

Area

**Fwd Machinery Space [450296544]**

Machine Id

**Thruster Fwd Fore - Lubrication System (S/N Sample Tag CL-06005-S1)**

Component

**Lube System**

Fluid

**PETRO CANADA ENERGOL GR-XP ISO 150 (5000 LTR)**

**DIAGNOSIS**

**Recommendation**

We recommend you service the filters on this component.

**Wear**

All component wear rates are normal.

**Contamination**

There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

**Fluid Condition**

The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PC0081676</b>	PC0076664	PC
Sample Date	Client Info			<b>31 Mar 2024</b>	29 Jan 2024	05 Jan 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>ABNORMAL</b>	ATTENTION	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
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)	>10	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<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

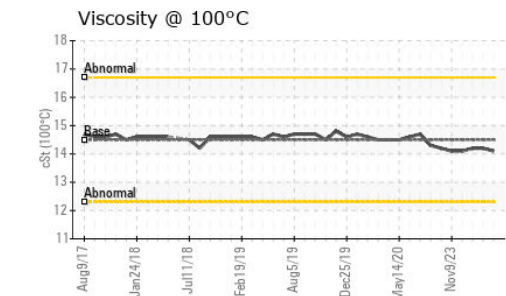
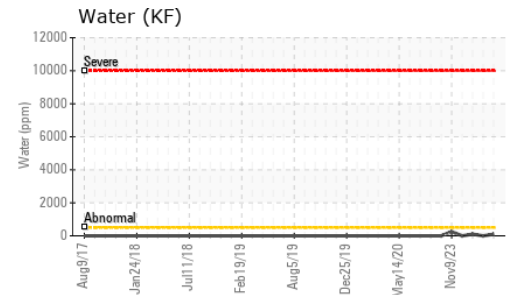
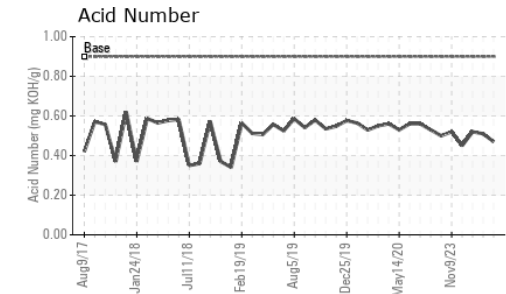
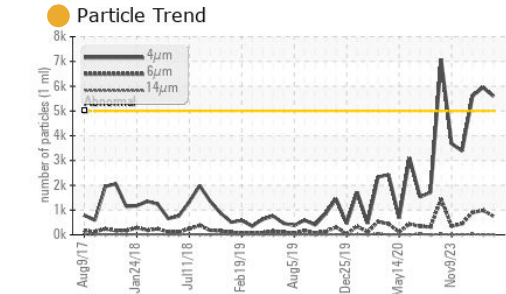
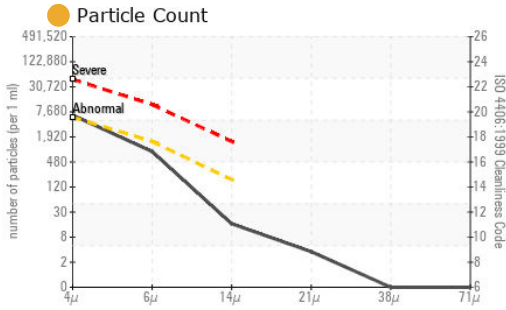
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>9</b>	11	10
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)		<b>4</b>	4	5
Phosphorus	ppm	ASTM D5185(m)		<b>182</b>	188	186
Zinc	ppm	ASTM D5185(m)		<b>4</b>	5	5
Sulfur	ppm	ASTM D5185(m)		<b>11537</b>	11977	11750
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Sodium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Water	%	ASTM D6304*	>0.05	<b>0.009</b>	---	0.010
ppm Water	ppm	ASTM D6304*	>500	<b>97</b>	---	101

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>5592</b>	5947	5610
Particles >6µm		ASTM D7647	>1300	<b>749</b>	982	895
Particles >14µm		ASTM D7647	>160	<b>14</b>	16	24
Particles >21µm		ASTM D7647	>40	<b>3</b>	2	6
Particles >38µm		ASTM D7647	>10	<b>0</b>	0	1
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	1

Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>20/17/11</b>	20/17/11	20/17/12
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# OIL ANALYSIS REPORT



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0081676  
**Lab Number** : 02631764  
**Unique Number** : 5772917  
**Test Package** : MAR 2 ( Additional Tests: KF, KV100, PQ, TAN Man, VI )  
**Received** : 26 Apr 2024  
**Tested** : 01 May 2024  
**Diagnosed** : 01 May 2024 - Kevin Marson

**Suncor - Terra Nova Projects**  
 Scotia Centre, 235 Water Street  
 St. John's, NL  
 CA A1C 1B6  
 Contact: Josh Hynes  
 joshynes@suncor.com  
 T: (709)778-3575  
 F: (709)724-2835

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.

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.9	<b>0.47</b>	0.51	0.52

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>HAZY</b>	NORML	▲ <b>HAZY</b>
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	<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)	149	<b>144</b>	145	146
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	<b>14.1</b>	14.2	14.2
Viscosity Index (VI)	Scale	ASTM D2270*		<b>94</b>	94	94

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						