CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
Mobile Fleet
Machine Id
5213 5213
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (4 GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

The aluminum level is abnormal. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

CONTAMINATION

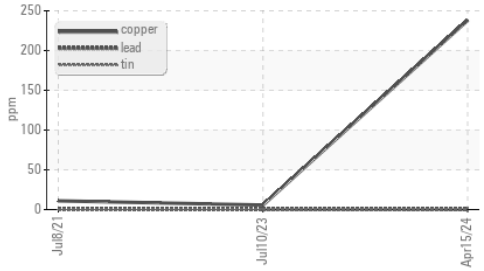
Sodium and/or potassium levels are high.

FLUID CONDITION

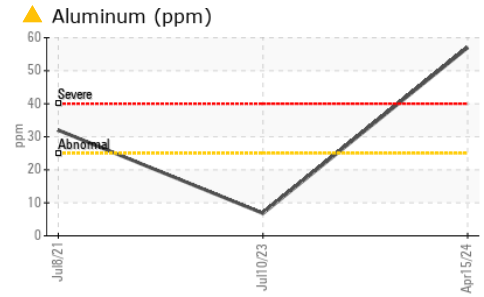
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0919067	WC0771067	WC0596453
Sample Date		Client Info		15 Apr 2024	10 Jul 2023	08 Jul 2021
Machine Age	hrs	Client Info		6538	5534	3480
Oil Age	hrs	Client Info		504	5534	537
Filter Age	hrs	Client Info		504	5534	537
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	51	20	15
Chromium	ppm	ASTM D5185m	>20	2	<1	3
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	▲ 57	7	▲ 32
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	▲ 238	6	11
Tin	ppm	ASTM D5185m	>15	0	<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	8	7	5
Potassium	ppm	ASTM D5185m	>20	▲ 102	2	5
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.1	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.2	5.8	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	20.9	23.8
Particles >4µm		ASTM D7647	>20000	9439	▲ 154559	8104
Particles >6µm		ASTM D7647	>5000	● 5142	▲ 8422	4415
Particles >14µm		ASTM D7647	>640	● 875	▲ 1433	● 751
Particles >21µm		ASTM D7647	>160	● 295	▲ 483	● 253
Particles >38µm		ASTM D7647	>40	● 46	▲ 75	39
Particles >71µm		ASTM D7647	>10	5	8	4
Oil Cleanliness		ISO 4406 (c)	>21/19/16	● 20/20/17	▲ 24/20/18	● 20/19/17
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		▲ 66	7	3
Boron	ppm	ASTM D5185m	0	32	57	34
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	51	51	43
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	0	494	554	530
Calcium	ppm	ASTM D5185m		1725	1738	1605
Phosphorus	ppm	ASTM D5185m		841	804	748
Zinc	ppm	ASTM D5185m		972	995	888
Sulfur	ppm	ASTM D5185m		2533	3328	2183
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.3	18.9	21.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	8.1	9.9	9.4
Visc @ 100°C	cSt	ASTM D445	14	12.3	12.5	13.0

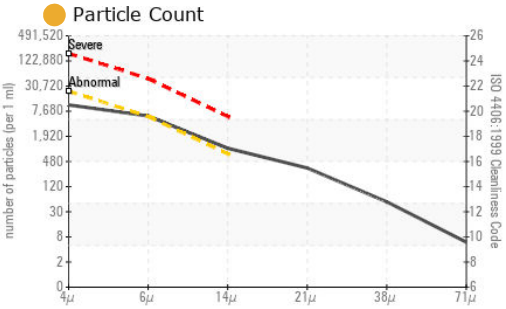
Non-ferrous Metals



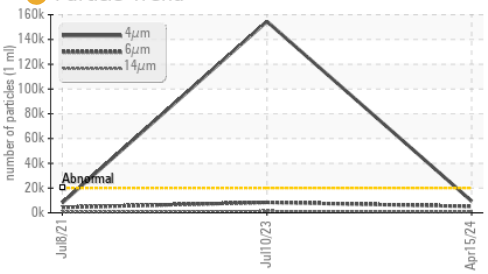
Aluminum (ppm)



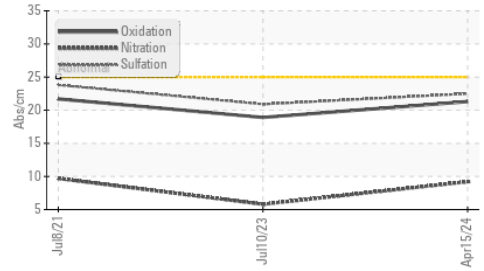
Particle Count



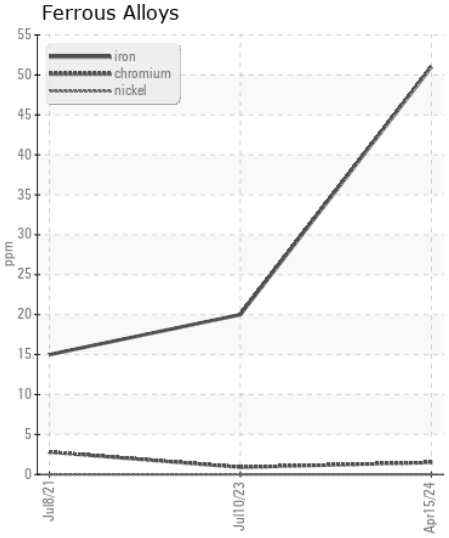
Particle Trend



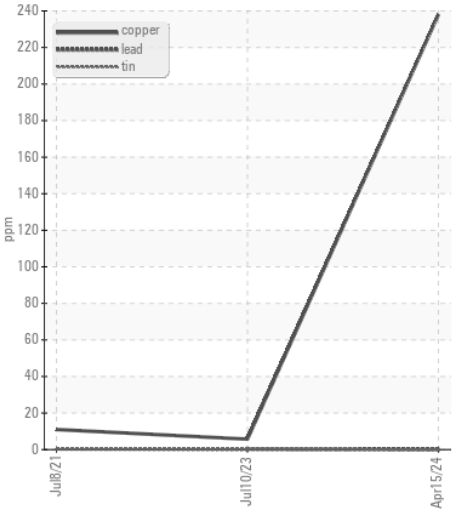
FT-IR (Direct Trend)



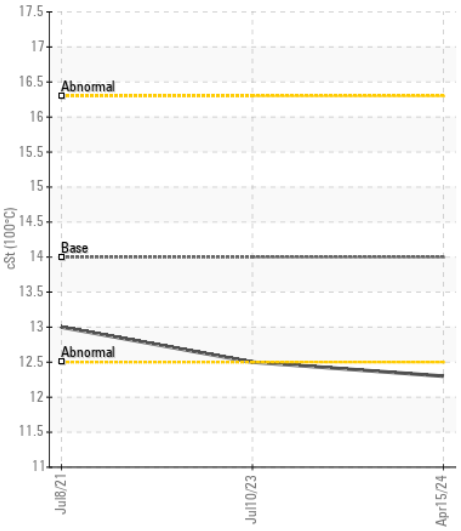
Ferrous Alloys



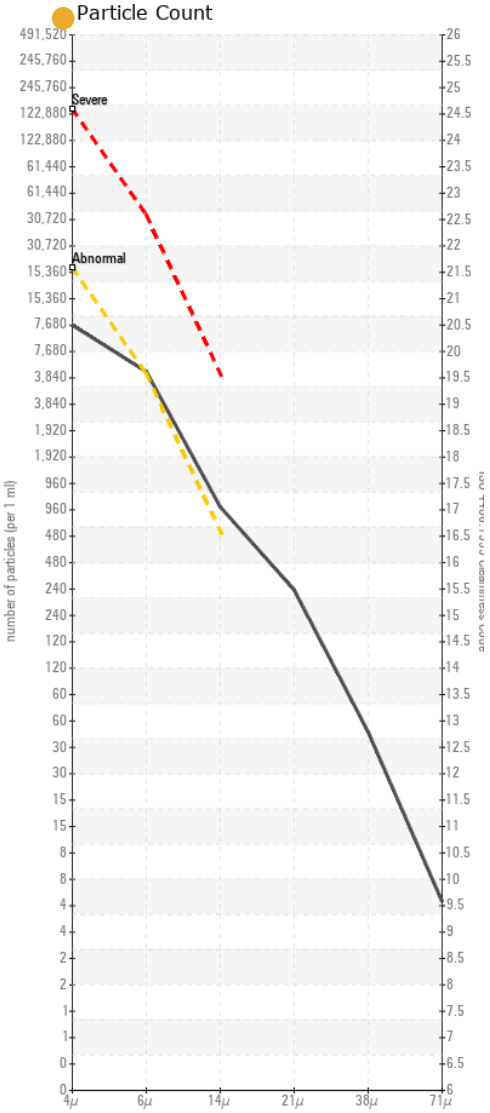
Non-ferrous Metals



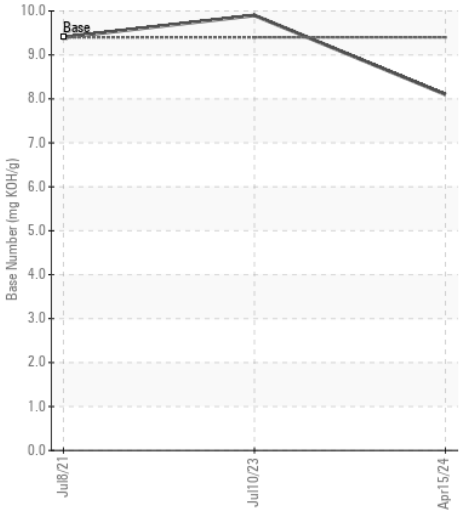
Viscosity @ 100°C



Particle Count



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0919067 **Received** : 17 Apr 2024
Lab Number : 06151846 **Tested** : 22 Apr 2024
Unique Number : 10981924 **Diagnosed** : 22 Apr 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: Glycol, 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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