



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
Mobile Fleet
 Machine Id
6416 6416
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (10 GAL)

RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0939348	WC0918642	WC0861729
Sample Date		Client Info		08 May 2024	18 Mar 2024	21 Nov 2023
Machine Age	hrs	Client Info		17526	17209	16889
Oil Age	hrs	Client Info		317	320	301
Filter Age	hrs	Client Info		317	320	301
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Not Changed	Changed	Not Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>65	8	4	5
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>3	<1	<1	0
Titanium	ppm	ASTM D5185m	>5	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>35	3	7	4
Lead	ppm	ASTM D5185m	>10	<1	<1	<1
Copper	ppm	ASTM D5185m	>180	1	8	<1
Tin	ppm	ASTM D5185m	>8	<1	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

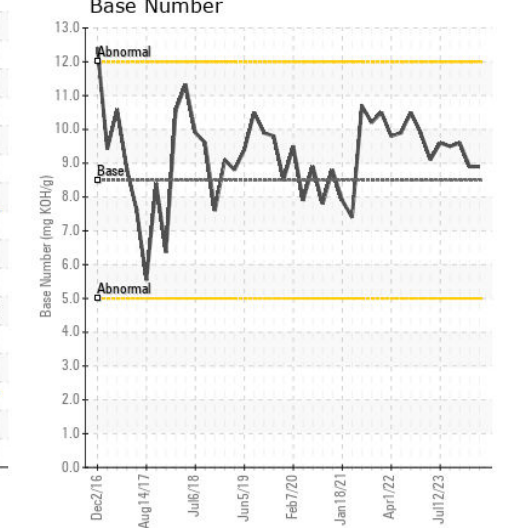
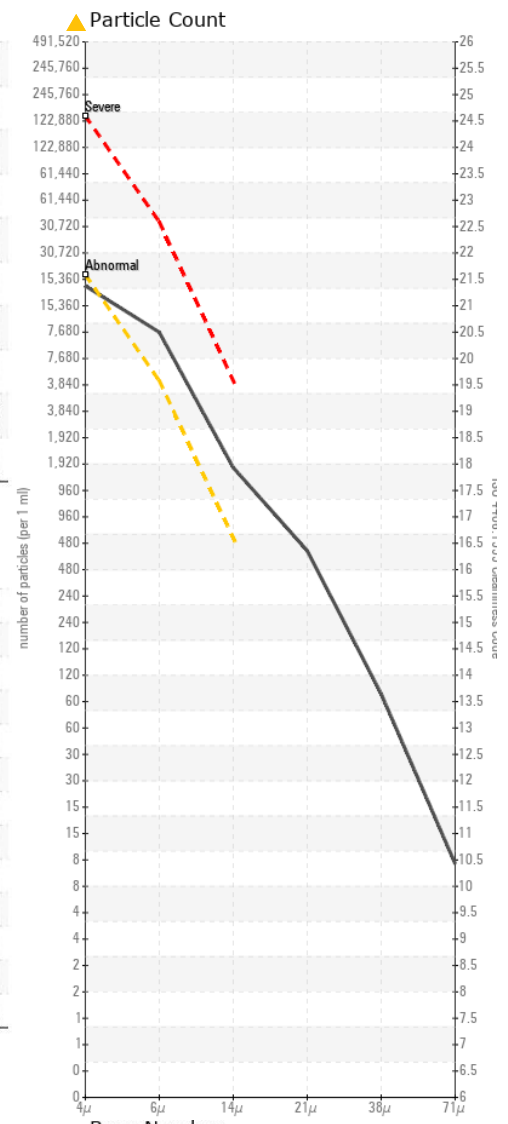
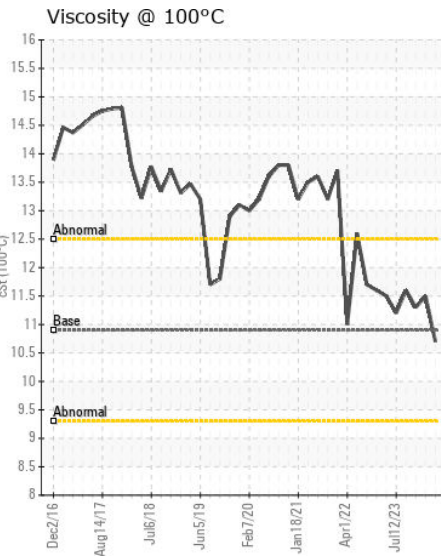
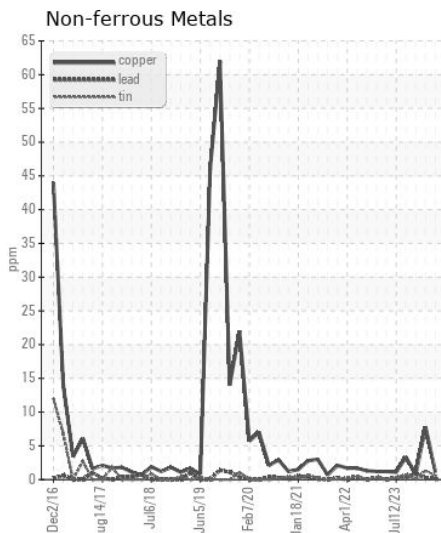
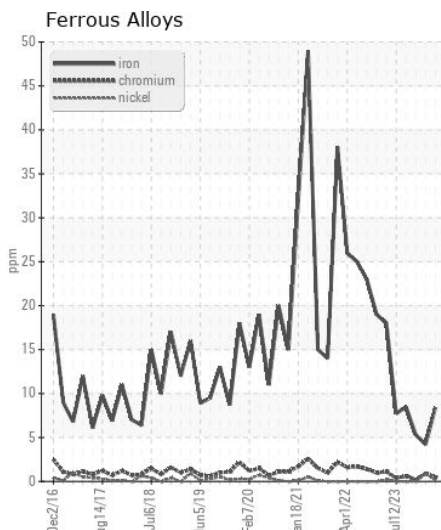
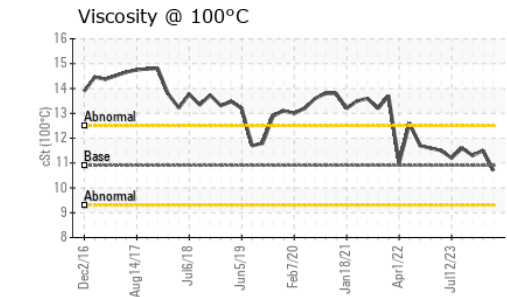
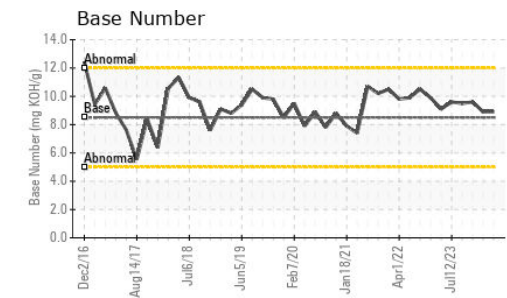
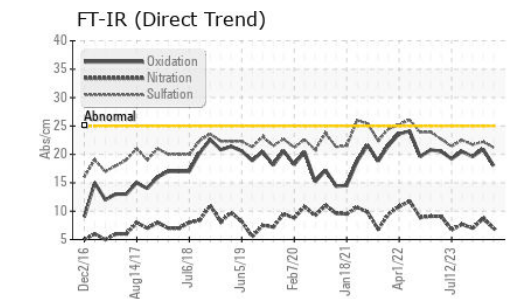
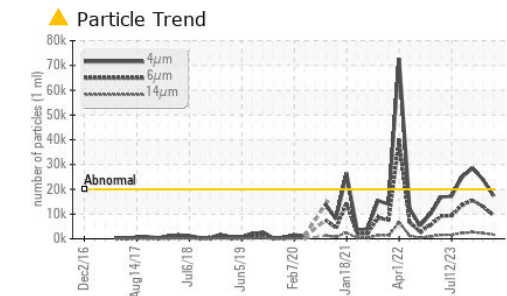
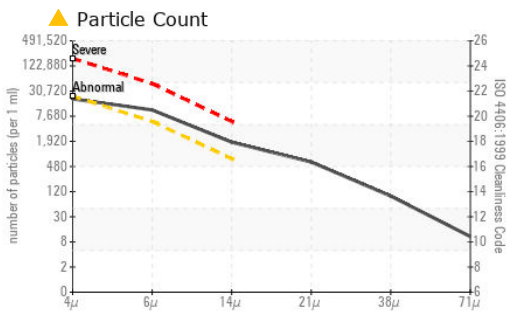
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>15	7	5	10
Potassium	ppm	ASTM D5185m	>20	3	5	<1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.0	8.7	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	22.2	21.7
Particles >4µm		ASTM D7647	>20000	17304	▲ 23855	▲ 28535
Particles >6µm		ASTM D7647	>5000	● 9426	▲ 12995	▲ 15545
Particles >14µm		ASTM D7647	>640	▲ 1604	▲ 2212	▲ 2646
Particles >21µm		ASTM D7647	>160	▲ 540	▲ 745	▲ 891
Particles >38µm		ASTM D7647	>40	▲ 83	▲ 115	▲ 138
Particles >71µm		ASTM D7647	>10	9	▲ 12	▲ 14
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 21/20/18	▲ 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		<1	10	3
Boron	ppm	ASTM D5185m	250	45	39	42
Barium	ppm	ASTM D5185m	10	2	0	0
Molybdenum	ppm	ASTM D5185m	100	45	39	46
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	535	440	495
Calcium	ppm	ASTM D5185m	3000	1502	1375	1661
Phosphorus	ppm	ASTM D5185m	1150	873	587	699
Zinc	ppm	ASTM D5185m	1350	984	822	906
Sulfur	ppm	ASTM D5185m	4250	3404	2155	2307
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	20.9	19.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.9	8.9	9.6
Visc @ 100°C	cSt	ASTM D445	10.9	10.7	11.5	11.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0939348 **Received** : 10 May 2024
Lab Number : 06176634 **Tested** : 15 May 2024
Unique Number : 11022687 **Diagnosed** : 15 May 2024 - Sean Felton
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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