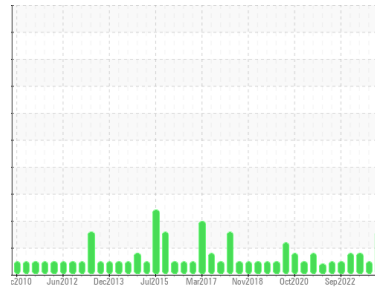




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**FES 5 B (S/N 93008031)**  
 Component  
**Refrigeration Compressor**  
 Fluid  
**ALL TEMP 717 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates present in the oil.

### 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>USP0006559</b>  | USP0004662  | USP0001831  |
| Sample Date   | Client Info |             | <b>20 Apr 2024</b> | 02 Jan 2024 | 23 Sep 2023 |
| Machine Age   | hrs         | Client Info | <b>28334</b>       | 27958       | 25863       |
| 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>ABNORMAL</b>    | NORMAL      | ATTENTION   |

## WEAR METALS

|          | method | limit/base     | current | history1 | history2 |
|----------|--------|----------------|---------|----------|----------|
| Iron     | ppm    | ASTM D5185m >8 | <1      | <1       | <1       |
| Chromium | ppm    | ASTM D5185m >2 | <1      | <1       | 0        |
| Nickel   | ppm    | ASTM D5185m    | <1      | 0        | 0        |
| Titanium | ppm    | ASTM D5185m    | <1      | 0        | 0        |
| Silver   | ppm    | ASTM D5185m >2 | 0       | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >3 | 0       | 1        | <1       |
| Lead     | ppm    | ASTM D5185m >2 | <1      | 0        | 0        |
| Copper   | ppm    | ASTM D5185m >8 | <1      | 0        | <1       |
| Tin      | ppm    | ASTM D5185m >4 | <1      | <1       | 0        |
| Vanadium | ppm    | ASTM D5185m    | <1      | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m    | <1      | 0        | 0        |

## ADDITIVES

|            | method | limit/base  | current | history1 | history2 |
|------------|--------|-------------|---------|----------|----------|
| Boron      | ppm    | ASTM D5185m | 0       | 0        | 0        |
| Barium     | ppm    | ASTM D5185m | 0       | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m | <1      | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m | 0       | 0        | <1       |
| Magnesium  | ppm    | ASTM D5185m | <1      | 0        | 0        |
| Calcium    | ppm    | ASTM D5185m | 0       | <1       | 0        |
| Phosphorus | ppm    | ASTM D5185m | 0       | <1       | 0        |
| Zinc       | ppm    | ASTM D5185m | 0       | 0        | 0        |
| Sulfur     | ppm    | ASTM D5185m | 0       | 0        | 0        |

## CONTAMINANTS

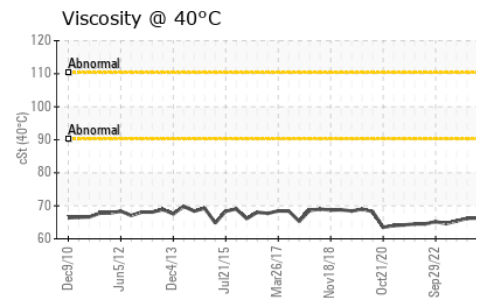
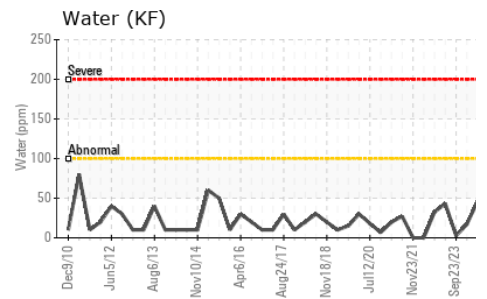
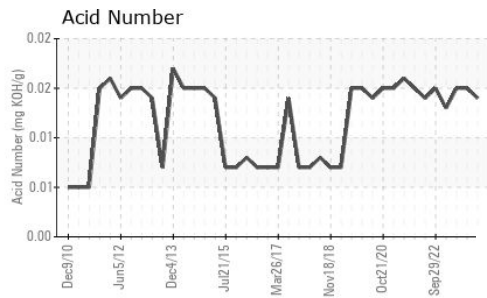
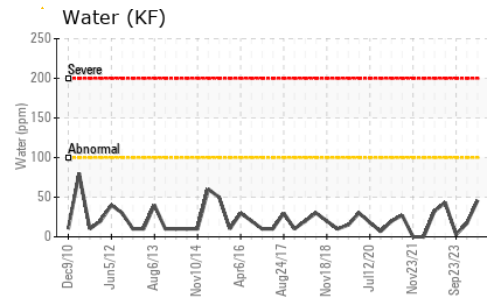
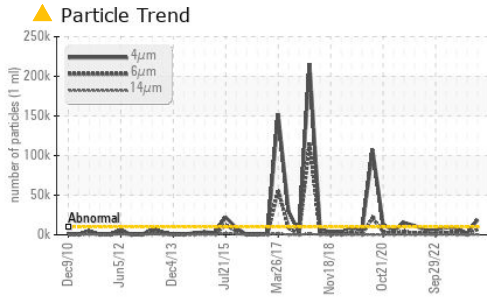
|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >15  | <1           | 0        | <1       |
| Sodium    | ppm    | ASTM D5185m      | <1           | 0        | <1       |
| Potassium | ppm    | ASTM D5185m >20  | <1           | 1        | 0        |
| Water     | %      | ASTM D6304 >0.01 | <b>0.004</b> | 0.002    | 0.001    |
| ppm Water | ppm    | ASTM D6304 >100  | <b>46</b>    | 17       | 2.6      |

## FLUID CLEANLINESS

|                 | method       | limit/base | current           | history1 | history2   |
|-----------------|--------------|------------|-------------------|----------|------------|
| Particles >4µm  | ASTM D7647   | >10000     | ▲ <b>19069</b>    | 1850     | 8631       |
| Particles >6µm  | ASTM D7647   | >2500      | ▲ <b>6974</b>     | 496      | ● 3367     |
| Particles >14µm | ASTM D7647   | >320       | ▲ <b>426</b>      | 27       | 204        |
| Particles >21µm | ASTM D7647   | >80        | <b>55</b>         | 5        | 30         |
| Particles >38µm | ASTM D7647   | >20        | <b>0</b>          | 0        | 1          |
| Particles >71µm | ASTM D7647   | >4         | <b>0</b>          | 0        | 0          |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15  | ▲ <b>21/20/16</b> | 18/16/12 | ● 20/19/15 |

## FLUID DEGRADATION

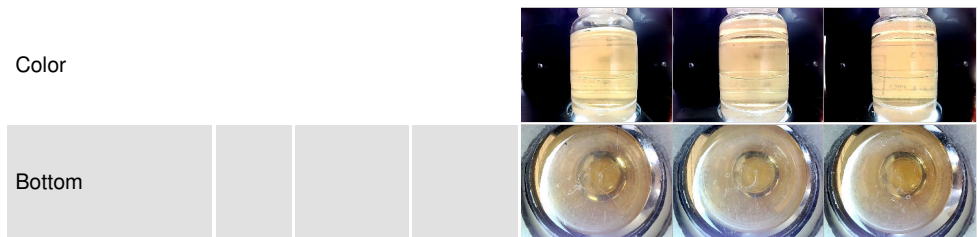
|                  | method   | limit/base | current      | history1 | history2 |
|------------------|----------|------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974  | <b>0.014</b> | 0.015    | 0.015    |



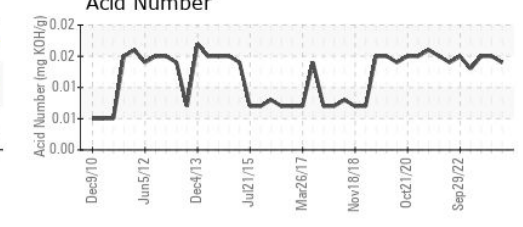
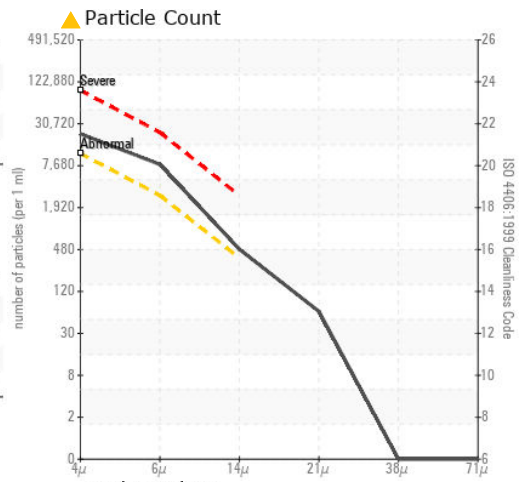
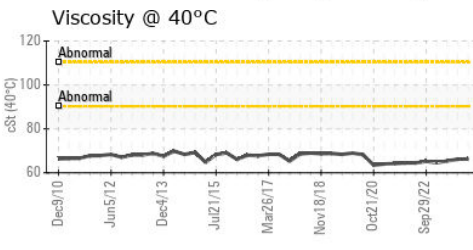
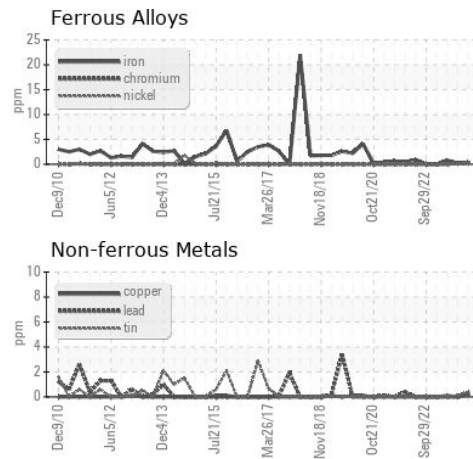
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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  | 66.3    | 66.2     | 65.4     |

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



## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : USP006559  
 Lab Number : 06159179  
 Unique Number : 10994602  
 Test Package : IND 2  
 Received : 24 Apr 2024  
 Tested : 25 Apr 2024  
 Diagnosed : 26 Apr 2024 - Jonathan Hester

MILAN PROCESSING  
 832 EAST 3RD ST  
 MILAN, MO  
 US 63556  
 Contact: SERVICE MANAGER

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: