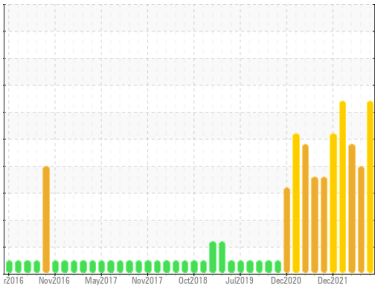
PROBLEM SUMMARY

Sample Rating Trend

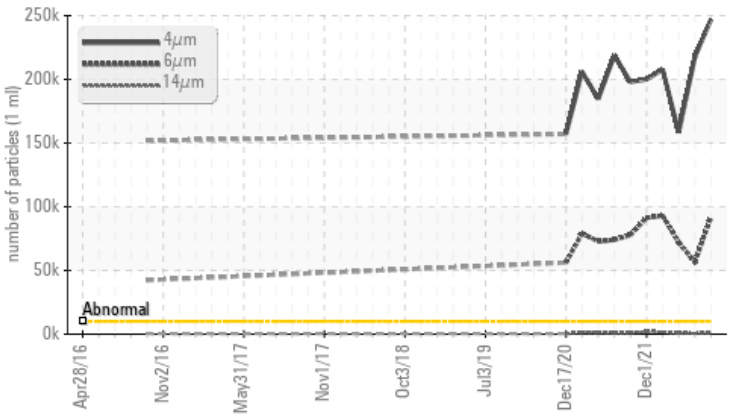


ISO

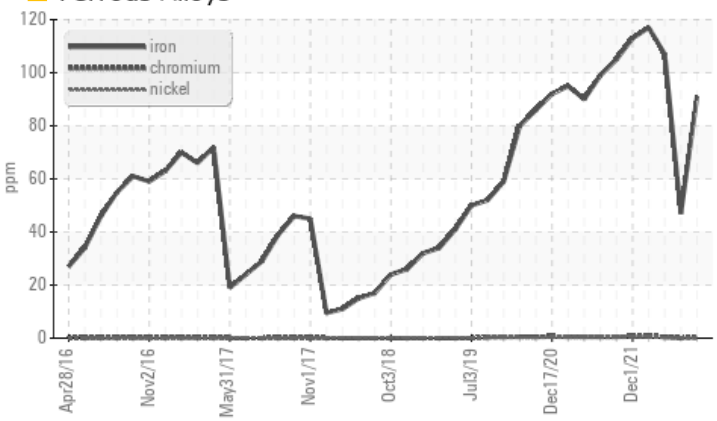
Area
OZR/BD09
Machine Id
101905 Cap Drive
Component
Front Thrust Bearing
Fluid
MOBIL MOBILGEAR 600 XP 320 (190 LTR)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



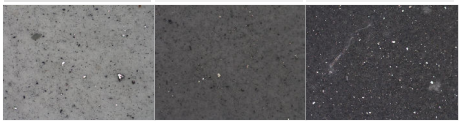
▲ Ferrous Alloys



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you check for visible metal particles in the oil. 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	SEVERE
Iron	ppm	ASTM D5185(m)	>85	▲ **91**	47	▲ 107
Particles >4µm		ASTM D7647	>10000	▲ **246980**	▲ 217584	▲ 158446
Particles >6µm		ASTM D7647	>2500	▲ **91824**	▲ 56568	▲ 71954
Particles >14µm		ASTM D7647	>160	▲ **893**	▲ 558	▲ 745
Particles >21µm		ASTM D7647	>40	▲ **84**	56	51
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **25/24/17**	▲ 25/23/16	▲ 24/23/17
White Metal	scalar	Visual*	NONE	▲ **VLITE**	NONE	NONE
PrtFilter						

Customer Id: MITWAT
Sample No.: WC0889242
Lab Number: 02628226
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
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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.
Check For Visual Metal	---	---	?	We advise that you check for visible metal particles in the oil.
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

12 Dec 2022 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. Particles >6µm are severely high. Particles >4µm are severely high. Oil Cleanliness are severely high. Particles >14µm are abnormally high. 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

ISO

02 Jun 2022 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.Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. Particles >6µm are severely high. Particles >4µm are severely high. Oil Cleanliness are severely high. Particles >14µm are abnormally high. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

ISO

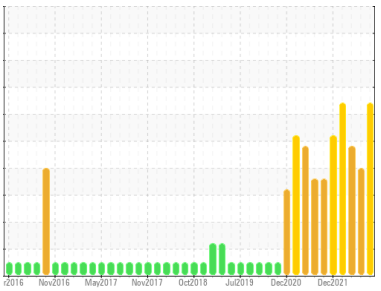
30 Mar 2022 Diag: Kevin Marson

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.Light concentration of visible metal present. Particles >14µm are severely high. Particles >6µm are severely high. Particles >4µm are severely high. Particles >21µm are abnormally high. 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
OZR/BD09
Machine Id
101905 Cap Drive
Component
Front Thrust Bearing
Fluid
MOBIL MOBILGEAR 600 XP 320 (190 LTR)

DIAGNOSIS

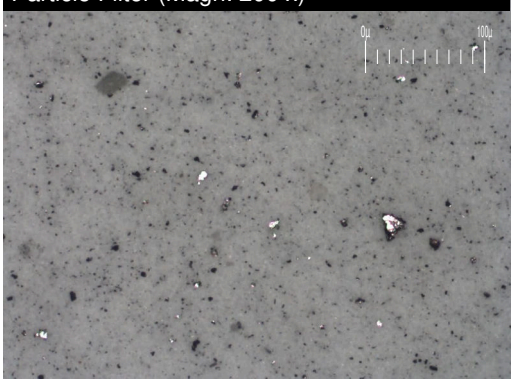
Recommendation
We advise that you check all areas where contaminants can enter the system. We advise that you check for visible metal particles in the oil. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires 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
Iron ppm levels are abnormal. Light concentration of visible metal present. Bearing wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

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

Fluid Condition
The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Particle Filter (Magn: 200 x)



SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0889242**	WC0718902	WC0688636
Sample Date		Client Info		**08 Apr 2024**	12 Dec 2022	02 Jun 2022
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				**SEVERE**	SEVERE	SEVERE

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

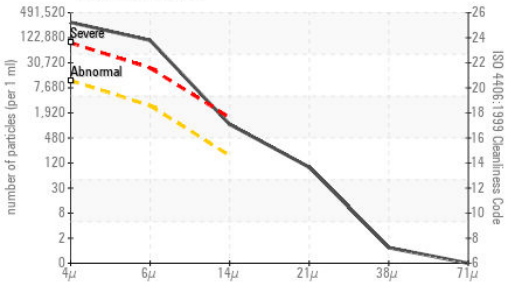
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**99**	---	48
Iron	ppm	ASTM D5185(m)	>85	▲ **91**	47	▲ 107
Chromium	ppm	ASTM D5185(m)	>20	**<1**	0	<1
Nickel	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>40	**0**	<1	<1
Lead	ppm	ASTM D5185(m)	>60	**0**	0	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**	<1	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)		**29**	36	27
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**<1**	<1	1
Magnesium	ppm	ASTM D5185(m)		**0**	<1	0
Calcium	ppm	ASTM D5185(m)		**<1**	0	2
Phosphorus	ppm	ASTM D5185(m)		**318**	361	319
Zinc	ppm	ASTM D5185(m)		**3**	2	3
Sulfur	ppm	ASTM D5185(m)		**8142**	8870	15275
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

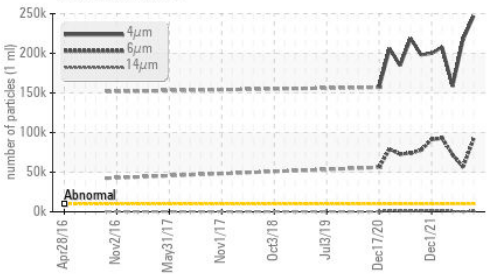
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**<1**	2	<1
Sodium	ppm	ASTM D5185(m)		**<1**	<1	0
Potassium	ppm	ASTM D5185(m)	>20	**0**	1	<1

OIL ANALYSIS REPORT

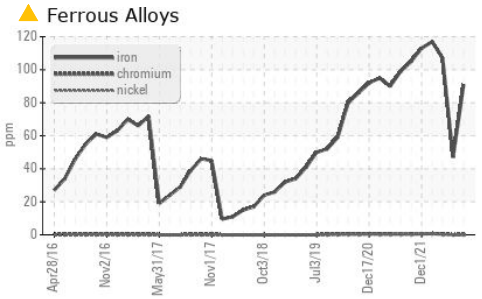
Particle Count



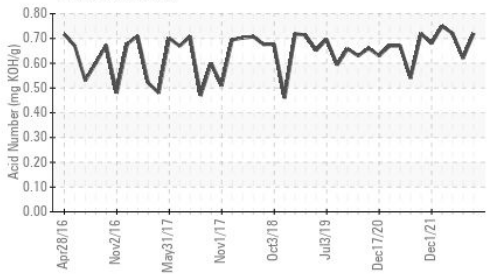
Particle Trend



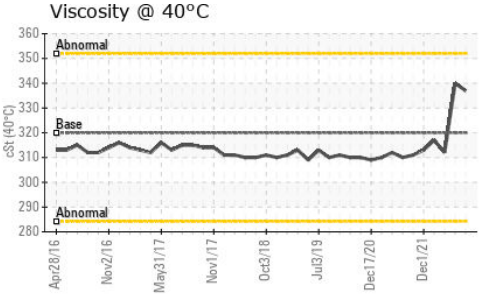
Ferrous Alloys



Acid Number



Viscosity @ 40°C

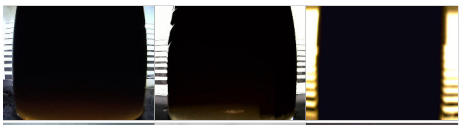
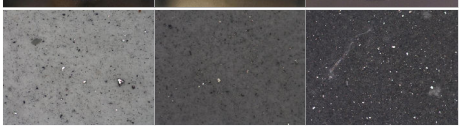


FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **246980**	▲ 217584	▲ 158446
Particles >6µm		ASTM D7647	>2500	▲ **91824**	▲ 56568	▲ 71954
Particles >14µm		ASTM D7647	>160	▲ **893**	▲ 558	▲ 745
Particles >21µm		ASTM D7647	>40	▲ **84**	56	51
Particles >38µm		ASTM D7647	>10	**1**	0	1
Particles >71µm		ASTM D7647	>3	**0**	0	1
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **25/24/17**	▲ 25/23/16	▲ 24/23/17

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.72**	0.62	0.72

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ **VLITE**	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**	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)	320	**337**	340	312

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

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0889242 **Received** : 11 Apr 2024
Lab Number : 02628226 **Tested** : 12 Apr 2024
Unique Number : 5761358 **Diagnosed** : 12 Apr 2024 - Kevin Marson
Test Package : IND 2 (Additional Tests: BottomAnalysis, FilterPatch, PQ, PrtCount, PrtFilter, TAN Mac)

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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Report Id: MITWAT [WCAMIS] 02628226 (Generated: 04/12/2024 10:24:21) Rev: 1
Contact/Location: Alan Davies - MITWAT