CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
Mobile Fleet
Machine Id
542 542
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (8 GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Cylinder, crank, or cam shaft wear is indicated.

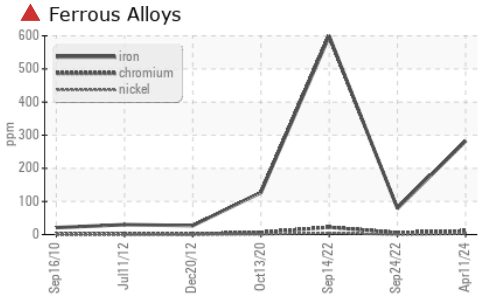
CONTAMINATION

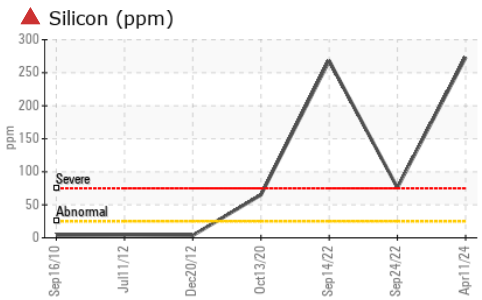
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Light fuel dilution occurring. The amount and size of particulates present in the system are acceptable.

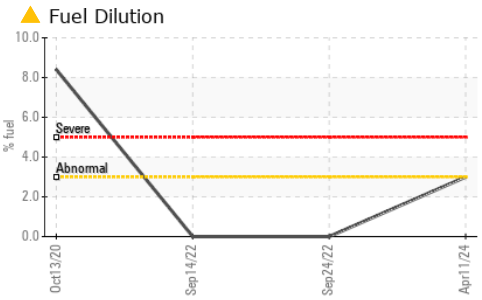
FLUID CONDITION

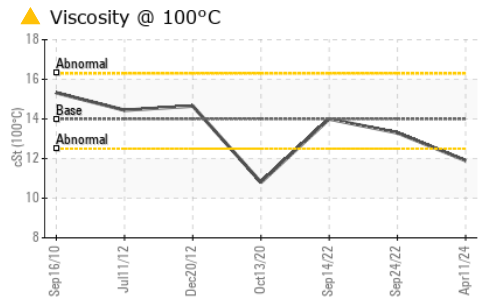
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

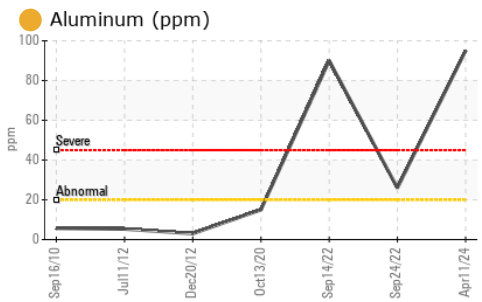
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0919122	WCMCF58998	WC0740845
Sample Date		Client Info		11 Apr 2024	24 Sep 2022	14 Sep 2022
Machine Age	hrs	Client Info		29017	29017	29407
Oil Age	hrs	Client Info		343	0	440
Filter Age	hrs	Client Info		343	0	440
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>120	▲ 282	79	▲ 599
Chromium	ppm	ASTM D5185m	>20	11	6	▲ 22
Nickel	ppm	ASTM D5185m	>5	2	0	4
Titanium	ppm	ASTM D5185m	>2	9	2	7
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	● 95	● 26	● 90
Lead	ppm	ASTM D5185m	>40	4	19	▲ 74
Copper	ppm	ASTM D5185m	>330	7	44	203
Tin	ppm	ASTM D5185m	>15	<1	2	6
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	▲ 273	▲ 76	▲ 268
Potassium	ppm	ASTM D5185m	>20	51	26	▲ 204
Fuel	%	ASTM D3524	>3.0	▲ 3.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.0	0.0	▲ 0.10
Soot %	%	*ASTM D7844	>4	0.1	0.2	1.1
Nitration	Abs/cm	*ASTM D7624	>20	7.1	8.1	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	25.8	30.2
Particles >4µm		ASTM D7647	>20000	6525	▲ 65856	▲ 35590
Particles >6µm		ASTM D7647	>5000	3554	▲ 35876	▲ 19388
Particles >14µm		ASTM D7647	>640	605	▲ 6106	▲ 3300
Particles >21µm		ASTM D7647	>160	204	▲ 2057	▲ 1111
Particles >38µm		ASTM D7647	>40	31	▲ 318	▲ 172
Particles >71µm		ASTM D7647	>10	3	▲ 32	▲ 18
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/19/16	▲ 23/22/20	▲ 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
Sodium	ppm	ASTM D5185m		19	77	▲ 635
Boron	ppm	ASTM D5185m	0	65	46	27
Barium	ppm	ASTM D5185m	0	<1	0	2
Molybdenum	ppm	ASTM D5185m	0	49	54	95
Manganese	ppm	ASTM D5185m		5	1	6
Magnesium	ppm	ASTM D5185m	0	536	567	746
Calcium	ppm	ASTM D5185m		1701	1810	1942
Phosphorus	ppm	ASTM D5185m		800	835	1030
Zinc	ppm	ASTM D5185m		890	997	1206
Sulfur	ppm	ASTM D5185m		2600	3104	2906
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	23.5	25.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	10.0	11.3	12.6
Visc @ 100°C	cSt	ASTM D445	14	▲ 11.9	13.3	14.0

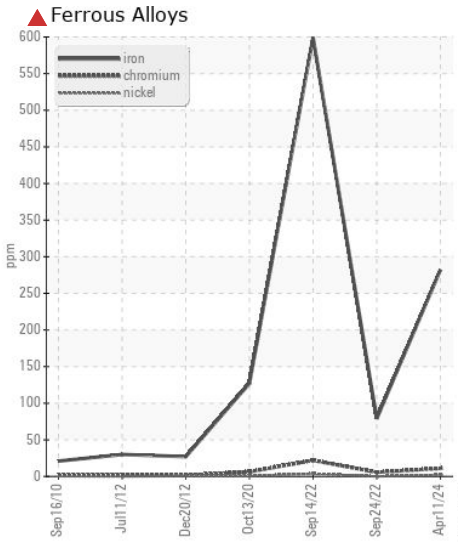


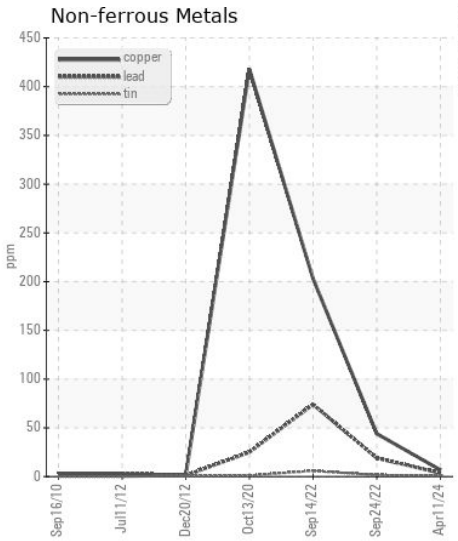


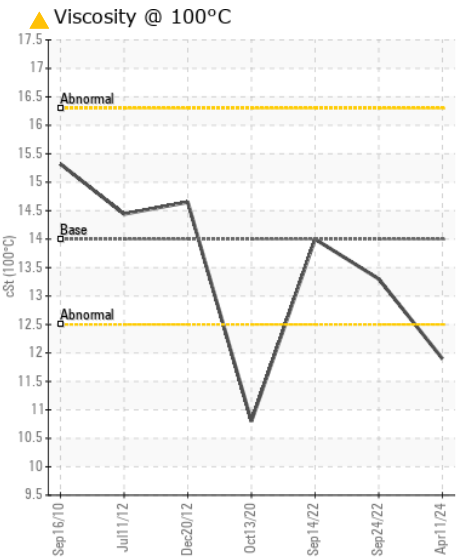


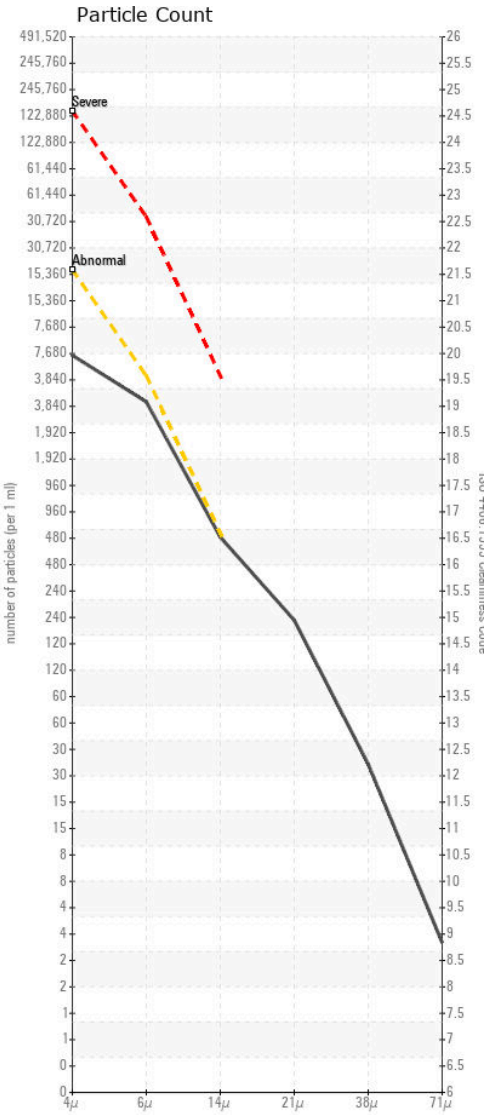


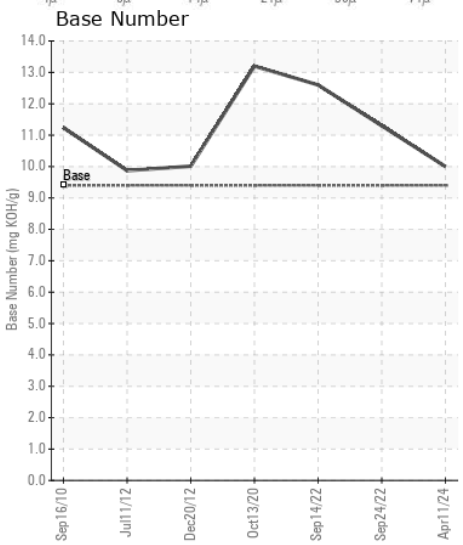












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0919122
Lab Number : 06148537
Unique Number : 10978615
Test Package : CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, PrtCount, TBN)

Received : 15 Apr 2024
Tested : 19 Apr 2024
Diagnosed : 19 Apr 2024 - Jonathan Hester

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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