



# OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

**ABNORMAL**  
**ATTENTION**  
**NORMAL**

Machine Id  
**RA512**  
Component  
**Hydraulic System**  
Fluid  
**{not provided} (--- GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number  |     | Client Info |           | <b>WC0675005</b>   | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>27 Dec 2023</b> | ---      | ---      |
| Machine Age    | hrs | Client Info |           | <b>2110</b>        | ---      | ---      |
| Oil Age        | hrs | Client Info |           | <b>190</b>         | ---      | ---      |
| Filter Age     | hrs | Client Info |           | <b>190</b>         | ---      | ---      |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | ---      | ---      |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | ---      | ---      |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | ---      | ---      |

## WEAR

The iron level is abnormal. All other component wear rates are normal.

|              |        |             |      |              |     |     |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron         | ppm    | ASTM D5185m | >20  | <b>▲ 31</b>  | --- | --- |
| Chromium     | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | --- | --- |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>0</b>     | --- | --- |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | --- | --- |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>     | --- | --- |
| Aluminum     | ppm    | ASTM D5185m | >10  | <b>1</b>     | --- | --- |
| Lead         | ppm    | ASTM D5185m | >10  | <b>3</b>     | --- | --- |
| Copper       | ppm    | ASTM D5185m | >75  | <b>16</b>    | --- | --- |
| Tin          | ppm    | ASTM D5185m | >10  | <b>0</b>     | --- | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | --- | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | --- | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | --- | --- |

## CONTAMINATION

There is a moderate amount of silt (particulates < 6 microns in size) present in the oil.

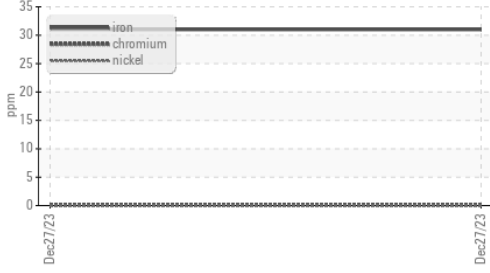
|                  |        |              |           |                   |     |     |
|------------------|--------|--------------|-----------|-------------------|-----|-----|
| Silicon          | ppm    | ASTM D5185m  | >20       | <b>2</b>          | --- | --- |
| Potassium        | ppm    | ASTM D5185m  | >20       | <b>2</b>          | --- | --- |
| Water            |        | WC Method    | >0.1      | <b>NEG</b>        | --- | --- |
| Particles >4µm   |        | ASTM D7647   | >5000     | <b>▲ 5004</b>     | --- | --- |
| Particles >6µm   |        | ASTM D7647   | >1300     | <b>646</b>        | --- | --- |
| Particles >14µm  |        | ASTM D7647   | >160      | <b>11</b>         | --- | --- |
| Particles >21µm  |        | ASTM D7647   | >40       | <b>2</b>          | --- | --- |
| Particles >38µm  |        | ASTM D7647   | >10       | <b>0</b>          | --- | --- |
| Particles >71µm  |        | ASTM D7647   | >3        | <b>0</b>          | --- | --- |
| Oil Cleanliness  |        | ISO 4406 (c) | >19/17/14 | <b>▲ 20/17/11</b> | --- | --- |
| Silt             | scalar | *Visual      | NONE      | <b>NONE</b>       | --- | --- |
| Debris           | scalar | *Visual      | NONE      | <b>NONE</b>       | --- | --- |
| Sand/Dirt        | scalar | *Visual      | NONE      | <b>NONE</b>       | --- | --- |
| Appearance       | scalar | *Visual      | NORML     | <b>NORML</b>      | --- | --- |
| Odor             | scalar | *Visual      | NORML     | <b>NORML</b>      | --- | --- |
| Emulsified Water | scalar | *Visual      | >0.1      | <b>NEG</b>        | --- | --- |

## FLUID CONDITION

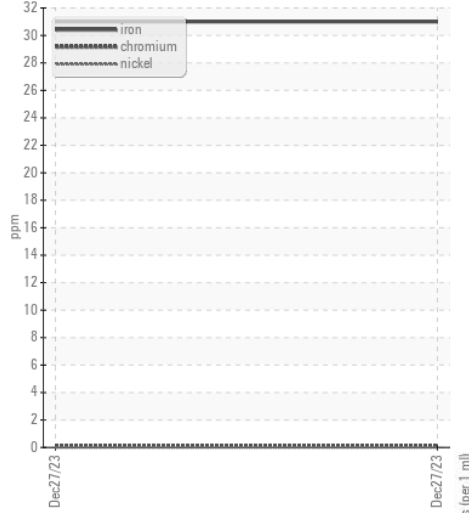
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

|                  |          |             |  |              |     |     |
|------------------|----------|-------------|--|--------------|-----|-----|
| Sodium           | ppm      | ASTM D5185m |  | <b>2</b>     | --- | --- |
| Boron            | ppm      | ASTM D5185m |  | <b>10</b>    | --- | --- |
| Barium           | ppm      | ASTM D5185m |  | <b>0</b>     | --- | --- |
| Molybdenum       | ppm      | ASTM D5185m |  | <b>&lt;1</b> | --- | --- |
| Manganese        | ppm      | ASTM D5185m |  | <b>0</b>     | --- | --- |
| Magnesium        | ppm      | ASTM D5185m |  | <b>14</b>    | --- | --- |
| Calcium          | ppm      | ASTM D5185m |  | <b>510</b>   | --- | --- |
| Phosphorus       | ppm      | ASTM D5185m |  | <b>707</b>   | --- | --- |
| Zinc             | ppm      | ASTM D5185m |  | <b>896</b>   | --- | --- |
| Sulfur           | ppm      | ASTM D5185m |  | <b>2018</b>  | --- | --- |
| Acid Number (AN) | mg KOH/g | ASTM D8045  |  | <b>0.76</b>  | --- | --- |
| Visc @ 40°C      | cSt      | ASTM D445   |  | <b>39.8</b>  | --- | --- |

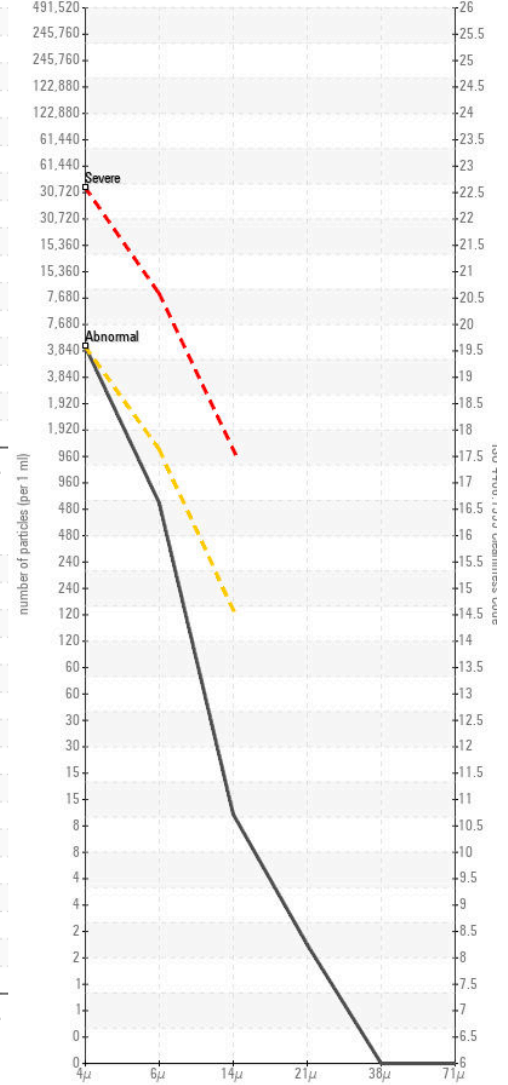
**▲ Ferrous Alloys**



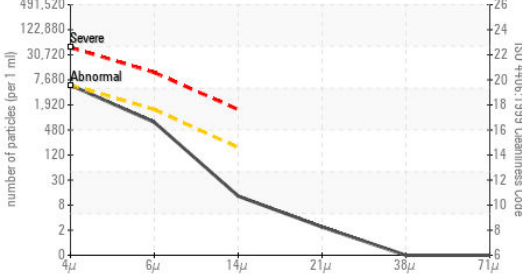
**▲ Ferrous Alloys**



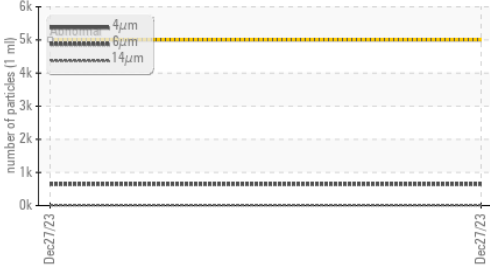
**▲ Particle Count**



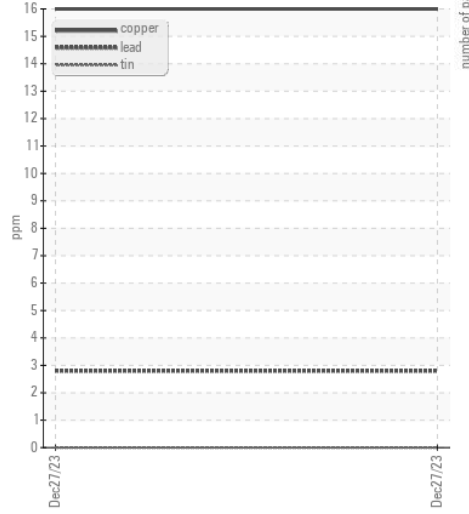
**▲ Particle Count**



**▲ Particle Trend**



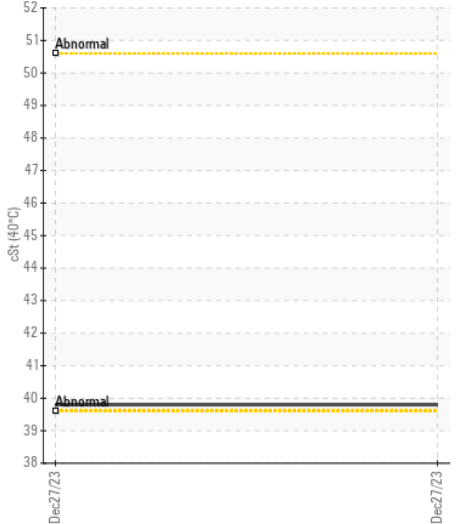
**Non-ferrous Metals**



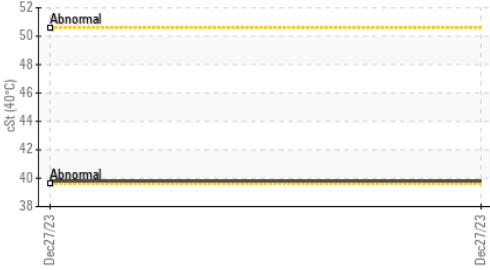
**Acid Number**



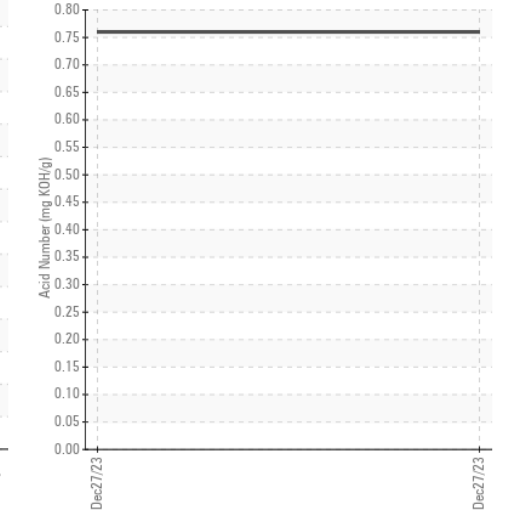
**Viscosity @ 40°C**



**Viscosity @ 40°C**



**Acid Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0675005 **Received** : 17 Jan 2024  
**Lab Number** : 06062587 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10833969 **Diagnostician** : Jonathan Hester  
**Test Package** : CONST

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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)