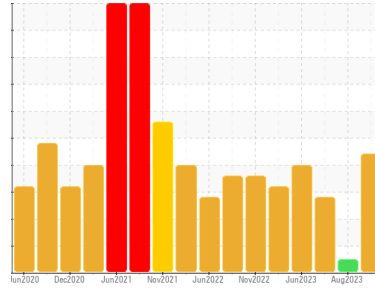




# PROBLEM SUMMARY

Sample Rating Trend

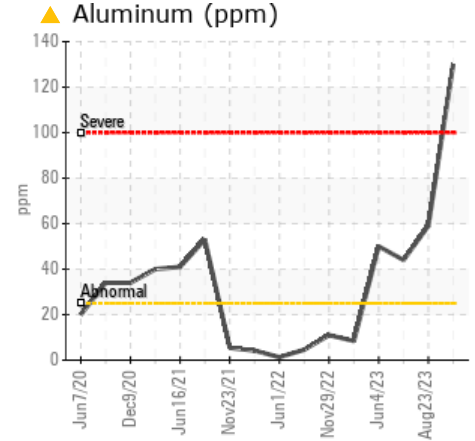
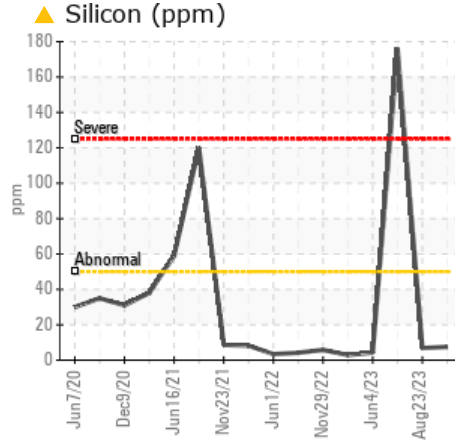
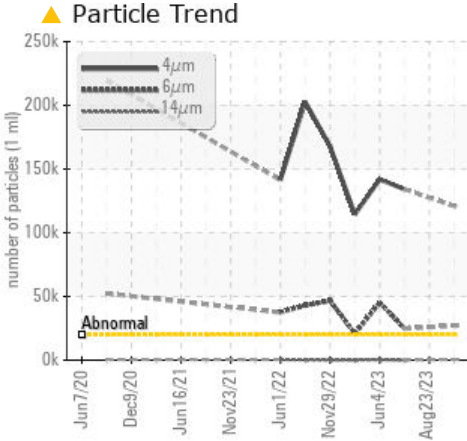


**DIRT**



Machine Id  
**CRYOVAC 8600-14CS LINE 8 (S/N CK3357U00145)**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA PURITY FG EP GEAR OIL 220 (--- QTS)**

## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	---	ABNORMAL
Aluminum	ppm	ASTM D5185m	>25	<b>▲ 44</b>	▲ 59	▲ 130
Silicon	ppm	ASTM D5185m	>50	<b>▲ 176</b>	7	8
Particles >4µm		ASTM D7647	>20000	<b>▲ 134138</b>	---	▲ 120967
Particles >6µm		ASTM D7647	>5000	<b>▲ 24747</b>	---	▲ 27049
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>▲ 24/22/13</b>	---	▲ 24/22/16
Appearance	scalar	*Visual	NORML	<b>▲ HAZY</b>	▲ MILKY	▲ HAZY

Customer Id: SMIMID  
 Sample No.: USP0000513  
 Lab Number: 05933724  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

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

### 23 Aug 2023 Diag:

UNKNOWN



view report



### 23 Aug 2023 Diag: Doug Bogart

WEAR



Resample at the next service interval to monitor. The aluminum level is abnormal. All other 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



### 04 Jun 2023 Diag: Doug Bogart

WEAR



We recommend an early resample to monitor this condition. The aluminum level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand or type of oil. Confirmed. The AN level is acceptable for this fluid.

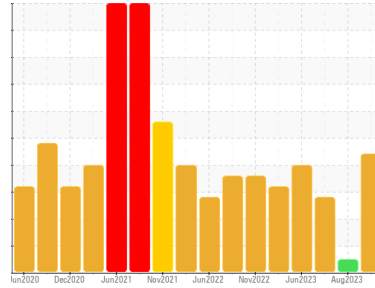
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**CRYOVAC 8600-14CS LINE 8 (S/N CK3357U00145)**

Component  
**Gearbox**  
Fluid  
**PETRO CANADA PURITY FG EP GEAR OIL 220 (--- QTS)**

## DIAGNOSIS

- Recommendation**  
Resample at the next service interval to monitor.
- Wear**  
The aluminum level is abnormal. All other component wear rates are normal.
- Contamination**  
Appearance is hazy. 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>USP0000513</b>	USP0000517	USP0000499
Sample Date	Client Info		<b>23 Aug 2023</b>	23 Aug 2023	23 Aug 2023
Machine Age	mls	Client Info	<b>0</b>	0	0
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	---	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	<b>37</b>	▲ 334	34
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	3	0
Nickel	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	1	3
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>▲ 44</b>	▲ 59	▲ 130
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>4</b>	8	2
Tin	ppm	ASTM D5185m	>25	<b>0</b>	0	0
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>12</b>	5	8
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	<1
Magnesium	ppm	ASTM D5185m		<b>2</b>	2	4
Calcium	ppm	ASTM D5185m		<b>391</b>	▲ 268	494
Phosphorus	ppm	ASTM D5185m		<b>199</b>	▲ 171	251
Zinc	ppm	ASTM D5185m		<b>0</b>	0	0
Sulfur	ppm	ASTM D5185m		<b>1166</b>	▲ 734	896

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	<b>▲ 176</b>	7	8
Sodium	ppm	ASTM D5185m		<b>20</b>	22	51
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Water	%	ASTM D6304	>0.2	<b>0.006</b>	▲ 0.594	0.009
ppm Water	ppm	ASTM D6304	>2000	<b>60.2</b>	▲ 5940	96.9

## FLUID CLEANLINESS

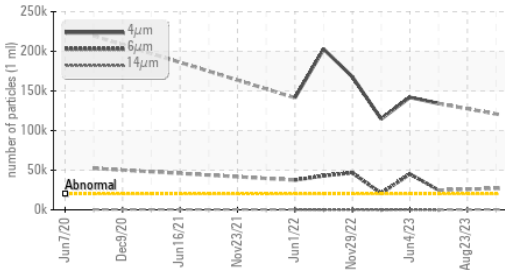
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 134138</b>	---	▲ 120967
Particles >6µm	ASTM D7647	>5000	<b>▲ 24747</b>	---	▲ 27049
Particles >14µm	ASTM D7647	>640	<b>78</b>	---	462
Particles >21µm	ASTM D7647	>160	<b>15</b>	---	83
Particles >38µm	ASTM D7647	>40	<b>1</b>	---	1
Particles >71µm	ASTM D7647	>10	<b>0</b>	---	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 24/22/13</b>	---	▲ 24/22/16

## FLUID DEGRADATION

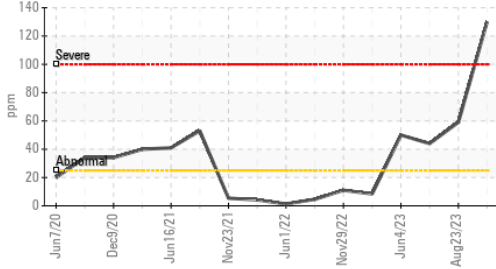
	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.51	<b>0.25</b>	0.16	0.26

# OIL ANALYSIS REPORT

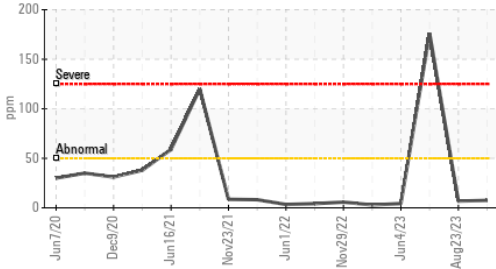
### ▲ Particle Trend



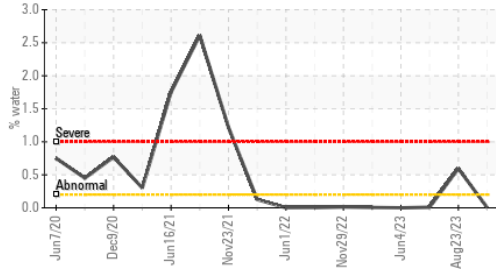
### ▲ Aluminum (ppm)



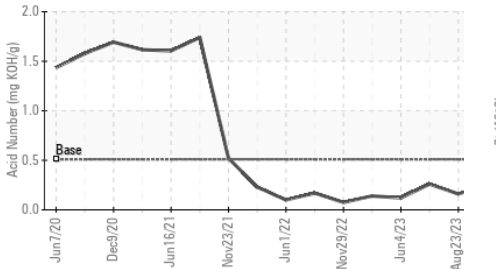
### ▲ Silicon (ppm)



### Water



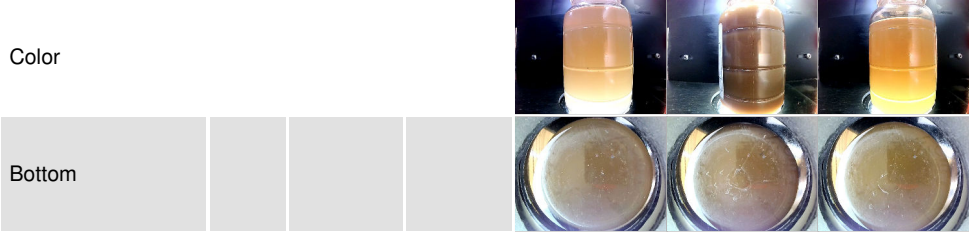
### Acid Number



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	▲ MODER	LIGHT	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	▲ HAZY	▲ MILKY	▲ HAZY	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	0.2%	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

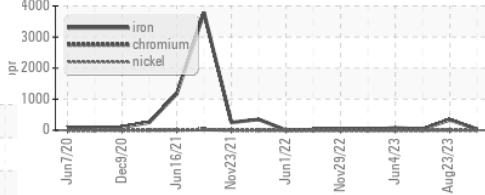
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	205.8	207	177	222

SAMPLE IMAGES	method	limit/base	current	history1	history2
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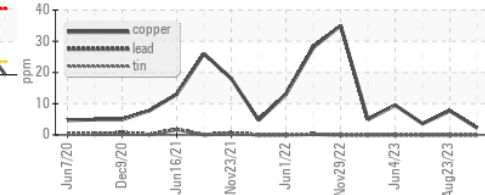


### GRAPHS

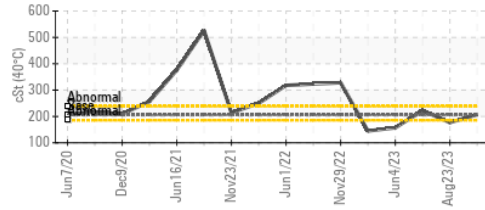
#### Ferrous Alloys



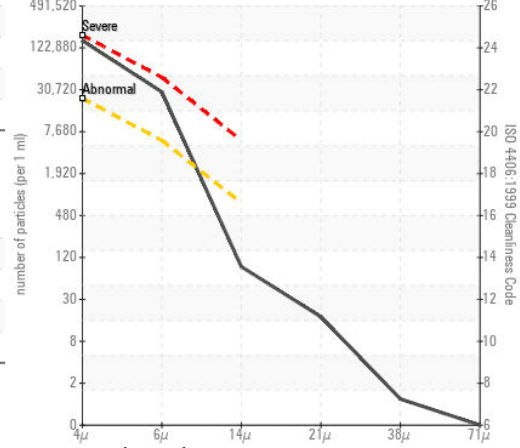
#### Non-ferrous Metals



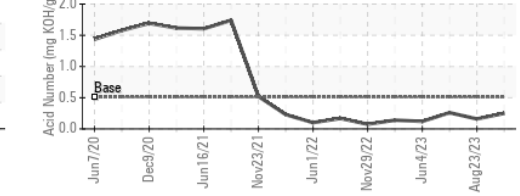
#### Viscosity @ 40°C



#### ▲ Particle Count



#### Acid Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0000513 **Received** : 24 Aug 2023  
**Lab Number** : 05933724 **Diagnosed** : 25 Aug 2023  
**Unique Number** : 10618995 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**SMITHFIELD FOODS-MIDDLESBORO**  
 MIDDLESBORO, KY  
 US  
 Contact: SERVICE MANAGER

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)

T:  
F: