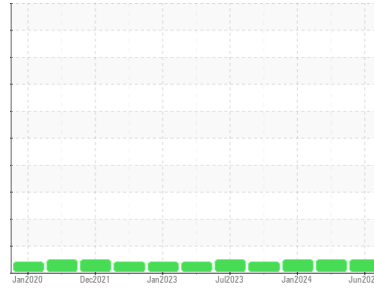




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**KR-FA-007004 - COMP 5 (S/N 63559)**  
 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>USP0013246</b>  | USP0008254  | USP0005266  |
| Sample Date   | Client Info |             | <b>17 Jun 2024</b> | 30 Mar 2024 | 10 Jan 2024 |
| Machine Age   | hrs         | Client Info | <b>0</b>           | 0           | 0           |
| 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>0</b> | 0        | 0        |
| Chromium | ppm    | ASTM D5185m >2 | <b>0</b> | <1       | 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>0</b> | 0        | 0        |
| Tin      | ppm    | ASTM D5185m >4 | <b>0</b> | <1       | 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>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        | 0        |
| Zinc       | ppm    | ASTM D5185m    | <b>0</b>  | 0        | 0        |
| Sulfur     | ppm    | ASTM D5185m 50 | <b>36</b> | 0        | 0        |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >15  | <b>0</b>     | 0        | 0        |
| Sodium    | ppm    | ASTM D5185m      | <b>&lt;1</b> | <1       | 0        |
| Potassium | ppm    | ASTM D5185m >20  | <b>0</b>     | <1       | 0        |
| Water     | %      | ASTM D6304 >0.01 | <b>0.003</b> | 0.001    | 0.001    |
| ppm Water | ppm    | ASTM D6304 >100  | <b>32</b>    | 9        | 13       |

## FLUID CLEANLINESS

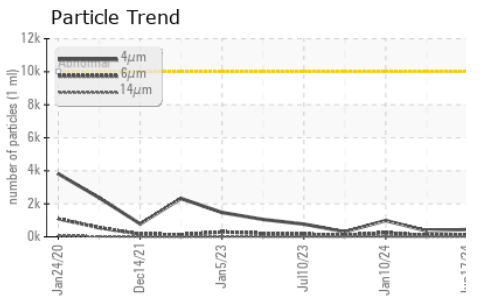
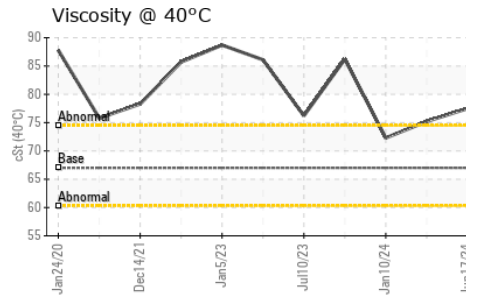
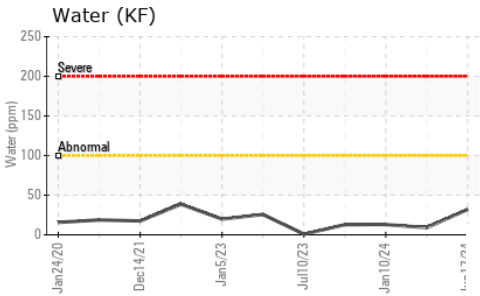
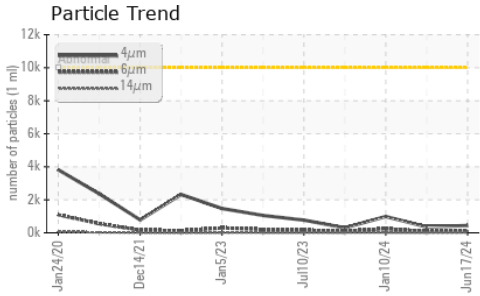
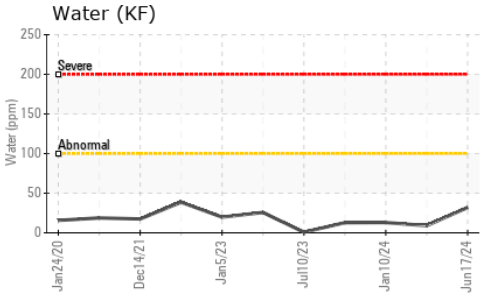
|                 | method       | limit/base | current         | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >10000     | <b>444</b>      | 356      | 987      |
| Particles >6µm  | ASTM D7647   | >2500      | <b>121</b>      | 71       | 253      |
| Particles >14µm | ASTM D7647   | >640       | <b>9</b>        | 10       | 14       |
| Particles >21µm | ASTM D7647   | >160       | <b>3</b>        | 3        | 4        |
| Particles >38µm | ASTM D7647   | >40        | <b>0</b>        | 0        | 0        |
| Particles >71µm | ASTM D7647   | >10        | <b>0</b>        | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >20/18/16  | <b>16/14/10</b> | 16/13/10 | 17/15/11 |

## FLUID DEGRADATION

|                  | method   | limit/base      | current      | history1 | history2 |
|------------------|----------|-----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974 0.005 | <b>0.014</b> | 0.027    | 0.014    |



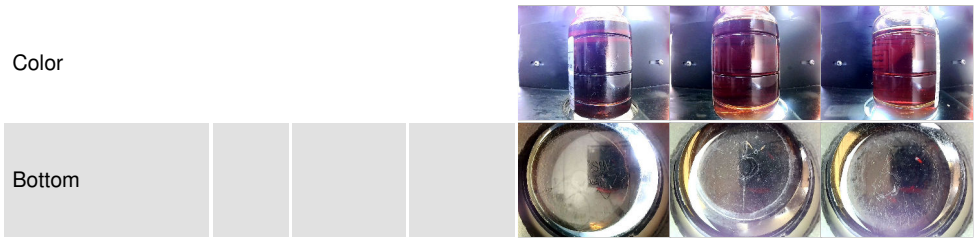
# OIL ANALYSIS REPORT



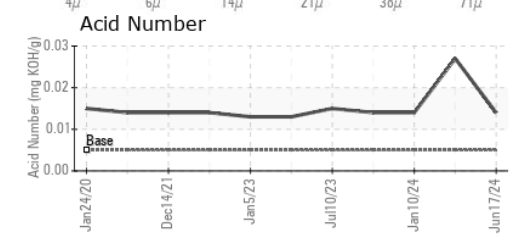
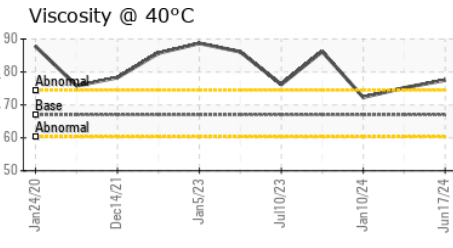
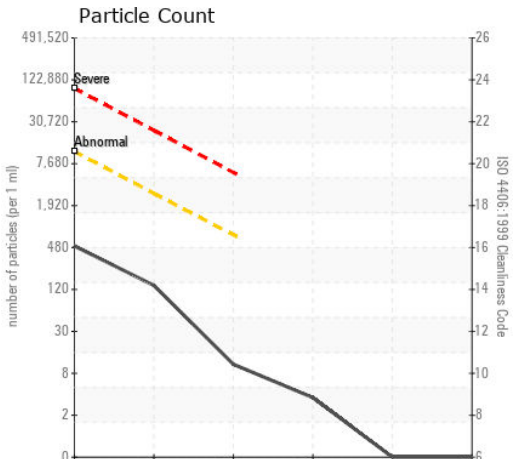
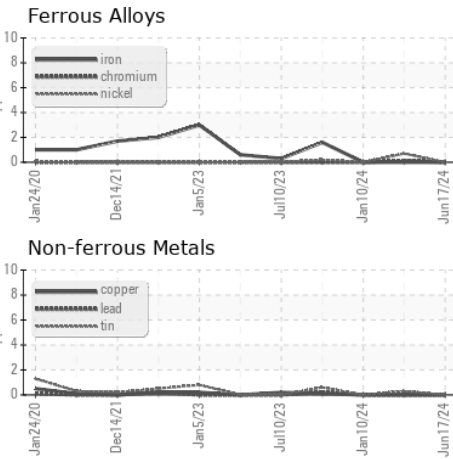
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | LIGHT    |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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      | 77.5     | 75.2     |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0013246  
**Lab Number** : 06213535  
**Unique Number** : 11086399  
**Test Package** : IND 2  
**Received** : 18 Jun 2024  
**Tested** : 20 Jun 2024  
**Diagnosed** : 21 Jun 2024 - Jonathan Hester

**KraftHeinz - Kirksville - Plant 8333 USP**  
 2504 INDUSTRIAL RD  
 KIRKSVILLE, MO  
 US 63501  
 Contact: LARRY WISKIRCHEN  
 larry.wiskirchen@kraftfoods.com  
 T: (660)627-1031  
 F:

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)