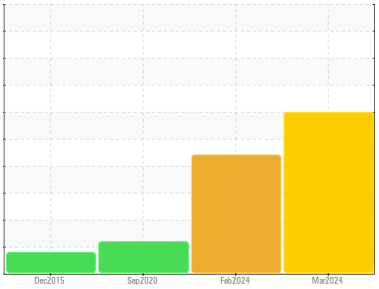
PROBLEM SUMMARY

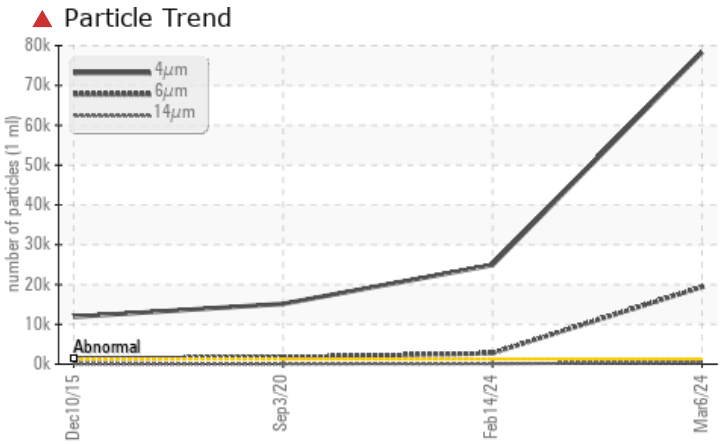
Area
2GS
Machine Id
2GS G4 GENERATOR NDE BEARING 1
Component
Bearing
Fluid
MOBIL TERESSTIC 100 (15 GAL)

Sample Rating Trend



ISO

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	ATTENTION
Particles >4µm		ASTM D7647	>1300	▲ **78312**	▲ 24908	● 15139
Particles >6µm		ASTM D7647	>320	▲ **19377**	▲ 2739	1678
Particles >14µm		ASTM D7647	>40	▲ **396**	▲ 95	59
Particles >21µm		ASTM D7647	>10	▲ **44**	● 18	12
Oil Cleanliness		ISO 4406 (c)	>17/15/12	▲ **23/21/16**	▲ 22/19/14	● 21/18/13

Customer Id: ENE271OTT
Sample No.: WC0908272
Lab Number: 02622726
Test Package: IND 3

To manage this report scan the QR code

To discuss the diagnosis or test data:
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Kevin.Marson@wearcheck.com

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Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

ISO

14 Feb 2024 Diag: Kevin Marson

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness code is much higher than 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.

view report

WEAR

03 Sep 2020 Diag: Bill Quesnel

We recommend you service the filters on this component. Resample at the next service interval to monitor.Lead ppm levels are noted. All other component wear rates are normal. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system. 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.

view report

WEAR

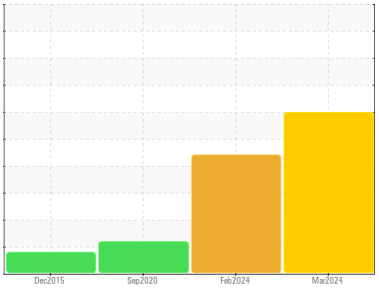
10 Dec 2015 Diag: Kevin Marson

We recommend an early resample to monitor this condition.Lead ppm levels are noted. All other component wear rates are normal. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system. 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

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
2GS
Machine Id
2GS G4 GENERATOR NDE BEARING 1
Component
Bearing
Fluid
MOBIL TERESSTIC 100 (15 GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

Wear

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

Contaminants

There is a high amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code.

Oil Condition

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 INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0908272**	WC0908282	WC0488743
Sample Date		Client Info		**06 Mar 2024**	14 Feb 2024	03 Sep 2020
Machine Age	yrs	Client Info		**22**	0	0
Oil Age	yrs	Client Info		**0**	30	6
Oil Changed		Client Info		**N/A**	Not Changd	Filtered
Sample Status				**SEVERE**	SEVERE	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>2	**NEG**	NEG	NEG

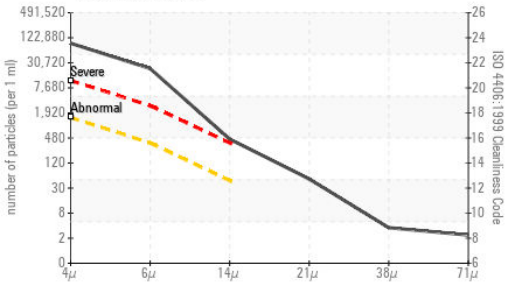
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	0
Iron	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**<1**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**4**	18	53
Copper	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>20	**<1**	1	1
Antimony	ppm	ASTM D5185(m)		**<1**	<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)		**0**	0	<1
Barium	ppm	ASTM D5185(m)		**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**0**	<1	<1
Calcium	ppm	ASTM D5185(m)		**<1**	1	<1
Phosphorus	ppm	ASTM D5185(m)		**0**	0	1
Zinc	ppm	ASTM D5185(m)		**<1**	2	3
Sulfur	ppm	ASTM D5185(m)		**8050**	8006	7506
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

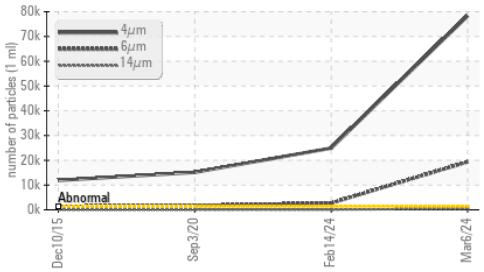
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**<1**	2	<1
Sodium	ppm	ASTM D5185(m)		**0**	0	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1

OIL ANALYSIS REPORT

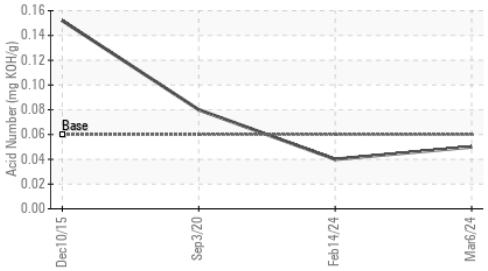
Particle Count



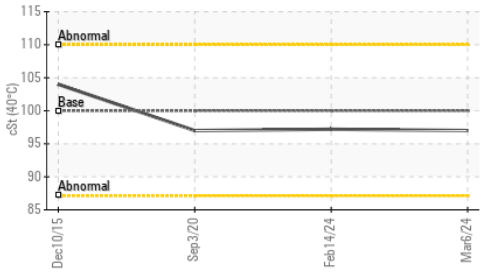
Particle Trend



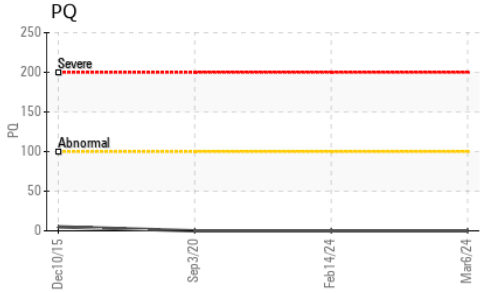
Acid Number



Viscosity @ 40°C



PQ



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>1300	▲ **78312**	▲ 24908	● 15139
Particles >6µm		ASTM D7647	>320	▲ **19377**	▲ 2739	1678
Particles >14µm		ASTM D7647	>40	▲ **396**	▲ 95	59
Particles >21µm		ASTM D7647	>10	▲ **44**	● 18	12
Particles >38µm		ASTM D7647	>3	**3**	2	0
Particles >71µm		ASTM D7647	>3	**2**	2	0
Oil Cleanliness		ISO 4406 (c)	>17/15/12	▲ **23/21/16**	▲ 22/19/14	● 21/18/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.06	**0.05**	0.04	0.08

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*	>2	**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)	100.0	**97.0**	97.2	97.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0908272 **Received** : 18 Mar 2024
Lab Number : 02622726 **Tested** : 22 Mar 2024
Unique Number : 5747845 **Diagnosed** : 22 Mar 2024 - Kevin Marson
Test Package : IND 3 (Additional Tests: PRTCOUNT, TAN Man)

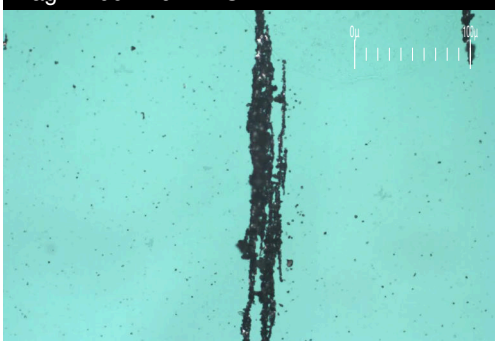
To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

Portage Power - Energy Ottawa
4 Booth Street
Ottawa, ON
CA K1R 6K8
Contact: Cheryl Gharib
info@portagepower.com
T:
F: x:

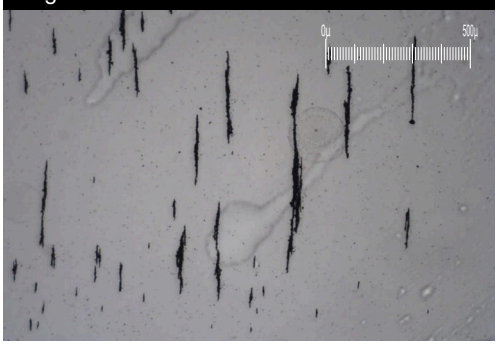
FERROGRAPHY REPORT

Area
2GS
Machine Id
2GS G4 GENERATOR NDE BEARING 1
Component
Bearing
Fluid
MOBIL TERESSTIC 100 (15 GAL)

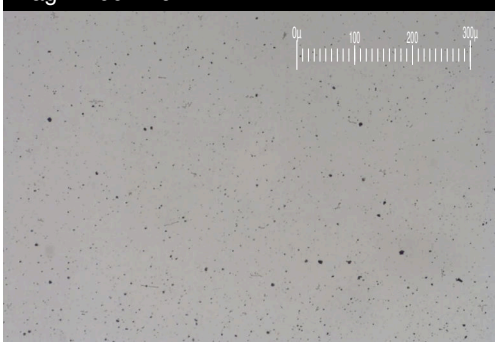
Magn: 200x Illum: BC



Magn: 50x Illum: RW



Magn: 100x Illum: RW

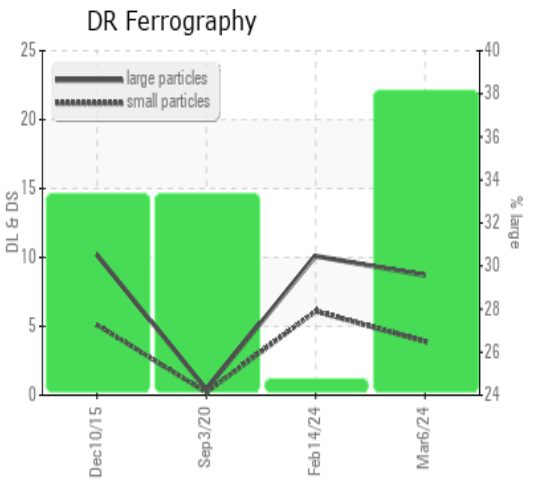


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		**8.7**	10.1	0.4
Small Particles		DR-Ferr*		**3.9**	6.1	0.2
Total Particles		DR-Ferr*	>---	**12.6**	16.2	0.6
Large Particles Percentage	%	DR-Ferr*		**38.1**	24.7	33.3
Severity Index		DR-Ferr*		**42**	40	0.1

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		**3**	3	2
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		**1**	1	1
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		**1**	1	1
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				1
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		**1**	1	2
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		**1**	1	

WEAR

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.



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