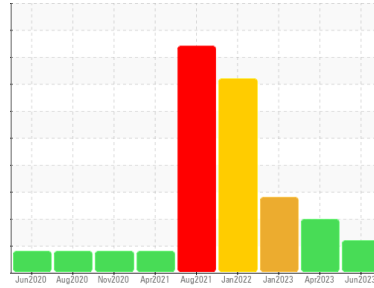


# PROBLEM SUMMARY

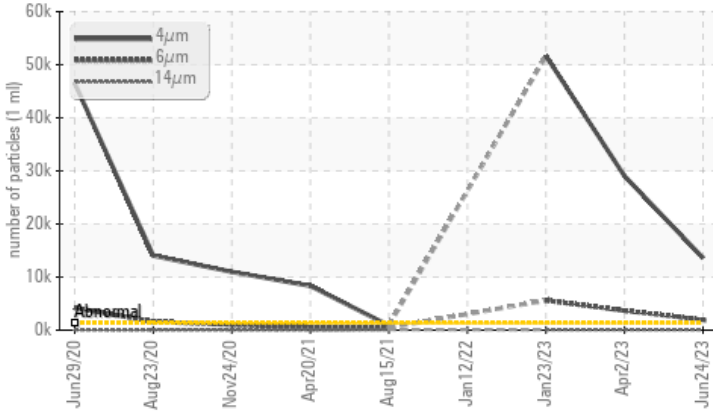
Area  
**Process Cheese [98301109]**  
Machine Id  
**HPLV CAT 9**  
Component  
**Pump**  
Fluid  
**R&O OIL ISO 100 (--- GAL)**

Sample Rating Trend



## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status		ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647 >1300	▲ 13588	▲ 29039	▲ 51659
Particles >6µm	ASTM D7647 >320	▲ 1911	▲ 3687	▲ 5605
Oil Cleanliness	ISO 4406 (c) >17/15/13	▲ 21/18/13	▲ 22/19/13	▲ 23/20/13

Customer Id: KRASPRMO  
Sample No.: PCA0096864  
Lab Number: 05887818  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

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

## RECOMMENDED ACTIONS

There are no recommended actions for this sample.

## HISTORICAL DIAGNOSIS

### 02 Apr 2023 Diag: Angela Borella

#### CONTAMINANT



No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Free water present. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 23 Jan 2023 Diag: Doug Bogart

#### WATER



No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. Free water present. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 12 Jan 2022 Diag: Don Baldrige

#### WATER



We advise that you check for the source of water entry. We recommend an early resample to monitor this condition. There is too much water present in this sample to perform a particle count. All component wear rates are normal. Appearance is hazy. There is a moderate concentration of water present in the oil. Free water present. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

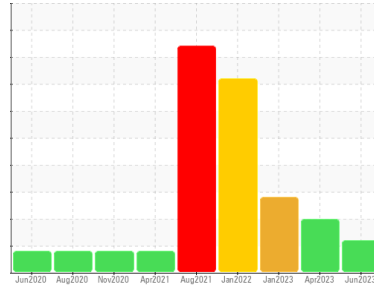
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**Process Cheese [98301109]**  
 Machine Id  
**HPLV CAT 9**  
 Component  
**Pump**  
 Fluid  
**R&O OIL ISO 100 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) 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	history 1	history 2
Sample Number	Client Info	<b>PCA0096864</b>	PCA0088303	PCA0081539
Sample Date	Client Info	<b>24 Jun 2023</b>	02 Apr 2023	23 Jan 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185m >90	<1	2	4
Chromium	ppm	ASTM D5185m >5	0	0	0
Nickel	ppm	ASTM D5185m >5	0	0	0
Titanium	ppm	ASTM D5185m >3	<1	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >7	<1	0	2
Lead	ppm	ASTM D5185m >12	0	0	0
Copper	ppm	ASTM D5185m >30	0	0	<1
Tin	ppm	ASTM D5185m >9	0	0	0
Antimony	ppm	ASTM D5185m	---	---	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

## ADDITIVES

method	limit/base	current	history 1	history 2	
Boron	ppm	ASTM D5185m 5	0	0	0
Barium	ppm	ASTM D5185m 5	14	0	0
Molybdenum	ppm	ASTM D5185m 5	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 5	13	0	<1
Calcium	ppm	ASTM D5185m 5	2	0	0
Phosphorus	ppm	ASTM D5185m 100	614	634	631
Zinc	ppm	ASTM D5185m 25	52	20	51
Sulfur	ppm	ASTM D5185m 1500	1855	1632	1739

## CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >60	2	3	2
Sodium	ppm	ASTM D5185m	<1	0	0
Potassium	ppm	ASTM D5185m >20	0	0	<1

## FLUID CLEANLINESS

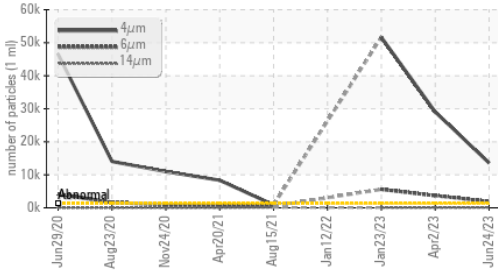
method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647 >1300	▲ <b>13588</b>	▲ 29039	▲ 51659
Particles >6µm	ASTM D7647 >320	▲ <b>1911</b>	▲ 3687	▲ 5605
Particles >14µm	ASTM D7647 >80	<b>51</b>	49	45
Particles >21µm	ASTM D7647 >20	<b>5</b>	7	3
Particles >38µm	ASTM D7647 >4	<b>0</b>	0	0
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >17/15/13	▲ <b>21/18/13</b>	▲ 22/19/13	▲ 23/20/13

## FLUID DEGRADATION

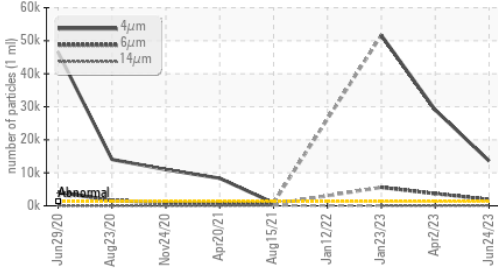
method	limit/base	current	history 1	history 2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.08	<b>0.23</b>	0.27	0.20

# OIL ANALYSIS REPORT

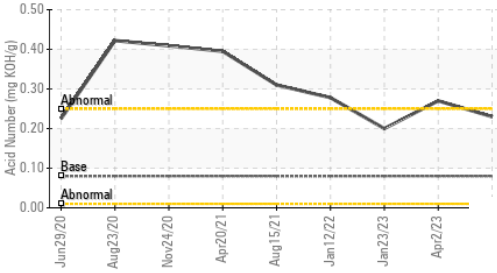
**▲ Particle Trend**



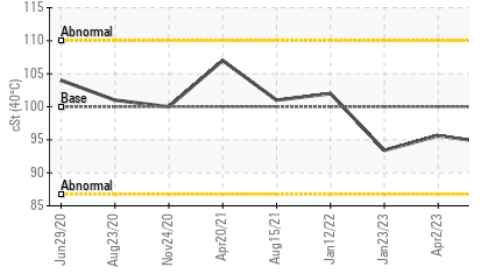
**▲ Particle Trend**



**Acid Number**



**Viscosity @ 40°C**



VISUAL	method	limit/base	current	history 1	history 2
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	▲ HAZY	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	NEG	0.2%	0.2%
Free Water	scalar	*Visual	NEG	NEG	▲ 1.0

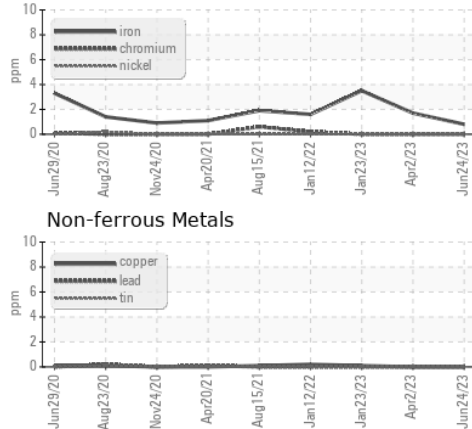
FLUID PROPERTIES	method	limit/base	current	history 1	history 2	
Visc @ 40°C	cSt	ASTM D445	100	94.5	95.6	93.4

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
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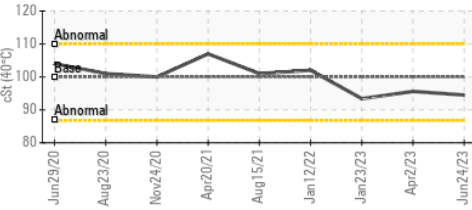


**GRAPHS**

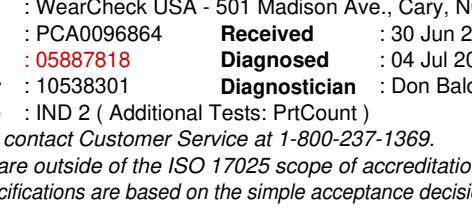
**Ferrous Alloys**



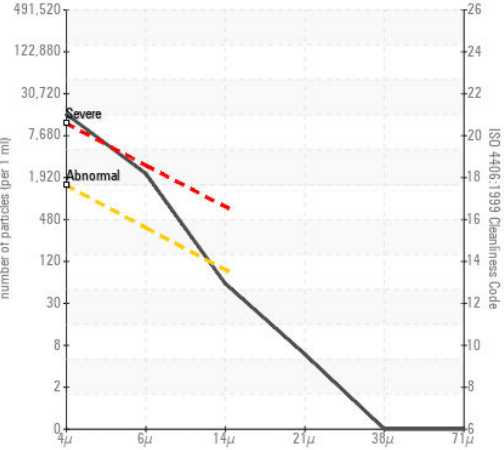
**Non-ferrous Metals**



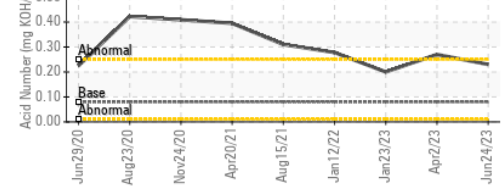
**Viscosity @ 40°C**



**▲ Particle Count**



**Acid Number**



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0096864 **Received** : 30 Jun 2023  
**Lab Number** : 05887818 **Diagnosed** : 04 Jul 2023  
**Unique Number** : 10538301 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

**KraftHeinz - Springfield - Plant 8311 PCA**  
 2035 E BENNETT  
 SPRINGFIELD, MO  
 US 65804  
 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: