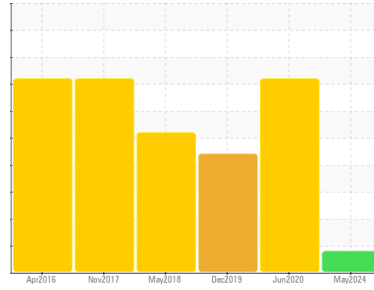


Area
Fwd Machinery Space [450343811]
 Machine Id
Thruster Fwd Aft - Steering Tube Seal (S/N Sample Tag CL-06004-S5)
 Component
Steering
 Fluid
PETRO CANADA ENERGOL GR-XP ISO 150 (35 LTR)



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 fluid.
- Fluid Condition**
The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PC0080638	PC	PC0016493
Sample Date	Client Info			16 May 2024	05 Jun 2020	22 Dec 2019
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				ATTENTION	SEVERE	SEVERE

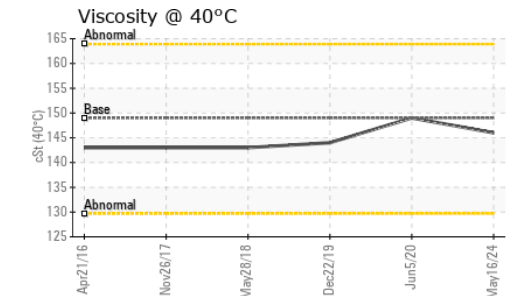
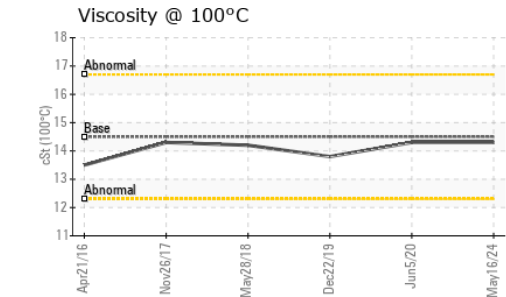
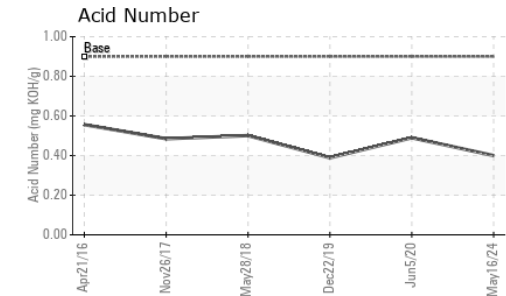
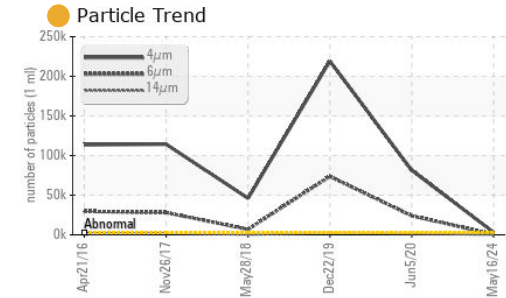
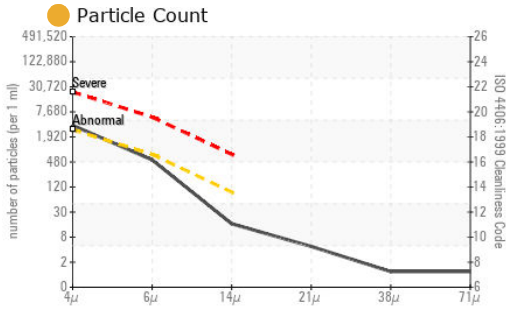
CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	12
Iron	ppm	ASTM D5185(m)	>50	<1	5	49
Chromium	ppm	ASTM D5185(m)	>15	0	<1	1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>5	0	0	<1
Lead	ppm	ASTM D5185(m)	>10	0	0	0
Copper	ppm	ASTM D5185(m)	>50	0	<1	<1
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Antimony	ppm	ASTM D5185(m)		0	<1	<1
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)		10	6	2
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	<1
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)		<1	<1	2
Calcium	ppm	ASTM D5185(m)		7	2	3
Phosphorus	ppm	ASTM D5185(m)		149	335	266
Zinc	ppm	ASTM D5185(m)		3	4	5
Sulfur	ppm	ASTM D5185(m)		11622	7640	10029
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<1	<1	2
Sodium	ppm	ASTM D5185(m)		<1	<1	2
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0080638
Lab Number : 02639709
Unique Number : 5788871
Test Package : MAR 2 (Additional Tests: KV100, PQ, PrtCount, VI)
Received : 04 Jun 2024
Tested : 07 Jun 2024
Diagnosed : 07 Jun 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 CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	● 3189	▲ 81388	219062	
Particles >6µm	ASTM D7647	>640	▲ 473	▲ 24018	73788	
Particles >14µm	ASTM D7647	>80	▲ 14	▲ 1621	▲ 2710	
Particles >21µm	ASTM D7647	>20	▲ 4	▲ 389	▲ 691	
Particles >38µm	ASTM D7647	>4	● 1	● 8	▲ 18	
Particles >71µm	ASTM D7647	>3	● 1	0	0	
Oil Cleanliness	ISO 4406 (c)	>18/16/13	● 19/16/11	▲ 24/22/18	▲ 25/23/19	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.9	0.40	0.49	0.389

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	VLITE
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	.2%	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	149	146	149	144
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	14.3	14.3	13.8
Viscosity Index (VI)	Scale	ASTM D2270*		95	92	90

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

