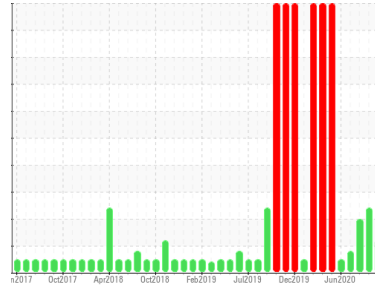


Area
Fwd Machinery Space
Machine Id
Thruster Fwd Aft - Seal Oil System (S/N Sample Tag CL-06004-S3)
Component
Sealing System
Fluid
PETRO CANADA ENERGOL GR-XP ISO 150 (65 LTR)



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 fluid.

Fluid Condition

The AN level is acceptable for this fluid. The fluid 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			PC	PC	PC0076466
Sample Date	Client Info			05 Jan 2024	02 Dec 2023	09 Nov 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	ABNORMAL

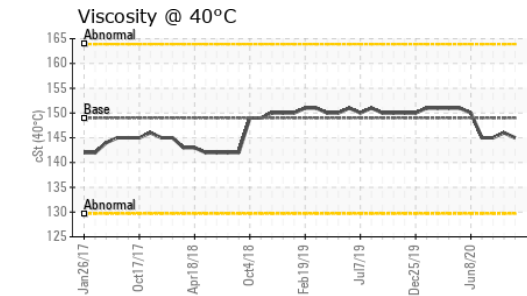
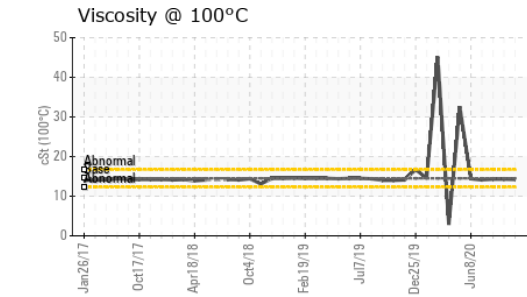
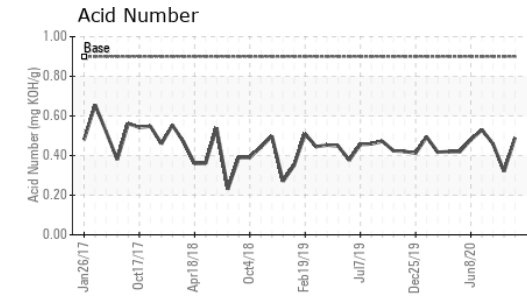
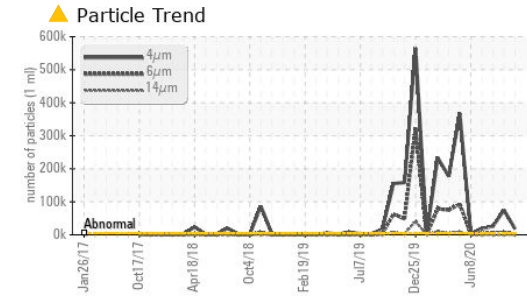
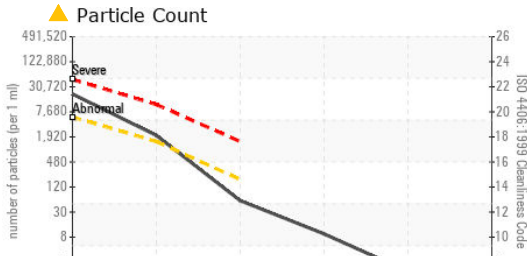
CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>100	<1	13	1
Chromium	ppm	ASTM D5185(m)	>3	0	1	0
Nickel	ppm	ASTM D5185(m)	>8	<1	1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		2	0	<1
Aluminum	ppm	ASTM D5185(m)	>3	<1	<1	0
Lead	ppm	ASTM D5185(m)		0	<1	<1
Copper	ppm	ASTM D5185(m)	>3	<1	<1	<1
Tin	ppm	ASTM D5185(m)		0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		14	5	13
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		<1	1	<1
Calcium	ppm	ASTM D5185(m)		15	31	29
Phosphorus	ppm	ASTM D5185(m)		170	157	165
Zinc	ppm	ASTM D5185(m)		6	10	9
Sulfur	ppm	ASTM D5185(m)		9522	12325	11235
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	3	3	3
Sodium	ppm	ASTM D5185(m)		<1	3	1
Potassium	ppm	ASTM D5185(m)	>20	<1	0	0

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : 02611255
Unique Number : 5720350
Test Package : MAR 2 (Additional Tests: KV100, PQ, PrtCount, TAN Man, VI)

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.

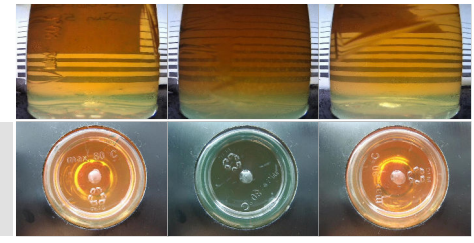
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 17971	● 74465	▲ 26105
Particles >6µm	ASTM D7647	>1300	▲ 1822	▲ 7220	▲ 4918
Particles >14µm	ASTM D7647	>160	50	▲ 194	▲ 286
Particles >21µm	ASTM D7647	>40	8	39	▲ 76
Particles >38µm	ASTM D7647	>10	1	6	11
Particles >71µm	ASTM D7647	>3	0	1	4
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 21/18/13	● 23/20/15	▲ 22/19/15

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.9	0.49	0.32	0.46

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar Visual*	NONE	NONE	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*		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)	149	145	146	145
Visc @ 100°C	cSt ASTM D7279(m)	14.5	14.2	14.3	14.3
Viscosity Index (VI)	Scale ASTM D2270*		94	95	95

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



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