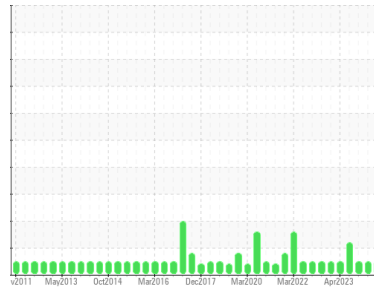




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**SLAUGHTER**

Machine Id

**SULLAIR TYSAMAS 1 SUL (S/N 007-00001287)**

Component

**Refrigeration Compressor**

Fluid

**USPI 1009-68 SC (--- GAL)**

## 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 oil. 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 oil is suitable for further service.

## SAMPLE INFORMATION

| method        | limit/base  | current            | history1     | history2    |       |
|---------------|-------------|--------------------|--------------|-------------|-------|
| Sample Number | Client Info | <b>USP0013207</b>  | USP0006115   | USP0003559  |       |
| Sample Date   | Client Info | <b>12 Jun 2024</b> | 15 Mar 2024  | 14 Nov 2023 |       |
| Machine Age   | hrs         | Client Info        | <b>19248</b> | 17141       | 14698 |
| Oil Age       | hrs         | Client Info        | <b>0</b>     | 0           | 0     |
| Oil Changed   | Client Info | <b>N/A</b>         | N/A          | N/A         |       |
| Sample Status |             | <b>NORMAL</b>      | NORMAL       | NORMAL      |       |

## WEAR METALS

| method   | limit/base | current     | history1 | history2     |    |   |
|----------|------------|-------------|----------|--------------|----|---|
| Iron     | ppm        | ASTM D5185m | >8       | <b>&lt;1</b> | 4  | 0 |
| Chromium | ppm        | ASTM D5185m | >2       | <b>0</b>     | <1 | 0 |
| Nickel   | ppm        | ASTM D5185m |          | <b>&lt;1</b> | 0  | 0 |
| Titanium | ppm        | ASTM D5185m |          | <b>0</b>     | 0  | 0 |
| Silver   | ppm        | ASTM D5185m | >2       | <b>0</b>     | 0  | 0 |
| Aluminum | ppm        | ASTM D5185m | >3       | <b>&lt;1</b> | 0  | 0 |
| Lead     | ppm        | ASTM D5185m | >2       | <b>0</b>     | 0  | 0 |
| Copper   | ppm        | ASTM D5185m | >8       | <b>&lt;1</b> | 0  | 0 |
| Tin      | ppm        | ASTM D5185m | >4       | <b>&lt;1</b> | 0  | 0 |
| 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  | 0  |
| Molybdenum | ppm        | ASTM D5185m |          | <b>0</b>     | 0  | 0  |
| Manganese  | ppm        | ASTM D5185m |          | <b>&lt;1</b> | <1 | <1 |
| Magnesium  | ppm        | ASTM D5185m |          | <b>0</b>     | 1  | 0  |
| Calcium    | ppm        | ASTM D5185m |          | <b>0</b>     | 0  | 1  |
| Phosphorus | ppm        | ASTM D5185m |          | <b>0</b>     | 0  | 0  |
| Zinc       | ppm        | ASTM D5185m |          | <b>0</b>     | 0  | 0  |
| Sulfur     | ppm        | ASTM D5185m | 50       | <b>0</b>     | 0  | 0  |

## CONTAMINANTS

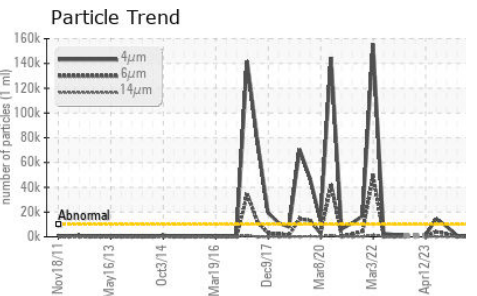
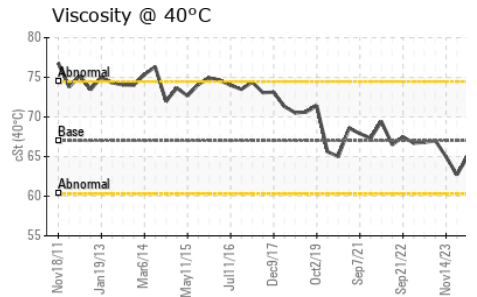
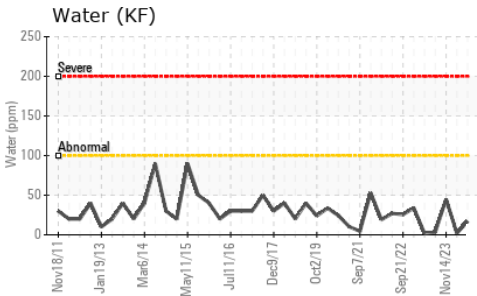
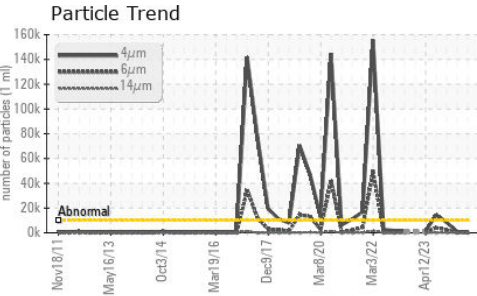
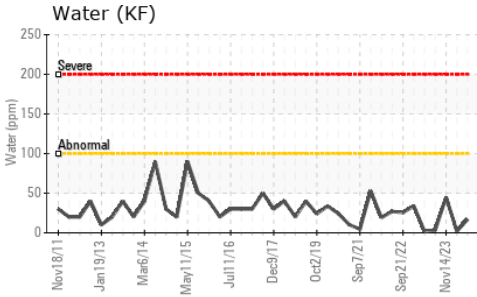
| method    | limit/base | current     | history1 | history2     |       |       |
|-----------|------------|-------------|----------|--------------|-------|-------|
| Silicon   | ppm        | ASTM D5185m | >15      | <b>1</b>     | 0     | <1    |
| Sodium    | ppm        | ASTM D5185m |          | <b>2</b>     | 1     | 0     |
| Potassium | ppm        | ASTM D5185m | >20      | <b>3</b>     | 0     | 0     |
| Water     | %          | ASTM D6304  | >0.01    | <b>0.002</b> | 0.001 | 0.004 |
| ppm Water | ppm        | ASTM D6304  | >100     | <b>17</b>    | 2     | 45    |

## FLUID CLEANLINESS

| method          | limit/base   | current   | history1       | history2 |          |
|-----------------|--------------|-----------|----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >10000    | <b>194</b>     | 952      | 8470     |
| Particles >6µm  | ASTM D7647   | >2500     | <b>56</b>      | 172      | 2210     |
| Particles >14µm | ASTM D7647   | >320      | <b>3</b>       | 12       | 81       |
| Particles >21µm | ASTM D7647   | >80       | <b>0</b>       | 3        | 13       |
| Particles >38µm | ASTM D7647   | >20       | <b>0</b>       | 0        | 0        |
| Particles >71µm | ASTM D7647   | >4        | <b>0</b>       | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | <b>15/13/9</b> | 17/15/11 | 20/18/14 |

## FLUID DEGRADATION

| method           | limit/base | current   | history1 | history2     |       |      |
|------------------|------------|-----------|----------|--------------|-------|------|
| Acid Number (AN) | mg KOH/g   | ASTM D974 | 0.005    | <b>0.014</b> | 0.013 | 0.02 |



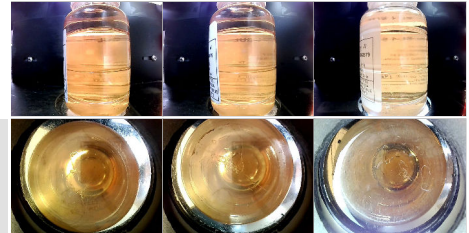
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | NONE     | LIGHT    |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | NONE     |
| Appearance       | scalar | *Visual    | NORML   | NORML    | NORML    |
| Odor             | scalar | *Visual    | NORML   | NORML    | NORML    |
| Emulsified Water | scalar | *Visual    | >0.01   | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 67      | 65.0     | 62.7     |

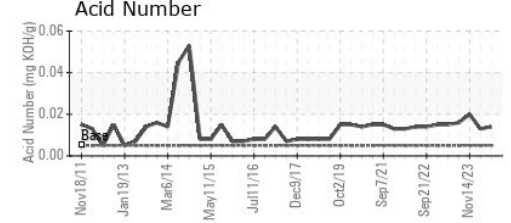
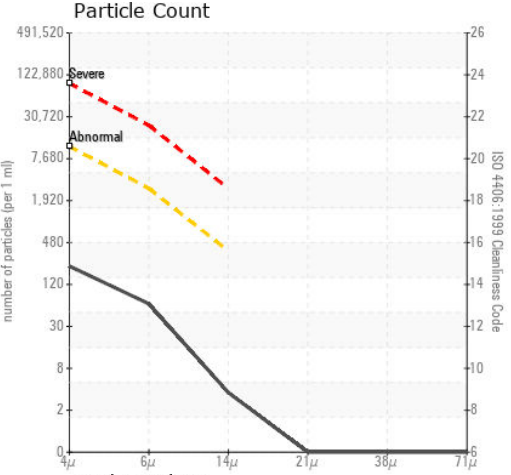
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

Color

Bottom



## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : USP0013207

Lab Number : 06214077

Unique Number : 11086941

Test Package : IND 2

Received : 18 Jun 2024

Tested : 20 Jun 2024

Diagnosed : 21 Jun 2024 - Jonathan Hester

TYSON -AMARILLO-USP

AMARILLO, TX

US

Contact: RANDY INGRAM

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)

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