



# OIL ANALYSIS REPORT

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>ATTENTION</b>
FLUID CONDITION	<b>NORMAL</b>

Area

**Mobile Fleet**

Machine Id

**8109 8109**

Component

**Front Differential**

Fluid

**MOBIL DELVAC 1 SYNTHETIC GEAR SAE 75W90 (5 GAL)**

## RECOMMENDATION

The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0861832</b>	WC0740699	WC0579819
Sample Date		Client Info		<b>15 Jan 2024</b>	15 Sep 2022	12 May 2021
Machine Age	hrs	Client Info		<b>12255</b>	9473	6165
Oil Age	hrs	Client Info		<b>6090</b>	3308	2940
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Sample Status				<b>SEVERE</b>	ABNORMAL	ABNORMAL

## WEAR

The copper level is severe. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>500	<b>363</b>	309	325
Chromium	ppm	ASTM D5185m	>10	<b>2</b>	2	2
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	2	1
Lead	ppm	ASTM D5185m	>25	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>100	<b>713</b>	365	270
Tin	ppm	ASTM D5185m	>10	<b>9</b>	5	4
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

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

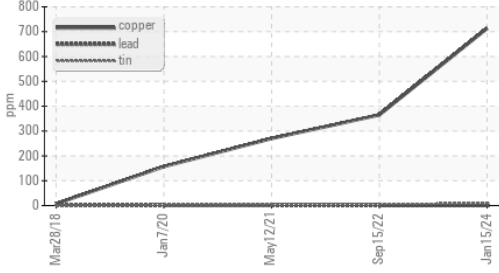
Silicon	ppm	ASTM D5185m	>75	<b>66</b>	36	72
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	4
Water		WC Method	>.2	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>12232</b>	7925	14280
Particles >6µm		ASTM D7647	>5000	<b>6663</b>	4317	7779
Particles >14µm		ASTM D7647	>640	<b>1134</b>	735	1324
Particles >21µm		ASTM D7647	>160	<b>382</b>	248	446
Particles >38µm		ASTM D7647	>40	<b>59</b>	38	69
Particles >71µm		ASTM D7647	>10	<b>6</b>	4	7
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>21/20/17</b>	20/19/17	21/20/18
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	>.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

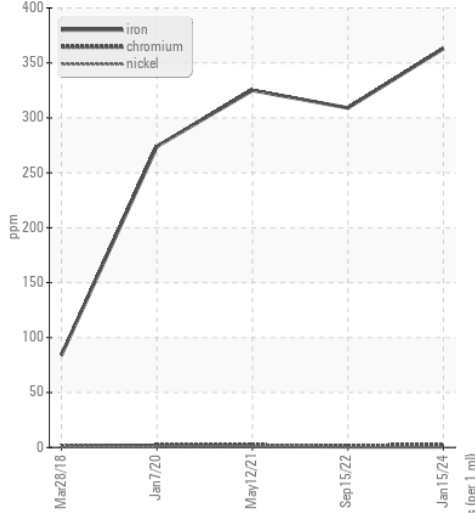
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>1</b>	3	7
Boron	ppm	ASTM D5185m		<b>246</b>	271	245
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Manganese	ppm	ASTM D5185m		<b>13</b>	12	55
Magnesium	ppm	ASTM D5185m		<b>12</b>	12	3
Calcium	ppm	ASTM D5185m		<b>39</b>	45	32
Phosphorus	ppm	ASTM D5185m		<b>1269</b>	1302	1321
Zinc	ppm	ASTM D5185m		<b>44</b>	50	23
Sulfur	ppm	ASTM D5185m		<b>19467</b>	25165	19278
Visc @ 40°C	cSt	ASTM D445	120	<b>92.1</b>	94.8	95.1

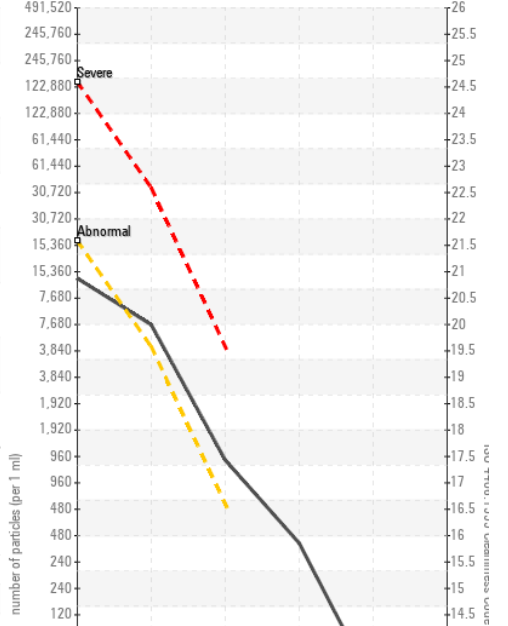
**Non-ferrous Metals**



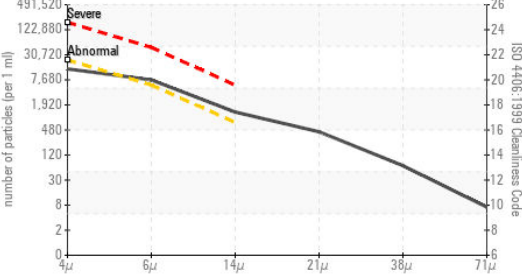
**Ferrous Alloys**



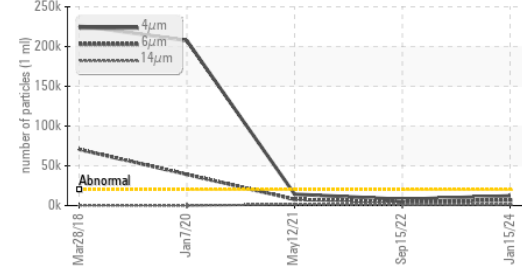
**Particle Count**



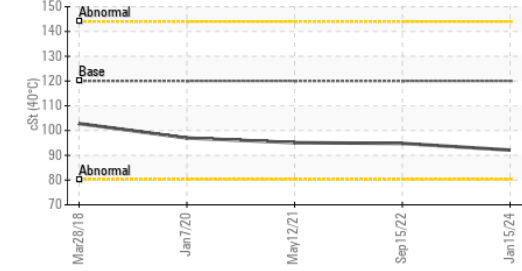
**Particle Count**



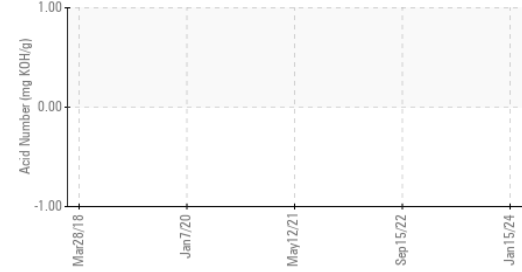
**Particle Trend**



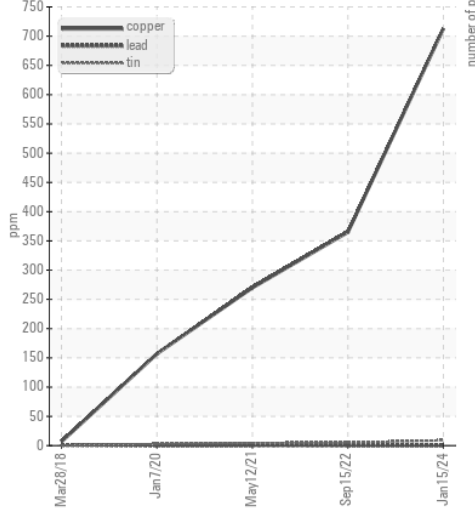
**Viscosity @ 40°C**



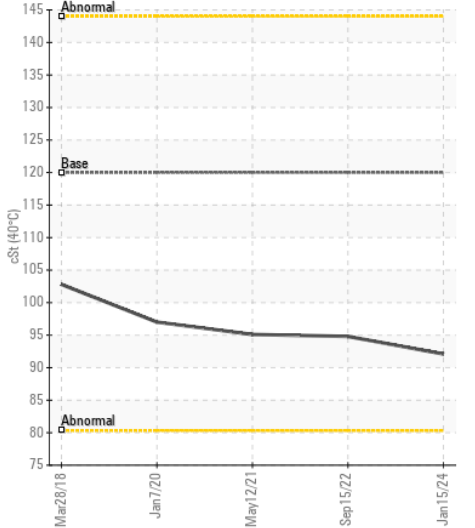
**Acid Number**



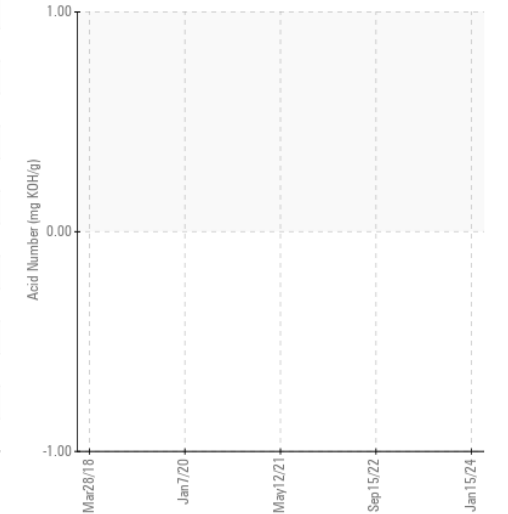
**Non-ferrous Metals**



**Viscosity @ 40°C**



**Acid Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0861832 **Received** : 19 Jan 2024  
**Lab Number** : 06065488 **Diagnosed** : 23 Jan 2024  
**Unique Number** : 10836870 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: PrtCount )

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