



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Area  
**Mobile Fleet**  
Machine Id  
**5206 5206**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0947890</b>	WC0861818	WC0834904
Sample Date		Client Info		<b>27 Jun 2024</b>	19 Jan 2024	14 Jul 2023
Machine Age	hrs	Client Info		<b>11528</b>	11110	10599
Oil Age	hrs	Client Info		<b>437</b>	511	627
Filter Age	hrs	Client Info		<b>437</b>	511	627
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>40</b>	71	18
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>13</b>	14	▲ 29
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>6</b>	2	4
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

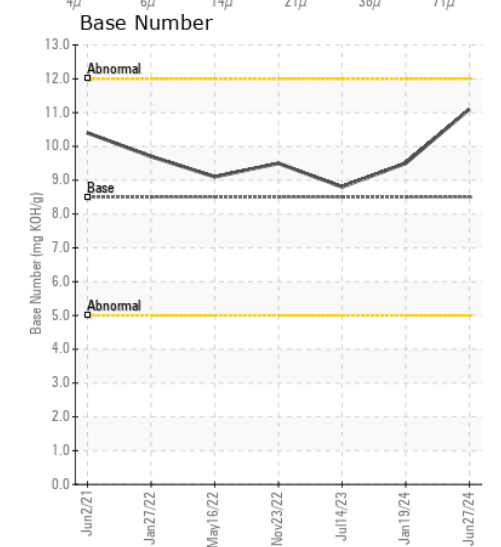
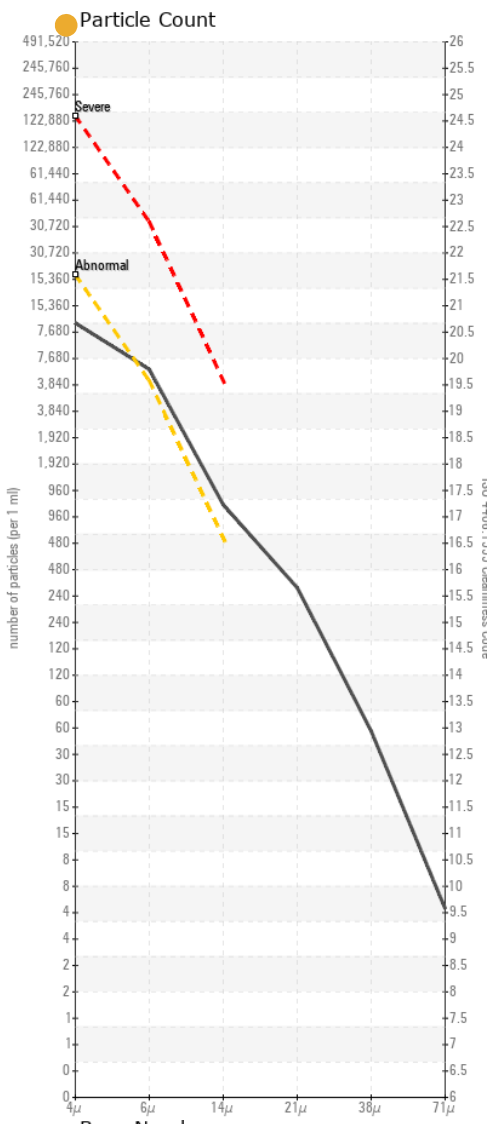
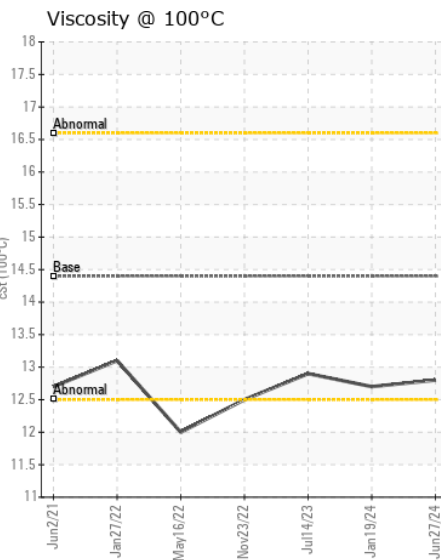
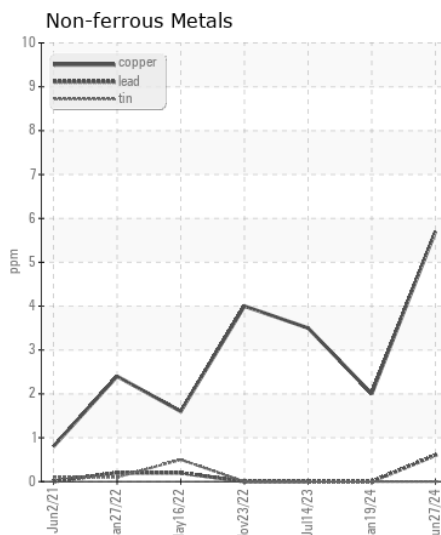
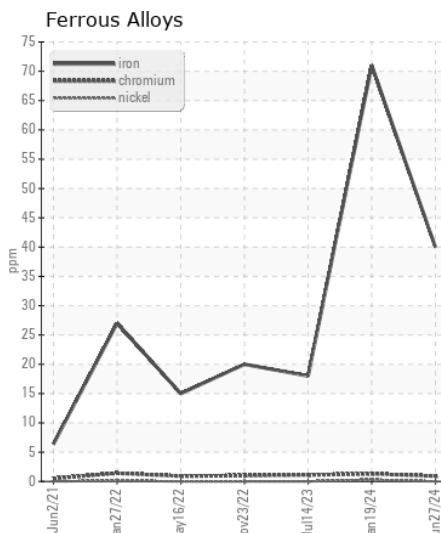
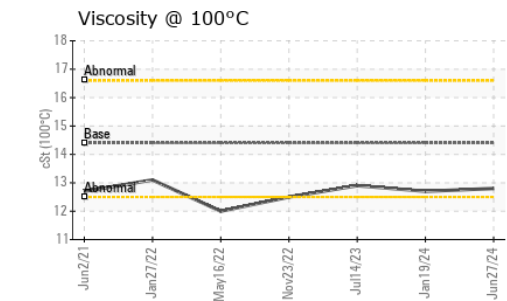
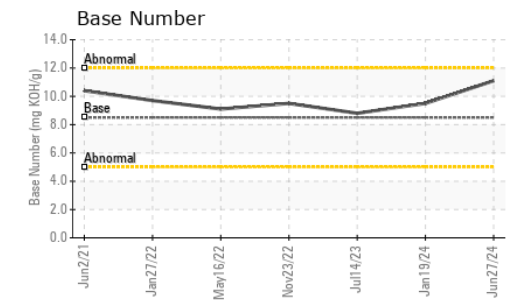
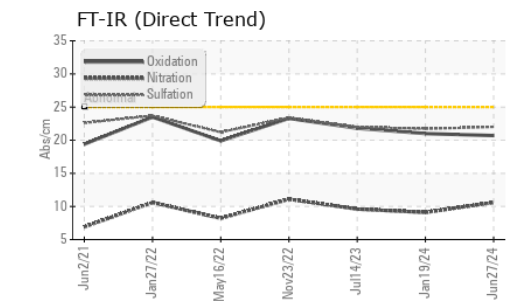
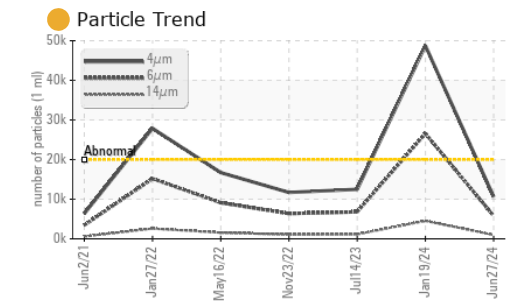
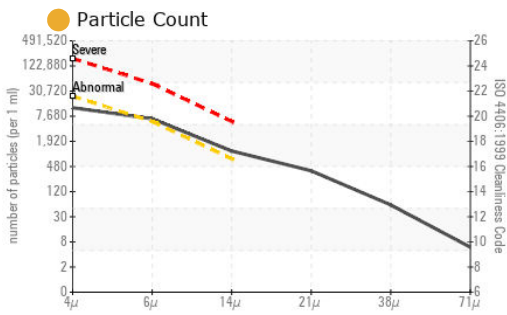
Sodium and/or potassium levels are high. There is a moderate amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	10	8
Potassium	ppm	ASTM D5185m	>20	▲ <b>17</b>	4	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.6</b>	9.1	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.0</b>	21.7	22.0
Particles >4µm		ASTM D7647	>20000	<b>10648</b>	▲ 48753	12493
Particles >6µm		ASTM D7647	>5000	● <b>5801</b>	▲ 26558	● 6805
Particles >14µm		ASTM D7647	>640	● <b>987</b>	▲ 4520	● 1158
Particles >21µm		ASTM D7647	>160	● <b>333</b>	▲ 1523	● 390
Particles >38µm		ASTM D7647	>40	● <b>51</b>	▲ 235	● 60
Particles >71µm		ASTM D7647	>10	● <b>5</b>	▲ 24	● 6
Oil Cleanliness		ISO 4406 (c)	>21/19/16	● <b>21/20/17</b>	▲ 23/22/19	● 21/20/17
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>158	▲ <b>821</b>	▲ 117	2
Boron	ppm	ASTM D5185m	250	<b>6</b>	24	6
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>216</b>	61	48
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	1
Magnesium	ppm	ASTM D5185m	450	<b>593</b>	503	546
Calcium	ppm	ASTM D5185m	3000	<b>1962</b>	1613	1802
Phosphorus	ppm	ASTM D5185m	1150	<b>905</b>	764	796
Zinc	ppm	ASTM D5185m	1350	<b>1097</b>	924	985
Sulfur	ppm	ASTM D5185m	4250	<b>3471</b>	2642	3161
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.7</b>	21.0	21.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>11.1</b>	9.5	8.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.8</b>	12.7	12.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0947890 **Received** : 01 Jul 2024  
**Lab Number** : 06225691 **Tested** : 10 Jul 2024  
**Unique Number** : 11103888 **Diagnosed** : 10 Jul 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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