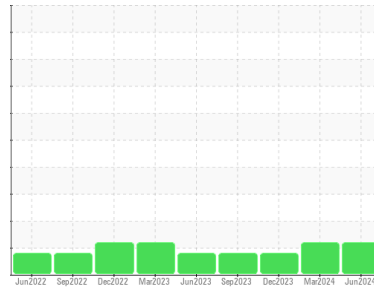




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

**PACKAGING [10-1514797]**

Machine Id

**WEST VANDEBERG - VFD1-10B (S/N 850114369.05.05.002)**

Component

**Gearbox**

Fluid

**PETRO CANADA PURITY FG SYNTH EP GEAR 220 (--- 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>USP0013120</b>	USP0006274	USP0004378
Sample Date	Client Info		<b>14 Jun 2024</b>	14 Mar 2024	11 Dec 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>	ABNORMAL	ATTENTION

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	<b>2</b>	70	71
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	2
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>7</b>	0	0
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>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Phosphorus	ppm	ASTM D5185m		<b>561</b>	473	523
Zinc	ppm	ASTM D5185m		<b>9</b>	0	0
Sulfur	ppm	ASTM D5185m		<b>1348</b>	900	876

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	<b>2</b>	3	2
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Water	%	ASTM D6304	>0.2	<b>0.069</b>	0.002	0.002
ppm Water	ppm	ASTM D6304	>2000	<b>698</b>	17	22

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 102309</b>	▲ 53415	● 36874
Particles >6µm	ASTM D7647	>5000	<b>▲ 17281</b>	● 5651	● 4288
Particles >14µm	ASTM D7647	>640	<b>396</b>	80	97
Particles >21µm	ASTM D7647	>160	<b>50</b>	9	17
Particles >38µm	ASTM D7647	>40	<b>1</b>	1	1
Particles >71µm	ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 24/21/16</b>	▲ 23/20/13	● 22/19/14

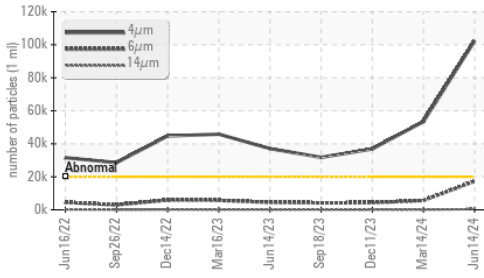
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.59	<b>0.51</b>	0.41	0.41

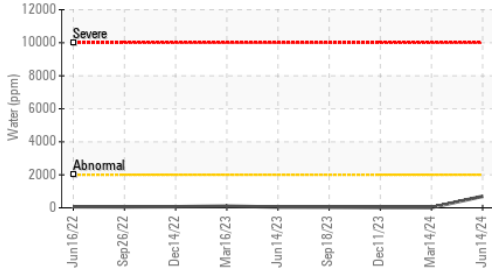


# OIL ANALYSIS REPORT

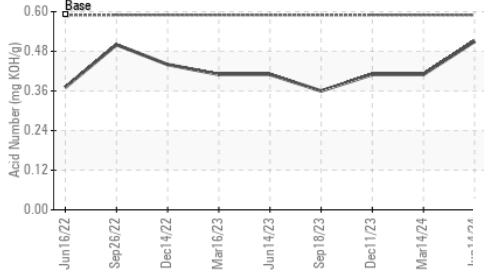
## ▲ Particle Trend



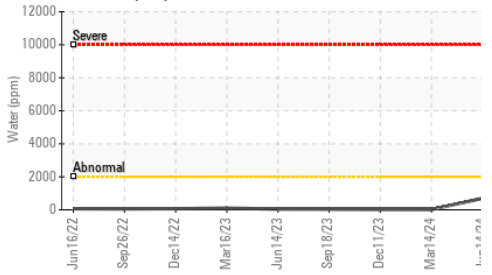
## Water (KF)



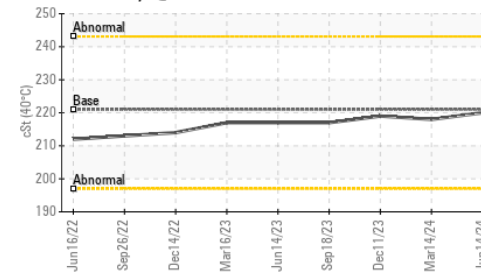
## Acid Number



## Water (KF)



## Viscosity @ 40°C



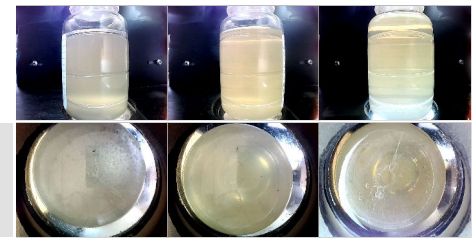
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	221	218	219

SAMPLE IMAGES	method	limit/base	current	history1	history2
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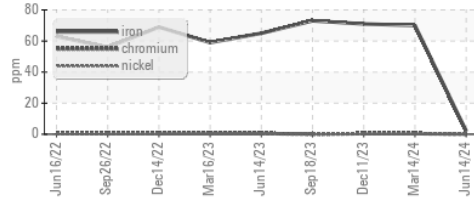
Color

Bottom

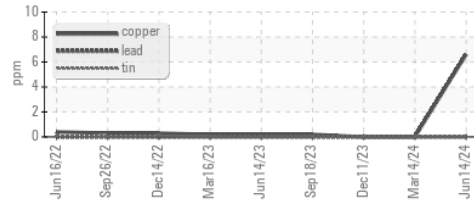


## GRAPHS

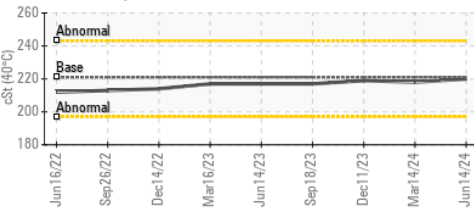
### Ferrous Alloys



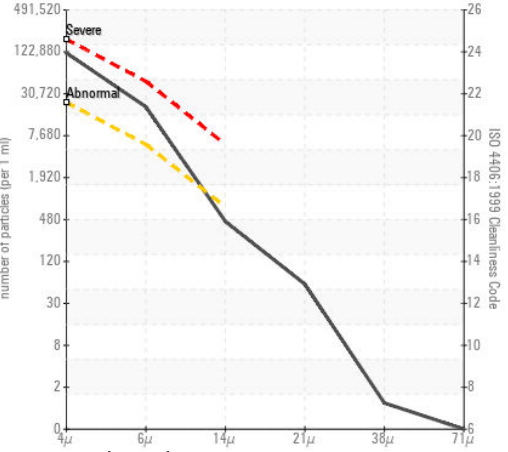
### Non-ferrous Metals



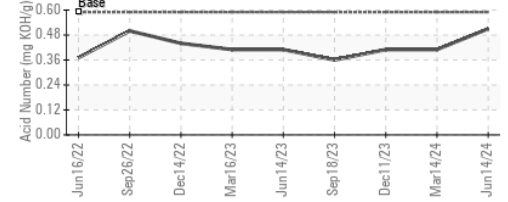
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP0013120 **Received** : 24 Jun 2024  
**Lab Number** : 06218254 **Tested** : 25 Jun 2024  
**Unique Number** : 11096451 **Diagnosed** : 25 Jun 2024 - Doug Bogart  
**Test Package** : IND 2

**TYSON - SMART CHICKEN MBA**  
 13151 DOVER ST  
 WAVERLY, NE  
 US 68462  
 Contact: KURT CONRADT  
 kconradt@smartchicken.com  
 T: (402)786-1072  
 F:

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)