

OIL ANALYSIS REPORT

Sample Rating Trend



Area SAB1 **SAB1 G10** Component **Thrust Bearing** Fluid ESSO TERESSO ISO 46 (4250 LTR)

Recommendation

We recommend you service the filters on this component. 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

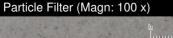
All component wear rates are normal.

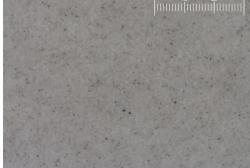
Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





Report Id: ONTQUE [WCAMIS] 02604984 (Generated: 12/27/2023 16:53:06) Rev: 1



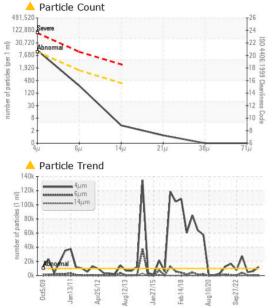


SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0864658	WC0828608	WC0642832
Sample Date		Client Info		21 Dec 2023	27 Aug 2023	27 Mar 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>85	2	2	2
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>40	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>60	<1	<1	1
Copper	ppm	ASTM D5185(m)	>7	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>40	<1	0	<1
Antimony	ppm	ASTM D5185(m)		0	0	<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
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current 0	history1 <1	history2 <1
	ppm ppm					
Boron		ASTM D5185(m)		0	<1	<1
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	0	0 0	<1 0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0	0 0 0	<1 0 0	<1 0 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	0 0 0	<1 0 0 0	<1 0 0 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	0 0 0 0 0	<1 0 0 0 0	<1 0 0 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 2.4	0 0 0 0 <1	<1 0 0 0 0 1	<1 0 0 <1 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 2.4	0 0 0 0 <1 9	<1 0 0 0 0 1 9	<1 0 0 <1 0 0 9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 2.4	0 0 0 0 <1 9 2	<1 0 0 0 0 1 9 2	<1 0 <1 0 0 9 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 2.4	0 0 0 0 <1 9 2 1451	<1 0 0 0 1 9 2 1373	<1 0 0 <1 0 0 9 2 1403
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 2.4 0	0 0 0 0 <1 9 2 1451 <1	<1 0 0 0 1 9 2 1373 <1	<1 0 0 <1 0 0 9 2 1403 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 2.4 0 	0 0 0 0 <1 9 2 1451 <1	<1 0 0 0 1 9 2 1373 <1 history1	<1 0 0 <1 0 0 9 2 1403 <1 <i>history2</i>
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 2.4 0 	0 0 0 0 <1 9 2 1451 <1 current 6	<1 0 0 0 1 9 2 1373 <1 history1 6	<1 0 0 <1 0 0 9 2 1403 <1 1403 <1 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 2.4 0 imit/base >20	0 0 0 0 <1 9 2 1451 <1	<1 0 0 0 1 9 2 1373 <1 <i>history1</i> 6 0	<1 0 0 <1 0 0 9 2 1403 <1 1403 <1 history2 5 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 0 2.4 0 0 imit/base >20	0 0 0 0 <1 9 2 1451 <1 <1 <i>current</i> 6 0 <1	<1 0 0 0 1 9 2 1373 <1 <i>history1</i> 6 0 <1	<1 0 0 <1 0 0 9 2 1403 <1 history2 5 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 2.4 0 0 0 0 2.4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (1 9 2 1451 <1 (urrent 6 0 <1 (urrent	<1 0 0 0 1 9 2 1373 <1 history1 6 0 <1 history1	<1 0 0 <1 0 0 9 2 1403 <1 history2 5 0 0 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 2.4 0 0 0 0 2.4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 4 1 9 2 1451 <1 5 0 4 1 0 <1 0 4 1 1 1 9 0 4 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1 0 1	<1 0 0 0 1 9 2 1373 <1 history1 6 0 <1 history1 6245	<1 0 0 4 1 0 0 2 1403 <1 1403 <1 1403 <1 1 5 0 0 0 bistory2 4772
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 2.4 0 2.4 0 2.4 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0	0 0 0 0 2 1451 <1	<1 0 0 0 1 9 2 1373 <1 history1 6 0 <1 history1 6245 341	<1 0 0 <1 0 9 2 1403 <1 history2 5 0 0 0 history2 4772 121
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647	0 0 0 2.4 0 2.4 0 2.4 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0	0 0 0 0 0 1 1 9 2 1451 <1 2 1451 <1 0 0 <1 0 <1 0 0 <1 0 11902 240 3	<1 0 0 0 1 9 2 1373 <1 history1 6 0 <1 history1 6245 341 13	<1 0 0 4 1 0 0 2 1 0 9 2 1403 <1 1 0 5 0 0 0 0 1 1403 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 2.4 0 2.4 0 3 20 3 20 3 20 3 20 3 10000 3 320 3 20 3	0 0 0 0 3 3 4 1 9 2 1 4 5 1 4 5 1 4 5 6 0 3 1 1 9 2 1 4 5 1 1 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<1 0 0 0 1 9 2 1373 <1 history1 6 0 <1 history1 6245 341 13 3 3	<1 0 0 (1 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium PtUID CLEANLIN Particles >4µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 2.4 0 2.4 0 3 20 3 20 3 20 3 20 3 10000 3 320 3 20 3	0 0 0 0 3 3 4 1451 4 1451 4 1451 5 4 1451 6 0 4 1 1 0 2 4 0 2 1 1 0 1 0 1 0 0 1 1 0 0 1 1 0 0 1 1 0 1	<1 0 0 0 1 9 2 1373 <1 history1 6 0 <1 history1 6245 341 13 3 0	<1 0 0 41 0 0 2 1403 2 1403 <1 5 0 0 0 bistory2 4772 121 7 2 1

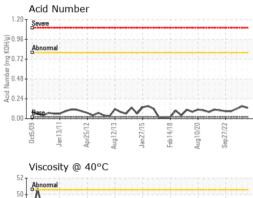


OIL ANALYSIS REPORT

FLUID DEGRADATION method limit/base



Acid Number (AN)	mg KOH/g	ASTM D974*	0.02	0.13	0.15	0.12
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	VLITE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	VLITE	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*	>2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46	45.6	45.7	45.7
SAMPLE IMAGES	5	method	limit/base	current	history1	history2



Apr25/12 -

Jan 13/11

Aug12/13

Jan27/15

Feb14/18

Aug10/20

Sep27/22

			Botto	m		
Feb14/18	Aug10/20	Sep27/22	PrtFil	lter		

Color



111244254673	CALA	Laboratory	: WearCheck - C8-1	175 Appleby Lin	e, Burlington, ON L7L 5H		tario Power Generation
	Testing Accreditation No. 1005218	Sample No.	: WC0864658	Recieved	: 22 Dec 2023	NIAGARA PLANT	GROUP,, 14000 NIAGARA PKWY
	ISO 17025:2017		: 02604984	Diagnosed	: 27 Dec 2023	NIAG	ARA ON THE LAKE, ON
3.44	Accredited Laboratory	Unique Number	: 5698069	Diagnostician	: Kevin Marson		CA LOS 1J0
		Test Package	: IND 2 (Additional	Tests: BottomAn	alysis, FilterPatch, PrtFilte	er, TAN Man)	Contact: Michael Brochu
- 163 P 71 9 5	To discuss this sample report, contact Customer Service at 1-800-268-2131.						mike.brochu@opg.com
	Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.						T: (905)357-0322
	Validity of results and interpretation are based on the sample and information as supplied.						F: (905)374-5466