



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
Mobile Fleet
 Machine Id
1525 1525
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (8 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		WC0919032	WC0861614	WC0808386
Sample Date		Client Info		09 Apr 2024	12 Dec 2023	26 Jun 2023
Machine Age	hrs	Client Info		19477	18995	18384
Oil Age	hrs	Client Info		482	625	424
Filter Age	hrs	Client Info		482	625	424
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	>90	36	34	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	24	14	<1
Copper	ppm	ASTM D5185m	>330	4	3	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

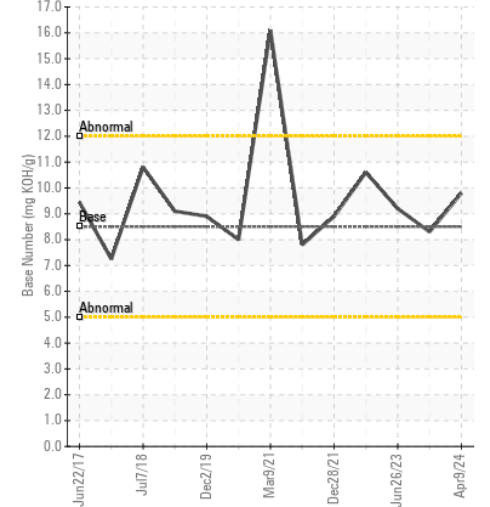
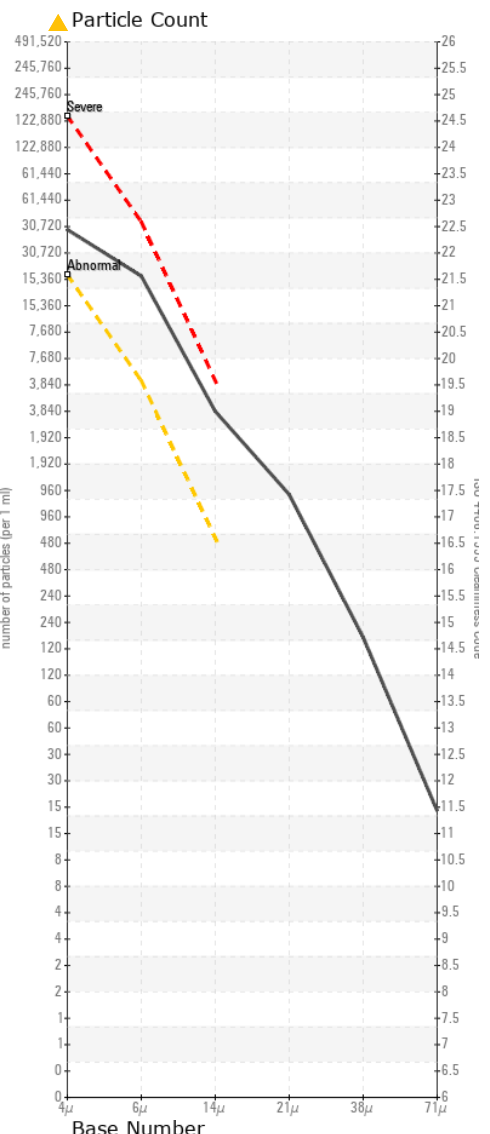
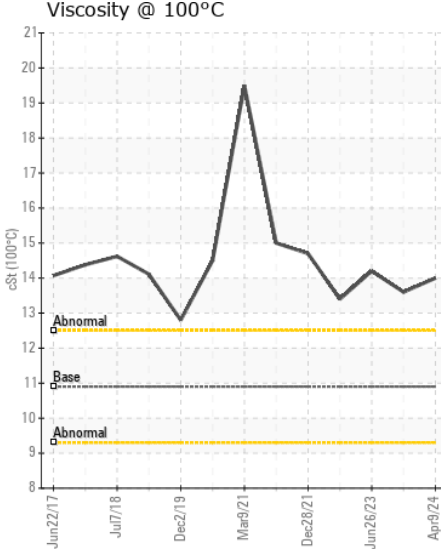
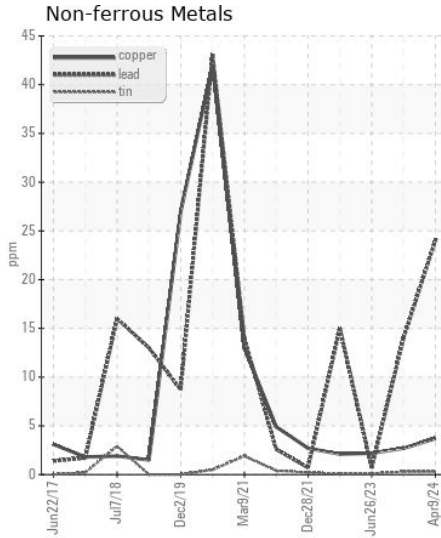
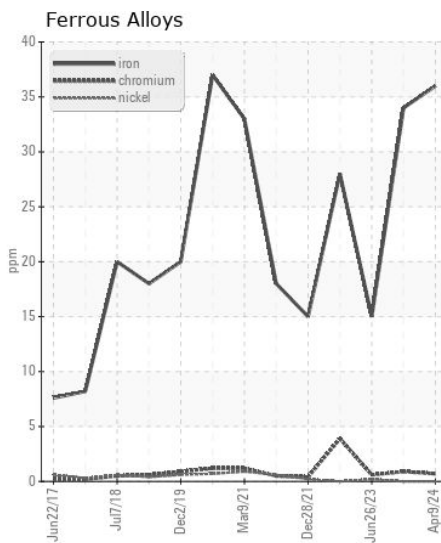
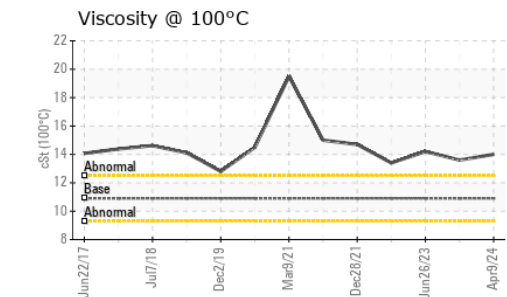
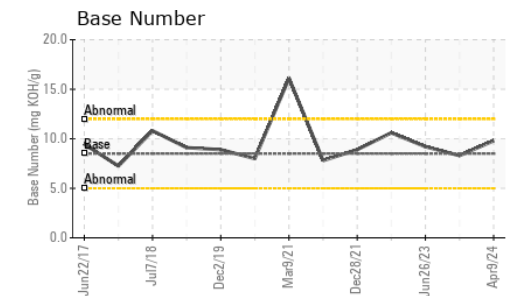
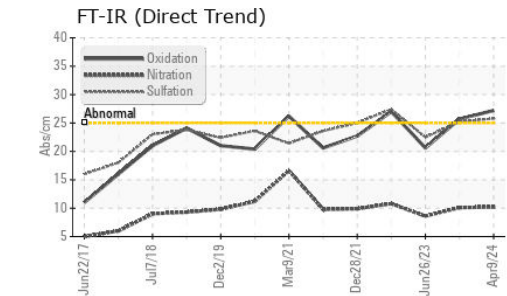
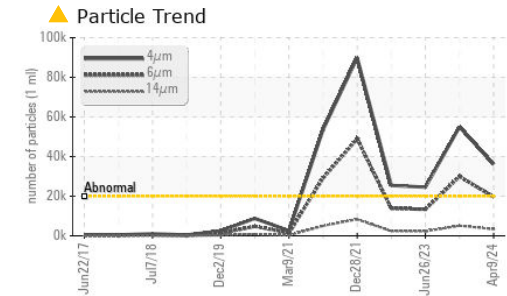
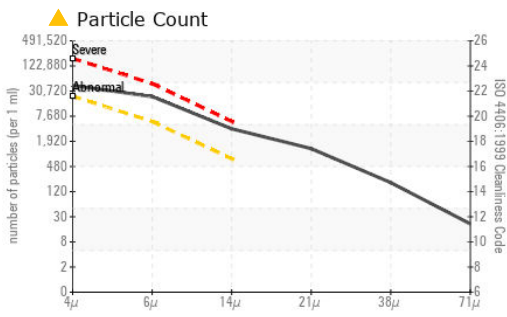
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	8
Potassium	ppm	ASTM D5185m	>20	<1	<1	<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	>6	0.3	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.2	10.1	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.8	25.2	22.5
Particles >4µm		ASTM D7647	>20000	▲ 36112	▲ 54964	▲ 24542
Particles >6µm		ASTM D7647	>5000	▲ 19672	▲ 29942	▲ 13369
Particles >14µm		ASTM D7647	>640	▲ 3348	▲ 5096	▲ 2275
Particles >21µm		ASTM D7647	>160	▲ 1128	▲ 1716	▲ 766
Particles >38µm		ASTM D7647	>40	▲ 174	▲ 265	▲ 118
Particles >71µm		ASTM D7647	>10	▲ 18	▲ 27	▲ 12
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 22/21/19	▲ 23/22/20	▲ 22/21/18
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		2	1	4
Boron	ppm	ASTM D5185m	250	71	56	58
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	57	51	56
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	681	570	598
Calcium	ppm	ASTM D5185m	3000	2158	1707	1691
Phosphorus	ppm	ASTM D5185m	1150	966	749	1057
Zinc	ppm	ASTM D5185m	1350	1181	1005	1306
Sulfur	ppm	ASTM D5185m	4250	3342	2348	3726
Oxidation	Abs/.1mm	*ASTM D7414	>25	27.2	25.7	20.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.8	8.3	9.2
Visc @ 100°C	cSt	ASTM D445	10.9	14.0	13.6	14.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0919032 **Received** : 11 Apr 2024
Lab Number : 06146509 **Tested** : 15 Apr 2024
Unique Number : 10976587 **Diagnosed** : 15 Apr 2024 - Sean Felton
Test Package : CONST (Additional Tests: PrtCount, TBN)

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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)