



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION



Area
Mobile Fleet
Machine Id
2013 2013
Component
Diesel Engine
Fluid
MOBIL 15W40 (11 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0947891	WC0867202	WC0630721
Sample Date		Client Info		26 Jun 2024	20 Oct 2023	07 Oct 2021
Machine Age	hrs	Client Info		7831	7550	7265
Oil Age	hrs	Client Info		291	295	211
Filter Age	hrs	Client Info		291	295	211
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	37	31	21
Chromium	ppm	ASTM D5185m	>6	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>30	2	2	3
Lead	ppm	ASTM D5185m	>10	5	3	1
Copper	ppm	ASTM D5185m	>150	4	4	4
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

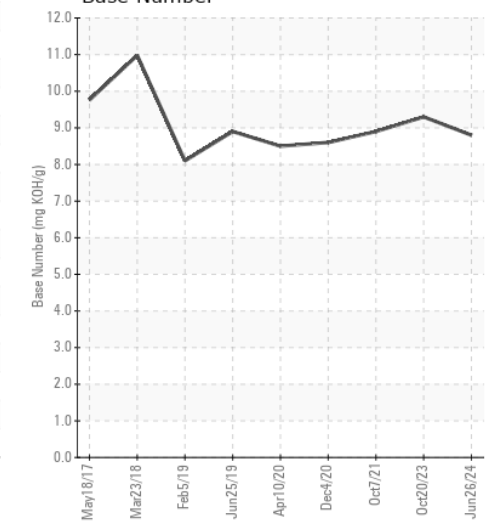
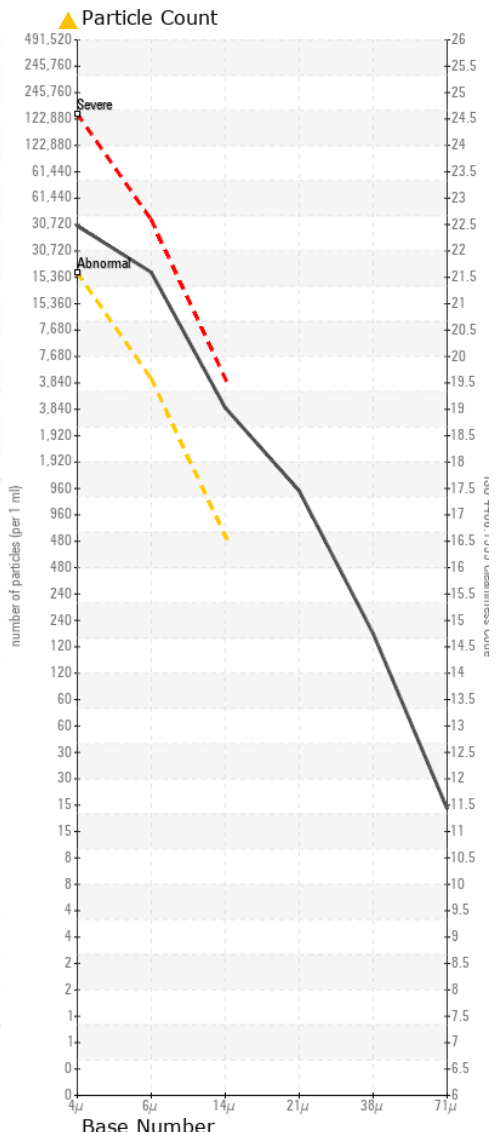
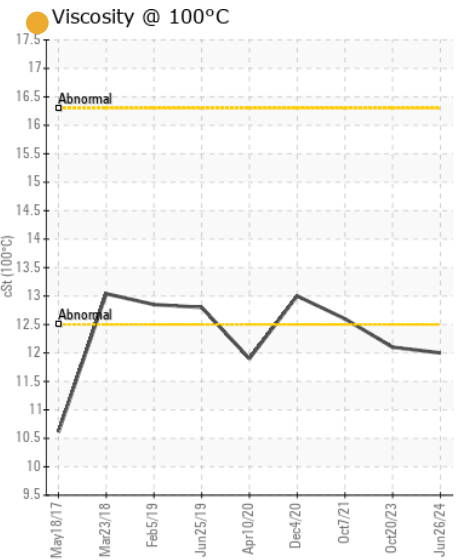
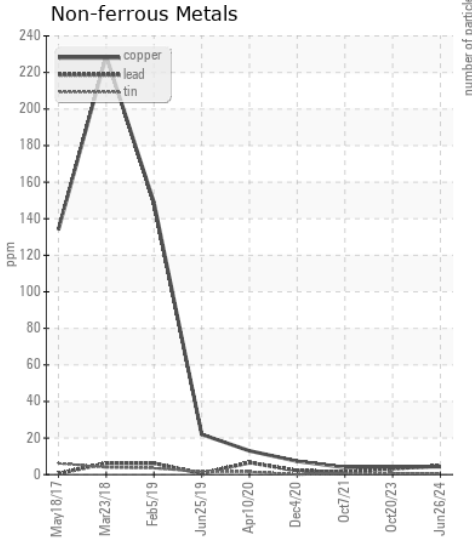
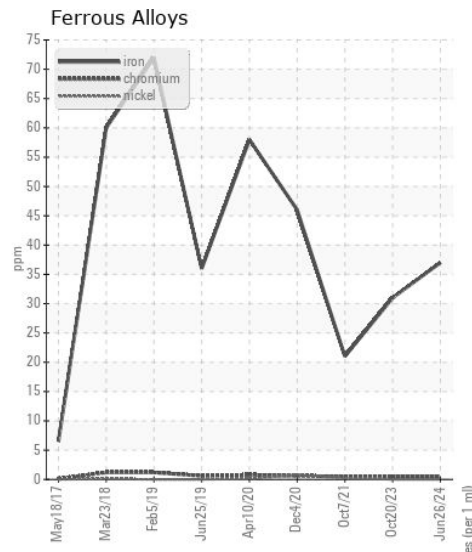
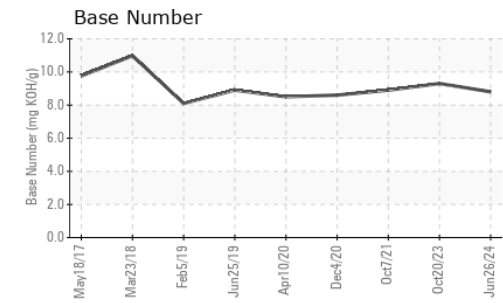
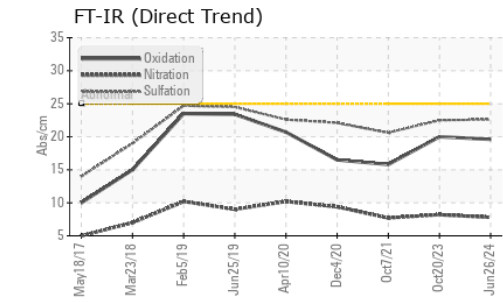
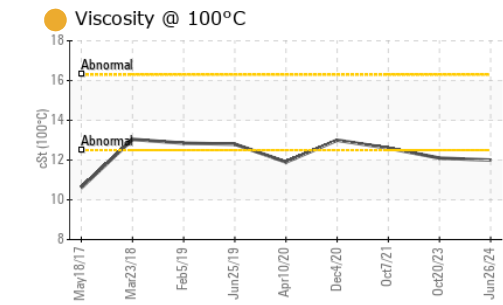
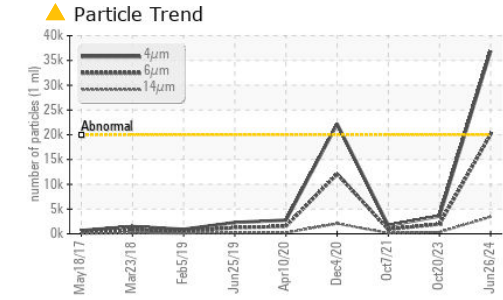
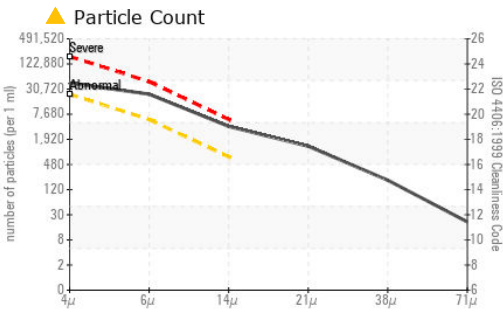
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>20	6	6	4
Potassium	ppm	ASTM D5185m	>20	2	0	1
Fuel		WC Method	>5	<1.0	▲ 2.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	7.8	8.2	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	22.5	20.6
Particles >4µm		ASTM D7647	>20000	▲ 36904	3584	1668
Particles >6µm		ASTM D7647	>5000	▲ 20104	1953	909
Particles >14µm		ASTM D7647	>640	▲ 3421	332	155
Particles >21µm		ASTM D7647	>160	▲ 1152	112	52
Particles >38µm		ASTM D7647	>40	▲ 178	17	8
Particles >71µm		ASTM D7647	>10	▲ 18	2	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 22/22/19	19/18/16	18/17/14
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>118	4	4	4
Boron	ppm	ASTM D5185m		45	52	71
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		47	39	27
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		506	480	565
Calcium	ppm	ASTM D5185m		1841	1697	1543
Phosphorus	ppm	ASTM D5185m		806	731	727
Zinc	ppm	ASTM D5185m		998	900	843
Sulfur	ppm	ASTM D5185m		3134	2549	2344
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.6	20.0	15.8
Base Number (BN)	mg KOH/g	ASTM D2896		8.8	9.3	8.9
Visc @ 100°C	cSt	ASTM D445		● 12.0	● 12.1	12.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0947891 **Received** : 28 Jun 2024
Lab Number : 06223382 **Tested** : 01 Jul 2024
Unique Number : 11101579 **Diagnosed** : 01 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: PRTCOUNT, TBN)

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)

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