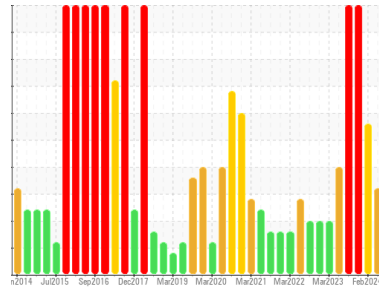




# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Machine Id  
**CRYOVAC SMIMID PACKAGER LINE 1 (S/N S148586)**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA PURITY FG EP GEAR OIL 220 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

We advise that you check for the source of water entry. 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 < 6 microns in size) present in the oil. There is a moderate 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>USP0011870</b>	USP0007549	USP0003813
Sample Date	Client Info		<b>14 May 2024</b>	28 Feb 2024	26 Nov 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>ABNORMAL</b>	SEVERE	SEVERE

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	<b>54</b>	143	140
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185m		<b>1</b>	2	2
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>45</b>	▲ 82	▲ 88
Lead	ppm	ASTM D5185m	>100	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>200	<b>4</b>	8	8
Tin	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>4</b>	16	19
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	1	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	3	2
Magnesium	ppm	ASTM D5185m		<b>2</b>	3	4
Calcium	ppm	ASTM D5185m		<b>227</b>	495	571
Phosphorus	ppm	ASTM D5185m		<b>199</b>	229	239
Zinc	ppm	ASTM D5185m		<b>0</b>	4	0
Sulfur	ppm	ASTM D5185m		<b>788</b>	781	755

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	<b>7</b>	11	11
Sodium	ppm	ASTM D5185m		<b>21</b>	39	34
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	1	2
Water	%	ASTM D6304	>0.2	▲ <b>0.574</b>	▲ 1.03	▲ 1.56
ppm Water	ppm	ASTM D6304	>2000	▲ <b>5740</b>	▲ 10300	▲ 15600

## FLUID CLEANLINESS

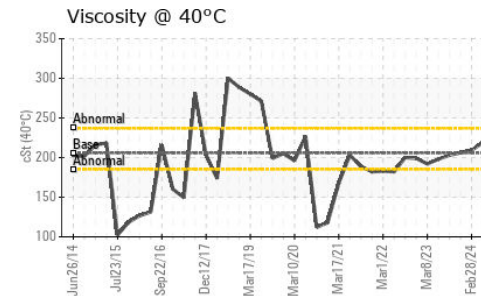
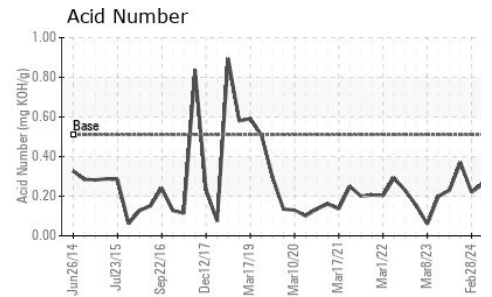
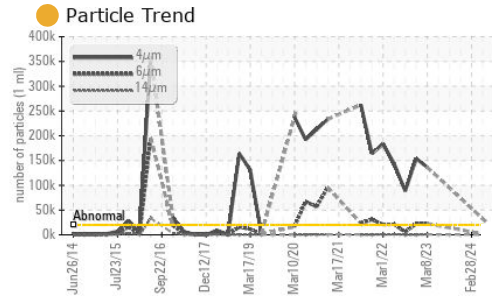
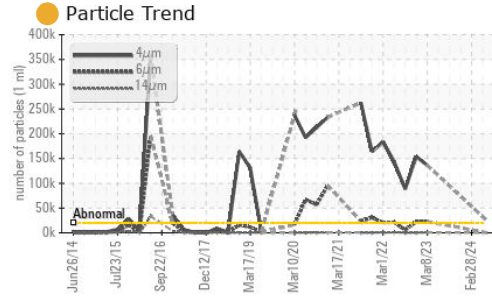
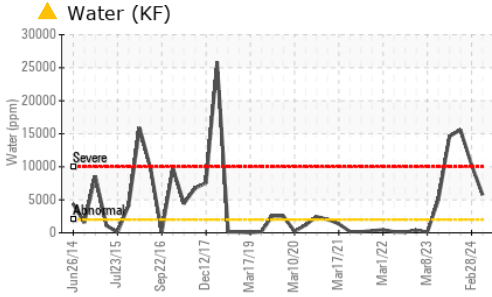
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	● <b>32659</b>	---	---
Particles >6µm	ASTM D7647	>5000	● <b>1642</b>	---	---
Particles >14µm	ASTM D7647	>640	● <b>29</b>	---	---
Particles >21µm	ASTM D7647	>160	● <b>8</b>	---	---
Particles >38µm	ASTM D7647	>40	● <b>1</b>	---	---
Particles >71µm	ASTM D7647	>10	● <b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	● <b>22/18/12</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.51	<b>0.26</b>	0.22	0.37



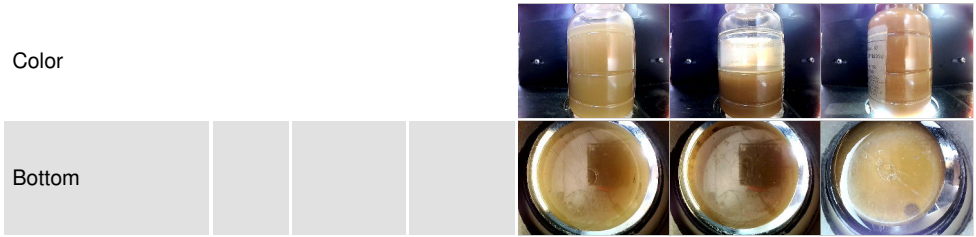
# OIL ANALYSIS REPORT



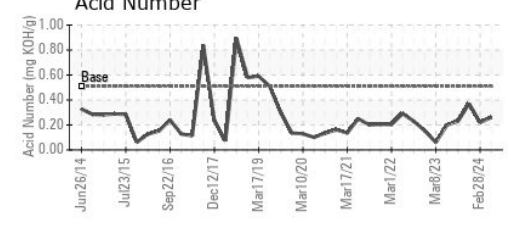
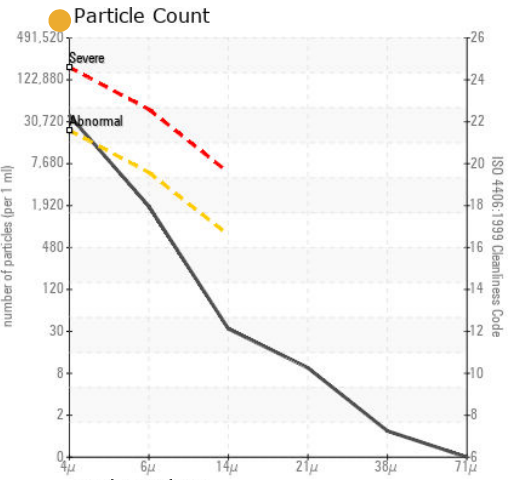
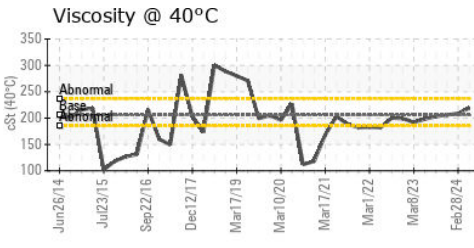
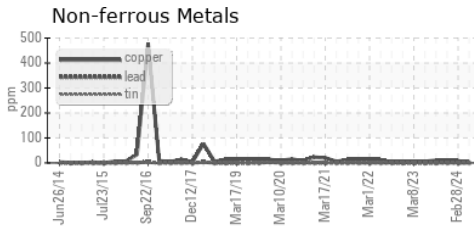
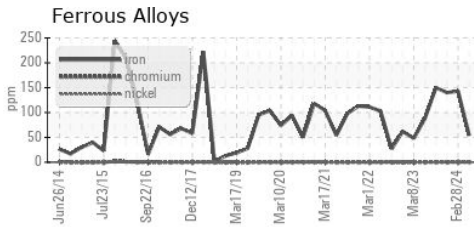
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	▲ MODER	▲ MODER
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	▲ 1.0

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	205.8	219	209

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0011870 **Received** : 15 May 2024  
**Lab Number** : 06180182 **Tested** : 23 May 2024  
**Unique Number** : 11031508 **Diagnosed** : 23 May 2024 - Jonathan Hester  
**Test Package** : IND 2

**SMITHFIELD FOODS-MIDDLESBORO**  
 MIDDLESBORO, KY  
 US  
 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)

T:  
F: