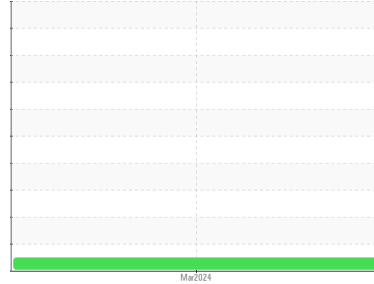


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
[450273743]
Machine Id
MPG
Component
Starboard Turbine
Fluid
TURBINE OIL ISO 32 (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) TURBINE OIL ISO 32. Please confirm. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. 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	PC	---	---
Sample Date	Client Info	04 Mar 2024	---	---
Machine Age	hrs Client Info	0	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		NORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.03	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >15	<1	---	---
Chromium	ppm ASTM D5185(m) >4	0	---	---
Nickel	ppm ASTM D5185(m) >2	0	---	---
Titanium	ppm ASTM D5185(m)	0	---	---
Silver	ppm ASTM D5185(m)	0	---	---
Aluminum	ppm ASTM D5185(m) >10	0	---	---
Lead	ppm ASTM D5185(m)	0	---	---
Copper	ppm ASTM D5185(m) >5	<1	---	---
Tin	ppm ASTM D5185(m) >5	<1	---	---
Antimony	ppm ASTM D5185(m)	0	---	---
Vanadium	ppm ASTM D5185(m)	0	---	---
Beryllium	ppm ASTM D5185(m)	0	---	---
Cadmium	ppm ASTM D5185(m)	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 5	0	---	---
Barium	ppm ASTM D5185(m) 5	0	---	---
Molybdenum	ppm ASTM D5185(m) 5	0	---	---
Manganese	ppm ASTM D5185(m)	0	---	---
Magnesium	ppm ASTM D5185(m) 5	0	---	---
Calcium	ppm ASTM D5185(m) 10	0	---	---
Phosphorus	ppm ASTM D5185(m) 275	259	---	---
Zinc	ppm ASTM D5185(m) 7	<1	---	---
Sulfur	ppm ASTM D5185(m) 400	601	---	---
Lithium	ppm ASTM D5185(m)	<1	---	---

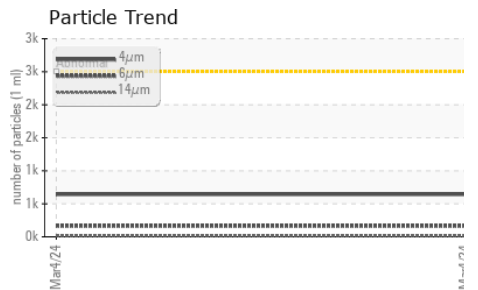
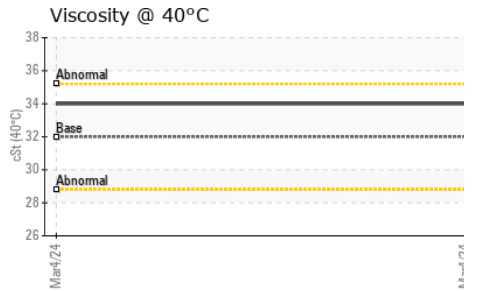
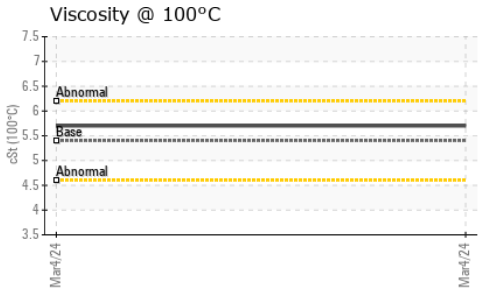
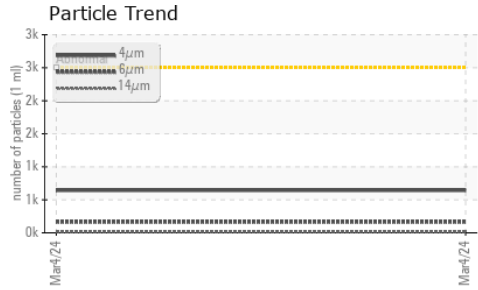
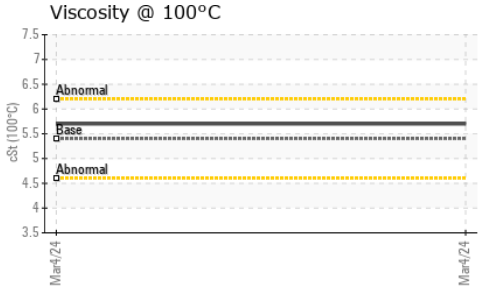
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	0	---	---
Sodium	ppm ASTM D5185(m)	<1	---	---
Potassium	ppm ASTM D5185(m) >20	<1	---	---

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >2500	643	---	---
Particles >6µm	ASTM D7647 >640	166	---	---
Particles >14µm	ASTM D7647 >80	14	---	---
Particles >21µm	ASTM D7647 >20	6	---	---
Particles >38µm	ASTM D7647 >4	1	---	---
Particles >71µm	ASTM D7647 >3	0	---	---
Oil Cleanliness	ISO 4406 (c) >18/16/13	17/15/11	---	---

OIL ANALYSIS REPORT



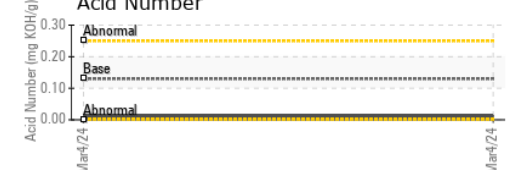
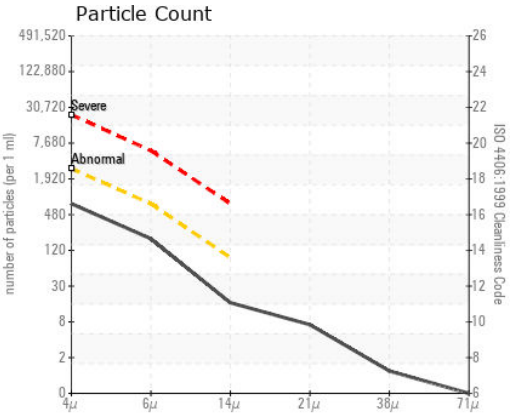
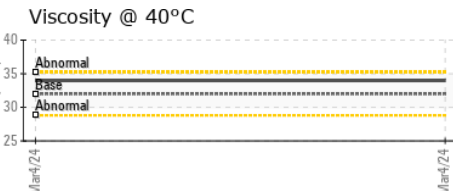
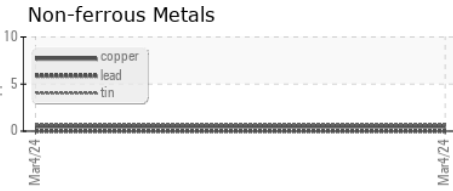
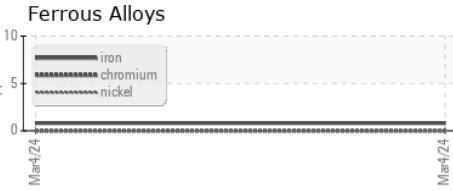
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.13	0.01	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.03	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32	34.0	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	5.4	5.7	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	102	107	---	---

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : 02625695
Unique Number : 5750814
Test Package : MAR 2 (Additional Tests: KV100, PrtCount, VI)
Received : 01 Apr 2024
Tested : 02 Apr 2024
Diagnosed : 02 Apr 2024 - Kevin Marson

Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Street
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshhynes@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.