CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
Mobile Fleet
Machine Id
890 890
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL 10W40 (9 GAL)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

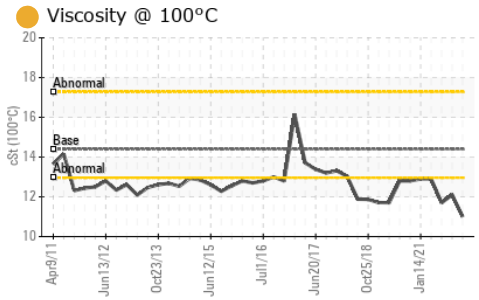
CONTAMINATION

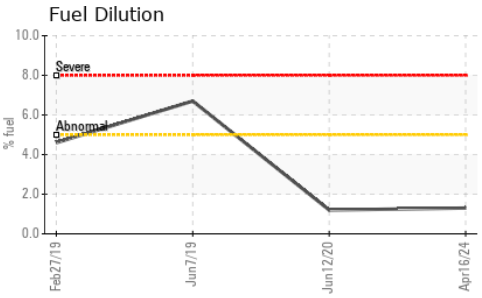
Fuel content negligible. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

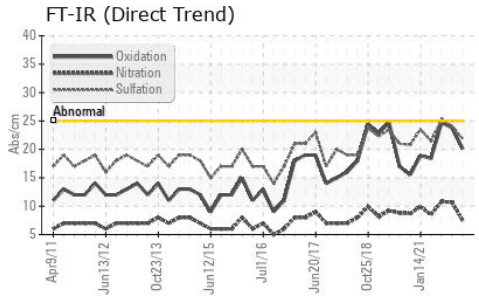
FLUID CONDITION

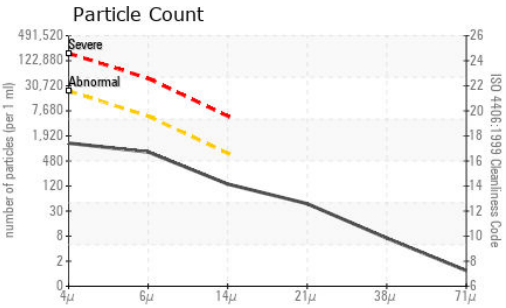
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

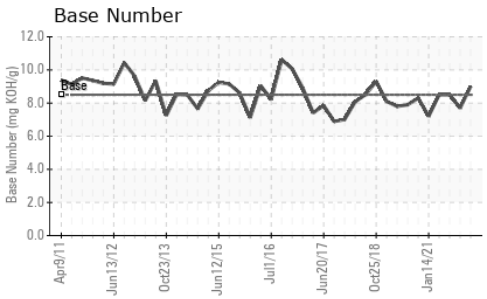
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0919142	WC0834887	WC0688185
Sample Date		Client Info		16 Apr 2024	26 Jul 2023	11 Apr 2022
Machine Age	hrs	Client Info		1338	32971	32374
Oil Age	hrs	Client Info		306	597	244
Filter Age	hrs	Client Info		306	597	244
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ATTENTION	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	45	▲ 114	62
Chromium	ppm	ASTM D5185m	>4	1	3	3
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	>9	2	4	3
Lead	ppm	ASTM D5185m	>20	2	12	11
Copper	ppm	ASTM D5185m	>260	3	14	11
Tin	ppm	ASTM D5185m	>4	2	2	3
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	8	8	7
Potassium	ppm	ASTM D5185m	>20	0	1	<1
Fuel	%	ASTM D3524	>5	1.3	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	7.5	10.7	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	24.1	25.2
Particles >4µm		ASTM D7647	>20000	1127	● 31336	16877
Particles >6µm		ASTM D7647	>5000	692	▲ 17071	▲ 9194
Particles >14µm		ASTM D7647	>640	118	▲ 2905	▲ 1565
Particles >21µm		ASTM D7647	>160	40	▲ 979	▲ 527
Particles >38µm		ASTM D7647	>40	6	▲ 151	▲ 81
Particles >71µm		ASTM D7647	>10	1	● 15	8
Oil Cleanliness		ISO 4406 (c)	>21/19/16	17/17/14	▲ 22/21/19	▲ 21/20/18
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
Sodium	ppm	ASTM D5185m		4	7	7
Boron	ppm	ASTM D5185m	250	41	39	39
Barium	ppm	ASTM D5185m	10	0	1	0
Molybdenum	ppm	ASTM D5185m	100	45	46	41
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	450	518	623	607
Calcium	ppm	ASTM D5185m	3000	1745	1919	1614
Phosphorus	ppm	ASTM D5185m	1150	782	842	843
Zinc	ppm	ASTM D5185m	1350	877	1070	1011
Sulfur	ppm	ASTM D5185m	4250	2954	3240	2738
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	23.8	24.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.0	7.7	8.5
Visc @ 100°C	cSt	ASTM D445	14.4	● 11.0	12.1	11.7

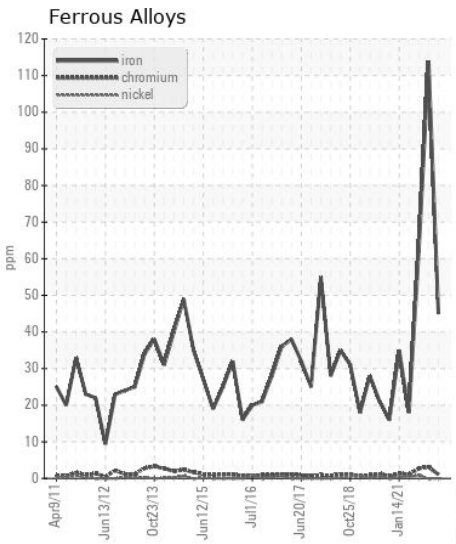


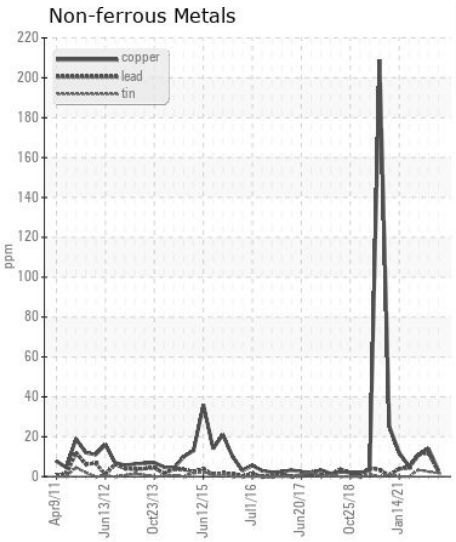


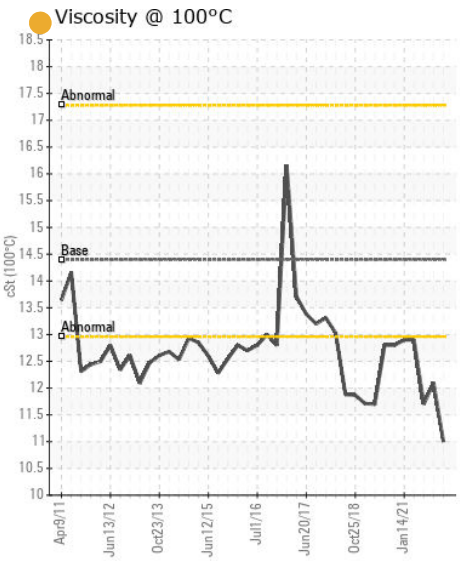


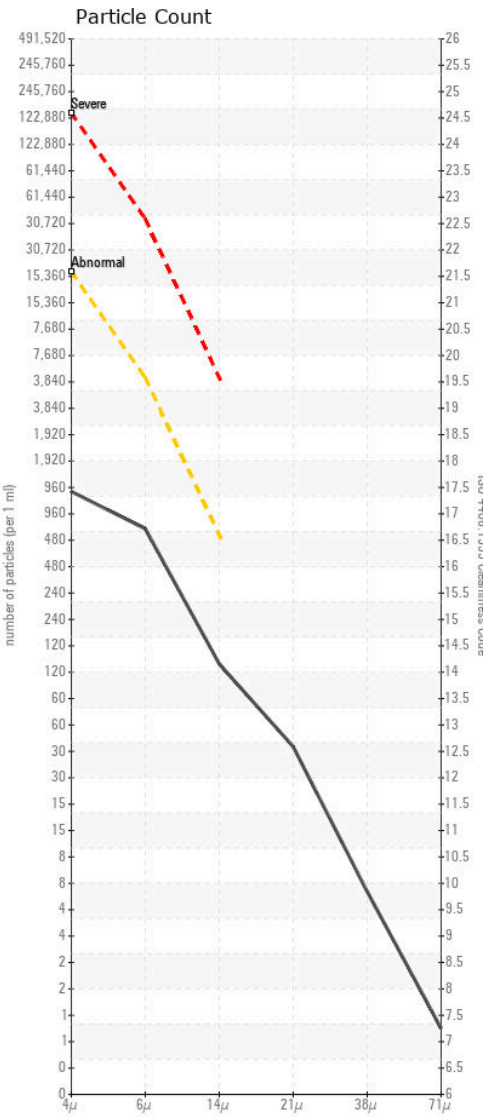


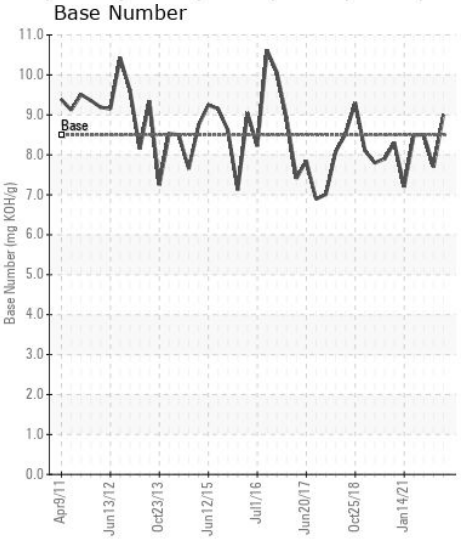












Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0919142 **Received** : 19 Apr 2024
Lab Number : 06154183 **Tested** : 23 Apr 2024
Unique Number : 10989606 **Diagnosed** : 23 Apr 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, PrtCount, TBN)

Certificate L2367

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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)