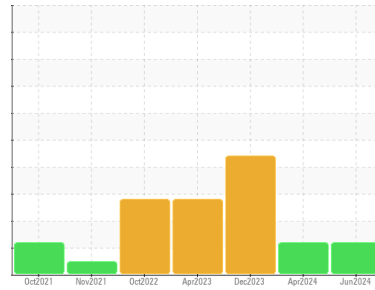




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**BAGLINE**  
 Machine Id  
**KETTLE 6 - 11531804**  
 Component  
**Refrigeration Compressor**  
 Fluid  
**PETRO CANADA PURITY FG EP GEAR OIL 220 (1 GAL)**

## DIAGNOSIS

### Recommendation

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	history1	history2
Sample Number	Client Info	<b>USP0013334</b>	USP0006691	USP0004470
Sample Date	Client Info	<b>13 Jun 2024</b>	25 Apr 2024	17 Dec 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	ABNORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >8	<b>6</b>	2	▲ 32
Chromium ppm	ASTM D5185m >2	<b>0</b>	0	0
Nickel ppm	ASTM D5185m	<b>0</b>	0	<1
Titanium ppm	ASTM D5185m	<b>0</b>	0	0
Silver ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum ppm	ASTM D5185m >3	<b>1</b>	0	<1
Lead ppm	ASTM D5185m >2	<b>0</b>	0	0
Copper ppm	ASTM D5185m >8	<b>35</b>	35	▲ 68
Tin ppm	ASTM D5185m >4	<b>2</b>	<1	1
Vanadium ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron ppm	ASTM D5185m	<b>5</b>	7	9
Barium ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Manganese ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Magnesium ppm	ASTM D5185m	<b>0</b>	0	0
Calcium ppm	ASTM D5185m	<b>0</b>	0	4
Phosphorus ppm	ASTM D5185m	<b>582</b>	525	609
Zinc ppm	ASTM D5185m	<b>0</b>	0	0
Sulfur ppm	ASTM D5185m	<b>532</b>	506	625

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >15	<b>72</b>	79	▲ 248
Sodium ppm	ASTM D5185m	<b>1</b>	0	<1
Potassium ppm	ASTM D5185m >20	<b>3</b>	0	0
Water %	ASTM D6304 >0.01	<b>0.007</b>	0.002	0.005
ppm Water	ASTM D6304 >100	<b>71</b>	16	55

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	▲ <b>106331</b>	▲ 96750	▲ 148158
Particles >6µm	ASTM D7647 >2500	▲ <b>18034</b>	▲ 12985	▲ 31183
Particles >14µm	ASTM D7647 >640	<b>158</b>	128	163
Particles >21µm	ASTM D7647 >160	<b>9</b>	21	12
Particles >38µm	ASTM D7647 >40	<b>0</b>	1	0
Particles >71µm	ASTM D7647 >10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >20/18/16	▲ <b>24/21/14</b>	▲ 24/21/14	▲ 24/22/15

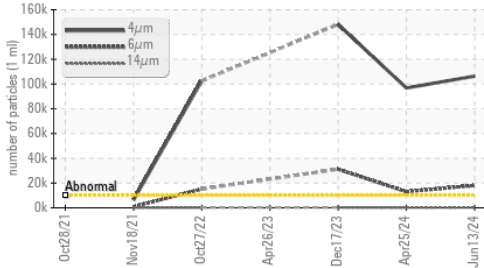
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D974 0.51	<b>0.66</b>	---	0.54

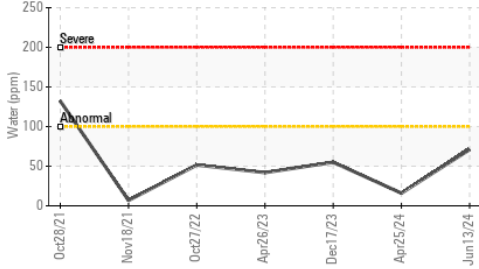


# OIL ANALYSIS REPORT

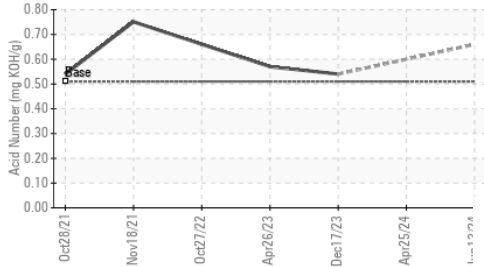
## Particle Trend



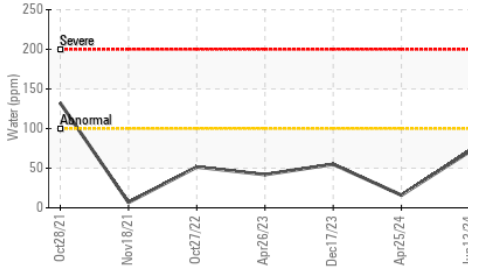
## Water (KF)



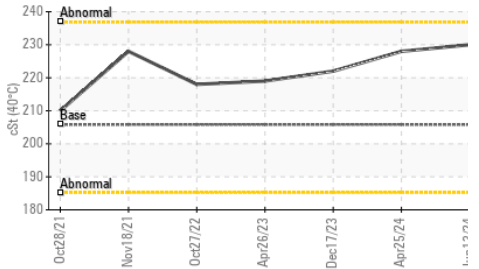
## Acid Number



## Water (KF)



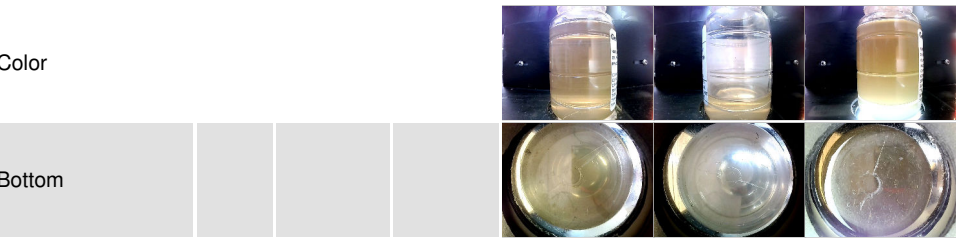
## Viscosity @ 40°C



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	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

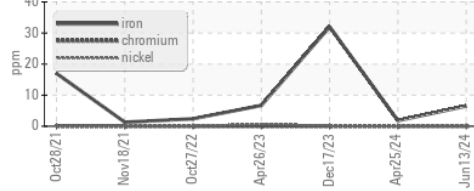
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	205.8	230	228

SAMPLE IMAGES	method	limit/base	current	history1	history2
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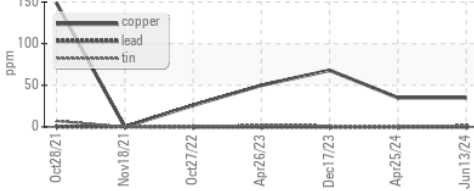


## GRAPHS

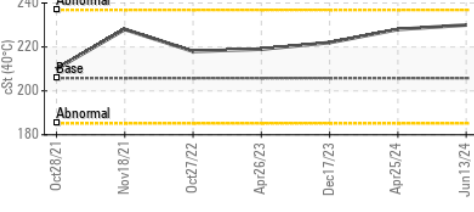
### Ferrous Alloys



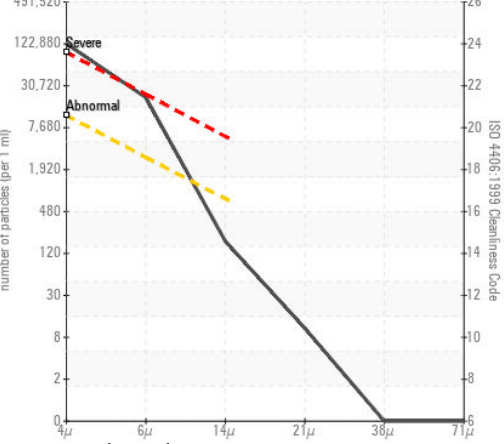
### Non-ferrous Metals



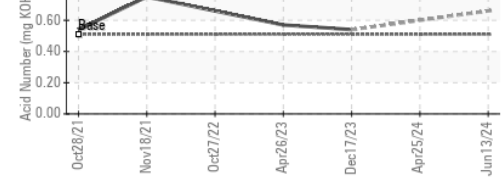
### Viscosity @ 40°C



### Particle Count



### Acid Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0013334  
**Lab Number** : 06210172  
**Unique Number** : 11083036  
**Test Package** : IND 2  
**Received** : 14 Jun 2024  
**Tested** : 18 Jun 2024  
**Diagnosed** : 19 Jun 2024 - Doug Bogart

**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)