

Area  
**Gas Compression [450264293]**  
Machine Id  
Component  
**Pump - Crude Oil Recirc - NDE Bearing (S/N Sample Tag PA-22001-NDE)**  
Fluid  
**PETRO CANADA TURBOFLO XL32 (1 LTR)**

**DIAGNOSIS**

**Recommendation**  
Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

**Wear**  
Copper ppm levels are abnormal.

**Contamination**  
Elemental level of silicon (Si) above normal indicating ingress of seal material and/or dirt.

**Fluid Condition**  
The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PC0080243</b>	PC	PC
Sample Date	Client Info		<b>27 Mar 2024</b>	22 Dec 2019	03 Apr 2019
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	ABNORMAL

CONTAMINATION	method	limit/base	current	history1	history2
Water	WC Method	>.1	<b>NEG</b>	NEG	NEG

WEAR METALS	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>75	<b>12</b>	15	6
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185(m)		<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185(m)	>10	<b>6</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>15	<b>46</b>	5	6
Tin	ppm	ASTM D5185(m)		<b>2</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	0
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

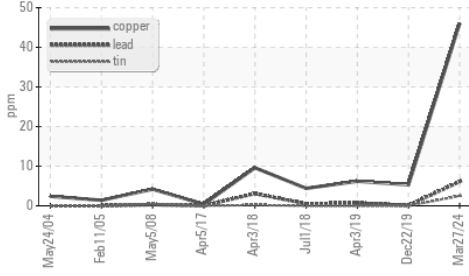
ADDITIVES	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Calcium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	5
Phosphorus	ppm	ASTM D5185(m)	5	<b>4</b>	4	16
Zinc	ppm	ASTM D5185(m)	0	<b>8</b>	6	8
Sulfur	ppm	ASTM D5185(m)	750	<b>574</b>	571	556
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0

CONTAMINANTS	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	<b>47</b>	0	<1
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0

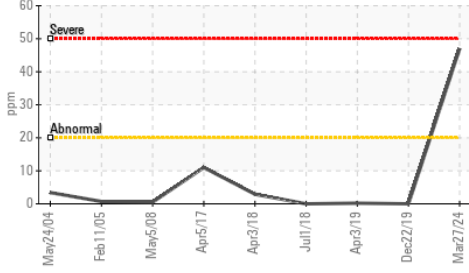
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>187416</b>	---	---
Particles >6µm	ASTM D7647	>2500	<b>95968</b>	---	---
Particles >14µm	ASTM D7647	>160	<b>319</b>	---	---
Particles >21µm	ASTM D7647	>40	<b>47</b>	---	---
Particles >38µm	ASTM D7647	>10	<b>3</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>--/18/14	<b>25/24/15</b>	---	---

# OIL ANALYSIS REPORT

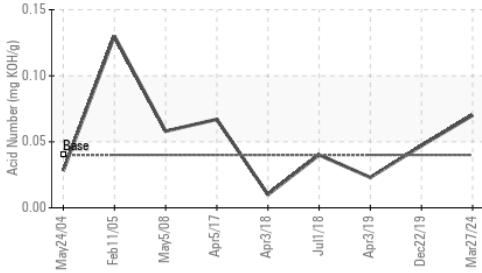
▲ Non-ferrous Metals



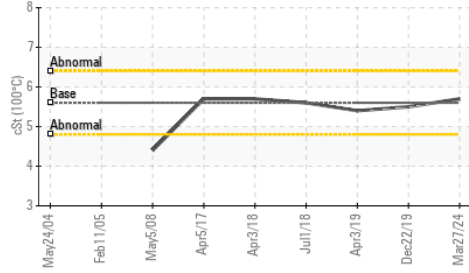
▲ Silicon (ppm)



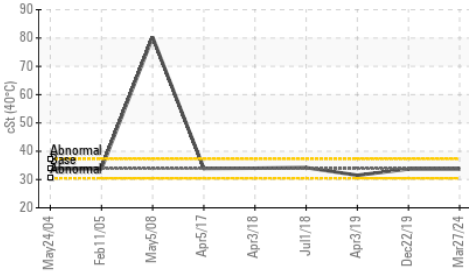
Acid Number



Viscosity @ 100°C



Viscosity @ 40°C

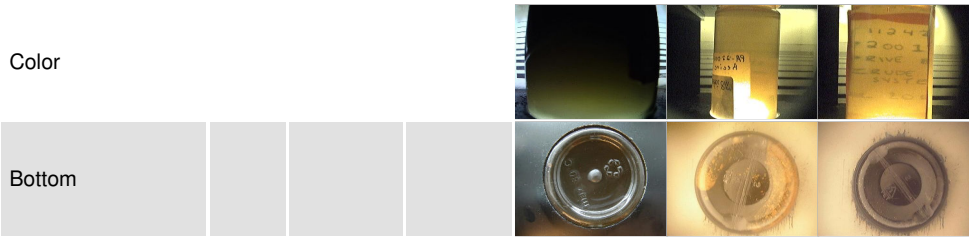


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.04	<b>0.07</b>	0.047	0.023

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	VLITE	▲ LIGHT
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	VLITE	LIGHT
Sand/Dirt	scalar	Visual*	NONE	<b>VLITE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>.1	<b>NEG</b>	.5%	▲ .5%
Free Water	scalar	Visual*		<b>NEG</b>	▲ 1%	▲ .5%

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	33.86	<b>33.7</b>	33.7	31.5
Visc @ 100°C	cSt	ASTM D7279(m)	5.60	<b>5.7</b>	5.5	5.4
Viscosity Index (VI)	Scale	ASTM D2270*	101	<b>108</b>	97	105

SAMPLE IMAGES



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0080243  
**Lab Number** : 02631148  
**Unique Number** : 5772301  
**Test Package** : MAR 2 ( Additional Tests: KV100, PrtCount, TAN Man, VI )

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*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.*