



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area  
**Mobile Fleet**

Machine Id  
**8027 8027**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 10W30 (10 GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0955982</b>	WC0939324	WC0918657
Sample Date		Client Info		<b>03 Jul 2024</b>	09 May 2024	25 Mar 2024
Machine Age	hrs	Client Info		<b>23995</b>	23731	23455
Oil Age	hrs	Client Info		<b>542</b>	278	347
Filter Age	hrs	Client Info		<b>542</b>	278	347
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>35</b>	26	22
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	1	2
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>30	<b>12</b>	9	12
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>150	<b>2</b>	1	4
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

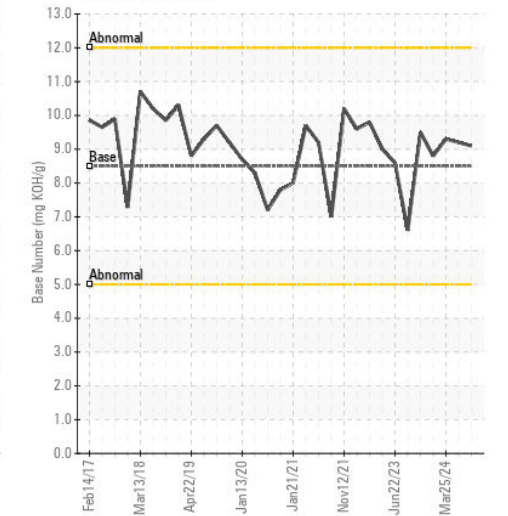
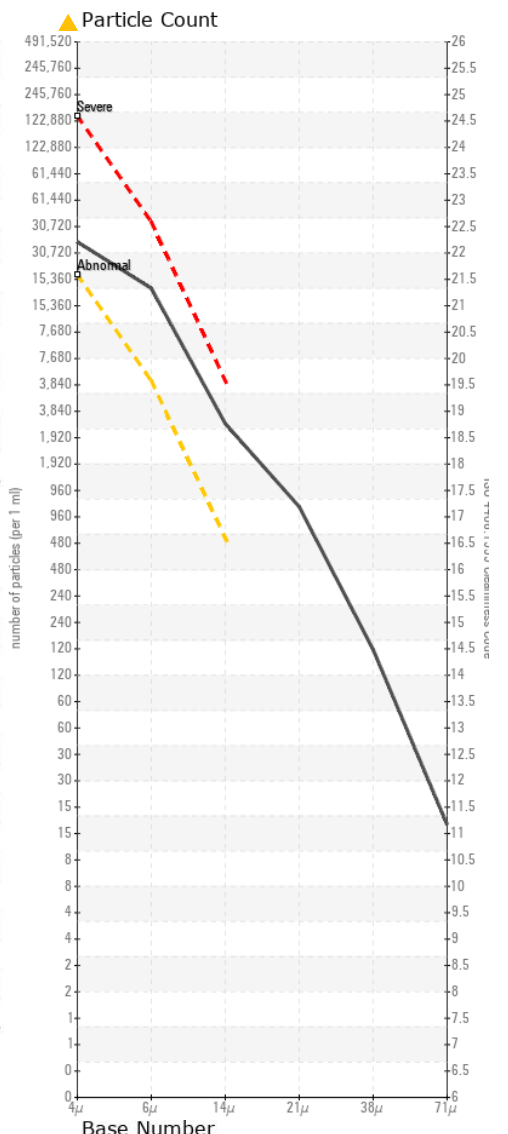
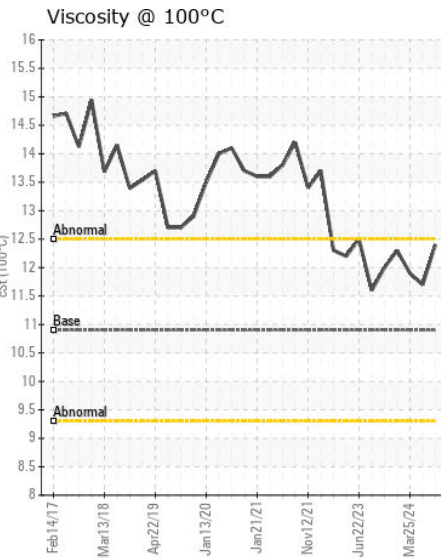
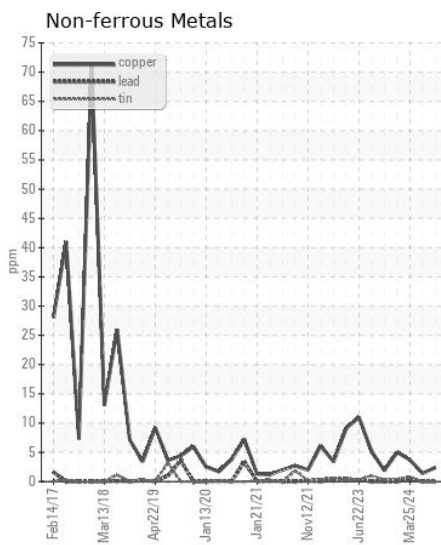
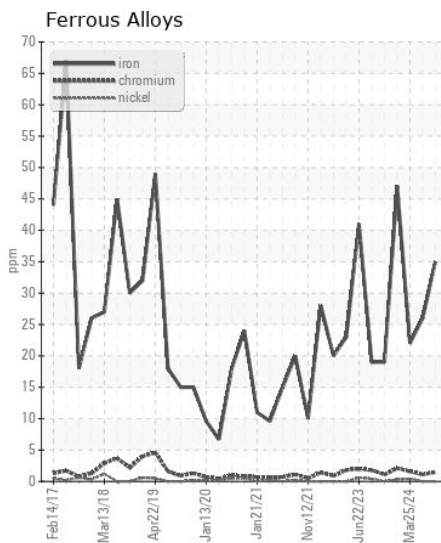
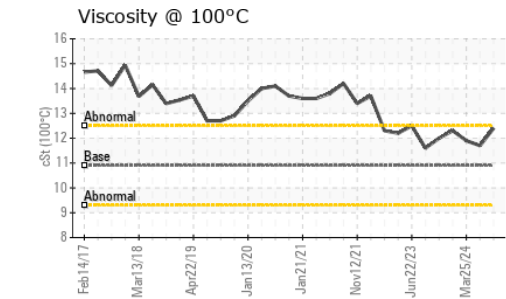
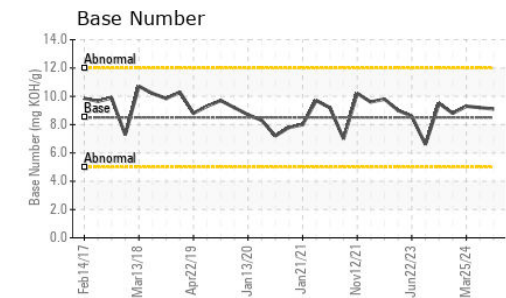
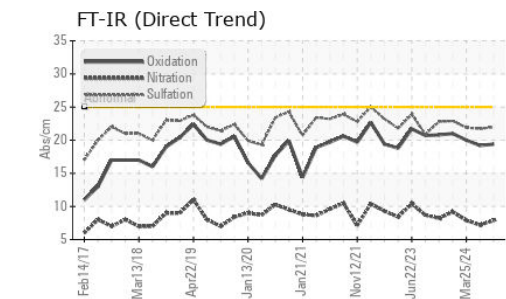
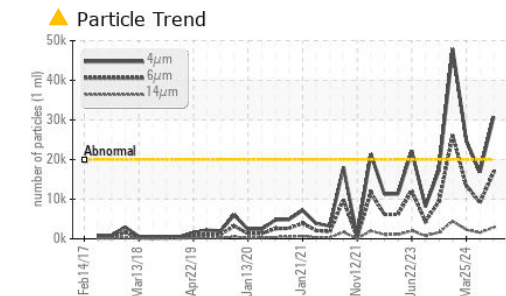
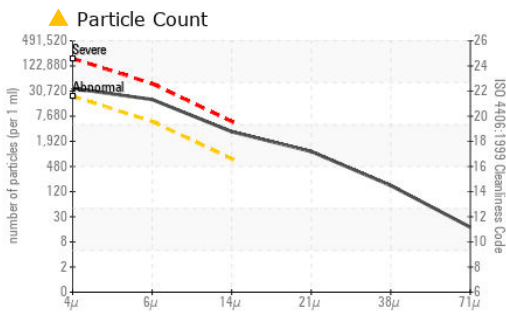
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>14</b>	12	12
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	3	11
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	7.2	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.0</b>	21.7	21.9
Particles >4µm		ASTM D7647	>20000	<b>▲ 30771</b>	16834	▲ 24663
Particles >6µm		ASTM D7647	>5000	<b>▲ 16763</b>	● 9170	▲ 13436
Particles >14µm		ASTM D7647	>640	<b>▲ 2853</b>	▲ 1561	▲ 2287
Particles >21µm		ASTM D7647	>160	<b>▲ 961</b>	▲ 526	▲ 770
Particles >38µm		ASTM D7647	>40	<b>▲ 148</b>	▲ 81	▲ 119
Particles >71µm		ASTM D7647	>10	<b>▲ 15</b>	8	▲ 12
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>▲ 22/21/19</b>	▲ 21/20/18	▲ 22/21/18
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>5</b>	4	13
Boron	ppm	ASTM D5185m	250	<b>31</b>	38	33
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>47</b>	48	51
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>519</b>	554	503
Calcium	ppm	ASTM D5185m	3000	<b>1782</b>	1797	1677
Phosphorus	ppm	ASTM D5185m	1150	<b>811</b>	810	794
Zinc	ppm	ASTM D5185m	1350	<b>968</b>	1001	936
Sulfur	ppm	ASTM D5185m	4250	<b>3010</b>	3165	2705
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.4</b>	19.2	20.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>9.1</b>	9.2	9.3
Visc @ 100°C	cSt	ASTM D445	10.9	<b>12.4</b>	11.7	11.9



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0955982 **Received** : 09 Jul 2024  
**Lab Number** : 06231372 **Tested** : 10 Jul 2024  
**Unique Number** : 11114865 **Diagnosed** : 10 Jul 2024 - Don Baldridge  
**Test Package** : CONST ( Additional Tests: PrtCount, TBN )

**CAROLINA SUNROCK**  
 PO BOX 25  
 BUTNER, NC  
 US 27509  
 Contact: Leigh Dennis  
 rdennis@thesunrockgroup.com  
 T: (919)575-4505  
 F: (919)575-0162

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)