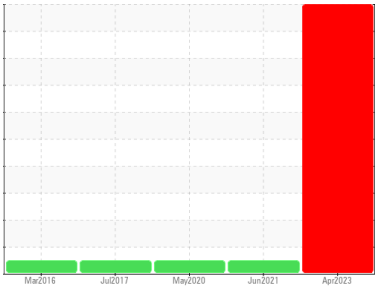
PROBLEM SUMMARY

Sample Rating Trend

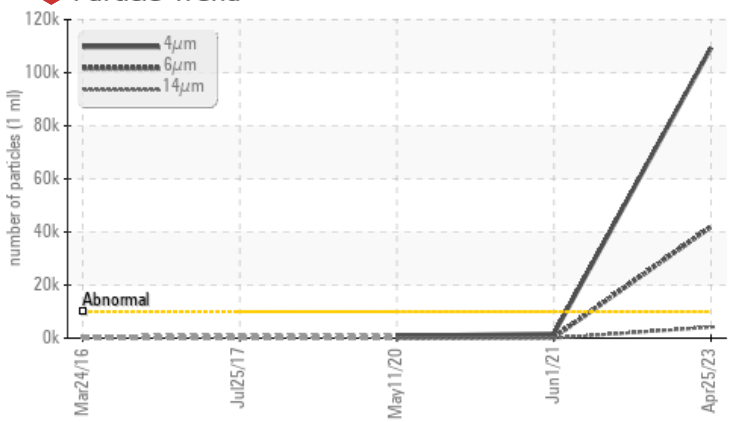


ISO

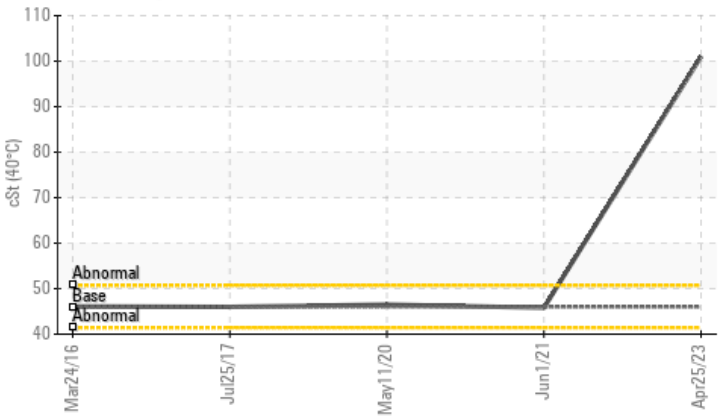
Machine Id
BFP - UNIT 5 THRUST BEARING (S/N 375301)
Component
Circulating Thrust Bearing
Fluid
SHELL TURBO T ISO 46 (30 LTR)

COMPONENT CONDITION SUMMARY

Particle Trend



Viscosity @ 40°C



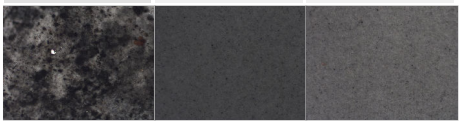
RECOMMENDATION

Due to this condition we recommend the following action... We advise an early resample to confirm this situation. NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

PROBLEMATIC TEST RESULTS

				SEVERE	NORMAL	NORMAL
Sample Status						
Particles >4µm		ASTM D7647	>10000	**109396**	1650	837
Particles >6µm		ASTM D7647	>2500	**41979**	343	170
Particles >14µm		ASTM D7647	>160	**4162**	33	26
Particles >21µm		ASTM D7647	>40	**1297**	7	12
Particles >38µm		ASTM D7647	>10	**33**	1	1
Oil Cleanliness		ISO 4406 (c)	>20/18/14	**24/23/19**	18/16/12	17/15/12
Appearance	scalar	Visual*	NORML	**WGOIL**	NORML	NORML
Free Water	scalar	Visual*		**1%**	NEG	NEG
Visc @ 40°C	cSt	ASTM D7279(m)	46	**101**	45.8	46.5

PrtFilter



Customer Id: NALGRA
Sample No.: WC0701183
Lab Number: 02556553
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We advise an early resample to confirm this situation.
Alert	---	---	?	NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

HISTORICAL DIAGNOSIS

01 Jun 2021 Diag: Kevin Marson

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

11 May 2020 Diag: Kevin Marson

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

25 Jul 2017 Diag: Wes Davis

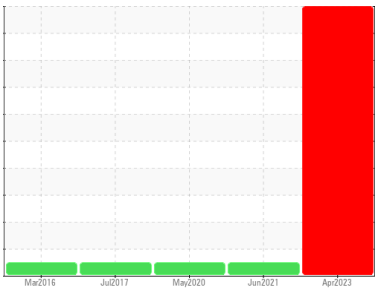
NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the component. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
BFP - UNIT 5 THRUST BEARING (S/N 375301)
Component
Circulating Thrust Bearing
Fluid
SHELL TURBO T ISO 46 (30 LTR)

DIAGNOSIS

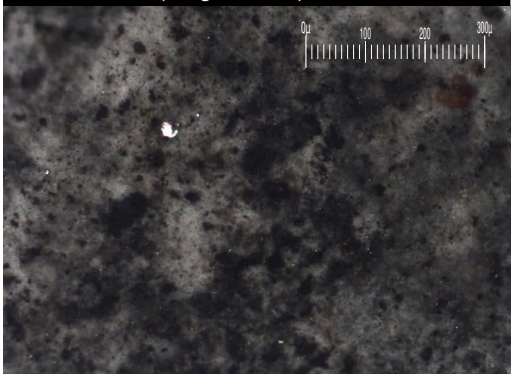
Recommendation
Due to this condition we recommend the following action... We advise an early resample to confirm this situation. NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

Wear
All component wear rates are normal.

Contamination
There is a high amount of particulates (2 to 100 microns in size) present in the oil. There is a moderate concentration of water present in the oil. Free water present.

Fluid Condition
Viscosity of sample indicates oil is within ISO 100 range, advise investigate. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Particle Filter (Magn: 100 x)



SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0701183**	WC0509216	WC0455066
Sample Date		Client Info		**25 Apr 2023**	01 Jun 2021	11 May 2020
Machine Age	yrs	Client Info		**0**	0	0
Oil Age	yrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>85	**11**	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>40	**0**	0	<1
Lead	ppm	ASTM D5185(m)	>60	**0**	0	0
Copper	ppm	ASTM D5185(m)	>7	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>40	**5**	<1	0
Antimony	ppm	ASTM D5185(m)		**<1**	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)	4.0	**0**	<1	0
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)		**<1**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**0**	0	<1
Calcium	ppm	ASTM D5185(m)	0	**0**	6	3
Phosphorus	ppm	ASTM D5185(m)	2.1	**0**	46	24
Zinc	ppm	ASTM D5185(m)	2.0	**1**	53	30
Sulfur	ppm	ASTM D5185(m)	1300	**161**	146	231
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

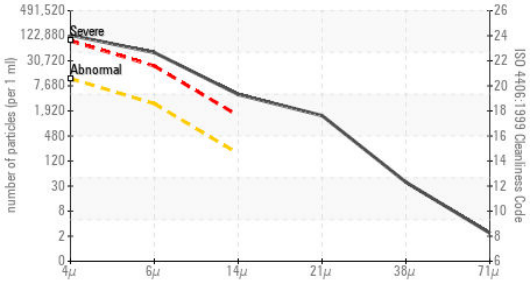
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**<1**	0	0
Sodium	ppm	ASTM D5185(m)		**0**	<1	0
Potassium	ppm	ASTM D5185(m)	>20	**0**	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**109396**	1650	837
Particles >6µm		ASTM D7647	>2500	**41979**	343	170
Particles >14µm		ASTM D7647	>160	**4162**	33	26
Particles >21µm		ASTM D7647	>40	**1297**	7	12
Particles >38µm		ASTM D7647	>10	**33**	1	1
Particles >71µm		ASTM D7647	>3	**2**	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/14	**24/23/19**	18/16/12	17/15/12

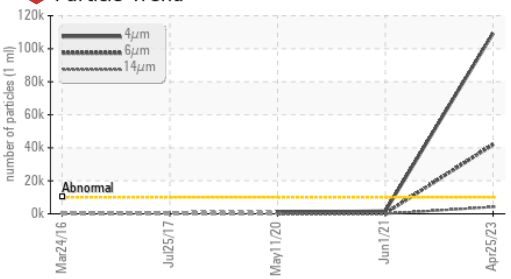
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	.05	**0.05**	0.08	0.08

OIL ANALYSIS REPORT

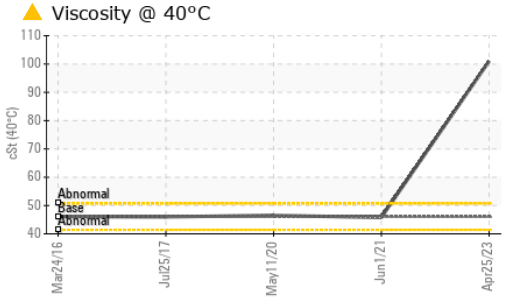
Particle Count



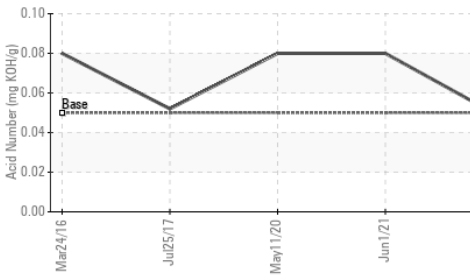
Particle Trend



Viscosity @ 40°C

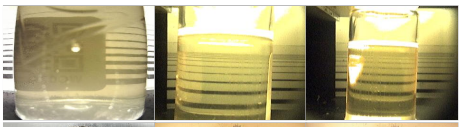
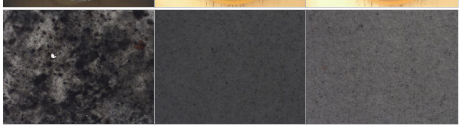


Acid Number



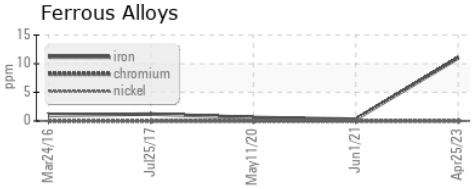
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**VLITE**	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	▲ **WGOIL**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>2	**.2%**	NEG	NEG
Free Water	scalar	Visual*		▲ **1%**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46	▲ **101**	45.8	46.5

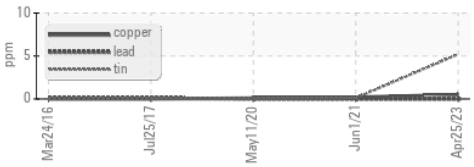
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
PrtFilter					

GRAPHS

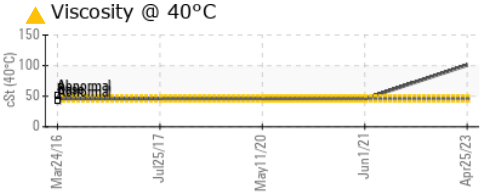
Ferrous Alloys



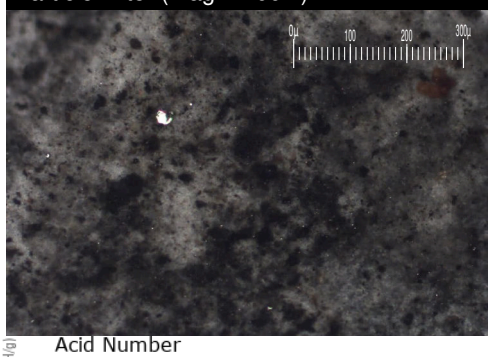
Non-ferrous Metals



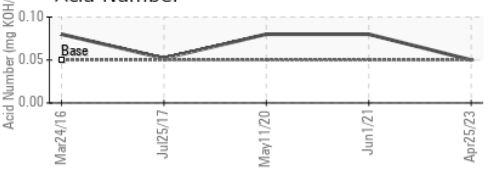
▲ Viscosity @ 40°C



Particle Filter (Magn: 100 x)



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Nalcor Energy - Grand Falls-Windsor**
Sample No. : WC0701183 **Received** : 10 May 2023 25 Hardy Avenue
Lab Number : 02556553 **Diagnosed** : 15 May 2023 Grand Falls-Windsor, NL
Unique Number : 5577593 **Diagnostician** : Kevin Marson CA A2A 2P8
Test Package : IND 2 (Additional Tests: BottomAnalysis, FilterPatch, PrtCount, PrtFilter, TAN Man) Contact: Phillip Winsor

To discuss this sample report, contact Customer Service at 1-800-268-2131. philipwinsor@nlh.nl.ca
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (709)486-8714
Validity of results and interpretation are based on the sample and information as supplied. F: