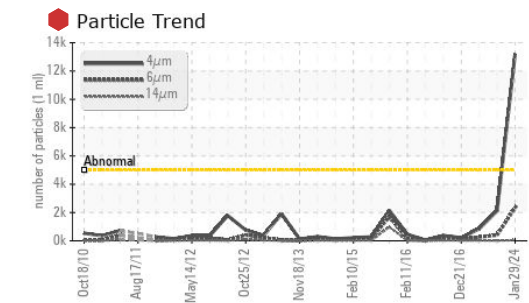
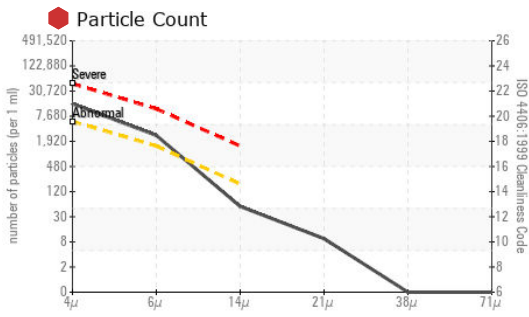
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

|                  |        |              |           |                 |          |          |
|------------------|--------|--------------|-----------|-----------------|----------|----------|
| Silicon          | ppm    | ASTM D5185m  | >15       | <b>0</b>        | 0        | <1       |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>2</b>        | 0        | 0        |
| Water            | %      | ASTM D6304   | >0.05     | <b>0.008</b>    | 0.005    | 0.010    |
| ppm Water        | ppm    | ASTM D6304   | >500      | <b>81</b>       | 54.2     | 107.9    |
| Particles >4µm   |        | ASTM D7647   | >5000     | <b>13192</b>    | 2127     | 849      |
| Particles >6µm   |        | ASTM D7647   | >1300     | <b>2327</b>     | 401      | 251      |
| Particles >14µm  |        | ASTM D7647   | >160      | <b>47</b>       | 12       | 29       |
| Particles >21µm  |        | ASTM D7647   | >40       | <b>8</b>        | 5        | 11       |
| Particles >38µm  |        | ASTM D7647   | >10       | <b>0</b>        | 0        | 1        |
| Particles >71µm  |        | ASTM D7647   | >3        | <b>0</b>        | 0        | 0        |
| Oil Cleanliness  |        | ISO 4406 (c) | >19/17/14 | <b>21/18/13</b> | 18/16/11 | 17/15/12 |
| 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>0</b>    | <1   | <1    |
| Boron            | ppm      | ASTM D5185m | 5    | <b>0</b>    | <1   | 6     |
| Barium           | ppm      | ASTM D5185m | 5    | <b>0</b>    | 0    | 0     |
| Molybdenum       | ppm      | ASTM D5185m | 5    | <b>2</b>    | 1    | 2     |
| Manganese        | ppm      | ASTM D5185m |      | <b>0</b>    | <1   | 0     |
| Magnesium        | ppm      | ASTM D5185m | 25   | <b>69</b>   | 69   | 6     |
| Calcium          | ppm      | ASTM D5185m | 200  | <b>53</b>   | 31   | 53    |
| Phosphorus       | ppm      | ASTM D5185m | 300  | <b>257</b>  | 298  | 240   |
| Zinc             | ppm      | ASTM D5185m | 370  | <b>371</b>  | 360  | 288   |
| Acid Number (AN) | mg KOH/g | ASTM D8045  | 0.57 | <b>0.41</b> | 0.43 | 0.444 |
| Visc @ 40°C      | cSt      | ASTM D445   | 68   | <b>63.4</b> | 62.3 | 64.3  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0038116 **Received** : 30 Jan 2024  
**Lab Number** : 06074735 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10856826 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: PQ )

**Kimberly-Clark - Mobile - TM 5**  
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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)