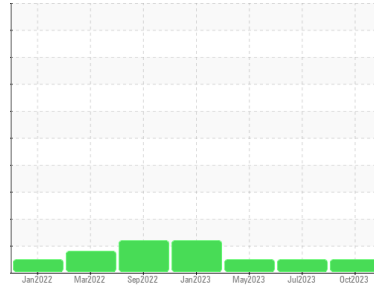




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**L6 C (S/N 5597660)**

Component  
**Vacuum Pump**

Fluid  
**USPI VAC 100 (--- QTS)**

## 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. Viscosity confirmed.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>USPM31021</b>   | USPM27750   | USPM25378   |
| Sample Date   | Client Info |             | <b>15 Oct 2023</b> | 10 Jul 2023 | 04 May 2023 |
| 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 >20 | <b>3</b>     | 2        | 2        |
| Chromium | ppm    | ASTM D5185m >20 | <b>0</b>     | 0        | 0        |
| Nickel   | ppm    | ASTM D5185m >20 | <b>0</b>     | 0        | 0        |
| Titanium | ppm    | ASTM D5185m     | <b>0</b>     | <1       | 0        |
| Silver   | ppm    | ASTM D5185m     | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | <1       | <1       |
| Lead     | ppm    | ASTM D5185m >20 | <b>0</b>     | 0        | 0        |
| Copper   | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | <1       | 0        |
| Tin      | ppm    | ASTM D5185m >20 | <b>&lt;1</b> | 0        | 0        |
| Vanadium | ppm    | ASTM D5185m     | <b>0</b>     | <1       | 0        |
| Cadmium  | ppm    | ASTM D5185m     | <b>0</b>     | <1       | 0        |

## ADDITIVES

|            | method | limit/base       | current      | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 0    | <b>0</b>     | 0        | 0        |
| Barium     | ppm    | ASTM D5185m 0    | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m 0    | <b>0</b>     | 0        | 0        |
| Manganese  | ppm    | ASTM D5185m      | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m 0    | <b>0</b>     | 0        | 0        |
| Calcium    | ppm    | ASTM D5185m 0    | <b>0</b>     | 0        | 0        |
| Phosphorus | ppm    | ASTM D5185m 1800 | <b>1506</b>  | 1468     | 1056     |
| Zinc       | ppm    | ASTM D5185m 0    | <b>0</b>     | 0        | 0        |
| Sulfur     | ppm    | ASTM D5185m 0    | <b>0</b>     | 0        | 0        |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >15  | <b>4</b>     | 3        | 11       |
| Sodium    | ppm    | ASTM D5185m      | <b>0</b>     | 0        | <1       |
| Potassium | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | 2        | 1        |
| Water     | %      | ASTM D6304 >.1   | <b>0.045</b> | 0.047    | 0.044    |
| ppm Water | ppm    | ASTM D6304 >1000 | <b>458.0</b> | 478.3    | 449.4    |

## FLUID CLEANLINESS

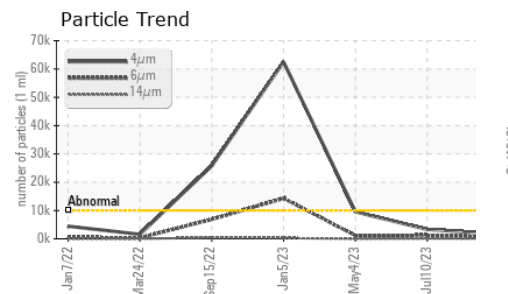
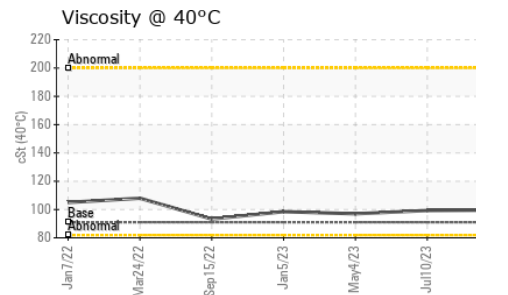
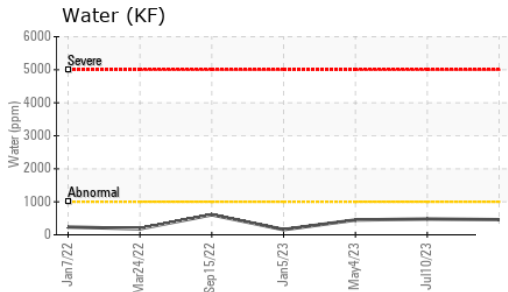
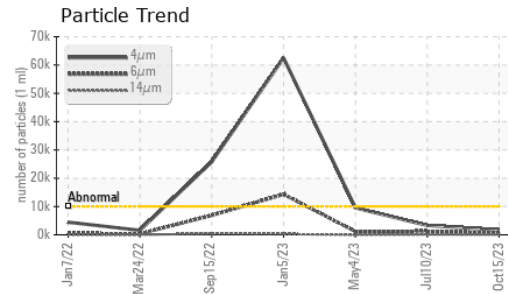
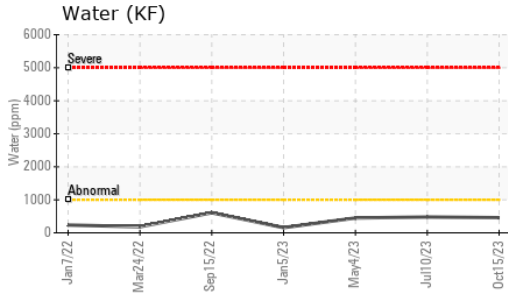
|                 | method       | limit/base | current         | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >10000     | <b>1717</b>     | 3311     | 9548     |
| Particles >6µm  | ASTM D7647   | >2500      | <b>528</b>      | 1251     | 1164     |
| Particles >14µm | ASTM D7647   | >640       | <b>25</b>       | 87       | 20       |
| Particles >21µm | ASTM D7647   | >160       | <b>8</b>        | 14       | 4        |
| Particles >38µm | ASTM D7647   | >40        | <b>0</b>        | 1        | 0        |
| Particles >71µm | ASTM D7647   | >10        | <b>0</b>        | 0        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >20/18/16  | <b>18/16/12</b> | 19/17/14 | 20/17/11 |

## FLUID DEGRADATION

|                  | method   | limit/base      | current      | history1 | history2 |
|------------------|----------|-----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.05 | <b>0.084</b> | 0.05     | 0.13     |



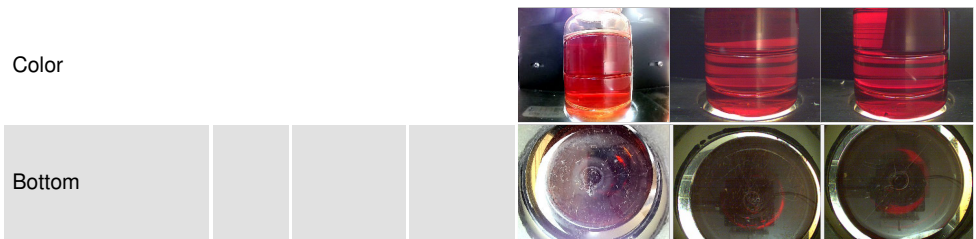
# OIL ANALYSIS REPORT



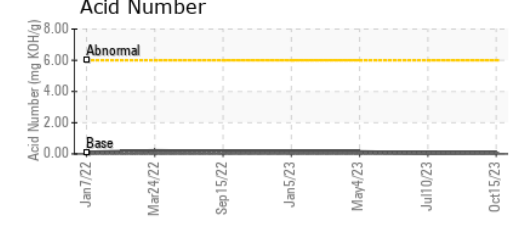
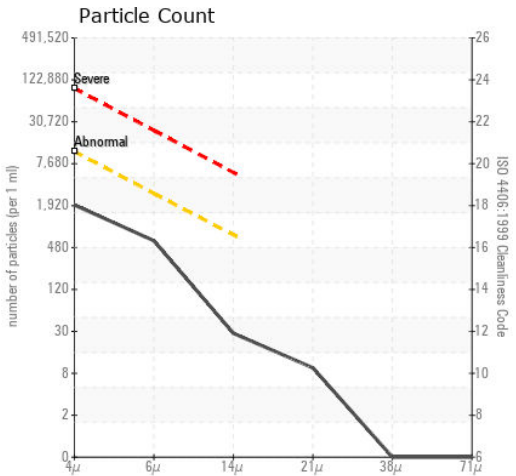
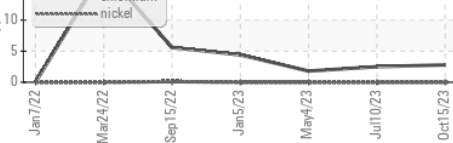
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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    | >.1     | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base   | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445 91 | 99.6    | 99.3     | 97.0     |

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



## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : USPM31021  
 Lab Number : 05979674  
 Unique Number : 10696969  
 Test Package : IND 2

**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)