



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**Mobile Fleet**  
Machine Id  
**339 339**  
Component  
**Hydraulic System**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (28 GAL)**

## RECOMMENDATION

We advise that you check for the source of water entry. We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0939230</b>	WC0794126	WC0637556
Sample Date		Client Info		<b>24 May 2024</b>	10 May 2023	10 Nov 2021
Machine Age	hrs	Client Info		<b>10366</b>	9990	9451
Oil Age	hrs	Client Info		<b>928</b>	552	2286
Filter Age	hrs	Client Info		<b>928</b>	552	2286
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	ATTENTION

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>23	<b>11</b>	7	11
Chromium	ppm	ASTM D5185m	>9	<b>2</b>	1	3
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>4</b>	1	3
Lead	ppm	ASTM D5185m	>28	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>51	<b>3</b>	2	3
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

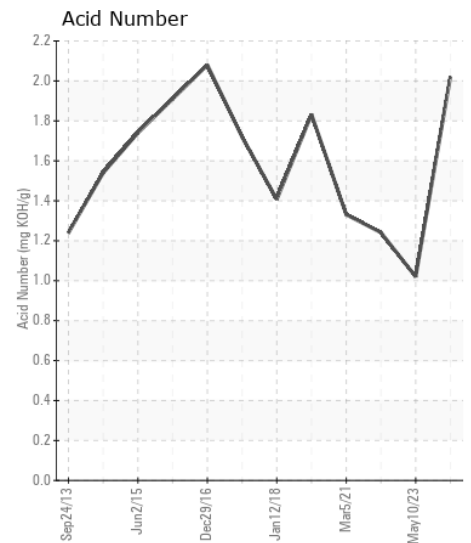
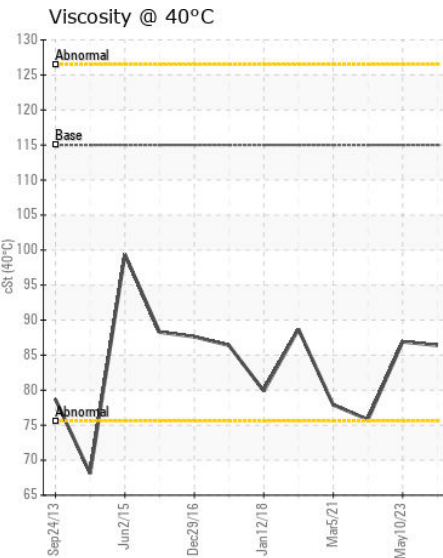
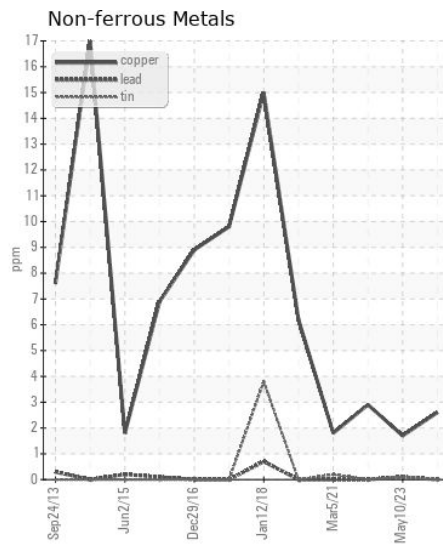
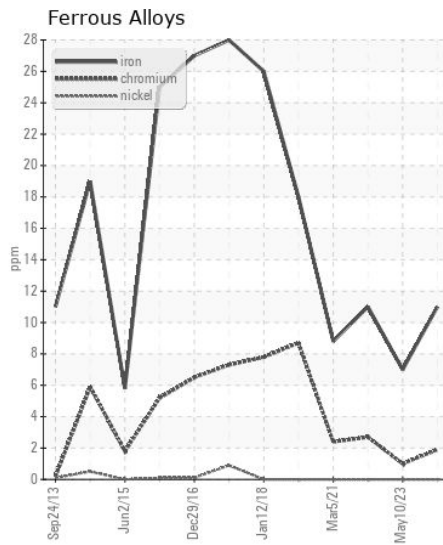
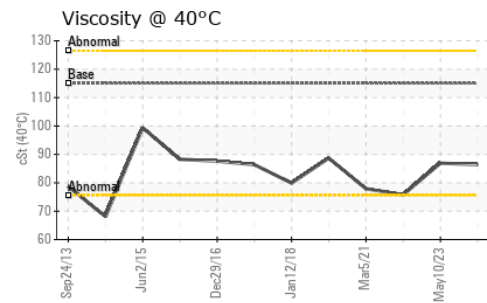
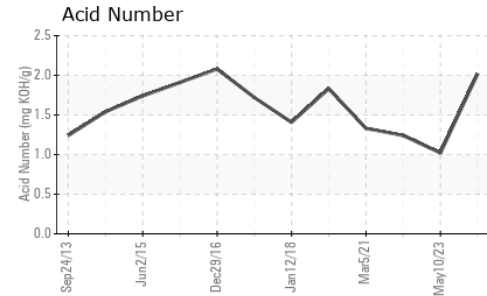
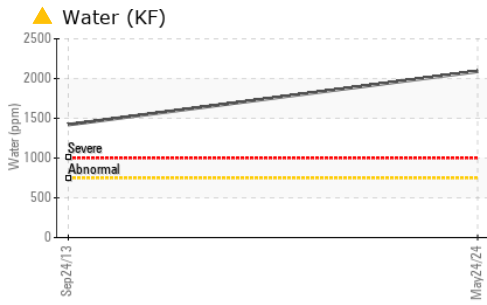
There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>31	<b>17</b>	13	10
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	1	0
Water	%	ASTM D6304	>0.075	<b>▲ 0.209</b>	---	---
ppm Water	ppm	ASTM D6304	>750	<b>▲ 2090</b>	---	---
Particles >4µm		ASTM D7647	>80000	---	65714	● 80773
Particles >6µm		ASTM D7647	>20000	---	7189	4946
Particles >14µm		ASTM D7647	>640	---	42	58
Particles >21µm		ASTM D7647	>160	---	5	14
Particles >38µm		ASTM D7647	>40	---	0	0
Particles >71µm		ASTM D7647	>10	---	0	0
Oil Cleanliness		ISO 4406 (c)	>23/21/16	---	23/20/13	● 24/19/13
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>▲ MODER</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	>0.075	<b>▲ 0.2%</b>	NEG	NEG

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>6</b>	<1	2
Boron	ppm	ASTM D5185m	250	<b>94</b>	81	100
Barium	ppm	ASTM D5185m	10	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	100	<b>45</b>	43	28
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	450	<b>580</b>	507	624
Calcium	ppm	ASTM D5185m	3000	<b>1886</b>	1592	1193
Phosphorus	ppm	ASTM D5185m	1150	<b>891</b>	766	734
Zinc	ppm	ASTM D5185m	1350	<b>1006</b>	936	867
Sulfur	ppm	ASTM D5185m	4250	<b>3851</b>	3024	2807
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>2.02</b>	1.02	1.241
Visc @ 40°C	cSt	ASTM D445	115	<b>86.4</b>	86.9	75.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0939230 **Received** : 29 May 2024  
**Lab Number** : 06193853 **Tested** : 31 May 2024  
**Unique Number** : 11055976 **Diagnosed** : 31 May 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: KF )

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)

**CAROLINA SUNROCK**  
 PO BOX 25  
 BUTNER, NC  
 US 27509

Contact: Leigh Dennis  
rdennis@thesunrockgroup.com

T: (919)575-4505

F: (919)575-0162