



# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**BLUE CRANE SOUTH**

Component  
**Hoisting Gearbox**

Fluid  
**{not provided} (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

| SAMPLE INFORMATION |             | method      | limit/base | current            | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|----------|----------|
| Sample Number      | Client Info |             |            | <b>WC0819601</b>   | ---      | ---      |
| Sample Date        | Client Info |             |            | <b>05 Jan 2024</b> | ---      | ---      |
| Machine Age        | hrs         | Client Info |            | <b>0</b>           | ---      | ---      |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | ---      | ---      |
| Oil Changed        | Client Info |             |            | <b>N/A</b>         | ---      | ---      |
| Sample Status      |             |             |            | <b>NORMAL</b>      | ---      | ---      |

| CONTAMINATION |           | method | limit/base | current    | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water         | WC Method |        | >0.1       | <b>NEG</b> | ---      | ---      |

| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >150       | <b>49</b>    | ---      | ---      |
| Chromium    | ppm | ASTM D5185m | >10        | <b>&lt;1</b> | ---      | ---      |
| Nickel      | ppm | ASTM D5185m | >10        | <b>0</b>     | ---      | ---      |
| Titanium    | ppm | ASTM D5185m |            | <b>&lt;1</b> | ---      | ---      |
| Silver      | ppm | ASTM D5185m |            | <b>0</b>     | ---      | ---      |
| Aluminum    | ppm | ASTM D5185m | >25        | <b>2</b>     | ---      | ---      |
| Lead        | ppm | ASTM D5185m | >100       | <b>0</b>     | ---      | ---      |
| Copper      | ppm | ASTM D5185m | >50        | <b>&lt;1</b> | ---      | ---      |
| Tin         | ppm | ASTM D5185m | >10        | <b>&lt;1</b> | ---      | ---      |
| Vanadium    | ppm | ASTM D5185m |            | <b>0</b>     | ---      | ---      |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | ---      | ---      |

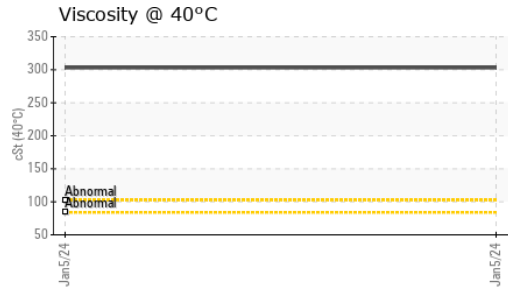
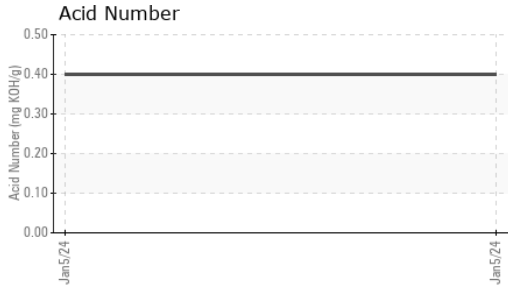
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m |            | <b>16</b>    | ---      | ---      |
| Barium     | ppm | ASTM D5185m |            | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm | ASTM D5185m |            | <b>&lt;1</b> | ---      | ---      |
| Manganese  | ppm | ASTM D5185m |            | <b>0</b>     | ---      | ---      |
| Magnesium  | ppm | ASTM D5185m |            | <b>0</b>     | ---      | ---      |
| Calcium    | ppm | ASTM D5185m |            | <b>207</b>   | ---      | ---      |
| Phosphorus | ppm | ASTM D5185m |            | <b>336</b>   | ---      | ---      |
| Zinc       | ppm | ASTM D5185m |            | <b>0</b>     | ---      | ---      |
| Sulfur     | ppm | ASTM D5185m |            | <b>10999</b> | ---      | ---      |

| CONTAMINANTS |     | method      | limit/base | current   | history1 | history2 |
|--------------|-----|-------------|------------|-----------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >50        | <b>10</b> | ---      | ---      |
| Sodium       | ppm | ASTM D5185m |            | <b>0</b>  | ---      | ---      |
| Potassium    | ppm | ASTM D5185m | >20        | <b>2</b>  | ---      | ---      |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 |            | <b>0.40</b> | ---      | ---      |



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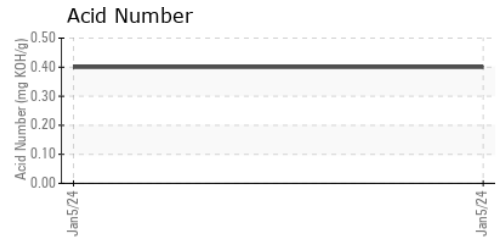
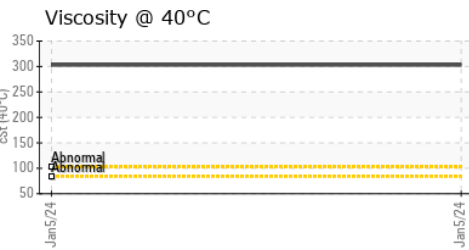
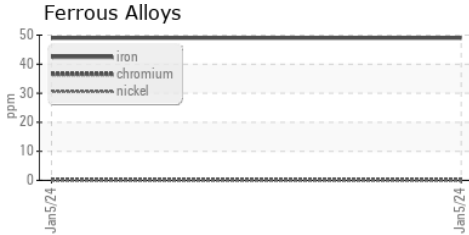
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
|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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 303     | ---      | ---      |

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

|        |  |  |  |          |          |
|--------|--|--|--|----------|----------|
| Color  |  |  |  | no image | no image |
| Bottom |  |  |  | no image | no image |

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0819601    Recieved : 16 Jan 2024  
 Lab Number : 06061330    Diagnosed : 17 Jan 2024  
 Unique Number : 10832712    Diagnostician : Don Baldrige  
 Test Package : IND 2

**THE WARREN CO.**  
 2201 LOVELAND AVE  
 ERIE, PA  
 US 16506

Contact: RILEY WARREN  
 riley.warren@thewarrencompany.com

T:  
 F: (814)833-7251

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)