



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Area
Mobile Fleet
Machine Id
5107 5107
Component
Diesel Engine
Fluid
MOBIL 15W40 (11 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0885977	WC0862108	WC0808777
Sample Date		Client Info		05 Jan 2024	28 Sep 2023	25 Sep 2023
Machine Age	hrs	Client Info		11391	10790	10790
Oil Age	hrs	Client Info		605	558	558
Filter Age	hrs	Client Info		605	558	558
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	12	5	34
Chromium	ppm	ASTM D5185m	>11	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	5
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	5	0	12
Lead	ppm	ASTM D5185m	>26	0	<1	2
Copper	ppm	ASTM D5185m	>26	4	1	4
Tin	ppm	ASTM D5185m	>4	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

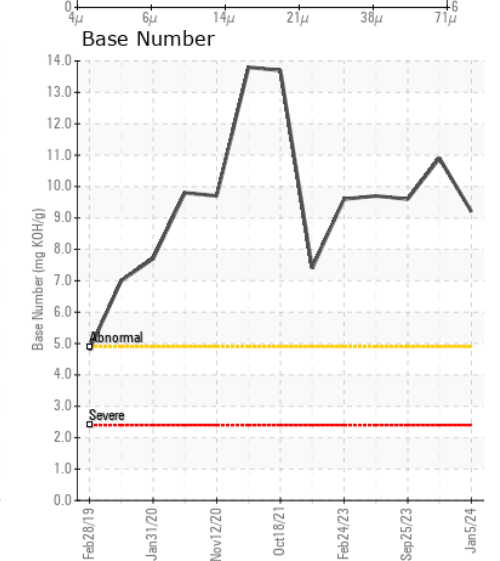
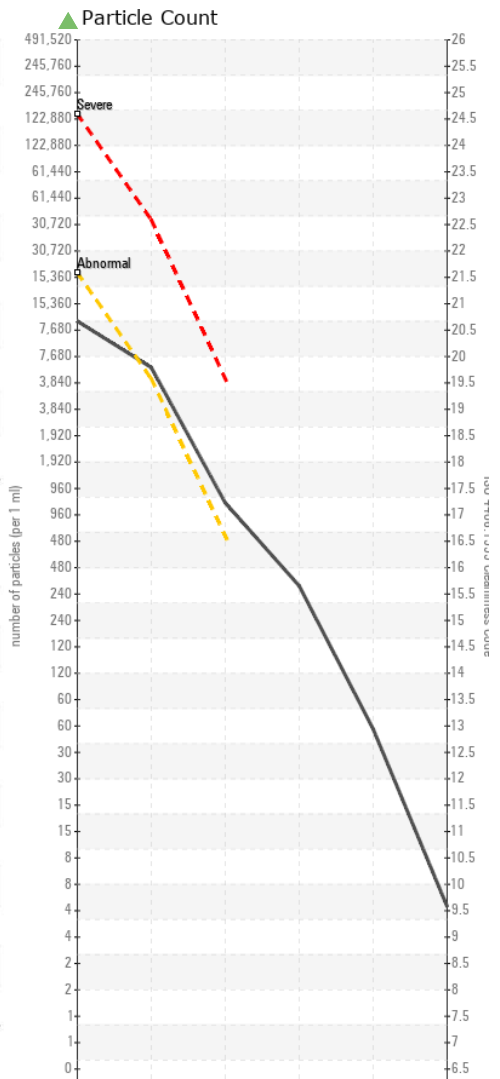
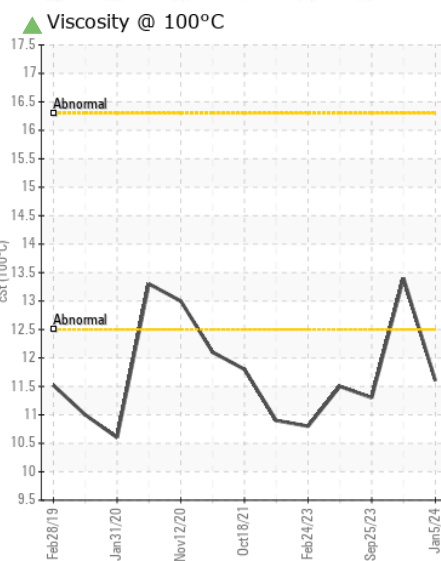
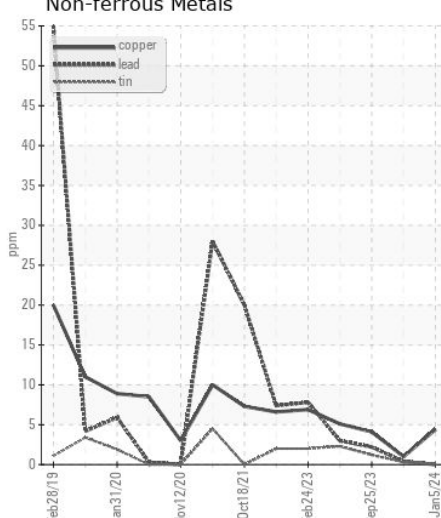
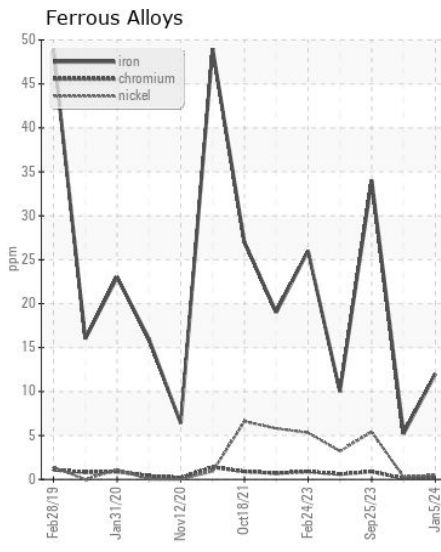
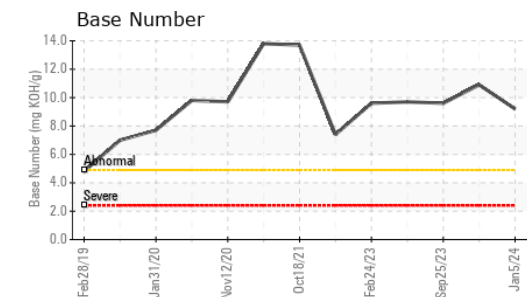
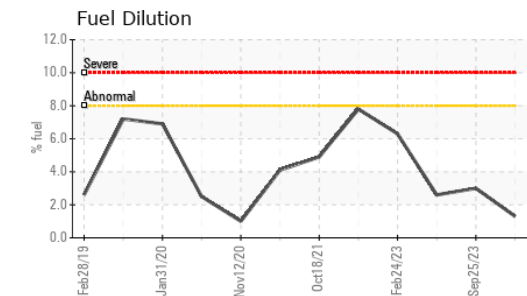
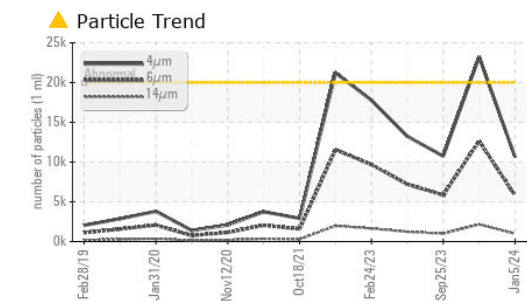
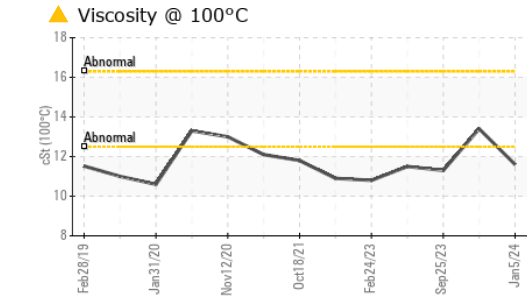
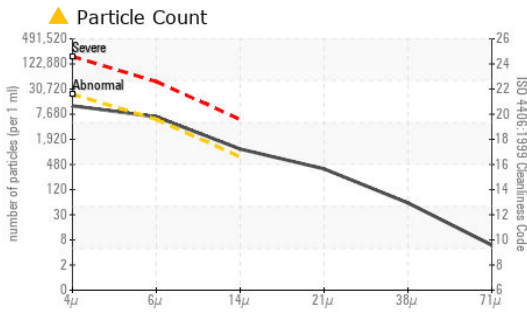
Sodium and/or potassium levels are high. There is a moderate amount of particulates present in the oil. Fuel content negligible. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>22	7	6	12
Potassium	ppm	ASTM D5185m	>20	▲ 13	2	▲ 26
Fuel	%	ASTM D3524	>8.0	1.3	<1.0	▲ 3.0
Water		WC Method	>0.21	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.7	5.1	8.9
Sulfation	Abs/1mm	*ASTM D7415	>30	21.2	21.4	20.6
Particles >4µm		ASTM D7647	>20000	10622	▲ 23237	10744
Particles >6µm		ASTM D7647	>5000	▲ 5787	▲ 12658	▲ 5853
Particles >14µm		ASTM D7647	>640	▲ 985	▲ 2154	▲ 996
Particles >21µm		ASTM D7647	>160	▲ 332	▲ 726	▲ 336
Particles >38µm		ASTM D7647	>40	▲ 51	▲ 112	▲ 52
Particles >71µm		ASTM D7647	>10	5	▲ 11	5
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 21/20/17	▲ 22/21/18	▲ 21/20/17
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	>0.21	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	▲ 111	41	▲ 384
Boron	ppm	ASTM D5185m		19	65	13
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		51	42	69
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		515	511	588
Calcium	ppm	ASTM D5185m		1643	1628	1820
Phosphorus	ppm	ASTM D5185m		791	731	914
Zinc	ppm	ASTM D5185m		923	897	1088
Sulfur	ppm	ASTM D5185m		2691	2522	3247
Oxidation	Abs/1mm	*ASTM D7414	>25	19.6	19.1	18.8
Base Number (BN)	mg KOH/g	ASTM D2896		9.2	10.9	9.6
Visc @ 100°C	cSt	ASTM D445		▲ 11.6	13.4	▲ 11.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0885977 **Received** : 09 Jan 2024
Lab Number : 06055818 **Diagnosed** : 12 Jan 2024
Unique Number : 10821767 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, 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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