

Area

**Gas Compression [450310863]**

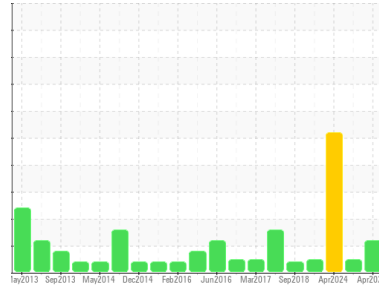
Machine Id  
**Methanol Wellhead Injection Pump D - Gearbox (S/N Sample Tag PD-42010D-S1)**

Component

**Gearbox**

Fluid

**PETRO CANADA ENDURATEX SYNTHETIC EP 220 (120 LTR)**



**DIAGNOSIS**

**Recommendation**

We recommend you service the filters on this component. Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

There is a light 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>PC</b>	PC	PC
Sample Date	Client Info			<b>09 Apr 2024</b>	09 Apr 2024	09 Apr 2024
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>ATTENTION</b>	NORMAL	ABNORMAL

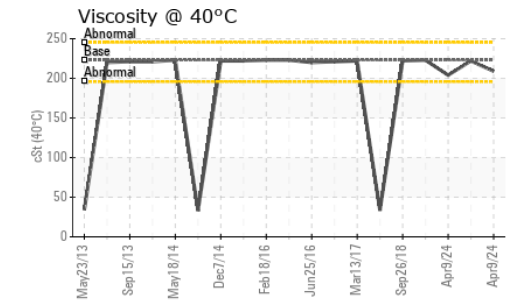
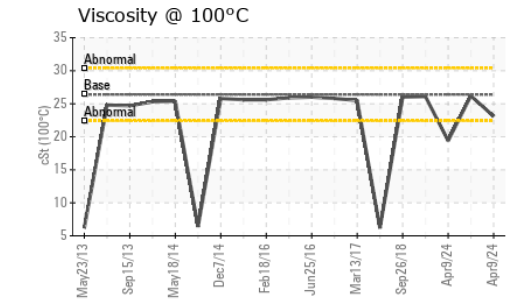
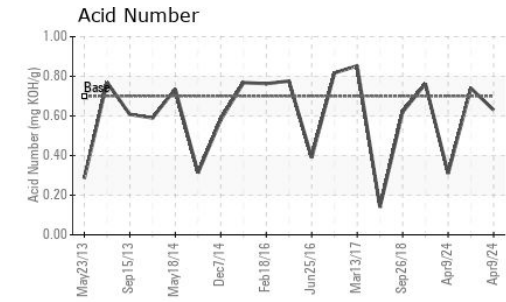
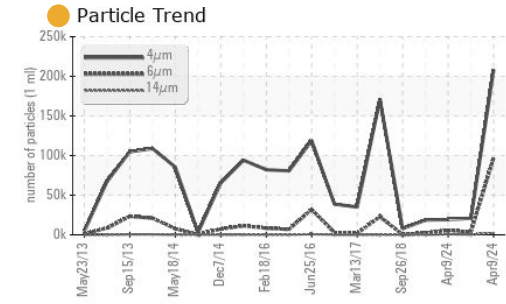
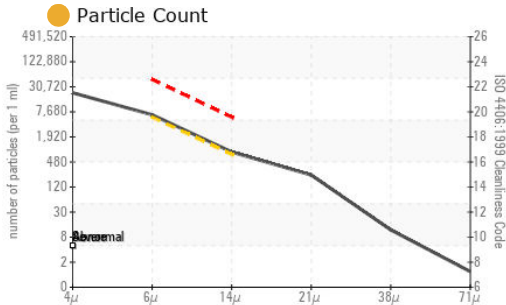
CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m)	>150	<b>4</b>	8	14
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>10	<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)	>5	<b>&lt;1</b>	<1	<b>▲ 5</b>
Lead	ppm	ASTM D5185(m)	>65	<b>0</b>	0	2
Copper	ppm	ASTM D5185(m)	>80	<b>3</b>	2	65
Tin	ppm	ASTM D5185(m)	>8	<b>0</b>	0	2
Antimony	ppm	ASTM D5185(m)	>5	<b>0</b>	0	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)	33	<b>10</b>	11	22
Barium	ppm	ASTM D5185(m)	5	<b>0</b>	0	0
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	<1
Phosphorus	ppm	ASTM D5185(m)	437	<b>331</b>	381	215
Zinc	ppm	ASTM D5185(m)	5	<b>2</b>	2	8
Sulfur	ppm	ASTM D5185(m)	5000	<b>4876</b>	4833	4414
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Sodium	ppm	ASTM D5185(m)		<b>2</b>	4	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1

# OIL ANALYSIS REPORT



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>19132</b>	20926	207903
Particles >6µm	ASTM D7647	>5000	<b>5695</b>	3396	▲ 97068
Particles >14µm	ASTM D7647	>640	<b>732</b>	224	▲ 2079
Particles >21µm	ASTM D7647	>160	<b>206</b>	59	● 294
Particles >38µm	ASTM D7647	>40	<b>10</b>	5	4
Particles >71µm	ASTM D7647	>10	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>--/19/16	<b>21/20/17</b>	22/19/15	▲ 25/24/18

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.7	<b>0.63</b>	0.74	0.31

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>	NONE	NONE
Silt	scalar Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar Visual*	NONE	<b>NONE</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*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	223	<b>209</b>	222	204
Visc @ 100°C	cSt ASTM D7279(m)	26.39	<b>23.1</b>	26.2	▲ 19.4
Viscosity Index (VI)	Scale ASTM D2270*	151	<b>135</b>	150	▲ 108

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC  
**Lab Number** : 02631775  
**Unique Number** : 5772928  
**Test Package** : MAR 2 ( Additional Tests: KV100, PQ, PrtCount, TAN Man, VI )  
**Received** : 26 Apr 2024  
**Tested** : 29 Apr 2024  
**Diagnosed** : 29 Apr 2024 - Kevin Marson

**Suncor - Terra Nova Projects**  
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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.