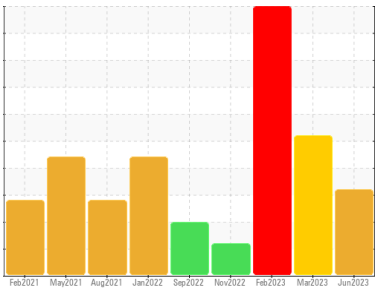
OIL DIAGNOSTICS

PROBLEM SUMMARY

Sample Rating Trend

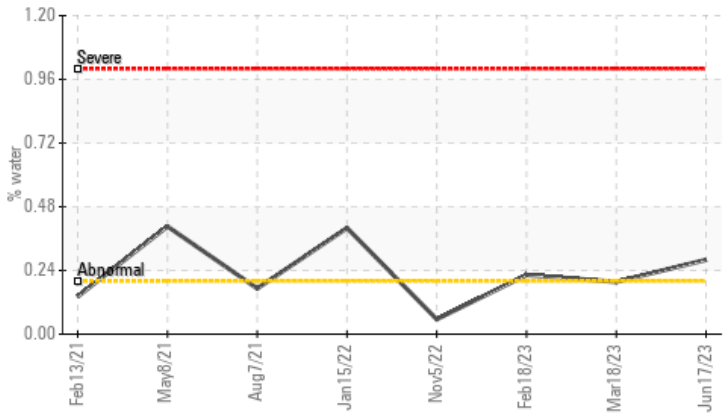


WATER

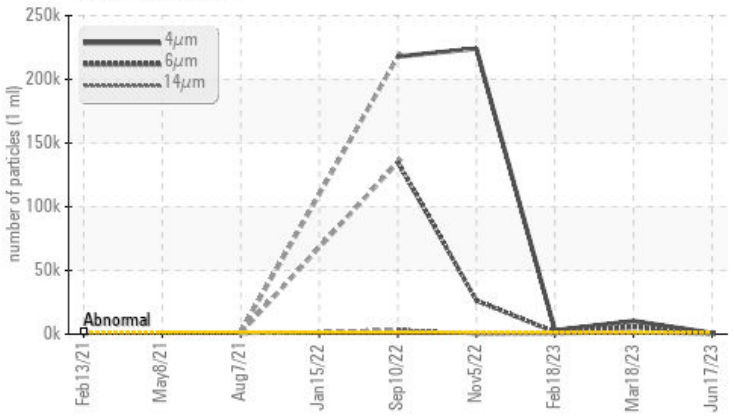
Area
PROCESS CHEESE [98316595]
Machine Id
COOKER 6
Component
Gearbox
Fluid
GEAR OIL ISO 320 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Water



▲ Particle Trend



RECOMMENDATION

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	SEVERE
Water	%	ASTM D6304	>0.2	▲ **0.280**	0.197	▲ 0.223
ppm Water	ppm	ASTM D6304	>2000	▲ **2800**	1970	▲ 2230
Particles >6µm		ASTM D7647	>320	▲ **469**	▲ 5616	▲ 1635
Oil Cleanliness		ISO 4406 (c)	>17/15/13	▲ **17/16/13**	▲ 21/20/17	▲ 19/18/15
Appearance	scalar	*Visual	NORML	▲ **HAZY**	▲ HAZY	▲ MILKY

Customer Id: KRASPRMO
Sample No.: PCA0100132
Lab Number: 05887819
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

18 Mar 2023 Diag: Don Baldridge

WATER

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. Appearance is hazy. There is a high amount of particulates present in the oil. Free water present. The AN level is acceptable for this fluid.

view report

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18 Feb 2023 Diag: Don Baldridge

WEAR

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.The iron level is severe. Gear wear is indicated. Appearance is milky. There is a high amount of particulates present in the oil. There is a light concentration of water present in the oil. Free water present. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

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05 Nov 2022 Diag: Jonathan Hester

ISO

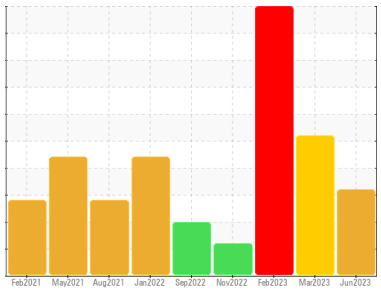
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Area
PROCESS CHEESE [98316595]
Machine Id
COOKER 6
Component
Gearbox
Fluid
GEAR OIL ISO 320 (--- GAL)

DIAGNOSIS

Recommendation

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

Appearance is hazy. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. There is a light concentration of water 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		**PCA0100132**	PCA0088296	PCA0081565
Sample Date		Client Info		**17 Jun 2023**	18 Mar 2023	18 Feb 2023
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	SEVERE

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>200	**70**	131	834
Chromium	ppm	ASTM D5185m	>15	**0**	<1	5
Nickel	ppm	ASTM D5185m	>15	**0**	<1	4
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	1	2
Lead	ppm	ASTM D5185m	>100	**0**	<1	0
Copper	ppm	ASTM D5185m	>200	**0**	<1	2
Tin	ppm	ASTM D5185m	>25	**0**	0	0
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	50	**0**	0	0
Barium	ppm	ASTM D5185m	15	**14**	<1	0
Molybdenum	ppm	ASTM D5185m	15	**0**	0	1
Manganese	ppm	ASTM D5185m		**<1**	1	8
Magnesium	ppm	ASTM D5185m	50	**14**	<1	9
Calcium	ppm	ASTM D5185m	50	**4**	0	3
Phosphorus	ppm	ASTM D5185m	350	**397**	547	541
Zinc	ppm	ASTM D5185m	100	**29**	6	9
Sulfur	ppm	ASTM D5185m	12500	**1158**	1473	1291

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>50	**1**	3	5
Sodium	ppm	ASTM D5185m		**5**	0	7
Potassium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Water	%	ASTM D6304	>0.2	**0.280**	0.197	0.223
ppm Water	ppm	ASTM D6304	>2000	**2800**	1970	2230

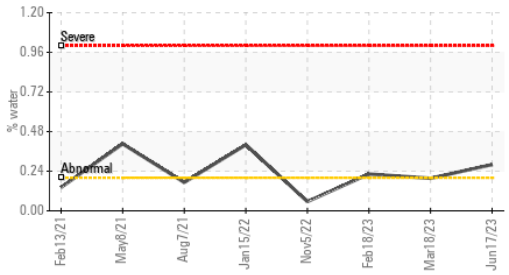
FLUID CLEANLINESS		method	limit/base	current	history 1	history 2
Particles >4µm		ASTM D7647	>1300	**861**	10309	3001
Particles >6µm		ASTM D7647	>320	**469**	5616	1635
Particles >14µm		ASTM D7647	>80	**80**	956	278
Particles >21µm		ASTM D7647	>20	**27**	322	94
Particles >38µm		ASTM D7647	>4	**4**	50	14
Particles >71µm		ASTM D7647	>3	**0**	5	1
Oil Cleanliness		ISO 4406 (c)	>17/15/13	**17/16/13**	21/20/17	19/18/15

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	**0.26**	0.32	0.33

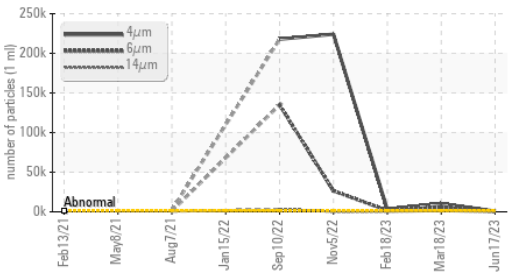
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

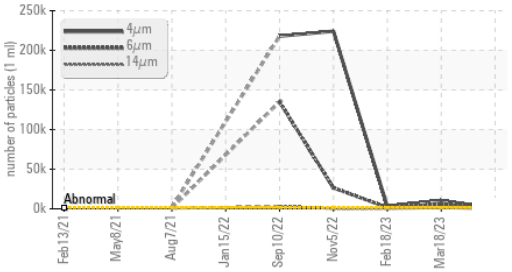
Water



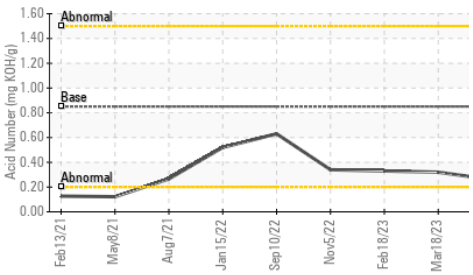
Particle Trend



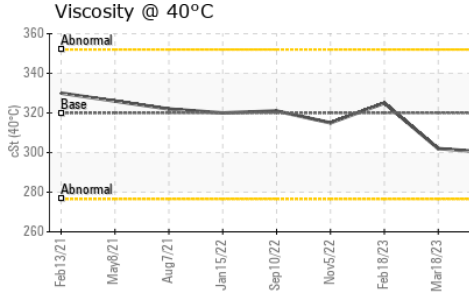
Particle Trend



Acid Number



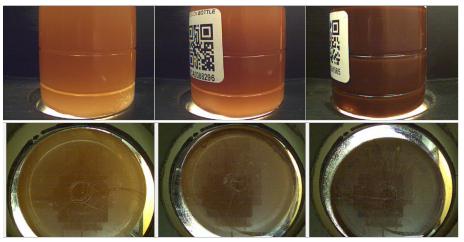
Viscosity @ 40°C



VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	▲ **HAZY**	▲ HAZY	▲ MILKY
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**0.2%**	0.2%	▲ 0.2%
Free Water	scalar	*Visual		**NEG**	▲ 1.0	▲ 1.0

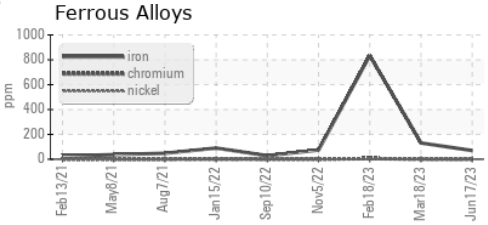
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	320	**300**	302	325

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					
Bottom					

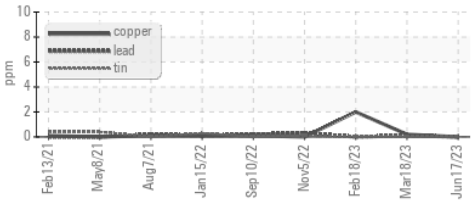


GRAPHS

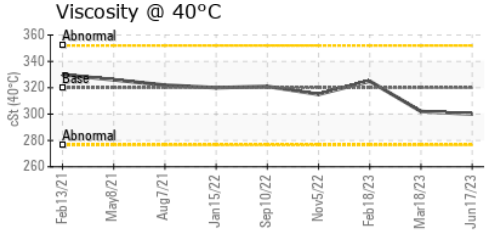
Ferrous Alloys



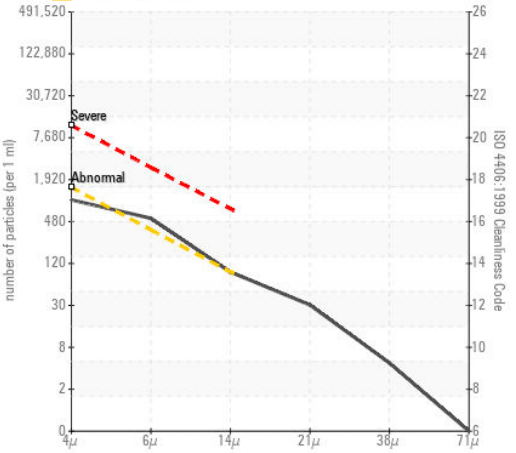
Non-ferrous Metals



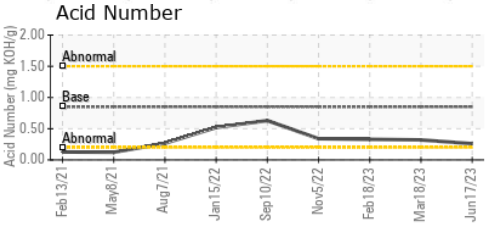
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0100132 **Received** : 30 Jun 2023
Lab Number : 05887819 **Diagnosed** : 07 Jul 2023
Unique Number : 10538302 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

Certificate L2367

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)

KraftHeinz - Springfield - Plant 8311 PCA
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US 65804
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