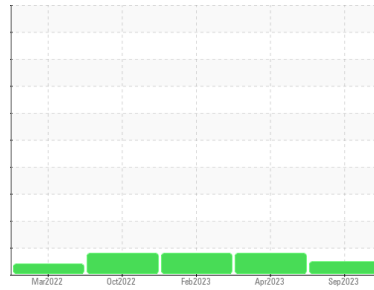




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**GUAY SON [CONHER]**  
 Machine Id  
**BM NAINARI IBACO BM NAINARI**

Component  
**Transmission (Manual)**  
 Fluid  
**RALOY SAE 50 (60 LTR)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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

### Fluid Condition

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

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>KL0012860</b>   | KL0012323   | KL0011345   |
| Sample Date   | Client Info |             | <b>21 Sep 2023</b> | 05 Apr 2023 | 22 Feb 2023 |
| Machine Age   | hrs         | Client Info | <b>18621</b>       | 18619       | 18272       |
| Oil Age       | hrs         | Client Info | <b>280</b>         | 278         | 1432        |
| Oil Changed   | Client Info |             | <b>Not Chngd</b>   | Not Chngd   | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | ATTENTION   | ATTENTION   |

## WEAR METALS

|          | method | limit/base  | current | history1     | history2 |    |
|----------|--------|-------------|---------|--------------|----------|----|
| Iron     | ppm    | ASTM D5185m | >200    | <b>0</b>     | 1        | 3  |
| Chromium | ppm    | ASTM D5185m | >5      | <b>0</b>     | 0        | 0  |
| Nickel   | ppm    | ASTM D5185m | >5      | <b>0</b>     | 0        | 0  |
| Titanium | ppm    | ASTM D5185m |         | <b>0</b>     | 0        | 0  |
| Silver   | ppm    | ASTM D5185m | >7      | <b>0</b>     | 0        | 0  |
| Aluminum | ppm    | ASTM D5185m | >25     | <b>&lt;1</b> | <1       | <1 |
| Lead     | ppm    | ASTM D5185m | >45     | <b>0</b>     | 0        | <1 |
| Copper   | ppm    | ASTM D5185m | >225    | <b>7</b>     | 7        | 32 |
| Tin      | ppm    | ASTM D5185m | >10     | <b>&lt;1</b> | 0        | <1 |
| Vanadium | ppm    | ASTM D5185m |         | <b>0</b>     | 0        | 0  |
| Cadmium  | ppm    | ASTM D5185m |         | <b>0</b>     | 0        | 0  |

## ADDITIVES

|            | method | limit/base  | current | history1     | history2 |      |
|------------|--------|-------------|---------|--------------|----------|------|
| Boron      | ppm    | ASTM D5185m |         | <b>0</b>     | 0        | 0    |
| Barium     | ppm    | ASTM D5185m |         | <b>0</b>     | 0        | 3    |
| Molybdenum | ppm    | ASTM D5185m |         | <b>0</b>     | <1       | <1   |
| Manganese  | ppm    | ASTM D5185m |         | <b>&lt;1</b> | <1       | 2    |
| Magnesium  | ppm    | ASTM D5185m |         | <b>12</b>    | 9        | 19   |
| Calcium    | ppm    | ASTM D5185m |         | <b>3447</b>  | 3458     | 3292 |
| Phosphorus | ppm    | ASTM D5185m |         | <b>998</b>   | 980      | 899  |
| Zinc       | ppm    | ASTM D5185m |         | <b>822</b>   | 819      | 794  |
| Sulfur     | ppm    | ASTM D5185m |         | <b>5554</b>  | 6085     | 6165 |

## CONTAMINANTS

|           | method | limit/base  | current | history1 | history2 |    |
|-----------|--------|-------------|---------|----------|----------|----|
| Silicon   | ppm    | ASTM D5185m | >125    | <b>6</b> | 6        | 7  |
| Sodium    | ppm    | ASTM D5185m |         | <b>1</b> | <1       | 2  |
| Potassium | ppm    | ASTM D5185m | >20     | <b>0</b> | 0        | <1 |

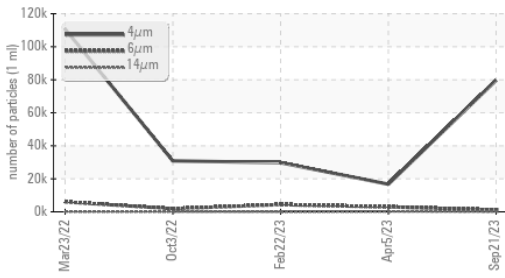
## FLUID CLEANLINESS

|                 | method       | limit/base | current      | history1 | history2 |
|-----------------|--------------|------------|--------------|----------|----------|
| Particles >4µm  | ASTM D7647   |            | <b>79680</b> | 16739    | 29766    |
| Particles >6µm  | ASTM D7647   | >2500      | <b>1150</b>  | ▲ 2990   | ▲ 4396   |
| Particles >14µm | ASTM D7647   | >320       | <b>14</b>    | 203      | 73       |
| Particles >21µm | ASTM D7647   | >80        | <b>1</b>     | 39       | 17       |
| Particles >38µm | ASTM D7647   | >20        | <b>1</b>     | 2        | 1        |
| Particles >71µm | ASTM D7647   | >4         | <b>0</b>     | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >18/15     | <b>17/11</b> | ▲ 19/15  | ▲ 19/13  |

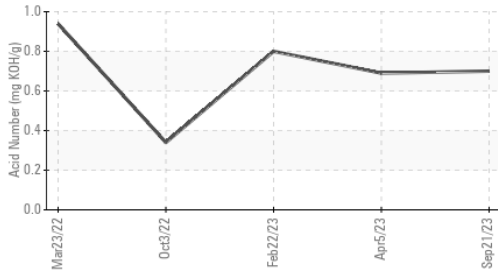
## FLUID DEGRADATION

|                  | method   | limit/base | current     | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | <b>0.70</b> | 0.69     | 0.80     |

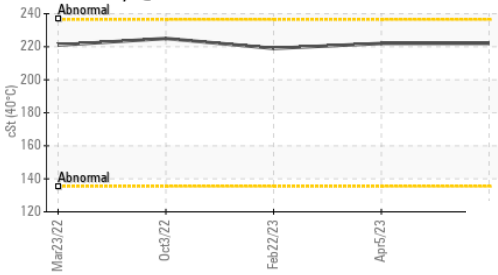
### Particle Trend



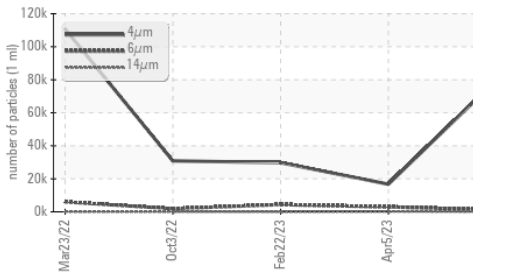
### Acid Number



### Viscosity @ 40°C



### Particle Trend

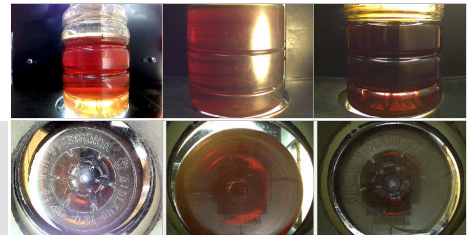


| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | NONE     | NONE     |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | NONE     |
| Appearance       | scalar | *Visual    | NORML   | NORML    | NORML    |
| Odor             | scalar | *Visual    | NORML   | NORML    | NORML    |
| Emulsified Water | scalar | *Visual    | >0.1    | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 222     | 222      | 219      |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

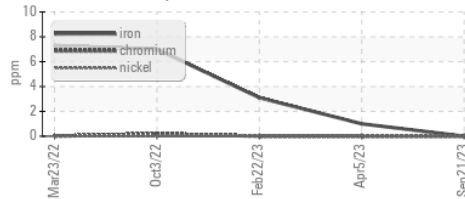
### Color



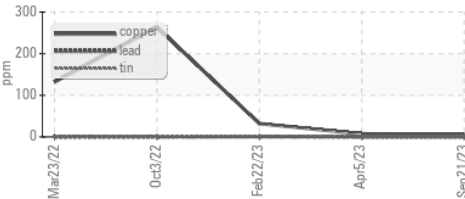
### Bottom

## GRAPHS

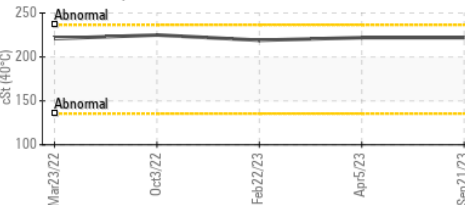
### Ferrous Alloys



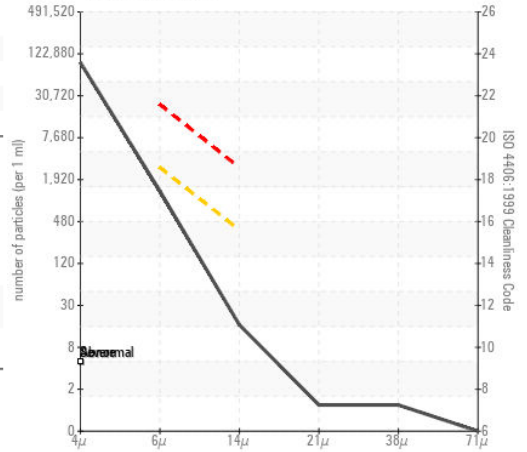
### Non-ferrous Metals



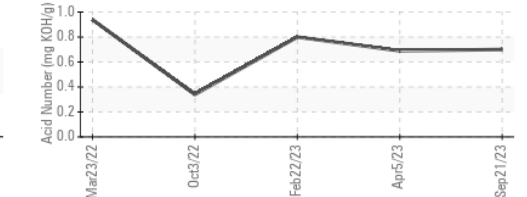
### Viscosity @ 40°C



### Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0012860 **Received** : 29 Sep 2023  
**Lab Number** : 05964567 **Diagnosed** : 06 Oct 2023  
**Unique Number** : 10671118 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

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)

**CONOR**  
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