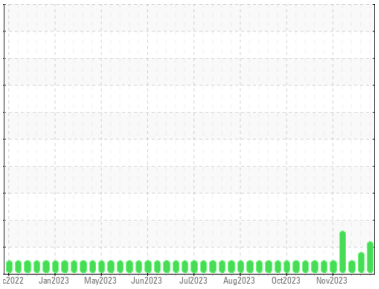
PROBLEM SUMMARY

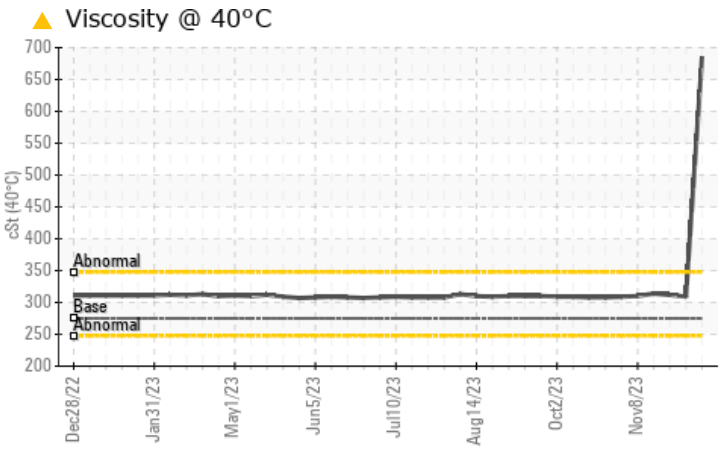
Sample Rating Trend

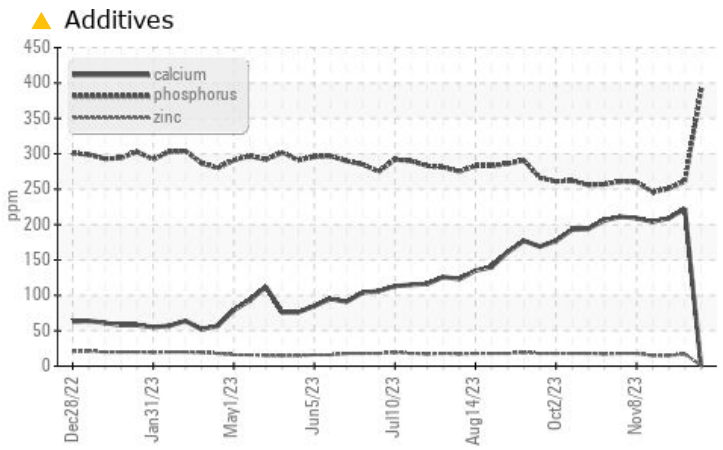


VISCOSITY

Area
5
Machine Id
5-3-241 Pump Station for Atox GBOX Lube
Component
Gearbox
Fluid
MOBIL MOBILGEAR 600 XP 320 (4400 LTR)

COMPONENT CONDITION SUMMARY





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

Sample Status				ABNORMAL	ABNORMAL	NORMAL
Calcium	ppm	ASTM D5185(m)	42	▲ **1**	222	209
Sulfur	ppm	ASTM D5185(m)	13649	▲ **95**	8494	8819
Visc @ 40°C	cSt	ASTM D7279(m)	275	▲ **685**	309	312

Customer Id: STMBOW
Sample No.: WC0883472
Lab Number: 02603585
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

28 Nov 2023 Diag: Kevin Marson

WEAR PARTICLES

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.Wear particle analysis indicates that the ferrous rubbing particles are abnormal. 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.

view report

20 Nov 2023 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 water content is negligible. 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

13 Nov 2023 Diag: Kevin Marson

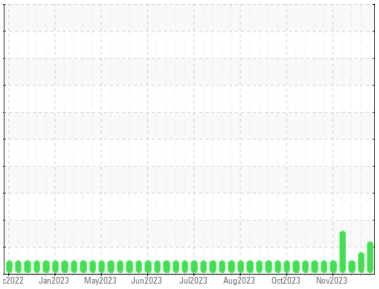
WATER

We advise that you check for the source of water entry. 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 advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. 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 concentration of water present in the oil. The system cleanliness is acceptable for your 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

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Area
5
Machine Id
5-3-241 Pump Station for Atox GBOX Lube
Component
Gearbox
Fluid
MOBIL MOBILGEAR 600 XP 320 (4400 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

Calcium and/or magnesium levels higher than normal indicating possible contamination with cement dust, advise investigate. The system and fluid cleanliness is acceptable.

Fluid Condition

Viscosity of sample indicates oil is within ISO 680 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0883472**	WC0842676	WC0869871
Sample Date		Client Info		**11 Dec 2023**	28 Nov 2023	20 Nov 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	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>200	**<1**	48	45
Chromium	ppm	ASTM D5185(m)	>15	**0**	<1	<1
Nickel	ppm	ASTM D5185(m)	>15	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**<1**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	**0**	16	15
Lead	ppm	ASTM D5185(m)	>100	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>200	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>25	**0**	0	0
Antimony	ppm	ASTM D5185(m)	>5	**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

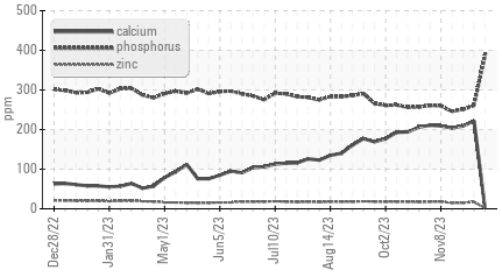
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	57	**<1**	2	2
Barium	ppm	ASTM D5185(m)	0.0	**<1**	<1	<1
Molybdenum	ppm	ASTM D5185(m)	2.0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0.0	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0.0	**0**	8	8
Calcium	ppm	ASTM D5185(m)	42	▲ **1**	222	209
Phosphorus	ppm	ASTM D5185(m)	399	**388**	261	251
Zinc	ppm	ASTM D5185(m)	13	**1**	17	15
Sulfur	ppm	ASTM D5185(m)	13649	▲ **95**	8494	8819
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	**16**	47	42
Sodium	ppm	ASTM D5185(m)		**<1**	1	1
Potassium	ppm	ASTM D5185(m)	>20	**0**	6	5

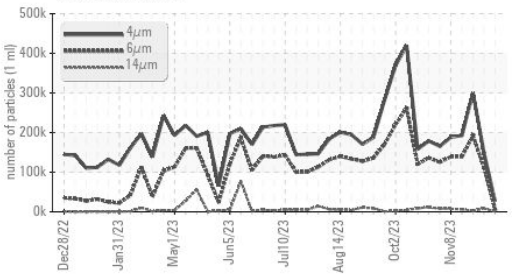
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**27530**	148710	299951
Particles >6µm		ASTM D7647	>320000	**7730**	112034	192157
Particles >14µm		ASTM D7647	>160000	**382**	8928	1899
Particles >21µm		ASTM D7647	>40000	**73**	659	23
Particles >38µm		ASTM D7647	>10000	**1**	8	0
Particles >71µm		ASTM D7647	>2500	**0**	3	0
Oil Cleanliness		ISO 4406 (c)	>--/25/24	**22/20/16**	24/24/20	25/25/18

OIL ANALYSIS REPORT

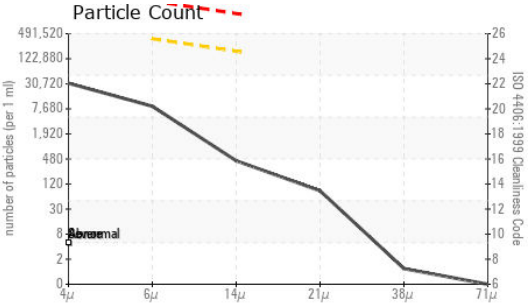
Additives



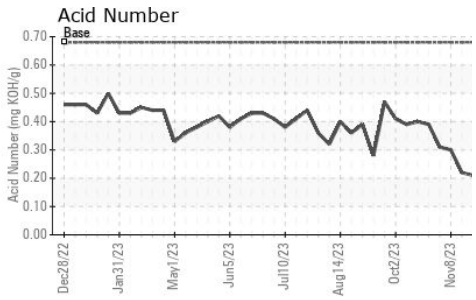
Particle Trend



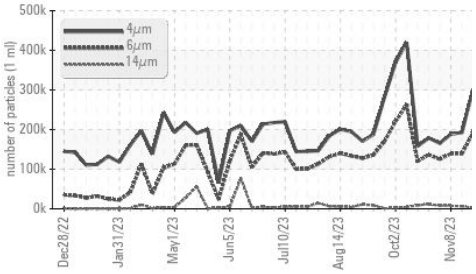
Particle Count



Acid Number



Particle Trend

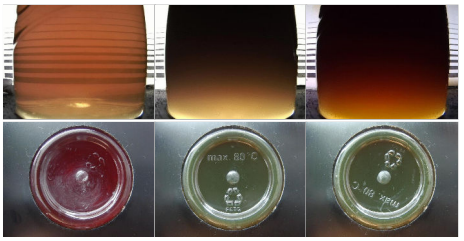


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.68	**0.42**	0.28	0.21

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	WGOIL
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	.2%
Free Water	scalar	Visual*		**NEG**	NEG	NEG

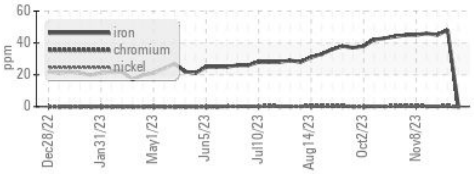
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	275	▲ **685**	309	312

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

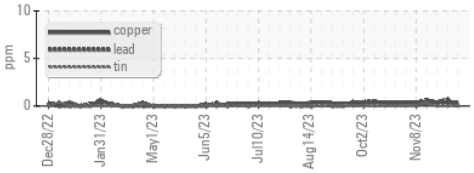


GRAPHS

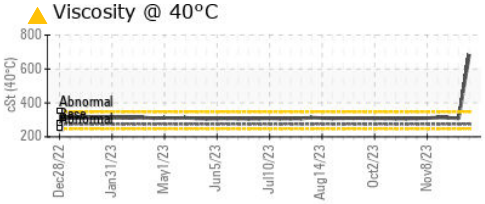
Ferrous Alloys



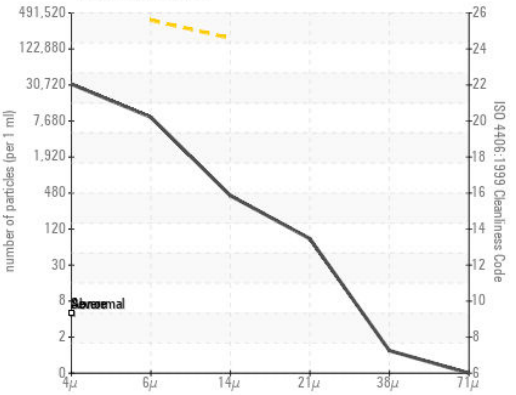
Non-ferrous Metals



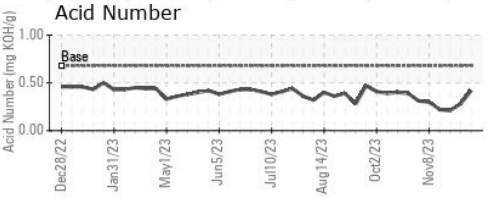
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0883472 **Recieved** : 15 Dec 2023
Lab Number : 02603585 **Diagnosed** : 18 Dec 2023
Unique Number : 5696670 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: 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.

ST. MARYS CEMENT CO.
400 BOWMANVILLE AVENUE
BOWMANVILLE, ON
CA L1C 7B5
Contact: Lou Traiforos
lou.traiforos@vcimentos.com
T: (905)440-5874
F: (905)623-4695