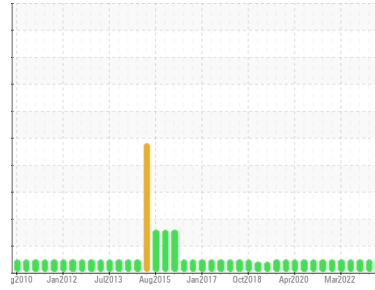




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**VILTER TYSPER 06 (S/N 13123)**

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>USP0004782</b>  | USP0000885  | USP245076   |
| Sample Date        | Client Info |             |            | <b>03 Jan 2024</b> | 31 Jul 2023 | 17 Jan 2023 |
| Machine Age        | mths        | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Age            | mths        | 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>0</b>     | <1       | 0        |
| Chromium    | ppm | ASTM D5185m | >2         | <b>0</b>     | 0        | 0        |
| Nickel      | ppm | ASTM D5185m |            | <b>0</b>     | <1       | 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>0</b>     | <1       | 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>0</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>     | <1       | <1       |
| Molybdenum | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Manganese  | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | 0        |
| Magnesium  | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | 0        |
| Calcium    | ppm | ASTM D5185m |            | <b>&lt;1</b> | 0        | 0        |
| Phosphorus | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Zinc       | ppm | ASTM D5185m |            | <b>2</b>     | <1       | 0        |
| Sulfur     | ppm | ASTM D5185m | 50         | <b>0</b>     | 0        | 7        |

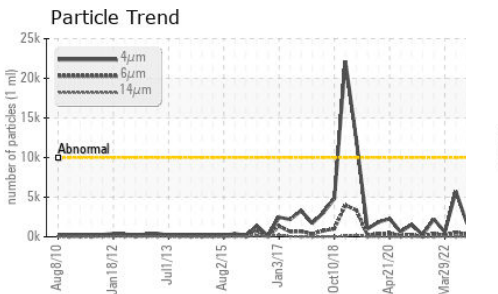
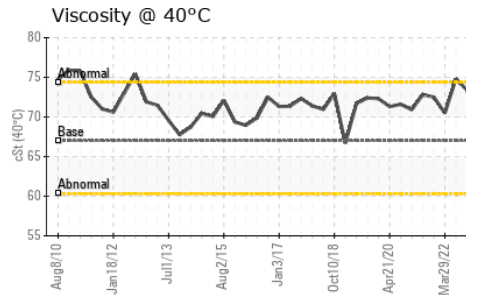
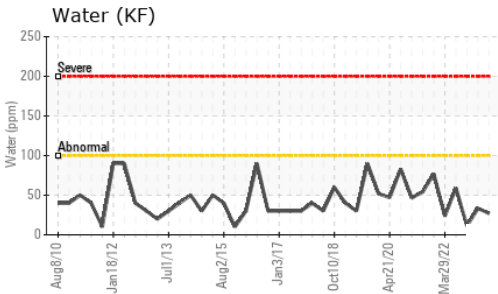
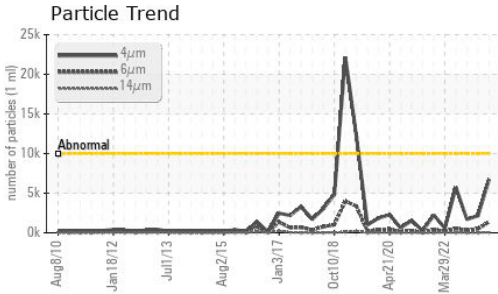
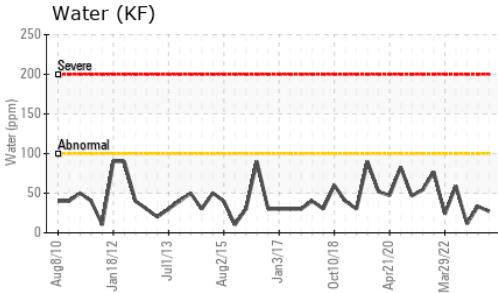
| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >15        | <b>2</b>     | 3        | 6        |
| Sodium       | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>0</b>     | 0        | <1       |
| Water        | %   | ASTM D6304  | >0.01      | <b>0.003</b> | 0.003    | 0.001    |
| ppm Water    | ppm | ASTM D6304  | >100       | <b>27</b>    | 33.3     | 11.3     |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   | >10000     | <b>6732</b>     | 2168     | 1683     |
| Particles >6µm    |  | ASTM D7647   | >2500      | <b>1382</b>     | 512      | 299      |
| Particles >14µm   |  | ASTM D7647   | >320       | <b>59</b>       | 28       | 11       |
| Particles >21µm   |  | ASTM D7647   | >80        | <b>14</b>       | 5        | 3        |
| Particles >38µm   |  | ASTM D7647   | >20        | <b>1</b>        | 0        | 0        |
| Particles >71µm   |  | ASTM D7647   | >4         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >20/18/15  | <b>20/18/13</b> | 18/16/12 | 18/15/11 |

| FLUID DEGRADATION |          | method    | limit/base | current      | history1 | history2 |
|-------------------|----------|-----------|------------|--------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D974 | 0.005      | <b>0.014</b> | 0.015    | 0.013    |



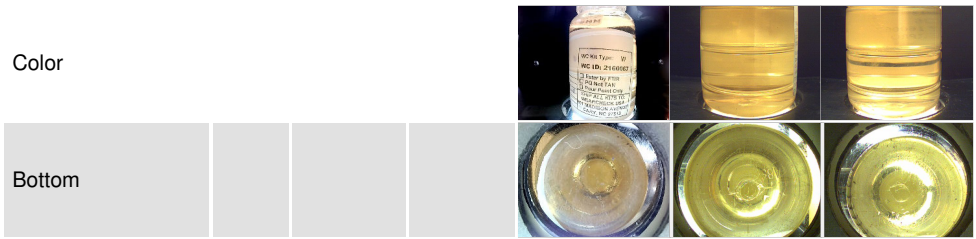
# OIL ANALYSIS REPORT



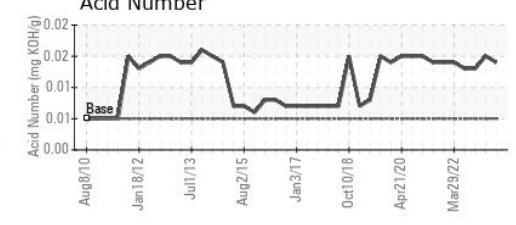
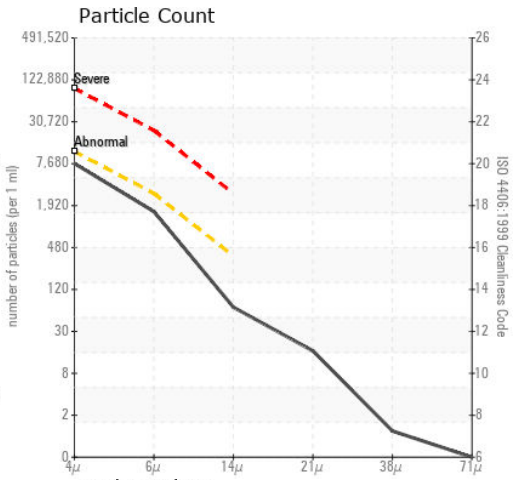
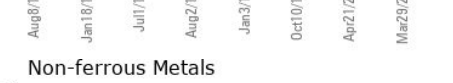
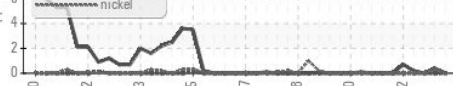
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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    | >0.01   | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base   | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 67 | 69.7    | 68.5     | 73.4     |

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



## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : USP0004782  
 Lab Number : 06062845  
 Unique Number : 10834227  
 Test Package : IND 2

TYSON TCCS -PERRY-USP

Received : 17 Jan 2024  
 Diagnosed : 19 Jan 2024  
 Diagnostician : Doug Bogart  
 PERRY, IA  
 US  
 Contact: SCOTT UHL  
 scott.uhl@tyson.com  
 T: (515)465-9740  
 F: (402)465-9735

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)