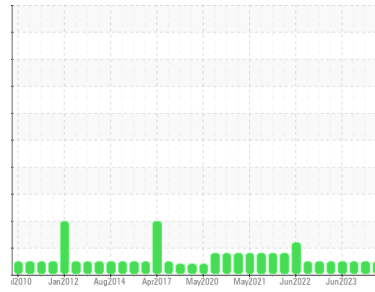




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**FRICK SGC23170237**  
 Component  
**Refrigeration Compressor**  
 Fluid  
**FRICK COMPRESSOR OIL #3 (165 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>USP0011424</b>  | USP0003639  | USP250105   |
| Sample Date   | Client Info |             | <b>08 May 2024</b> | 07 Nov 2023 | 13 Jun 2023 |
| Machine Age   | hrs         | Client Info | <b>65173</b>       | 63896       | 73819       |
| 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>5</b>     | 6        | 32       |
| Chromium | ppm    | ASTM D5185m >2 | <b>0</b>     | 0        | 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>0</b>     | 0        | <1       |
| 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>     | 1        | 0        |
| Molybdenum | ppm    | ASTM D5185m | <b>0</b>     | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m | <b>1</b>     | 0        | 0        |
| Magnesium  | ppm    | ASTM D5185m | <b>0</b>     | 0        | <1       |
| Calcium    | ppm    | ASTM D5185m | <b>0</b>     | 1        | <1       |
| Phosphorus | ppm    | ASTM D5185m | <b>2</b>     | 1        | <1       |
| Zinc       | ppm    | ASTM D5185m | <b>&lt;1</b> | 11       | 21       |
| Sulfur     | ppm    | ASTM D5185m | <b>477</b>   | 394      | 1219     |

### CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | <1       | <1       |
| Sodium    | ppm    | ASTM D5185m      | <b>2</b>     | 0        | 0        |
| Potassium | ppm    | ASTM D5185m >20  | <b>0</b>     | 0        | 0        |
| Water     | %      | ASTM D6304 >0.01 | <b>0.001</b> | 0.002    | 0.002    |
| ppm Water | ppm    | ASTM D6304 >100  | <b>15</b>    | 15.8     | 21.5     |

### FLUID CLEANLINESS

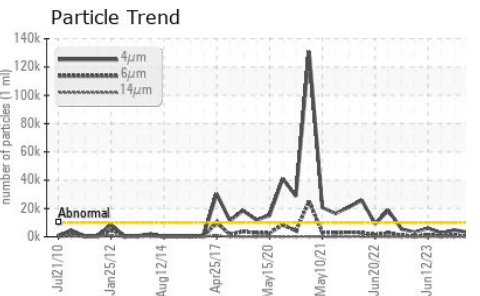
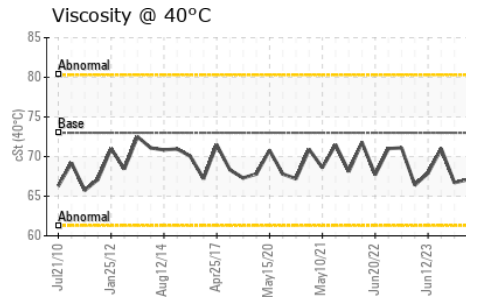
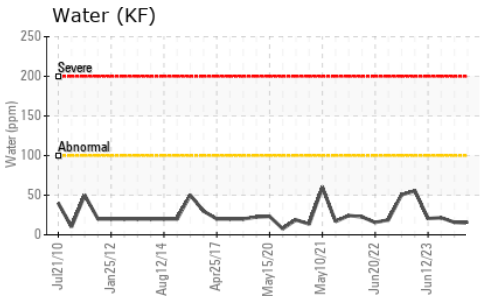
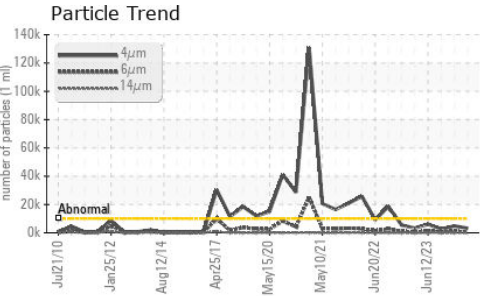
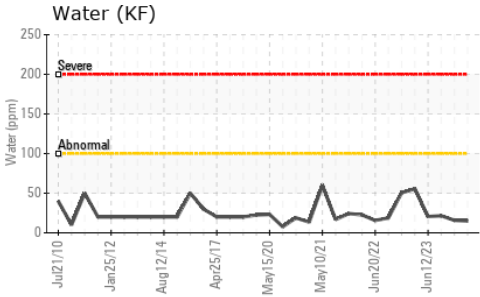
|                 | method       | limit/base | current         | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >10000     | <b>3230</b>     | 4872     | 2612     |
| Particles >6µm  | ASTM D7647   | >2500      | <b>568</b>      | 1114     | 457      |
| Particles >14µm | ASTM D7647   | >320       | <b>16</b>       | 17       | 17       |
| Particles >21µm | ASTM D7647   | >80        | <b>3</b>        | 4        | 5        |
| Particles >38µm | ASTM D7647   | >20        | <b>0</b>        | 1        | 0        |
| Particles >71µm | ASTM D7647   | >4         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15  | <b>19/16/11</b> | 19/17/11 | 19/16/11 |

### FLUID DEGRADATION

|                  | method   | limit/base | current      | history1 | history2 |
|------------------|----------|------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974  | <b>0.033</b> | 0.013    | 0.015    |



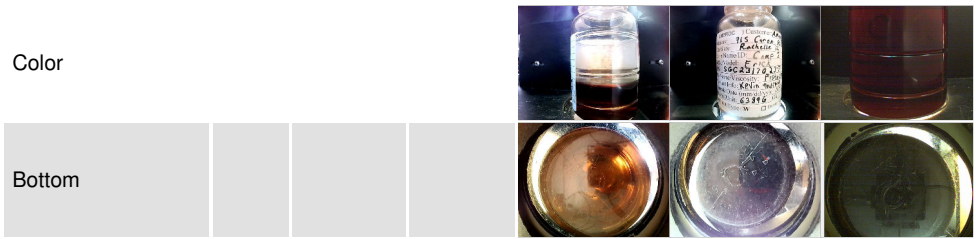
# OIL ANALYSIS REPORT



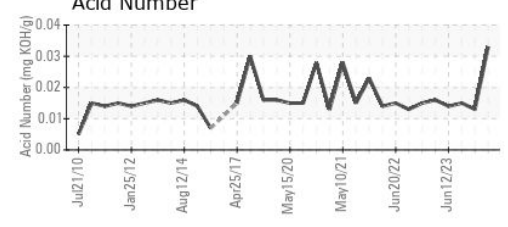
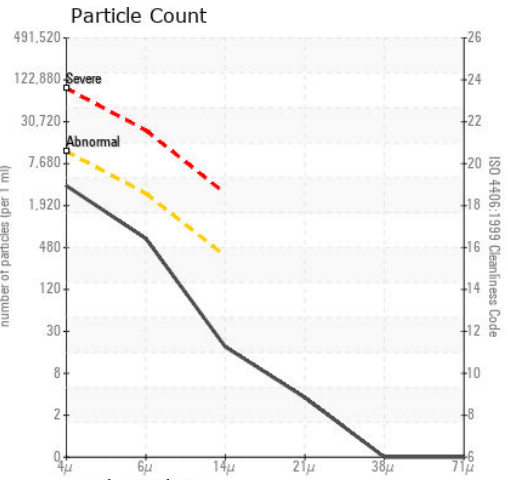
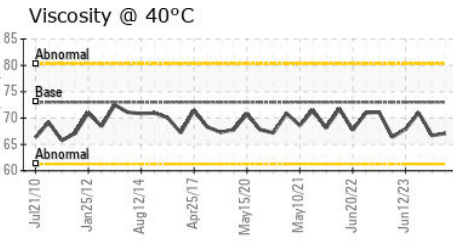
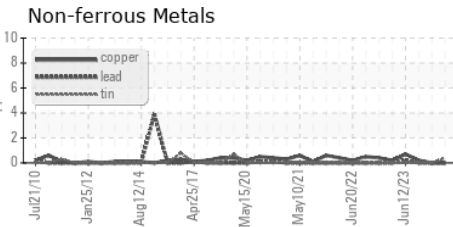
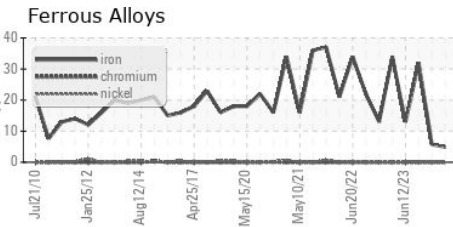
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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 73 | 67.1    | 66.7     | 71.0     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0011424  
**Lab Number** : 06177197  
**Unique Number** : 11023250  
**Test Package** : IND 2  
**Received** : 13 May 2024  
**Tested** : 14 May 2024  
**Diagnosed** : 14 May 2024 - Doug Bogart

**AMERICOLD LOGISTICS**  
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 ROCHELLE, IL  
 US 61068  
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 T: (815)826-0888  
 F: (815)562-1081

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)