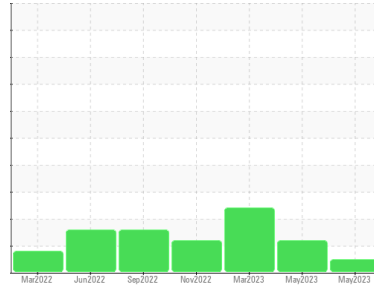




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**C-1702B EAST (S/N MK6A-493)**

Component  
**Refrigeration Compressor**  
Fluid  
**FES 4 (210 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>USP248446</b>   | USP247265   | USP247264   |
| Sample Date   | Client Info | <b>24 May 2023</b> | 02 May 2023 | 07 Mar 2023 |
| Machine Age   | hrs         | <b>0</b>           | 0           | 0           |
| Oil Age       | hrs         | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info | <b>N/A</b>         | N/A         | N/A         |
| Sample Status |             | <b>NORMAL</b>      | ATTENTION   | ATTENTION   |

## WEAR METALS

| method   | limit/base | current         | history1     | history2 |    |
|----------|------------|-----------------|--------------|----------|----|
| Iron     | ppm        | ASTM D5185m >50 | <b>0</b>     | <1       | 7  |
| Chromium | ppm        | ASTM D5185m >10 | <b>0</b>     | 0        | 0  |
| Nickel   | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0  |
| Titanium | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0  |
| Silver   | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0  |
| Aluminum | ppm        | ASTM D5185m >10 | <b>0</b>     | 0        | 0  |
| Lead     | ppm        | ASTM D5185m >10 | <b>0</b>     | 0        | 0  |
| Copper   | ppm        | ASTM D5185m >50 | <b>&lt;1</b> | 0        | 4  |
| Tin      | ppm        | ASTM D5185m >10 | <b>0</b>     | 0        | <1 |
| 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>0</b> | 0        | 0      |
| Magnesium  | ppm        | ASTM D5185m | <b>0</b> | 0        | 0      |
| Calcium    | ppm        | ASTM D5185m | <b>0</b> | 0        | 0      |
| Phosphorus | ppm        | ASTM D5185m | <b>0</b> | 0        | ▲ 449  |
| Zinc       | ppm        | ASTM D5185m | <b>0</b> | 0        | 2      |
| Sulfur     | ppm        | ASTM D5185m | <b>0</b> | 0        | ▲ 2578 |

## CONTAMINANTS

| method    | limit/base | current          | history1     | history2 |       |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon   | ppm        | ASTM D5185m >15  | <b>2</b>     | 2        | 2     |
| Sodium    | ppm        | ASTM D5185m      | <b>0</b>     | 0        | 0     |
| Potassium | ppm        | ASTM D5185m >20  | <b>&lt;1</b> | <1       | 0     |
| Water     | %          | ASTM D6304 >0.01 | <b>0.003</b> | 0.003    | 0.004 |
| ppm Water | ppm        | ASTM D6304 >100  | <b>34.9</b>  | 32.2     | 46.9  |

## FLUID CLEANLINESS

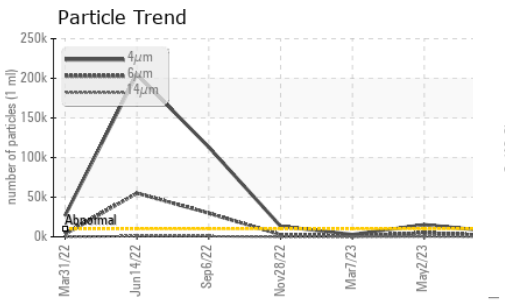
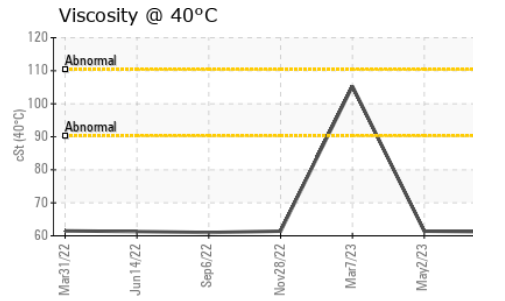
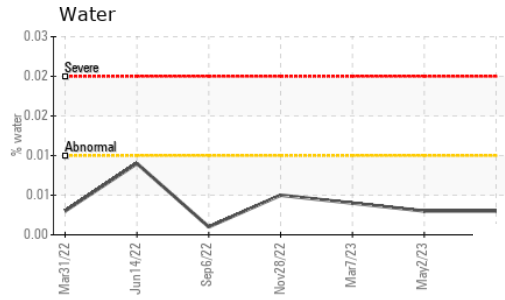
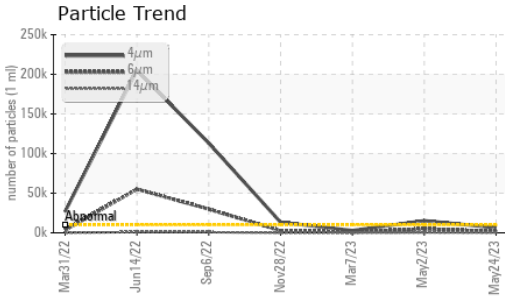
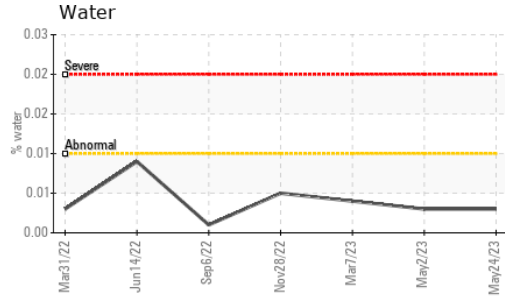
| method          | limit/base             | current         | history1   | history2 |
|-----------------|------------------------|-----------------|------------|----------|
| Particles >4µm  | ASTM D7647 >10000      | <b>6473</b>     | ▲ 15287    | 2863     |
| Particles >6µm  | ASTM D7647 >2500       | <b>1618</b>     | ▲ 4978     | 838      |
| Particles >14µm | ASTM D7647 >320        | <b>45</b>       | 282        | 53       |
| Particles >21µm | ASTM D7647 >80         | <b>6</b>        | 36         | 7        |
| 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>20/18/13</b> | ▲ 21/19/15 | 19/17/13 |

## FLUID DEGRADATION

| method           | limit/base | current   | history1     | history2 |         |
|------------------|------------|-----------|--------------|----------|---------|
| Acid Number (AN) | mg KOH/g   | ASTM D974 | <b>0.015</b> | 0.015    | ▲ 0.129 |



# OIL ANALYSIS REPORT



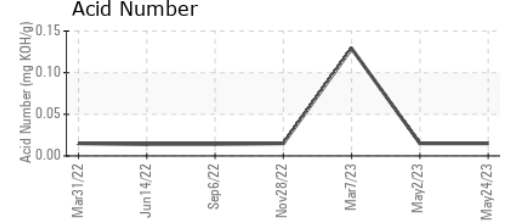
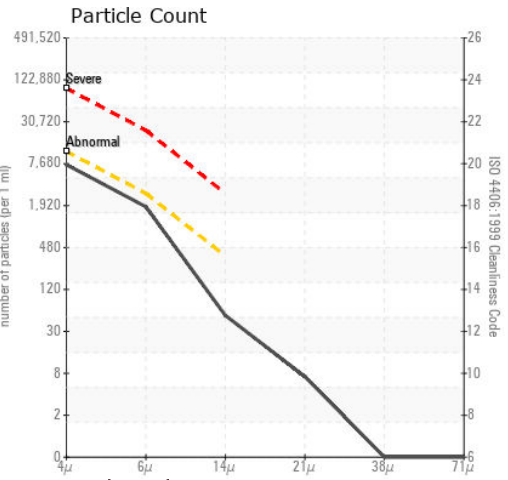
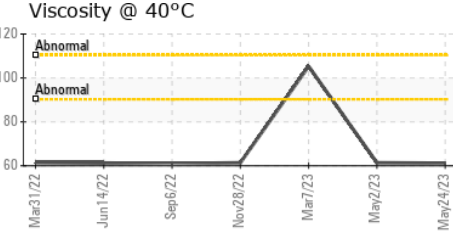
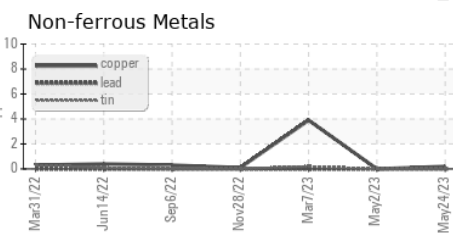
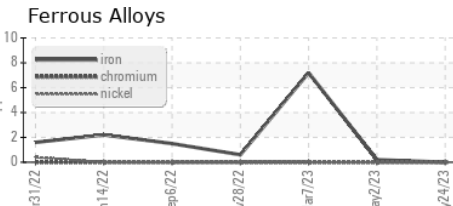
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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  | 61.2    | 61.4     | ▲ 105.3  |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP248446 **Received** : 01 Jun 2023  
**Lab Number** : 05861879 **Diagnosed** : 02 Jun 2023  
**Unique Number** : 10496344 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**REC SILICON MATERIALS**  
 119140 RICK JONES WAY  
 SILVER BOW, MT  
 US 59750  
 Contact: Service Manager

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)

T:  
F: