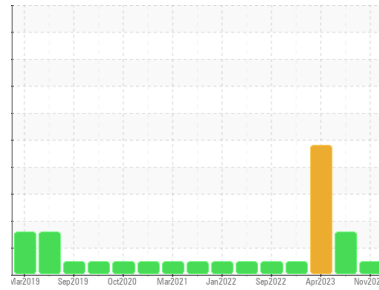




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

DEG-1

Component

Diesel Engine

Fluid

MOBIL MOBILGARD 412 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	RP0031582	RP0038712	RP0030039
Sample Date	Client Info	04 Nov 2023	12 Sep 2023	19 Apr 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	ABNORMAL	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Glycol	WC Method	NEG	NEG	0.0

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	6	6	9
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >4	0	0	0
Titanium	ppm ASTM D5185m	0	0	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	2	<1	0
Lead	ppm ASTM D5185m >40	1	2	1
Copper	ppm ASTM D5185m >330	2	2	1
Tin	ppm ASTM D5185m >15	0	<1	<1
Vanadium	ppm ASTM D5185m	0	<1	0
Cadmium	ppm ASTM D5185m	0	<1	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<1	<1	8
Barium	ppm ASTM D5185m 0	19	0	0
Molybdenum	ppm ASTM D5185m 0	0	0	<1
Manganese	ppm ASTM D5185m 0	0	<1	<1
Magnesium	ppm ASTM D5185m 18	19	19	22
Calcium	ppm ASTM D5185m 6350	4161	4462	4210
Phosphorus	ppm ASTM D5185m 200	213	202	190
Zinc	ppm ASTM D5185m 380	357	356	381

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	7	7	7
Sodium	ppm ASTM D5185m	2	5	7
Potassium	ppm ASTM D5185m >20	2	0	<1
Water	% ASTM D6304 >0.2	---	▲ 0.760	■ 6.42
ppm Water	ppm ASTM D6304 >2000	---	▲ 7600	■ 64200

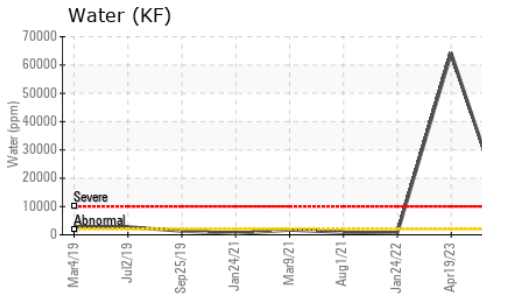
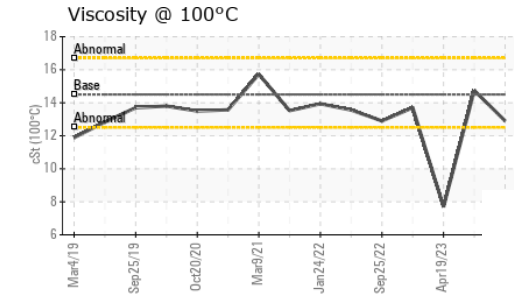
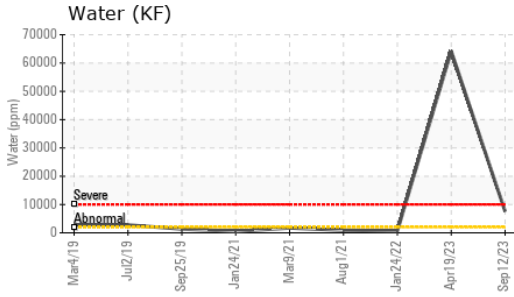
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.1	0.1	0.4
Nitration	Abs/cm *ASTM D7624 >20	5.5	6.4	12.4
Sulfation	Abs/.1mm *ASTM D7415 >30	13.5	12.4	0.3

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	3.3	3.7	9.4
Base Number (BN)	mg KOH/g ASTM D2896 15	11.44	10.49	10.72

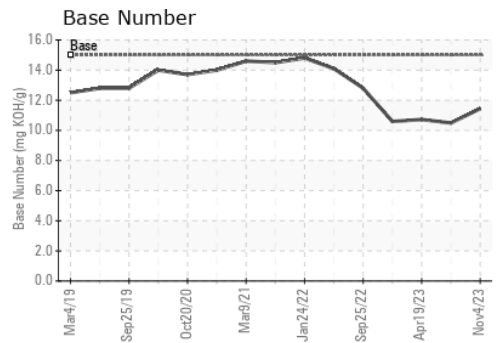
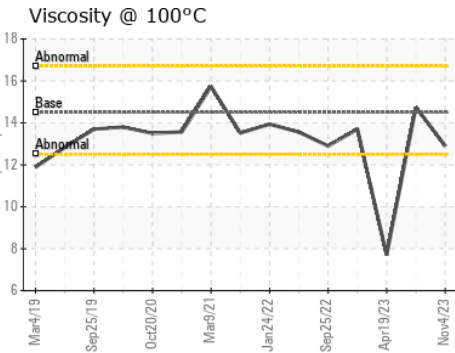
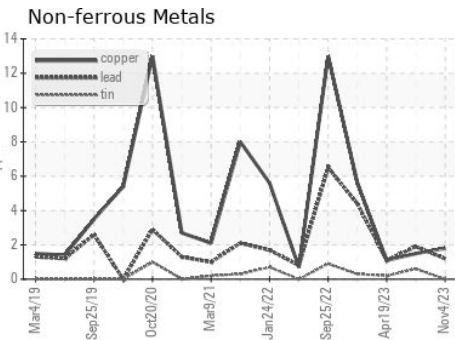
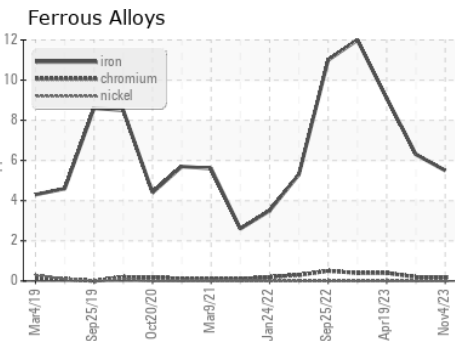
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	▲ MODER
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	>0.2	NEG	▲ 0.2%
Free Water	scalar	*Visual		NEG	● 0.2%

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.5	12.9	14.74

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0031582 **Received** : 03 Nov 2023
Lab Number : 05998194 **Diagnosed** : 06 Nov 2023
Unique Number : 10726554 **Diagnostician** : Sean Felton
Test Package : IND 2 (Additional Tests: FT-IR, KV100, TBN)

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 F:

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)