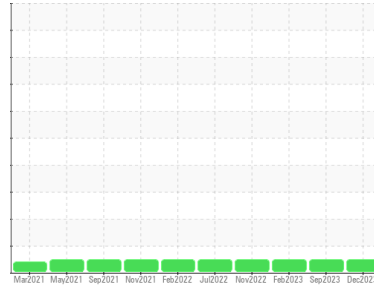




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**A3 SARAN LINE 1 (S/N U164500167)**

Component  
**Pump**  
Fluid  
**USPI VAC 100 (--- 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>USPM31991</b>   | USPM29586   | USPM26535   |
| Sample Date   | Client Info     | <b>05 Dec 2023</b> | 11 Sep 2023 | 27 Feb 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     | >90        | <b>0</b>     | 1        | 0        |
| Chromium ppm ASTM D5185m | >5         | <b>0</b>     | 0        | 0        |
| Nickel ppm ASTM D5185m   | >5         | <b>0</b>     | <1       | 0        |
| Titanium ppm ASTM D5185m | >3         | <b>0</b>     | 0        | 0        |
| Silver ppm ASTM D5185m   | >3         | <b>0</b>     | 0        | 0        |
| Aluminum ppm ASTM D5185m | >7         | <b>0</b>     | 0        | <1       |
| Lead ppm ASTM D5185m     | >12        | <b>0</b>     | 0        | 0        |
| Copper ppm ASTM D5185m   | >30        | <b>&lt;1</b> | 0        | 0        |
| Tin ppm ASTM D5185m      | >9         | <b>&lt;1</b> | <1       | <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      | 0          | <b>0</b>     | 0        | <1       |
| 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> | 0        | 1        |
| Magnesium ppm ASTM D5185m  | 0          | <b>0</b>     | <1       | 0        |
| Calcium ppm ASTM D5185m    | 0          | <b>&lt;1</b> | 0        | 0        |
| Phosphorus ppm ASTM D5185m | 1800       | <b>1359</b>  | 1472     | 1401     |
| Zinc ppm ASTM D5185m       | 0          | <b>0</b>     | 0        | 2        |
| Sulfur ppm ASTM D5185m     | 0          | <b>0</b>     | 17       | 0        |

## CONTAMINANTS

| method                    | limit/base | current      | history1 | history2 |
|---------------------------|------------|--------------|----------|----------|
| Silicon ppm ASTM D5185m   | >60        | <b>&lt;1</b> | 1        | 2        |
| Sodium ppm ASTM D5185m    |            | <b>2</b>     | <1       | 0        |
| Potassium ppm ASTM D5185m | >20        | <b>2</b>     | 1        | <1       |
| Water % ASTM D6304        | >.1        | <b>0.028</b> | 0.057    | 0.034    |
| ppm Water ppm ASTM D6304  | >1000      | <b>288</b>   | 579.9    | 340.8    |

## FLUID CLEANLINESS

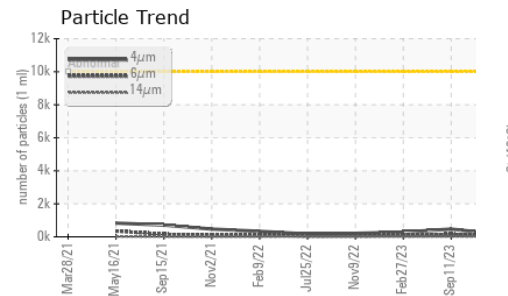
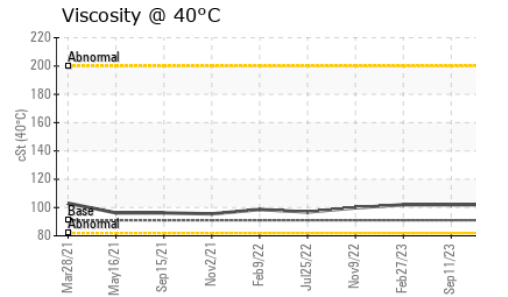
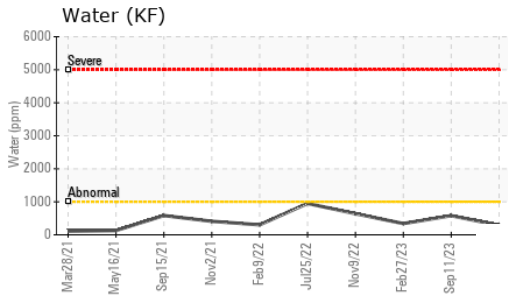
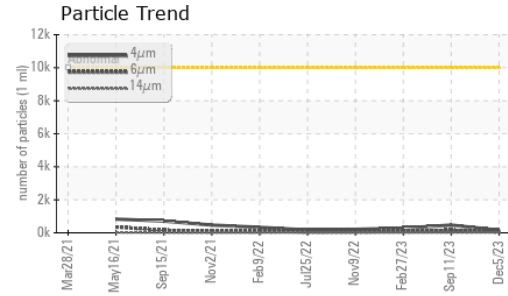
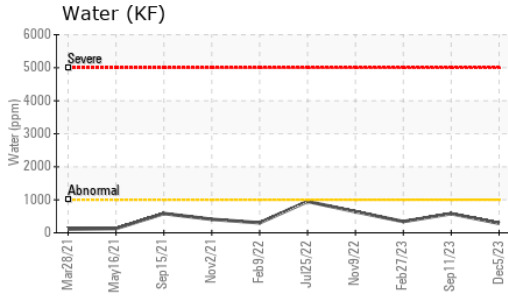
| method                       | limit/base | current         | history1 | history2 |
|------------------------------|------------|-----------------|----------|----------|
| Particles >4µm ASTM D7647    | >10000     | <b>155</b>      | 470      | 283      |
| Particles >6µm ASTM D7647    | >2500      | <b>57</b>       | 151      | 84       |
| Particles >14µm ASTM D7647   | >640       | <b>17</b>       | 18       | 14       |
| Particles >21µm ASTM D7647   | >160       | <b>6</b>        | 3        | 4        |
| Particles >38µm ASTM D7647   | >40        | <b>2</b>        | 0        | 1        |
| Particles >71µm ASTM D7647   | >10        | <b>0</b>        | 0        | 0        |
| Oil Cleanliness ISO 4406 (c) | >20/18/16  | <b>14/13/11</b> | 16/14/11 | 15/14/11 |

## FLUID DEGRADATION

| method                               | limit/base | current     | history1 | history2 |
|--------------------------------------|------------|-------------|----------|----------|
| Acid Number (AN) mg KOH/g ASTM D8045 | 0.05       | <b>0.24</b> | 0.24     | 0.17     |



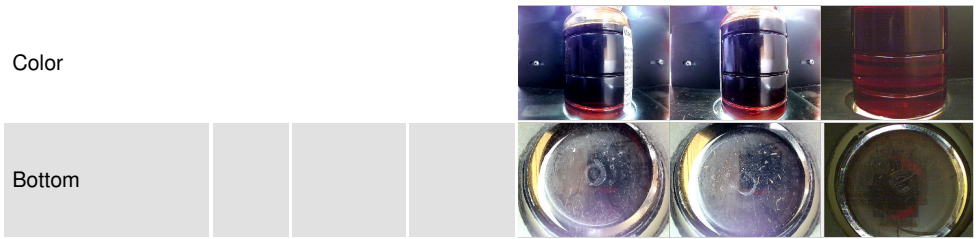
# OIL ANALYSIS REPORT



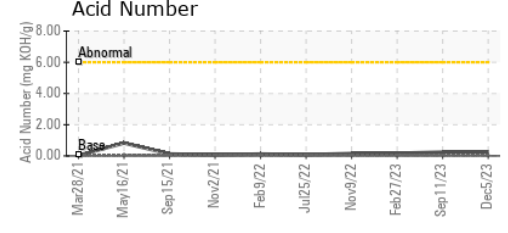
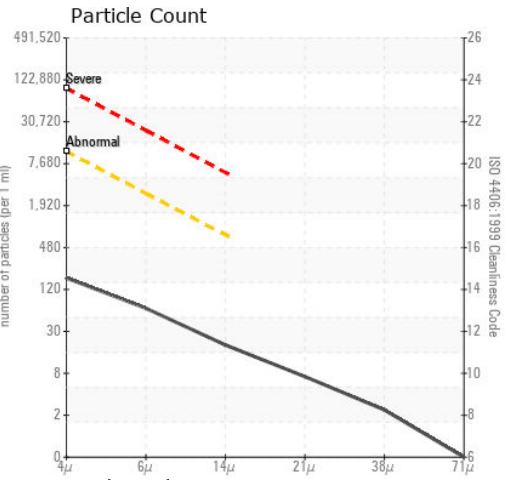
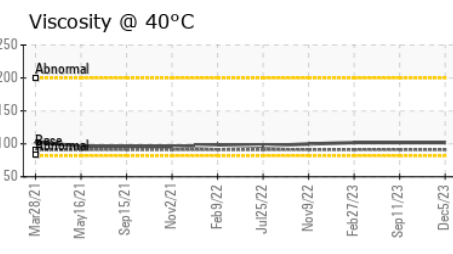
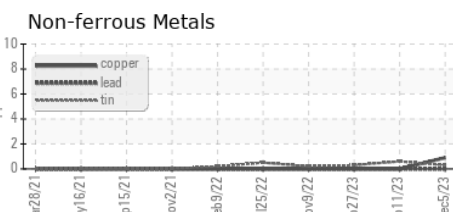
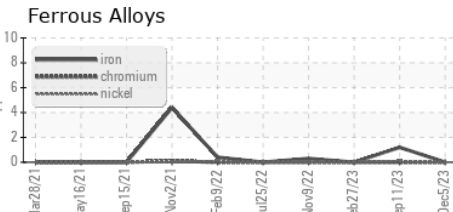
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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 | 102     | 102      | 102      |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USPM31991  
**Lab Number** : 06026488  
**Unique Number** : 10776279  
**Test Package** : IND 2

**KraftHeinz - Columbia - Plant 8330 USP**  
 4600 WACO RD  
 COLUMBIA, MO  
 US 65202  
 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: