

PROBLEM SUMMARY

SAB2 **SAB2 G17**

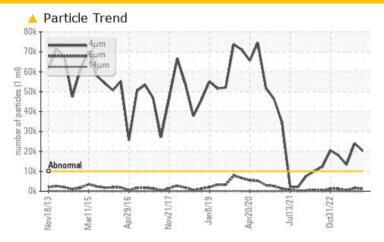
Component **Thrust Bearing**

ESSO TERESSO ISO 46 (3182 LTR)

Sample Rating Trend 9013 Mar/015 Ar/1016 Mar/017 1-data Sana

ISO

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. 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.

PROBLEMATIC TEST RESULTS							
Sample Status			ABNORMAL	ABNORMAL	ATTENTION		
Particles >4µm	ASTM D7647	>10000	20255	<u>4</u> 24088	<u>▲</u> 13314		
Oil Cleanliness	ISO 4406 (c)	>20/17/14	<u>22/17/10</u>	<u>22/18/11</u>	<u>^</u> 21/16/10		
PrtFilter				122			

Customer Id: ONTQUE **Sample No.:** WC0858080 Lab Number: 02592140 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
Change Filter			?	We recommend you service the filters on this component.
Resample			?	We recommend an early resample to monitor this condition.
Contact Required			?	Please contact your representative for information regarding the proper sampling kits for your service.
Alert			?	NOTE: We recommend using IND 3 test kits,

HISTORICAL DIAGNOSIS

31 Jul 2023 Diag: Kevin Marson



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. 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.Component wear rates appear to be normal (unconfirmed). There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



05 Jun 2023 Diag: Kevin Marson



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.Component wear rates appear to be normal (unconfirmed). There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



26 Jan 2023 Diag: Kevin Marson

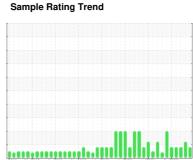


We recommend you service the filters on this component. Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.Component wear rates appear to be normal (unconfirmed). There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT



ISO



SAB2 **SAB2 G17**

Thrust Bearing

ESSO TERESSO ISO 46 (3182 LTR)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. 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

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

Particle Filter (Magn: 100 x)

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0858080	WC0830380	WC0780502
Sample Date		Client Info		25 Oct 2023	31 Jul 2023	05 Jun 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				ABNORMAL	ABNORMAL	ATTENTION
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>85	2	3	2
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)	>40	0	0	<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	0	0	0
Antimony	ppm	ASTM D5185(m)		0	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)	0	<1	0	<1
		4.0TH 4.DE (.0E/)		_	•	•

0

0

0

<1

0

<1

630

<1

0.10

0

0

0

<1

0

1

691

<1

0.02

0

0

<1

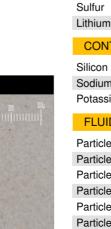
0

0

<1

621

<1



Barium

Molybdenum

Manganese

Magnesium

Phosphorus

Calcium

Zinc

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ASTM D5185(m)

ASTM D5185(m)

ASTM D5185(m)

ASTM D5185(m) O

ASTM D5185(m) O

ASTM D5185(m) O

ASTM D5185(m)

ASTM D5185(m)

mg KOH/g ASTM D974* 0.02

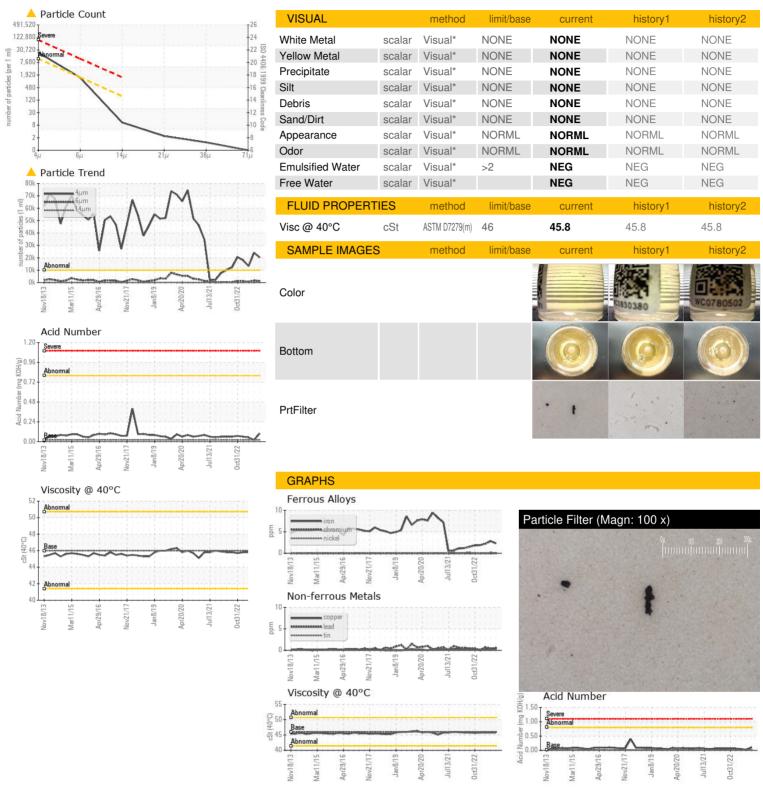
ASTM D5185(m) 2.4

0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	0	0	0
Sodium	ppm	ASTM D5185(m)		0	0	0
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	20255	<u>4</u> 24088	▲ 13314
Particles >6µm		ASTM D7647	>1300	1251	<u>▲</u> 1620	533
Particles >14μm		ASTM D7647	>160	9	17	9
Particles >21µm		ASTM D7647	>40	2	5	4
Particles >38μm		ASTM D7647	>10	1	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>20/17/14	<u>22/17/10</u>	<u>22/18/11</u>	<u>^</u> 21/16/10
FLUID DEGRADATION		method	limit/base	current	history1	history2



OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number **Unique Number**

: 02592140

: WC0858080 : 5669219

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received

: 26 Oct 2023 Diagnosed : 30 Oct 2023 Diagnostician : Kevin Marson

Ontario Power Generation NIAGARA PLANT GROUP,, 14000 NIAGARA PKWY NIAGARA ON THE LAKE, ON

CA LOS 1J0

Test Package : IND 2 (Additional Tests: BottomAnalysis, FilterPatch, PrtFilter, TAN Macontact: Alex Courtemanche 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.

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