



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area

Mobile Fleet

Machine Id

1508 1508

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 10W30 (6 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0918637	WC0885842	WC0862116
Sample Date		Client Info		19 Mar 2024	11 Dec 2023	29 Sep 2023
Machine Age	hrs	Client Info		8084	7824	7537
Oil Age	hrs	Client Info		260	287	234
Filter Age	hrs	Client Info		260	287	234
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	11	8	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	1	0
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	1	1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

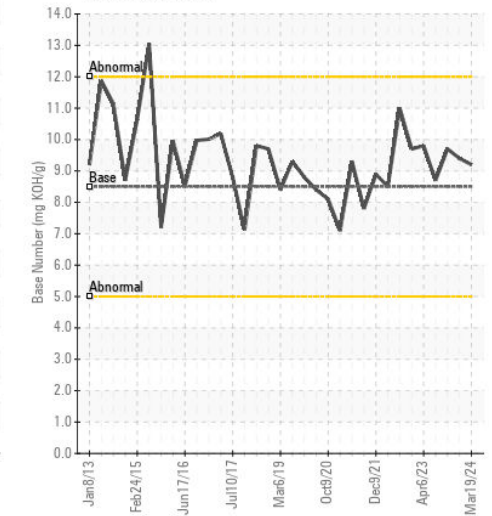
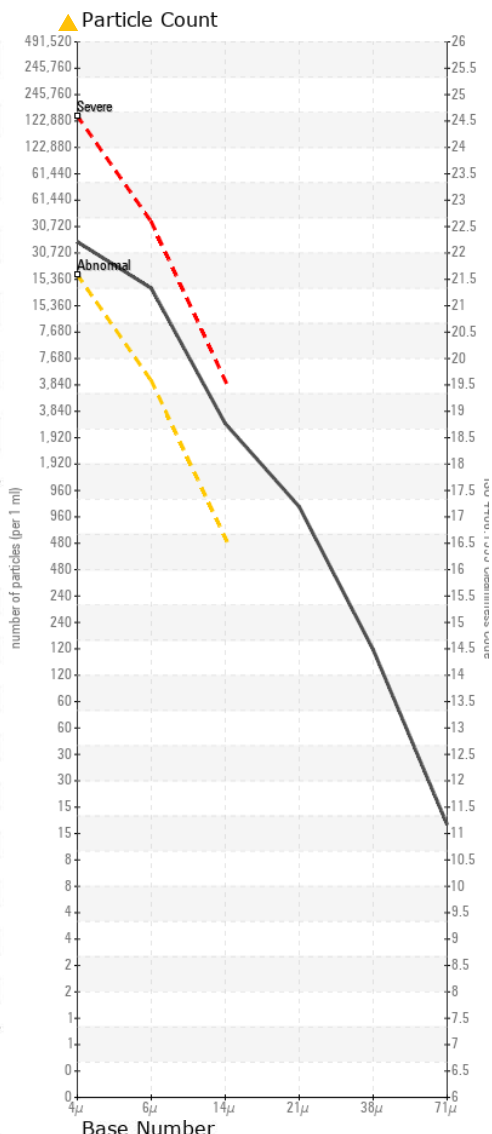
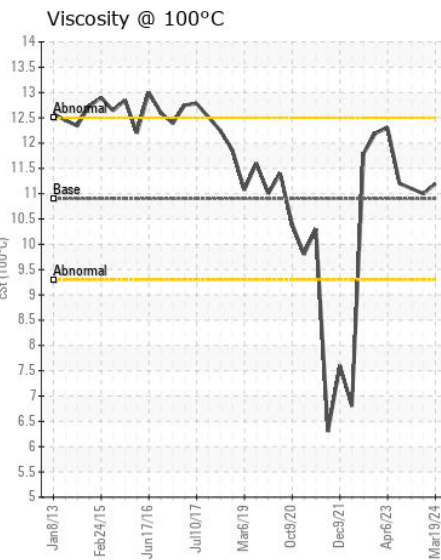
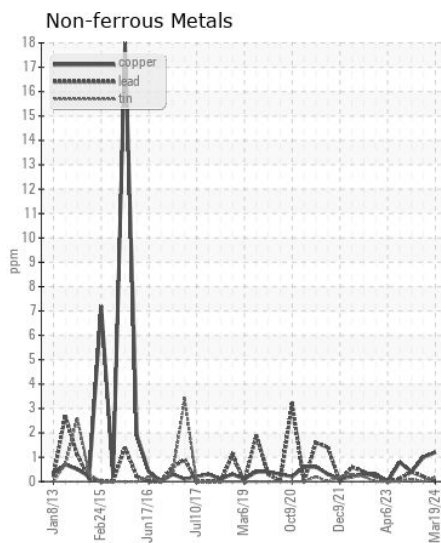
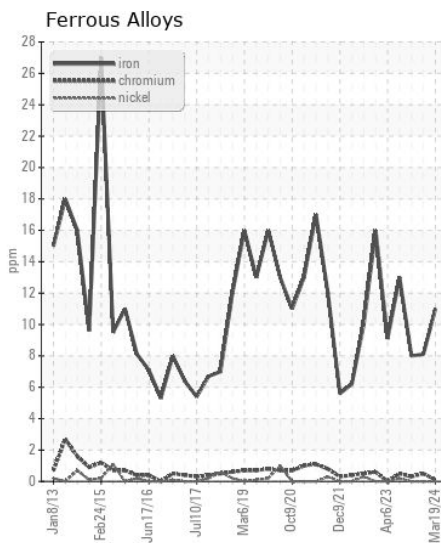
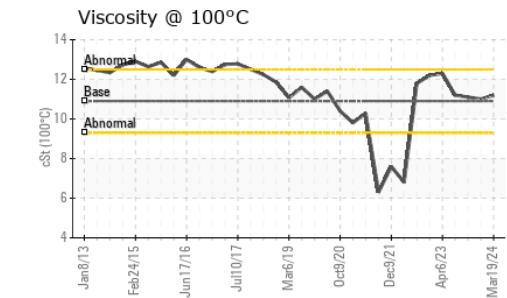
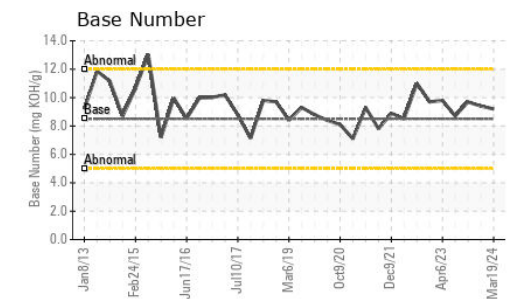
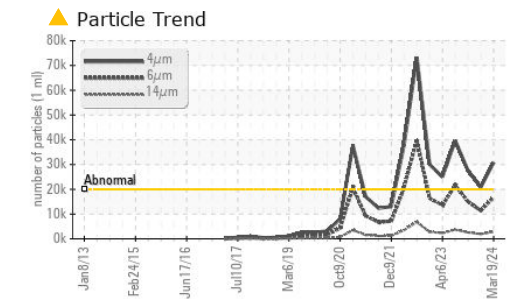
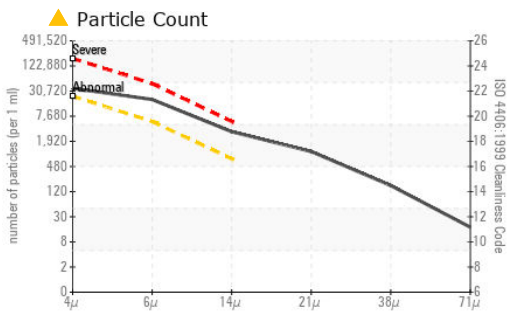
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	6
Potassium	ppm	ASTM D5185m	>20	0	0	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.8	9.5	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.5	23.6	23.1
Particles >4µm		ASTM D7647	>20000	▲ 30788	● 20905	▲ 27526
Particles >6µm		ASTM D7647	>5000	▲ 16772	▲ 11388	▲ 14995
Particles >14µm		ASTM D7647	>640	▲ 2854	▲ 1938	▲ 2552
Particles >21µm		ASTM D7647	>160	▲ 961	▲ 653	▲ 860
Particles >38µm		ASTM D7647	>40	▲ 148	▲ 101	▲ 133
Particles >71µm		ASTM D7647	>10	▲ 15	10	▲ 14
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 22/21/19	▲ 22/21/18	▲ 22/21/19
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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	2	3
Boron	ppm	ASTM D5185m	250	62	55	56
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	48	52	50
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	530	440	524
Calcium	ppm	ASTM D5185m	3000	1736	1699	1722
Phosphorus	ppm	ASTM D5185m	1150	781	736	772
Zinc	ppm	ASTM D5185m	1350	925	887	933
Sulfur	ppm	ASTM D5185m	4250	2797	1866	2620
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.8	24.6	23.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.2	9.4	9.7
Visc @ 100°C	cSt	ASTM D445	10.9	11.2	11.0	11.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0918637
Lab Number : 06125569
Unique Number : 10939720
Test Package : CONST (Additional Tests: PrtCount, TBN)

Received : 21 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 25 Mar 2024 - Don Baldrige

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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