



# OIL ANALYSIS REPORT

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



Machine Id  
**L4652**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0874318</b>	WC0783986	WC0783997
Sample Date		Client Info		<b>16 Mar 2024</b>	08 Aug 2023	09 May 2023
Machine Age	hrs	Client Info		<b>3191</b>	6452	4060
Oil Age	hrs	Client Info		<b>0</b>	412	585
Filter Age	hrs	Client Info		<b>0</b>	412	585
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	<b>11</b>	21	21
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>1</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>4</b>	3	4
Lead	ppm	ASTM D5185m	>30	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>150	<b>2</b>	3	3
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

There is no indication of any contamination in the oil.

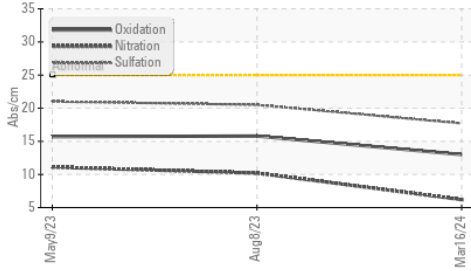
Silicon	ppm	ASTM D5185m	>20	<b>7</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	3	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.6	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.2</b>	10.2	11.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.7</b>	20.5	21.0
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

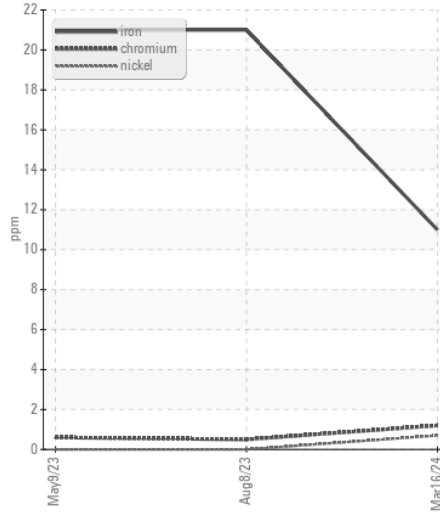
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>4</b>	7	6
Boron	ppm	ASTM D5185m	250	<b>19</b>	27	45
Barium	ppm	ASTM D5185m	10	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>63</b>	82	84
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>826</b>	113	111
Calcium	ppm	ASTM D5185m	3000	<b>1164</b>	2048	1992
Phosphorus	ppm	ASTM D5185m	1150	<b>993</b>	905	898
Zinc	ppm	ASTM D5185m	1350	<b>1159</b>	1123	1109
Sulfur	ppm	ASTM D5185m	4250	<b>3384</b>	4045	3836
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.0</b>	15.8	15.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>9.3</b>	5.6	6.1
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.6</b>	12.8	12.6

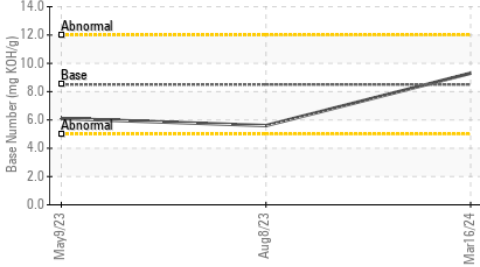
**FT-IR (Direct Trend)**



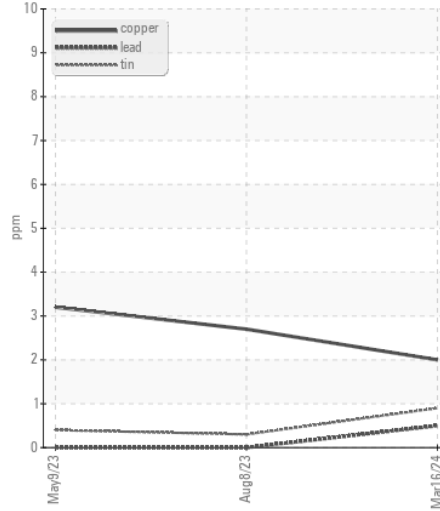
**Ferrous Alloys**



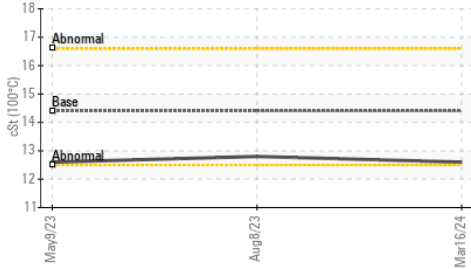
**Base Number**



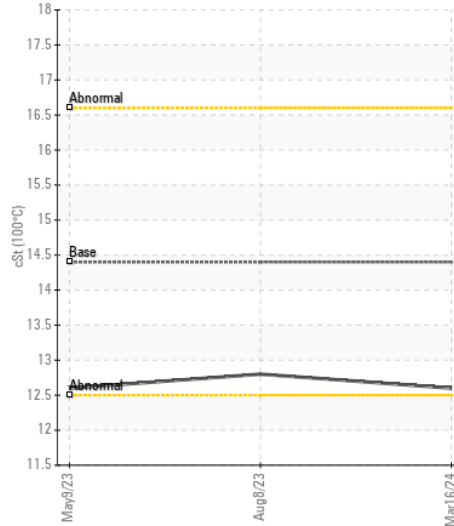
**Non-ferrous Metals**



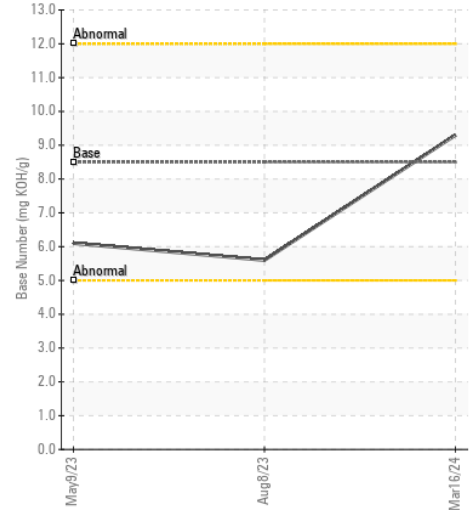
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0874318 **Received** : 28 May 2024  
**Lab Number** : 06192019 **Tested** : 29 May 2024  
**Unique Number** : 11048771 **Diagnosed** : 29 May 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**Apple Valley Waste - EHT Location**  
 6626 Delilah Road  
 Egg Harbor Township, NJ  
 US 08234  
 Contact: Service Manager

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)

T:  
F: