



# OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

ATTENTION  
NORMAL  
NORMAL

Machine Id  
**18175**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

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>WC0841887</b>	WC0742268	WC0742430
Sample Date		Client Info		<b>19 Dec 2023</b>	19 Jul 2023	10 May 2023
Machine Age	mls	Client Info		<b>332614</b>	287447	262192
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	NORMAL	NORMAL

## WEAR

An increase in the iron level is noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>▲ 69</b>	17	10
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>9</b>	3	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>5</b>	3	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</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

There is no indication of any contamination in the oil.

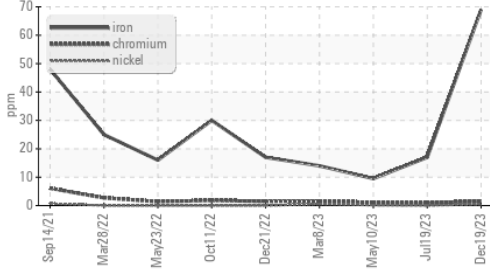
Silicon	ppm	ASTM D5185m	>25	<b>10</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>17</b>	12	8
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.3</b>	0.8	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.0</b>	10.8	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>27.7</b>	23.1	21.9
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

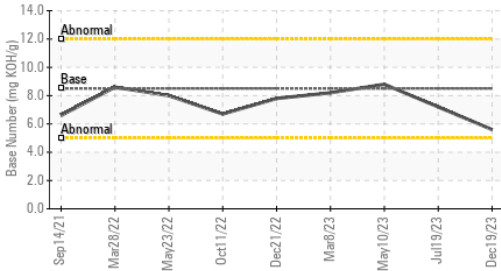
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>1</b>	3	2
Boron	ppm	ASTM D5185m	250	<b>10</b>	6	<1
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>61</b>	72	67
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>956</b>	970	1043
Calcium	ppm	ASTM D5185m	3000	<b>1399</b>	1219	1193
Phosphorus	ppm	ASTM D5185m	1150	<b>1190</b>	1057	1088
Zinc	ppm	ASTM D5185m	1350	<b>1485</b>	1287	1335
Sulfur	ppm	ASTM D5185m	4250	<b>3051</b>	2968	3320
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>25.7</b>	20.0	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>5.6</b>	7.2	8.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.2</b>	13.3	13.0

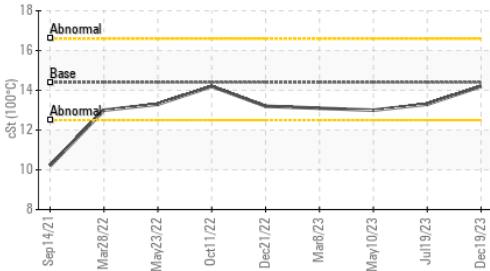
▲ Ferrous Alloys



Base Number



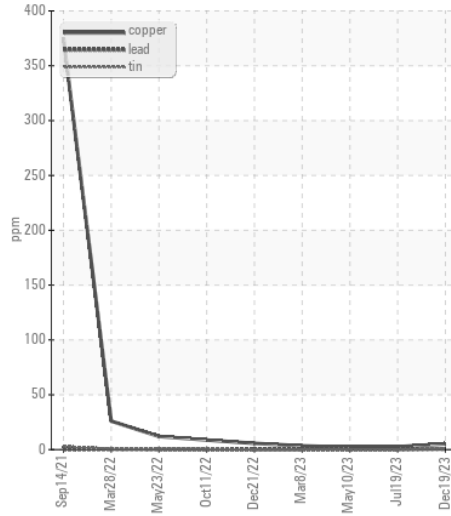
Viscosity @ 100°C



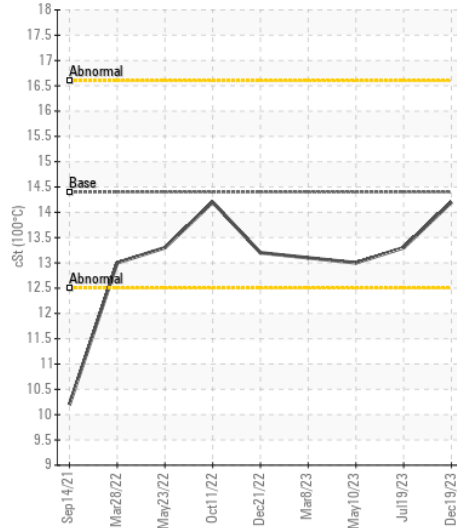
▲ Ferrous Alloys



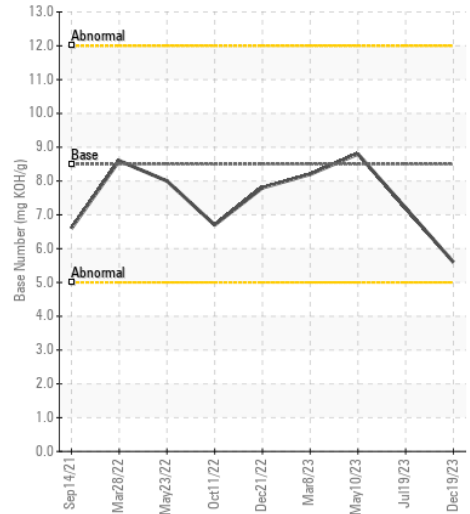
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0841887 **Received** : 18 Jan 2024  
**Lab Number** : 06064892 **Diagnosed** : 21 Jan 2024  
**Unique Number** : 10836274 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**SALEM NATIONALEASE CORPORATION**  
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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)