



# OIL ANALYSIS REPORT

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

Machine Id  
**23557**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0829899</b>	WC0829665	WC0592916
Sample Date		Client Info		<b>31 Jan 2024</b>	26 Sep 2023	09 Aug 2021
Machine Age	mls	Client Info		<b>192993</b>	178386	0
Oil Age	mls	Client Info		<b>0</b>	0	25000
Filter Age	mls	Client Info		<b>0</b>	0	25000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>8</b>	7	17
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	4
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	7	34
Lead	ppm	ASTM D5185m	>40	<b>0</b>	1	3
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	15
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	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

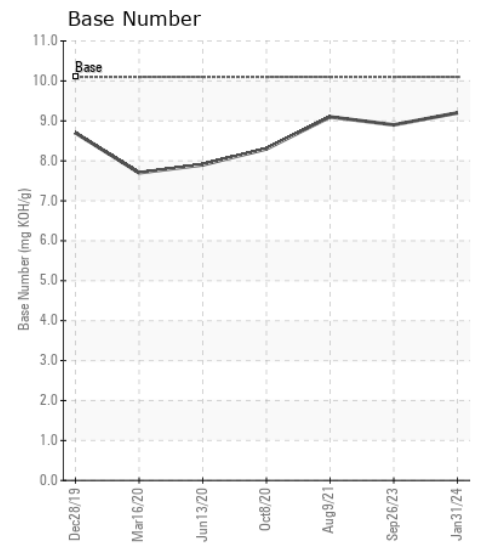
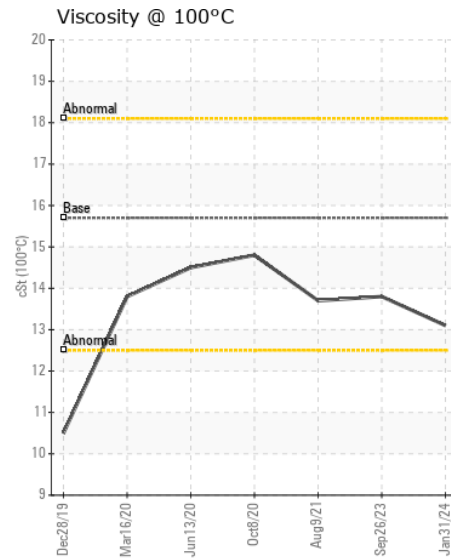
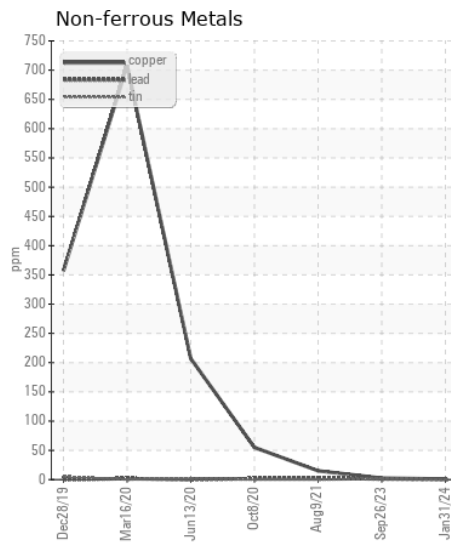
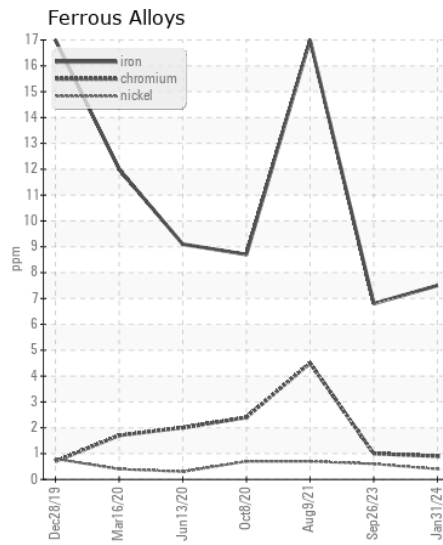
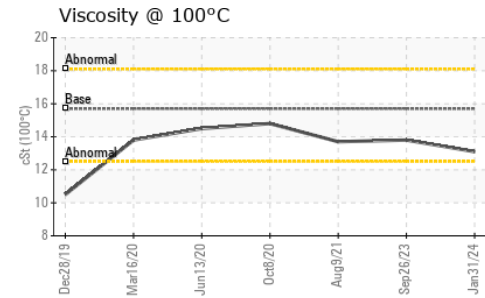
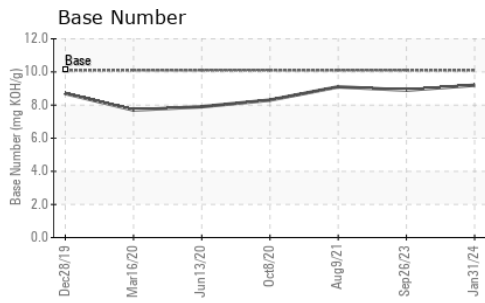
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	10	52
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>0.3</b>	0.4	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.1</b>	7.7	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	20.3	24
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>1</b>	1	2
Boron	ppm	ASTM D5185m	316	<b>5</b>	4	5
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>61</b>	62	67
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>976</b>	969	1071
Calcium	ppm	ASTM D5185m	2292	<b>1040</b>	1086	1223
Phosphorus	ppm	ASTM D5185m	1064	<b>1063</b>	1065	1071
Zinc	ppm	ASTM D5185m	1160	<b>1295</b>	1294	1252
Sulfur	ppm	ASTM D5185m	4996	<b>3199</b>	3144	2772
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.4</b>	16.1	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>9.2</b>	8.9	9.1
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.1</b>	13.8	13.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0829899  
**Lab Number** : 06087967  
**Unique Number** : 10875412  
**Test Package** : FLEET

**Received** : 13 Feb 2024  
**Tested** : 14 Feb 2024  
**Diagnosed** : 15 Feb 2024 - Don Baldrige

**SALEM NATIONALEASE CORPORATION**  
 198 PARK PLAZA DRIVE  
 WINSTON SALEM, NC  
 US 27105

Contact: Audrey Hopkins  
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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)

F: x: