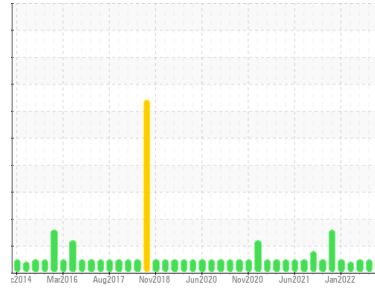


Area
TEAM 1
Machine Id
123001 Topping Turbine Generator
Component
Turbine
Fluid
PETRO CANADA TURBOFLO EP 46 (11200 LTR)



DIAGNOSIS

Recommendation
Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear
Component wear rates appear to be normal (unconfirmed).

Contamination
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

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	PC0069909	WC0801833	PC0061943
Sample Date	Client Info	05 Oct 2023	23 Mar 2023	12 Jan 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >15	1	1	1
Chromium	ppm ASTM D5185(m) >4	0	0	0
Nickel	ppm ASTM D5185(m) >2	0	0	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	<1	0	0
Aluminum	ppm ASTM D5185(m) >10	0	<1	<1
Lead	ppm ASTM D5185(m)	0	<1	0
Copper	ppm ASTM D5185(m) >5	<1	0	0
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)	<1	<1	<1
Barium	ppm ASTM D5185(m)	<1	0	0
Molybdenum	ppm ASTM D5185(m)	0	0	0
Manganese	ppm ASTM D5185(m)	0	0	0
Magnesium	ppm ASTM D5185(m)	0	<1	0
Calcium	ppm ASTM D5185(m)	<1	0	0
Phosphorus	ppm ASTM D5185(m) 280	415	454	451
Zinc	ppm ASTM D5185(m) 0.0	1	<1	<1
Sulfur	ppm ASTM D5185(m)	507	540	530
Lithium	ppm ASTM D5185(m)	<1	<1	<1

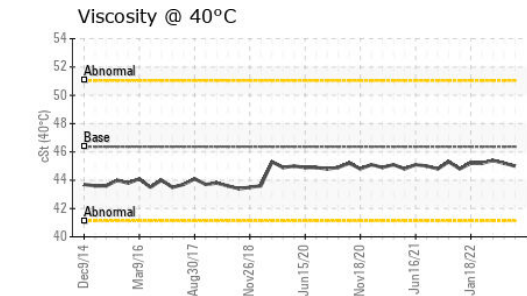
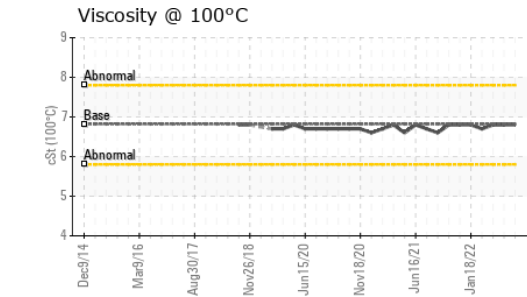
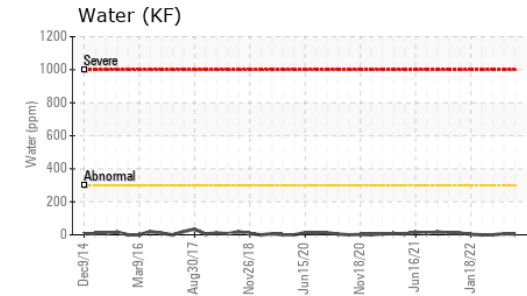
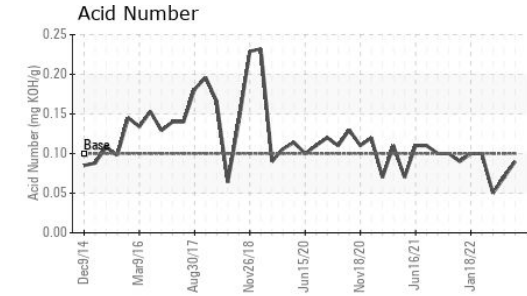
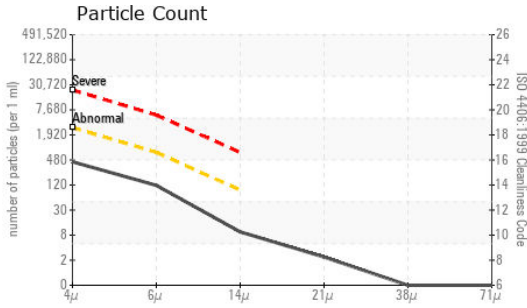
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	<1	<1	<1
Sodium	ppm ASTM D5185(m)	0	0	0
Potassium	ppm ASTM D5185(m) >20	0	0	<1
Water	% ASTM D6304* >0.03	0.001	0.001	0.00
ppm Water	ppm ASTM D6304* >300	3.6	6.9	0.00

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >2500	382	639	367
Particles >6µm	ASTM D7647 >640	104	254	102
Particles >14µm	ASTM D7647 >80	8	27	11
Particles >21µm	ASTM D7647 >20	2	6	4
Particles >38µm	ASTM D7647 >4	0	0	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >18/16/13	16/14/10	16/15/12	16/14/11

OIL ANALYSIS REPORT



ISO 17025:2017
Accredited
Laboratory

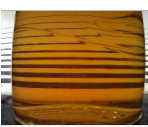
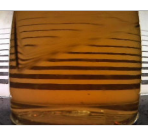
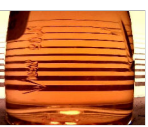


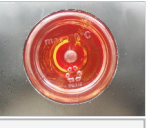

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0069909 **Received** : 25 Oct 2023
Lab Number : **02591750** **Diagnosed** : 26 Oct 2023
Unique Number : 5668829 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KV100, VI)

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 DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	.10	0.09	0.07	0.05

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	NONE
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*	>0.03	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)	46.37	45.0	45.2	45.4
Visc @ 100°C	cSt	ASTM D7279(m)	6.82	6.8	6.8	6.8
Viscosity Index (VI)	Scale	ASTM D2270*	101	105	104	103

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						
MPC				no image		no image