CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
Mobile Fleet
Machine Id
5504 5504
Component
Diesel Engine
Fluid
MOBIL 15W40 (5 GAL)

RECOMMENDATION

We advise that you check the fuel injection system. 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

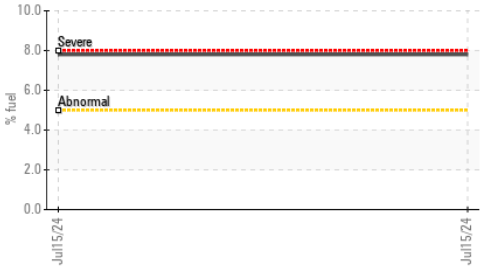
There is a high amount of particulates present in the oil. There is a moderate amount of fuel present in the oil.

FLUID CONDITION

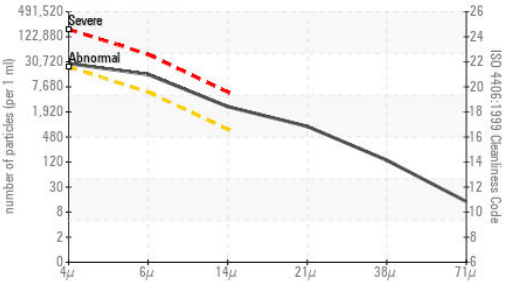
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0947896	WC0716681	WC0613167
Sample Date		Client Info		15 Jul 2024	18 Jul 2022	27 Aug 2021
Machine Age	hrs	Client Info		10988	9148	8136
Oil Age	hrs	Client Info		498	705	662
Filter Age	hrs	Client Info		498	705	662
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	32	37	45
Chromium	ppm	ASTM D5185m	>20	2	2	3
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	3	0
Aluminum	ppm	ASTM D5185m	>20	8	11	13
Lead	ppm	ASTM D5185m	>40	3	5	11
Copper	ppm	ASTM D5185m	>330	2	16	108
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
Silicon	ppm	ASTM D5185m	>25	9	26	17
Potassium	ppm	ASTM D5185m	>20	2	0	9
Fuel	%	ASTM D3524	>5	▲ 7.8	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.8	3	2.1
Nitration	Abs/cm	*ASTM D7624	>20	12.5	14.5	13.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.1	31.2	27.3
Particles >4µm		ASTM D7647	>20000	▲ 24255	● 21325	▲ 26680
Particles >6µm		ASTM D7647	>5000	▲ 13213	▲ 11617	▲ 14534
Particles >14µm		ASTM D7647	>640	▲ 2249	▲ 1977	▲ 2473
Particles >21µm		ASTM D7647	>160	▲ 757	▲ 666	▲ 833
Particles >38µm		ASTM D7647	>40	▲ 117	▲ 103	▲ 129
Particles >71µm		ASTM D7647	>10	▲ 12	10	▲ 13
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 22/21/18	▲ 22/21/18	▲ 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
Sodium	ppm	ASTM D5185m	>118	4	8	12
Boron	ppm	ASTM D5185m		24	22	17
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		48	47	45
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		476	628	616
Calcium	ppm	ASTM D5185m		1618	1719	1883
Phosphorus	ppm	ASTM D5185m		747	790	755
Zinc	ppm	ASTM D5185m		901	1060	958
Sulfur	ppm	ASTM D5185m		2392	2979	2023
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.1	26.5	24
Base Number (BN)	mg KOH/g	ASTM D2896		7.4	9.4	7.4
Visc @ 100°C	cSt	ASTM D445		▲ 12.0	15.2	14.4

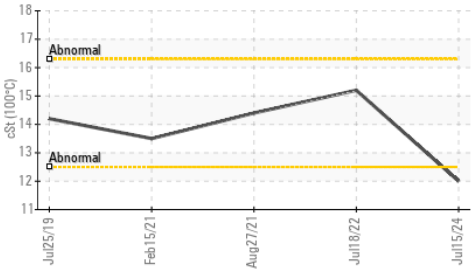
Fuel Dilution



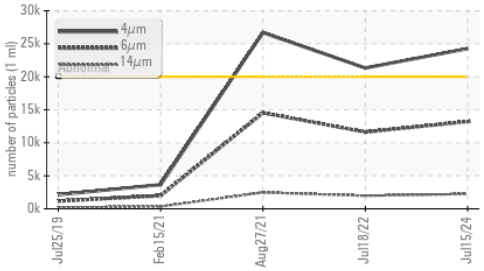
Particle Count



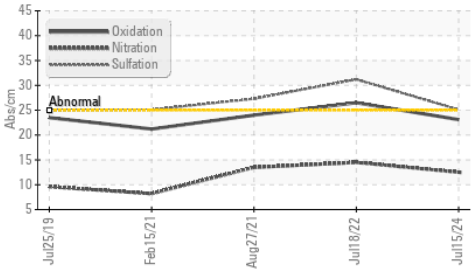
Viscosity @ 100°C



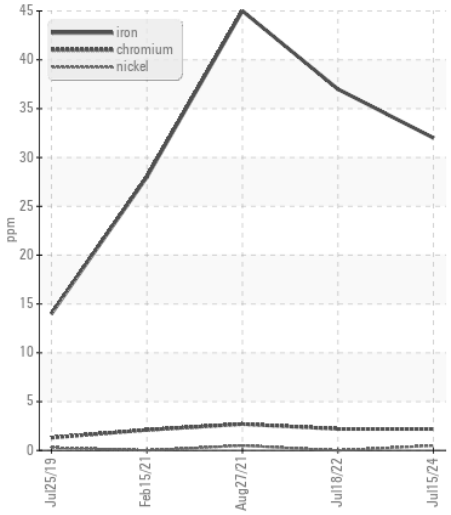
Particle Trend



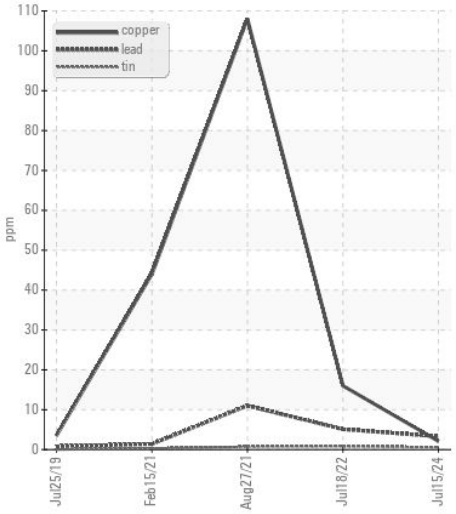
FT-IR (Direct Trend)



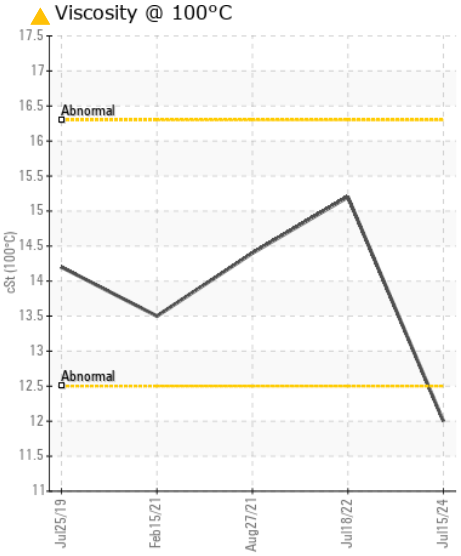
Ferrous Alloys



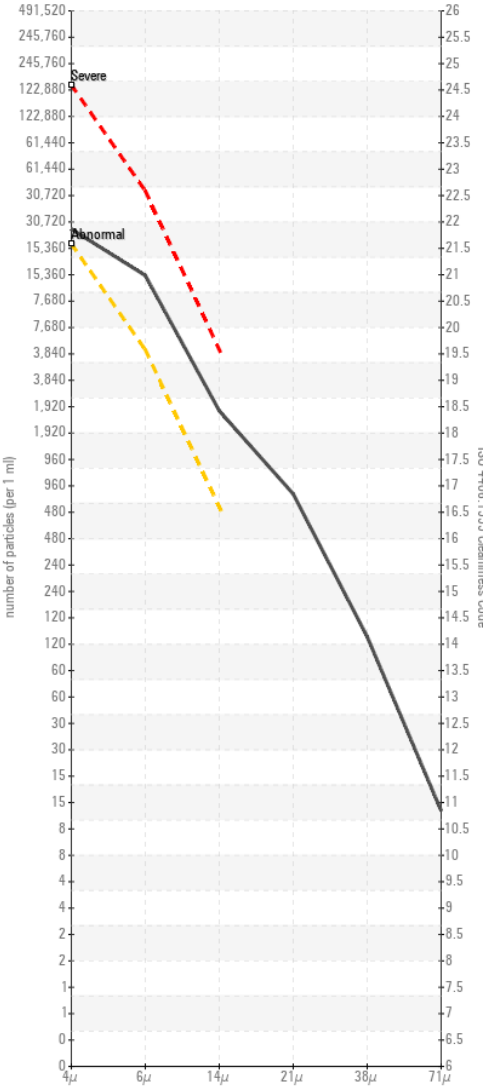
Non-ferrous Metals



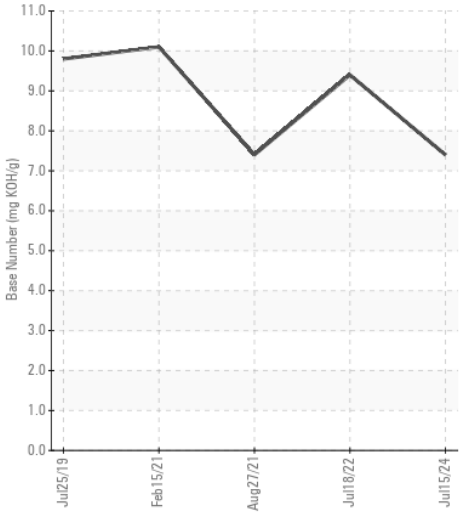
Viscosity @ 100°C



Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0947896
Lab Number : 06239020
Unique Number : 11127854
Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, PrtCount, TBN)

Received : 17 Jul 2024
Tested : 19 Jul 2024
Diagnosed : 19 Jul 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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