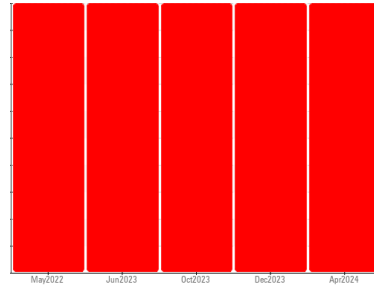




# PROBLEM SUMMARY

## Sample Rating Trend



WEAR



Area

### BAGLINE

Machine Id

## KETTLE 5 - BAG

Component

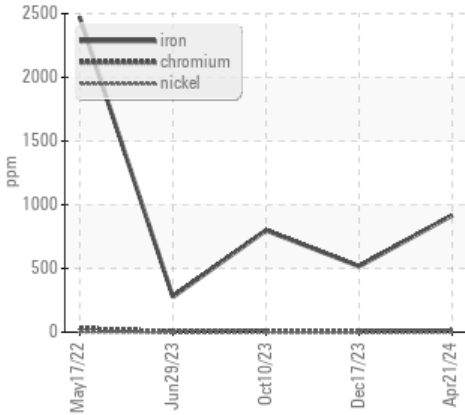
### Bottom Refrigeration Compressor

Fluid

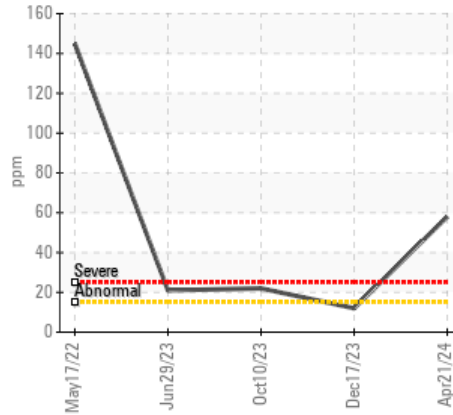
### PETRO CANADA PURITY FG SYNTH EP GEAR 220 (--- GAL)

## COMPONENT CONDITION SUMMARY

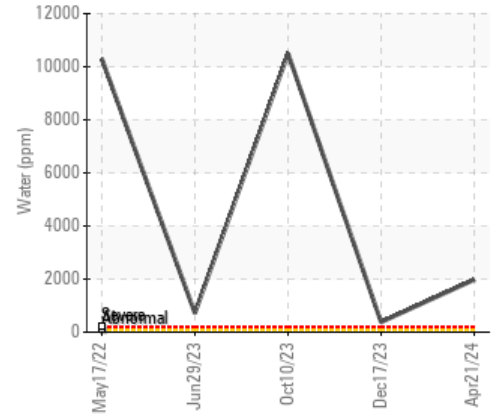
### ▲ Ferrous Alloys



### ▲ Silicon (ppm)



### ▲ Water (KF)



## RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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.

## PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>8	▲ 917	▲ 517	▲ 799
Chromium	ppm	ASTM D5185m	>2	▲ 12	▲ 6	▲ 10
Silicon	ppm	ASTM D5185m	>15	▲ 58	12	▲ 22
Water	%	ASTM D6304	>0.01	▲ 0.198	▲ 0.038	▲ 1.05
ppm Water	ppm	ASTM D6304	>100	▲ 1980	▲ 380	▲ 10500
Silt	scalar	*Visual	NONE	▲ MODER	▲ HEAVY	NONE
Emulsified Water	scalar	*Visual	>0.01	▲ 0.2%	▲ 0.2%	▲ 0.2%

Customer Id: KRACED  
 Sample No.: USP0006494  
 Lab Number: 06156015  
 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](mailto:jhester@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 advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

WEAR



**17 Dec 2023 Diag: Doug Bogart**

We advise that you perform a filter service and use off-line filtration to improve the cleanliness of the system fluid. We advise that you inspect for the source(s) of wear. 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. The iron level is severe. Appearance is milky. There is a high amount of visible silt present in the sample. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid.

view report



WEAR



**10 Oct 2023 Diag: Doug Bogart**

We advise that you check for the source of water entry. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. Please specify the brand and viscosity of the oil on your next sample. There is too much water present in this sample to perform a particle count. The iron level is severe. Appearance is milky. There is a high concentration of water present in the oil. Elemental level of silicon (Si) above normal. The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.

view report



WEAR



**29 Jun 2023 Diag: Doug Bogart**

We advise that you perform a filter service and use off-line filtration to improve the cleanliness of the system fluid. 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. The iron level is severe. Appearance is hazy. Elemental level of silicon (Si) above normal. Moderate concentration of visible dirt/debris present in the oil. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid.

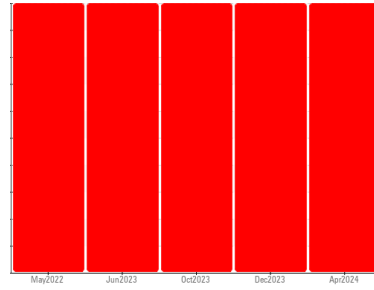
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area

**BAGLINE**

Machine Id

**KETTLE 5 - BAG**

Component

**Bottom Refrigeration Compressor**

Fluid

**PETRO CANADA PURITY FG SYNTH EP GEAR 220 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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.

### ▲ Wear

The iron level is severe.

### ▲ Contamination

Appearance is hazy. Elemental level of silicon (Si) above normal indicating ingress of seal material. There is a moderate amount of visible silt present in the sample. There is a light concentration of water present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>USP0006494</b>	USP0004462	USP0001369
Sample Date	Client Info		<b>21 Apr 2024</b>	17 Dec 2023	10 Oct 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>SEVERE</b>	SEVERE	SEVERE

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >8	<b>▲ 917</b>	▲ 517	▲ 799
Chromium	ppm	ASTM D5185m >2	<b>▲ 12</b>	▲ 6	▲ 10
Nickel	ppm	ASTM D5185m	<b>1</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >3	<b>2</b>	0	<1
Lead	ppm	ASTM D5185m >2	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >8	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m >4	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m	<b>4</b>	2	3
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	0	2
Calcium	ppm	ASTM D5185m	<b>4</b>	0	3
Phosphorus	ppm	ASTM D5185m	<b>441</b>	439	494
Zinc	ppm	ASTM D5185m	<b>3</b>	0	0
Sulfur	ppm	ASTM D5185m	<b>387</b>	380	444

## CONTAMINANTS

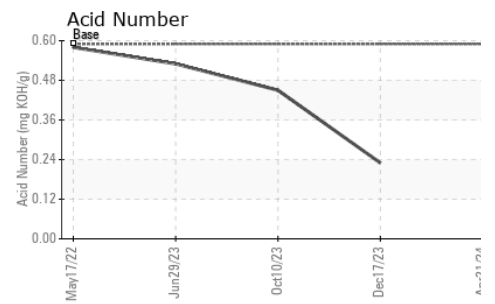
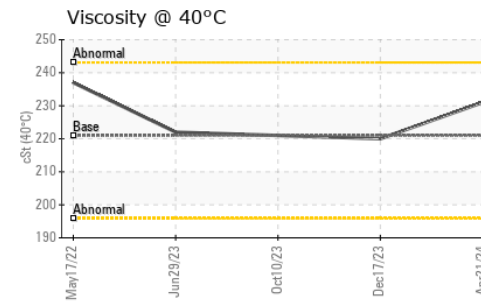
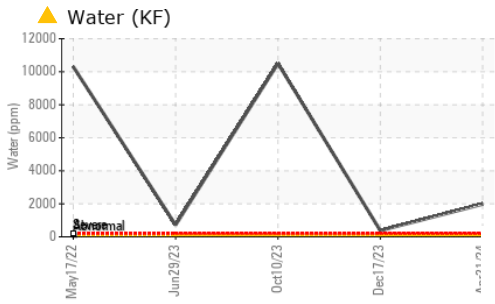
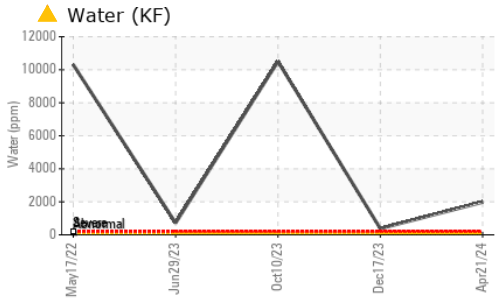
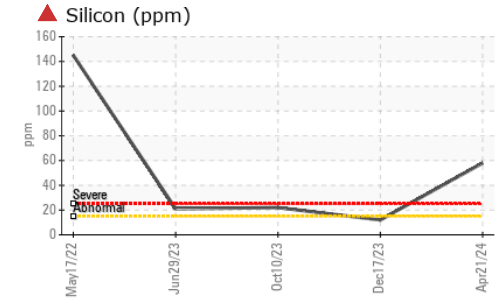
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>▲ 58</b>	12	▲ 22
Sodium	ppm	ASTM D5185m	<b>6</b>	3	4
Potassium	ppm	ASTM D5185m >20	<b>2</b>	0	0
Water	%	ASTM D6304 >0.01	<b>▲ 0.198</b>	▲ 0.038	▲ 1.05
ppm Water	ppm	ASTM D6304 >100	<b>▲ 1980</b>	▲ 380	▲ 10500

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974 0.59	<b>---</b>	0.23	0.45



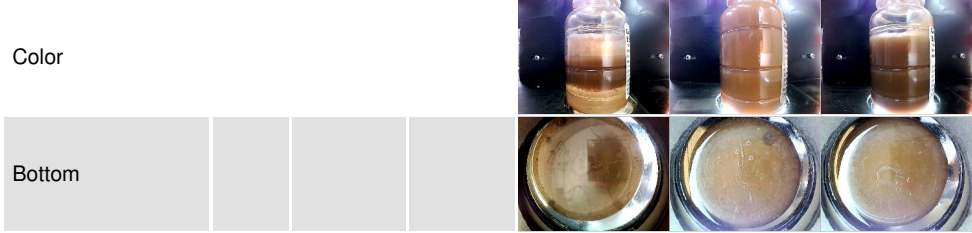
# OIL ANALYSIS REPORT



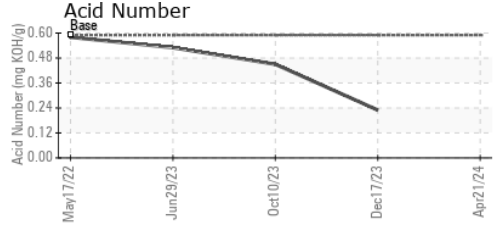
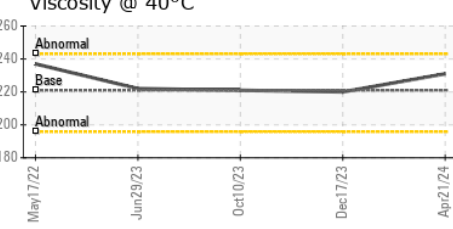
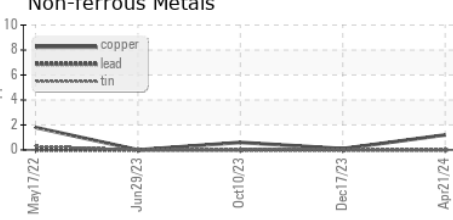
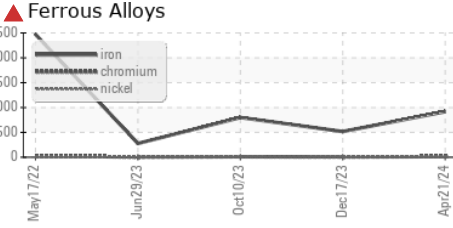
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	▲ MODER	▲ HEAVY	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	● HAZY	● MILKY	● MILKY
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	▲ 0.2%	▲ 0.2%	▲ 0.2%
Free Water	scalar	*Visual	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	221	231	220

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0006494  
**Lab Number** : 06156015  
**Unique Number** : 10991438  
**Test Package** : IND 2

**KraftHeinz - Cedar Rapids - Plant 8370**  
 4601 C ST SW  
 CEDAR RAPIDS, IA  
 US 52404  
 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)