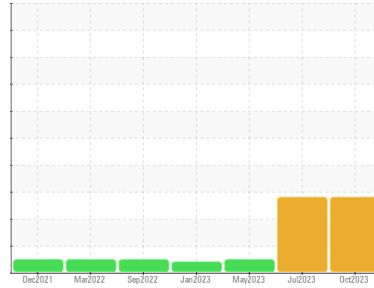




# PROBLEM SUMMARY

Sample Rating Trend



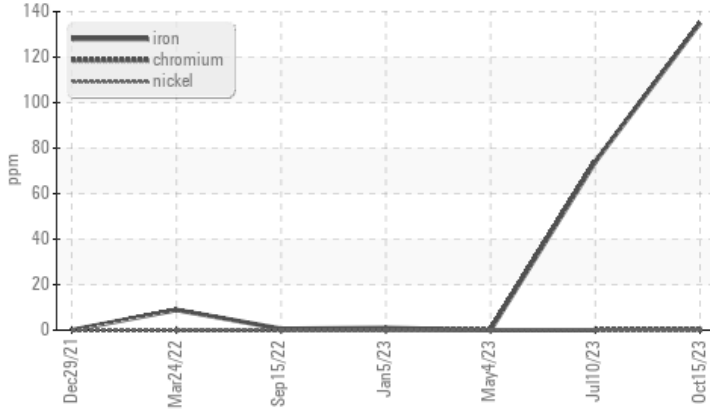
**WEAR**



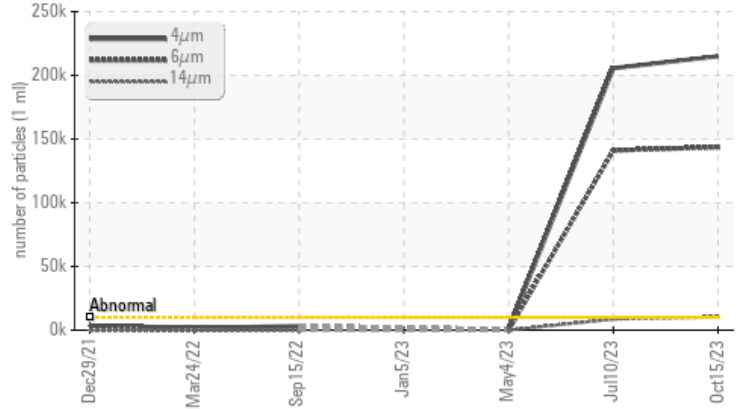
Machine Id  
**L7 A (S/N N/A)**  
 Component  
**Vacuum Pump**  
 Fluid  
**USPI VAC 100 (--- QTS)**

## COMPONENT CONDITION SUMMARY

▲ Ferrous Alloys



▲ Particle Trend



## RECOMMENDATION

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

## PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m >20	▲ 135	▲ 74	0
Particles >4µm		ASTM D7647 >10000	▲ 214957	▲ 205617	630
Particles >6µm		ASTM D7647 >2500	▲ 143667	▲ 141083	164
Particles >14µm		ASTM D7647 >640	▲ 10391	▲ 8643	13
Particles >21µm		ASTM D7647 >160	▲ 1097	▲ 395	3
Oil Cleanliness		ISO 4406 (c) >20/18/16	▲ 25/24/21	▲ 25/24/20	16/15/11

Customer Id: KRAKIRMO  
 Sample No.: USPM31031  
 Lab Number: 05979664  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.

## HISTORICAL DIAGNOSIS

### 10 Jul 2023 Diag: Doug Bogart

#### WEAR



We recommend you service the filters on this component. Resample at the next service interval to monitor. The iron level is abnormal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 04 May 2023 Diag: Doug Bogart

#### NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 05 Jan 2023 Diag: Doug Bogart

#### VIS DEBRIS



We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

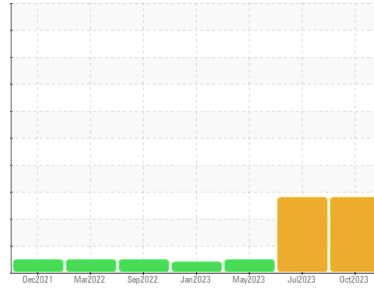
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**L7 A (S/N N/A)**  
 Component  
**Vacuum Pump**  
 Fluid  
**USPI VAC 100 (--- QTS)**

## DIAGNOSIS

### Recommendation

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

### Wear

The iron level is abnormal.

### 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>USPM31031</b>	USPM27751	USPM25379
Sample Date	Client Info	<b>15 Oct 2023</b>	10 Jul 2023	04 May 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	<b>▲ 135</b>	▲ 74	0
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</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>	<1	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>	2	0
Phosphorus	ppm	ASTM D5185m 1800	<b>1353</b>	1466	1702
Zinc	ppm	ASTM D5185m 0	<b>0</b>	0	0
Sulfur	ppm	ASTM D5185m 0	<b>0</b>	2	0

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<b>13</b>	2	3
Sodium	ppm	ASTM D5185m	<b>62</b>	6	0
Potassium	ppm	ASTM D5185m >20	<b>25</b>	8	<1
Water	%	ASTM D6304 >.1	<b>0.054</b>	0.048	0.073
ppm Water	ppm	ASTM D6304 >1000	<b>543.8</b>	481.7	739.2

## FLUID CLEANLINESS

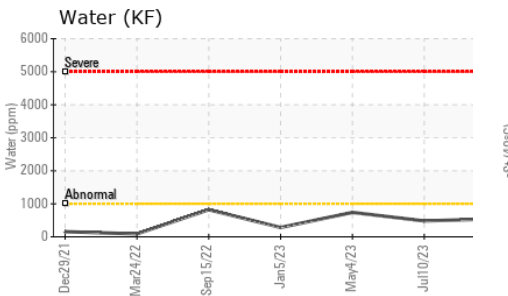
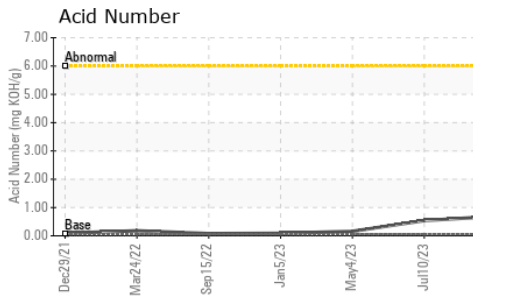
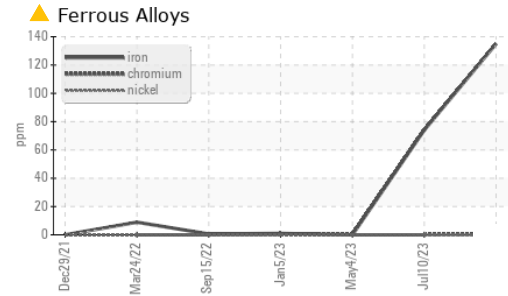
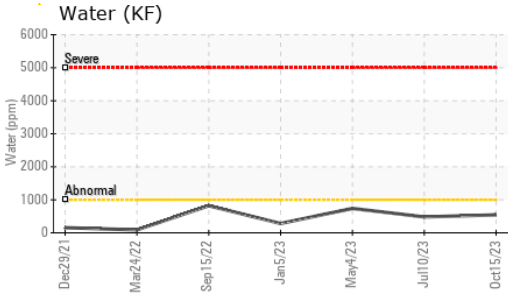
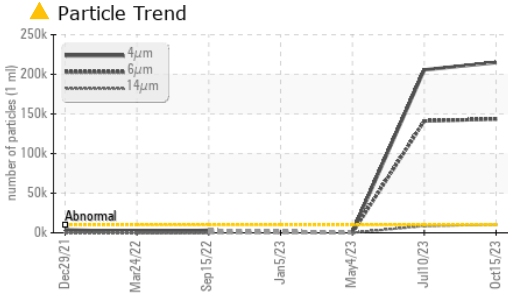
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	<b>▲ 214957</b>	▲ 205617	630
Particles >6µm	ASTM D7647 >2500	<b>▲ 143667</b>	▲ 141083	164
Particles >14µm	ASTM D7647 >640	<b>▲ 10391</b>	▲ 8643	13
Particles >21µm	ASTM D7647 >160	<b>▲ 1097</b>	▲ 395	3
Particles >38µm	ASTM D7647 >40	<b>7</b>	2	0
Particles >71µm	ASTM D7647 >10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >20/18/16	<b>▲ 25/24/21</b>	▲ 25/24/20	16/15/11

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.05	<b>0.69</b>	0.54	0.16



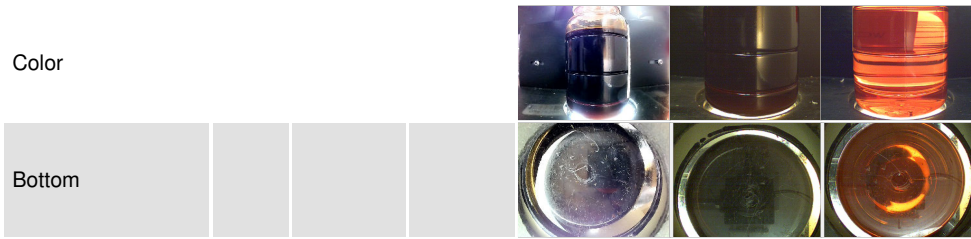
# OIL ANALYSIS REPORT



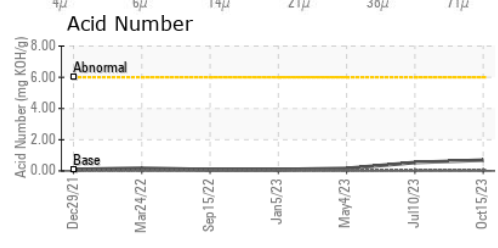
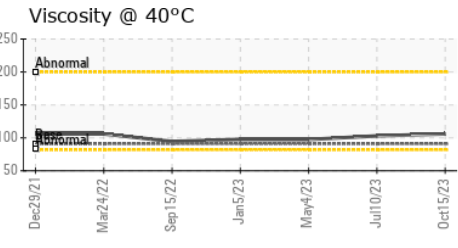
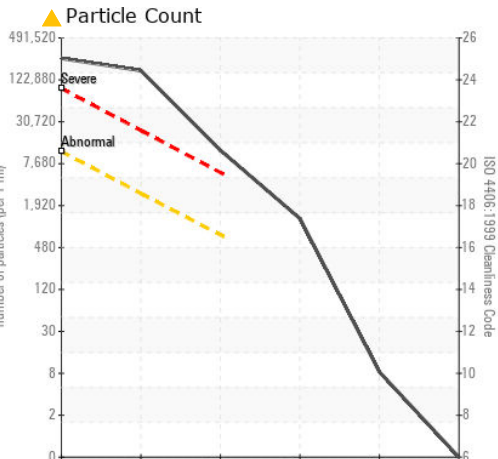
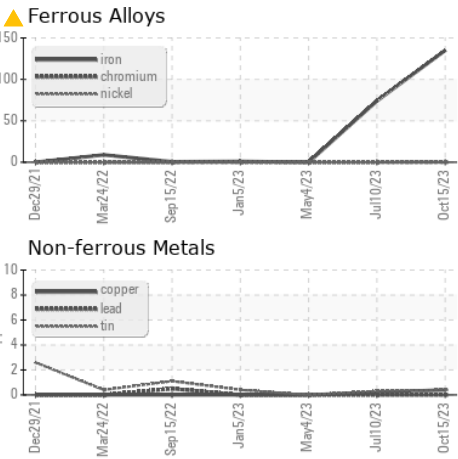
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	106	103	97.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USPM31031 **Received** : 16 Oct 2023  
**Lab Number** : 05979664 **Diagnosed** : 17 Oct 2023  
**Unique Number** : 10696959 **Diagnostician** : Doug Bogart  
**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)