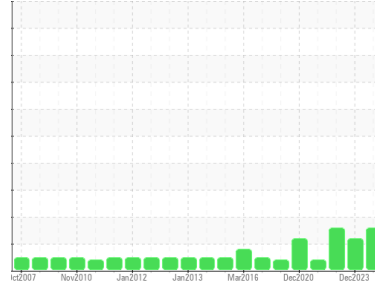


Area  
**1460**  
Machine Id  
**1460-5652-4024 - TAILINGS TANK AGITATOR**  
Component  
**Gearbox**  
Fluid  
**PETRO CANADA ENDURATEX SYNTHETIC EP 220 (20 LTR)**



**DIAGNOSIS**

**Recommendation**  
We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

**Wear**  
All component wear rates are normal.

**Contamination**  
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

**Fluid Condition**  
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PC0070696</b>	PC0070729	PC0040242
Sample Date	Client Info			<b>25 Feb 2024</b>	10 Dec 2023	01 Nov 2021
Machine Age	yrs	Client Info		<b>0</b>	0	0
Oil Age	yrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ATTENTION	ABNORMAL

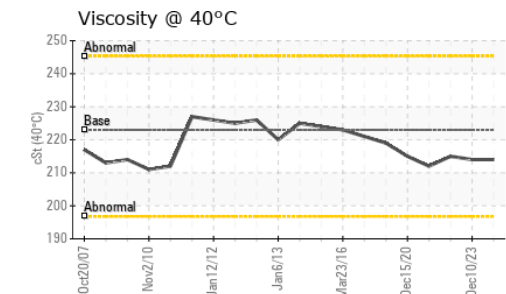
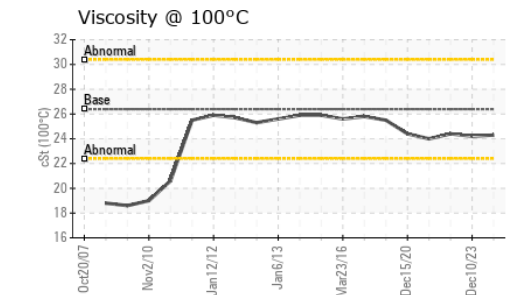
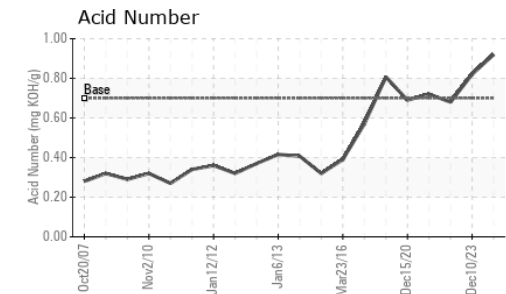
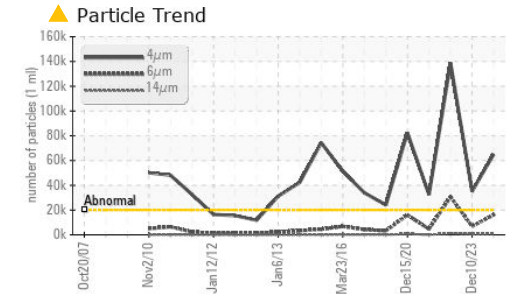
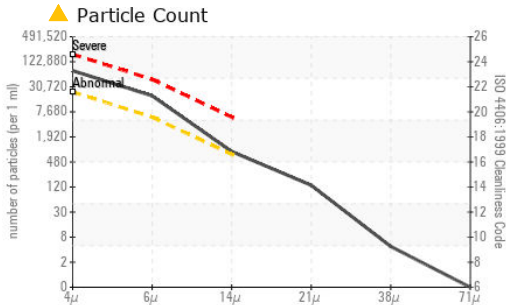
CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m)	>200	<b>17</b>	17	16
Chromium	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>100	<b>1</b>	<1	0
Copper	ppm	ASTM D5185(m)	>200	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>25	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	33	<b>16</b>	15	15
Barium	ppm	ASTM D5185(m)	5	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	<1	3
Phosphorus	ppm	ASTM D5185(m)	437	<b>279</b>	273	350
Zinc	ppm	ASTM D5185(m)	5	<b>17</b>	17	9
Sulfur	ppm	ASTM D5185(m)	5000	<b>4983</b>	4928	4889
Lithium	ppm	ASTM D5185(m)		<b>3</b>	3	3

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	<b>5</b>	5	6
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	2
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	<1	<1

# OIL ANALYSIS REPORT



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0070696  
**Lab Number** : 02620942  
**Unique Number** : 5746061  
**Test Package** : IND 2 ( Additional Tests: KV100, PQ, PrtCount, TAN Man, VI )

**Received** : 08 Mar 2024  
**Tested** : 11 Mar 2024  
**Diagnosed** : 11 Mar 2024 - Wes Davis

**Vale - Voisey's Bay**  
 Voisey's Bay Mine Site, P.O. Box 7001, Stn. C Happy Valley  
 Goose Bay, NL  
 CA A0P 1C0  
 Contact: Robert Feltham  
 robert.feltham@vale.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

T:  
F: x

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 64935	● 35081	▲ 138896
Particles >6µm	ASTM D7647	>5000	▲ 16155	● 6786	▲ 30728
Particles >14µm	ASTM D7647	>640	● 751	490	● 1230
Particles >21µm	ASTM D7647	>160	117	131	● 287
Particles >38µm	ASTM D7647	>40	4	4	15
Particles >71µm	ASTM D7647	>10	0	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 23/21/17	● 22/20/16	▲ 24/22/17

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.7	0.92	0.82	0.68

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	223	214	214	215
Visc @ 100°C	cSt ASTM D7279(m)	26.39	24.3	24.2	24.4
Viscosity Index (VI)	Scale ASTM D2270*	151	141	141	141

## SAMPLE IMAGES

