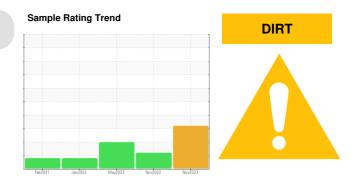


# **PROBLEM SUMMARY**

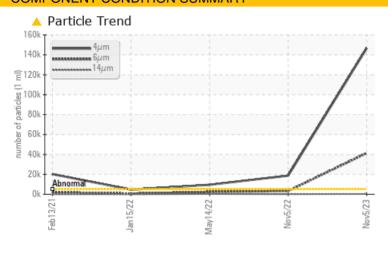
# PROCESS CHEESE [98620100] Machine Id SCALE HOPPER 11

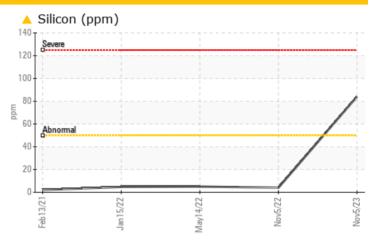
Component **Gearbox** 

GEAR OIL ISO 320 (--- GAL)



# **COMPONENT CONDITION SUMMARY**





# RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

PROBLEMATION	CTEST	RESULT	S			
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Silicon	ppm	ASTM D5185m	>50	<u> </u>	4	5
Particles >4µm		ASTM D7647	>5000	<b>146664</b>	<u>▲</u> 18703	<b>△</b> 9516
Particles >6µm		ASTM D7647	>1300	<b>41337</b>	<b>▲</b> 3267	<u>^</u> 2362
Particles >14µm		ASTM D7647	>320	<b>4</b> 389	166	<b>▲</b> 369
Oil Cleanliness		ISO 4406 (c)	>19/17/15	<u> 24/23/16</u>	<u>\</u> 21/19/15	<u>^</u> 20/18/16

Customer Id: KRASPRMO Sample No.: PCA0101647 Lab Number: 06013988 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

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

# RECOMMENDED ACTIONS

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

# HISTORICAL DIAGNOSIS

# 05 Nov 2022 Diag: Don Baldridge

ISO



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. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



# 14 May 2022 Diag: Doug Bogart

ISO



Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate 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.



#### 15 Jan 2022 Diag: Don Baldridge

ISO



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. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



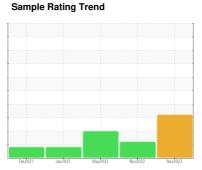


# **OIL ANALYSIS REPORT**

# PROCESS CHEESE [98620100] SCALE HOPPER 11

Gearbox

GEAR OIL ISO 320 (--- GAL)





# **DIAGNOSIS**

#### Recommendation

The oil change at the time of sampling has been noted. We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

# Wear

All component wear rates are normal.

#### Contamination

There is a high amount of particulates present in the oil. Elemental level of silicon (Si) above normal.

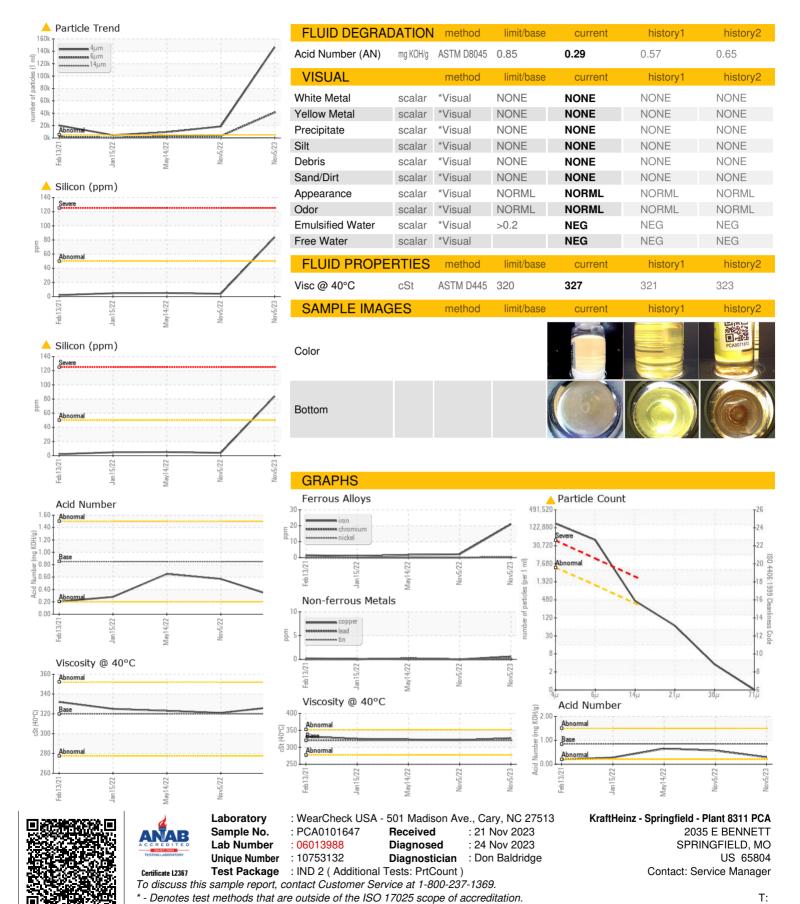
# **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

		Feb 2021	Jan2022	May2022 Nov2022	Nov2023	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0101647	PCA0081576	PCA0071812
Sample Date		Client Info		05 Nov 2023	05 Nov 2022	14 May 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	21	2	2
Chromium	ppm	ASTM D5185m	>15	<1	0	0
Nickel	ppm	ASTM D5185m	>15	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	0	<1
Lead	ppm	ASTM D5185m	>100	0	0	<1
Copper	ppm	ASTM D5185m	>200	<1	0	0
Tin	ppm	ASTM D5185m	>25	<1	0	0
Antimony	ppm		>5			
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2
	ppm					
Boron	• • • • • • • • • • • • • • • • • • • •	ASTM D5185m	50	0	0	1
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	50 15	0 4	0	1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 15	0 4 <1	0 0 0	1 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50	0 4 <1 <1 <1 0	0 0 0 0 0	1 0 0 <1 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350	0 4 <1 <1 <1 0 529	0 0 0 0 0 0 0 568	1 0 0 <1 <1 0 174
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100	0 4 <1 <1 <1 0 529	0 0 0 0 0 0 0 568	1 0 0 <1 <1 <1 0 174
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350	0 4 <1 <1 <1 0 529	0 0 0 0 0 0 0 568	1 0 0 <1 <1 0 174
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100	0 4 <1 <1 <1 0 529	0 0 0 0 0 0 0 568	1 0 0 <1 <1 <1 0 174
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100 12500	0 4 <1 <1 <1 0 529 0	0 0 0 0 0 0 0 568 0 571	1 0 0 <1 <1 <1 0 174 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base	0 4 <1 <1 <1 0 529 0 11111	0 0 0 0 0 0 0 568 0 571 history1	1 0 0 <1 <1 <1 0 174 0 28
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base	0 4 <1 <1 <1 0 529 0 11111 current  84	0 0 0 0 0 0 0 568 0 571 history1	1 0 0 0 <1 <1 0 174 0 28 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 Iimit/base >50	0 4 <1 <1 <1 0 529 0 1111  current  84 <1	0 0 0 0 0 0 568 0 571 history1 4	1 0 0 0 <1 <1 0 174 0 28 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm	ppm	ASTM D5185m  method ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base >50	0 4 <1 <1 <1 0 529 0 1111 current   84 <1 <1 <1 current  146664	0 0 0 0 0 0 568 0 571 history1 4 0 0 history1	1 0 0 174 0 28 history2 5 0 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm	ppm	ASTM D5185m  method ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base >50    Solution   Solution	0 4 <1 <1 <1 0 529 0 11111 current   84 <1 <1  current  146664  41337	0 0 0 0 0 0 568 0 571 history1 4 0 0 0 history1 ^ 18703 ^ 3267	1 0 0 174 0 28 history2 5 0 <1 history2  4 9516 2362
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm	ppm	ASTM D5185m  Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	50 15 15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >5000 >1300 >320	0 4 <1 <1 <1 0 529 0 11111 current   84 <1 <1 <1 current  4 146664 41337 389	0 0 0 0 0 0 568 0 571 history1 4 0 0 0 history1 18703 ▲ 3267 166	1 0 0 0 <1 <1 <1 0 174 0 28 history2 5 0 <1 history2  39516 2362 369
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >14µm Particles >21µm	ppm	ASTM D5185m  method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	50 15 15 50 50 350 100 12500  limit/base >50 >20  limit/base >5000 >1300 >320 >80	0 4 <1 <1 <1 0 529 0 11111  current  84 <1 <1 <1  current  41337  389 58	0 0 0 0 0 0 568 0 571 history1 4 0 0 0 history1 ▲ 18703 ▲ 3267 166 31	1 0 0 0 <1 <1 <1 0 174 0 28 history2  5 0 <1 history2  △ 2362 △ 369 △ 157
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >5µm Particles >21µm Particles >38µm	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	50 15 15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >5000 >1300 >320 >80 >20	0 4 <1 <1 <1 0 529 0 11111 current  ▲ 84 <1 <1 <1 current  ▲ 146664  ▲ 41337  ▲ 389 58 3	0 0 0 0 0 0 568 0 571 history1 4 0 0 history1 ▲ 18703 ▲ 3267 166 31	1 0 0 0 <1 <1 0 174 0 28 history2  5 0 <1 history2  4 9516 2362 369 157 18
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINAN Silicon Sodium Potassium FLUID CLEANI Particles >4µm Particles >14µm Particles >21µm	ppm	ASTM D5185m  method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	50 15 15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >5000 >1300 >320 >80 >20	0 4 <1 <1 <1 0 529 0 11111  current  84 <1 <1 <1  current  41337  389 58	0 0 0 0 0 0 568 0 571 history1 4 0 0 0 history1 ▲ 18703 ▲ 3267 166 31	1 0 0 0 <1 <1 <1 0 174 0 28 history2  5 0 <1 history2  △ 2362 △ 369 △ 157



# **OIL ANALYSIS REPORT**



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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