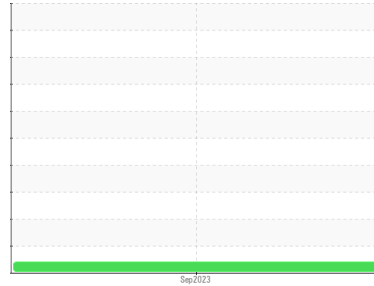




# PROBLEM SUMMARY

Sample Rating Trend



VISCOSITY



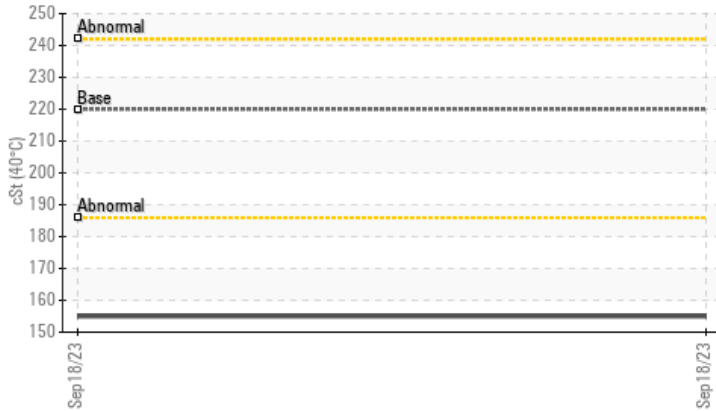
Machine Id  
**SUMITOMO T-SIDE**

Component  
**Gearbox**

Fluid  
**SHELL MORLINA S3 BA 220 (1 GAL)**

## COMPONENT CONDITION SUMMARY

▲ Viscosity @ 40°C



## RECOMMENDATION

Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status |     |           |     | ATTENTION | --- | --- |
|---------------|-----|-----------|-----|-----------|-----|-----|
| Visc @ 40°C   | cSt | ASTM D445 | 220 | ▲ 155     | --- | --- |

Customer Id: ALABUR  
 Sample No.: WC0731092  
 Lab Number: 05959062  
 Test Package: PLANT



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**SUMITOMO T-SIDE**  
 Component  
**Gearbox**  
 Fluid  
**SHELL MORLINA S3 BA 220 (1 GAL)**

## DIAGNOSIS

### ▲ Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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

### ▲ Fluid Condition

Viscosity of sample indicates oil is within ISO 150 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

## SAMPLE INFORMATION

| method        | limit/base      | current            | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info     | <b>WC0731092</b>   | ---      | ---      |
| Sample Date   | Client Info     | <b>18 Sep 2023</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>ATTENTION</b>   | ---      | ---      |

## WEAR METALS

| method                   | limit/base | current      | history1 | history2 |
|--------------------------|------------|--------------|----------|----------|
| Iron ppm ASTM D5185m     | >200       | <b>16</b>    | ---      | ---      |
| Chromium ppm ASTM D5185m | >15        | <b>0</b>     | ---      | ---      |
| Nickel ppm ASTM D5185m   | >15        | <b>0</b>     | ---      | ---      |
| Titanium ppm ASTM D5185m |            | <b>0</b>     | ---      | ---      |
| Silver ppm ASTM D5185m   |            | <b>0</b>     | ---      | ---      |
| Aluminum ppm ASTM D5185m | >25        | <b>0</b>     | ---      | ---      |
| Lead ppm ASTM D5185m     | >100       | <b>&lt;1</b> | ---      | ---      |
| Copper ppm ASTM D5185m   | >200       | <b>27</b>    | ---      | ---      |
| Tin ppm ASTM D5185m      | >25        | <b>0</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>2</b>     | ---      | ---      |
| Barium ppm ASTM D5185m     |            | <b>0</b>     | ---      | ---      |
| Molybdenum ppm ASTM D5185m |            | <b>0</b>     | ---      | ---      |
| Manganese ppm ASTM D5185m  |            | <b>&lt;1</b> | ---      | ---      |
| Magnesium ppm ASTM D5185m  |            | <b>2</b>     | ---      | ---      |
| Calcium ppm ASTM D5185m    |            | <b>13</b>    | ---      | ---      |
| Phosphorus ppm ASTM D5185m |            | <b>228</b>   | ---      | ---      |
| Zinc ppm ASTM D5185m       |            | <b>22</b>    | ---      | ---      |
| Sulfur ppm ASTM D5185m     |            | <b>10810</b> | ---      | ---      |

## CONTAMINANTS

| method                    | limit/base | current      | history1 | history2 |
|---------------------------|------------|--------------|----------|----------|
| Silicon ppm ASTM D5185m   | >50        | <b>&lt;1</b> | ---      | ---      |
| Sodium ppm ASTM D5185m    |            | <b>2</b>     | ---      | ---      |
| Potassium ppm ASTM D5185m | >20        | <b>1</b>     | ---      | ---      |

## FLUID CLEANLINESS

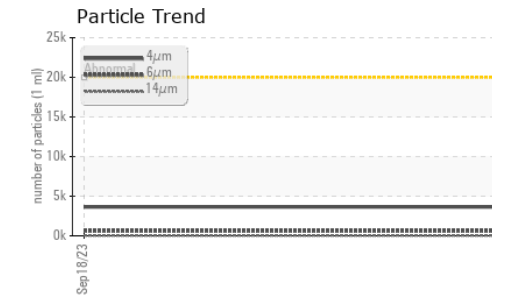
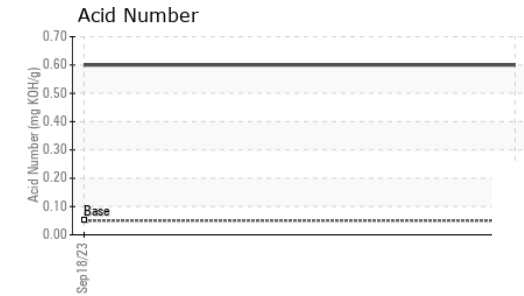
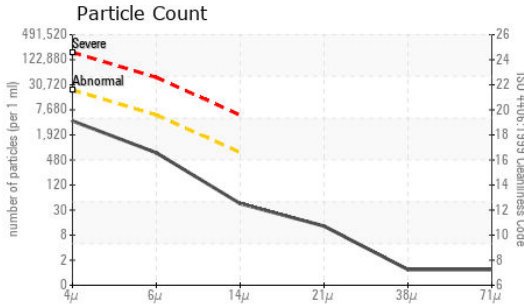
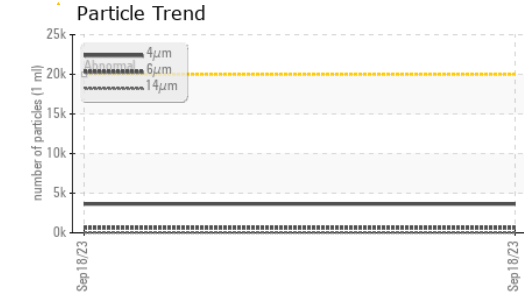
| method                       | limit/base | current         | history1 | history2 |
|------------------------------|------------|-----------------|----------|----------|
| Particles >4µm ASTM D7647    | >20000     | <b>3636</b>     | ---      | ---      |
| Particles >6µm ASTM D7647    | >5000      | <b>627</b>      | ---      | ---      |
| Particles >14µm ASTM D7647   | >640       | <b>38</b>       | ---      | ---      |
| Particles >21µm ASTM D7647   | >160       | <b>11</b>       | ---      | ---      |
| Particles >38µm ASTM D7647   | >40        | <b>1</b>        | ---      | ---      |
| Particles >71µm ASTM D7647   | >10        | <b>1</b>        | ---      | ---      |
| Oil Cleanliness ISO 4406 (c) | >21/19/16  | <b>19/16/12</b> | ---      | ---      |

## FLUID DEGRADATION

| method                               | limit/base | current     | history1 | history2 |
|--------------------------------------|------------|-------------|----------|----------|
| Acid Number (AN) mg KOH/g ASTM D8045 | 0.05       | <b>0.60</b> | ---      | ---      |



# OIL ANALYSIS REPORT



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0731092 **Received** : 22 Sep 2023  
**Lab Number** : 05959062 **Diagnosed** : 25 Sep 2023  
**Unique Number** : 10660275 **Diagnostician** : Don Baldrige  
**Test Package** : PLANT

**ALAMANCE OIL COMPANY**  
 1525 W. WEBB AVENUE  
 BURLINGTON, NC  
 US 27217  
 Contact: Steve Scott  
 steve.scott@berico.com  
 T: (336)226-9371  
 F: (336)222-9997

Certificate L2367  
 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)

| 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    | NONE     | ---      |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      |
| Emulsified Water | scalar | *Visual    | >0.2    | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base    | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 220 | ▲ 155   | ---      | ---      |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        |            |         | no image | no image |
| Bottom        |        |            |         | no image | no image |

## GRAPHS

