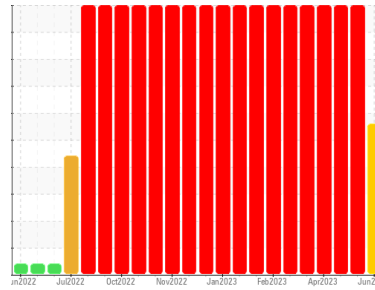




OIL ANALYSIS REPORT

Sample Rating Trend



Area
Building 12
Machine Id
Cone 2A
Component
Bulk Tank Lube System
Fluid
MOBIL MOBILGEAR 600 XP 320 (105 GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor.

Wear

Bearing and/or gear wear is indicated.

Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

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

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0820080	WC0820083	WC0782523
Sample Date	Client Info	02 Jun 2023	17 May 2023	26 Apr 2023
Machine Age	hrs	735	0	735
Oil Age	hrs	66	440	54
Oil Changed	Client Info	Changed	N/A	N/A
Sample Status		ABNORMAL	SEVERE	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.05	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >20	▲ 196	926	3211
Chromium	ppm ASTM D5185m >20	2	12	44
Nickel	ppm ASTM D5185m >20	4	23	88
Titanium	ppm ASTM D5185m	2	13	36
Silver	ppm ASTM D5185m	0	<1	0
Aluminum	ppm ASTM D5185m >20	▲ 35	156	424
Lead	ppm ASTM D5185m >20	▲ 37	146	349
Copper	ppm ASTM D5185m >20	▲ 360	1859	6628
Tin	ppm ASTM D5185m >20	▲ 38	179	642
Vanadium	ppm ASTM D5185m	0	<1	2
Cadmium	ppm ASTM D5185m	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	18	24	43
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	<1	3	5
Manganese	ppm ASTM D5185m	2	10	31
Magnesium	ppm ASTM D5185m	16	74	209
Calcium	ppm ASTM D5185m	18	80	225
Phosphorus	ppm ASTM D5185m	259	352	538
Zinc	ppm ASTM D5185m	0	6	35
Sulfur	ppm ASTM D5185m	17933	18534	21877

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >15	▲ 110	511	1554
Sodium	ppm ASTM D5185m	11	57	172
Potassium	ppm ASTM D5185m >20	5	23	64

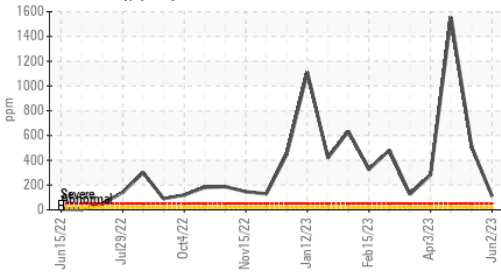
FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045	0.70	0.77	1.01

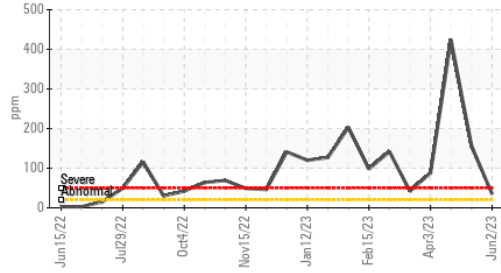


OIL ANALYSIS REPORT

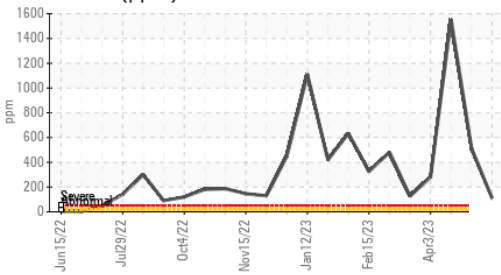
▲ Silicon (ppm)



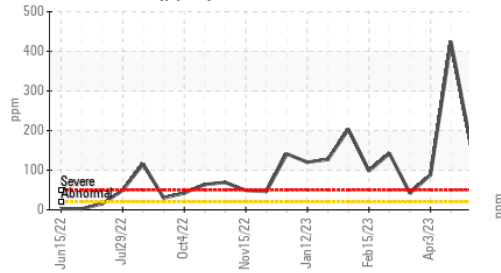
▲ Aluminum (ppm)



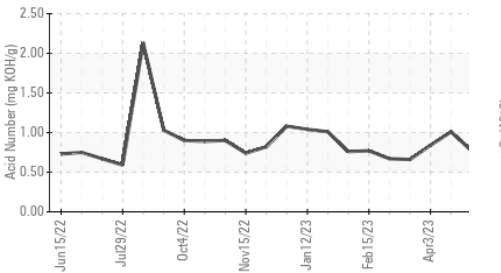
▲ Silicon (ppm)



▲ Aluminum (ppm)



Acid Number



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	▲ MODER	▲ MODER
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

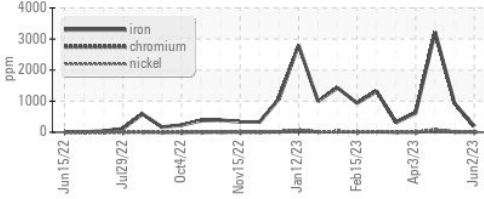
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	305	334

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

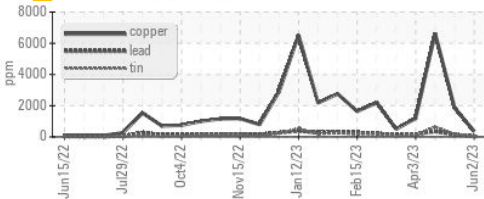


GRAPHS

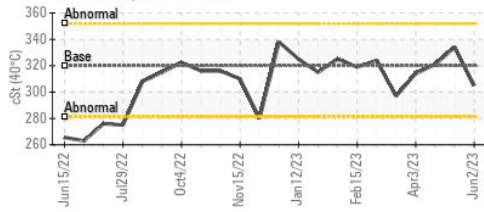
▲ Ferrous Alloys



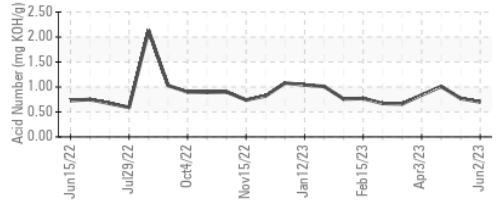
▲ Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0820080 Recieved : 05 Jun 2023
 Lab Number : 05864452 Diagnosed : 13 Jun 2023
 Unique Number : 10498917 Diagnostician : Doug Bogart
 Test Package : IND 2

3M - PITTSBORO
 4191 NC 87 S
 MONCURE, NC
 US 27559
 Contact: CHARLES JARRELL
 cjarrell@mmm.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:
F: