



# OIL ANALYSIS REPORT

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

Machine Id  
**15320**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0938681</b>	WC0866998	WC0866940
Sample Date		Client Info		<b>01 Jul 2024</b>	02 May 2024	08 Jan 2024
Machine Age	mls	Client Info		<b>390741</b>	366983	318697
Oil Age	mls	Client Info		<b>23758</b>	24594	24439
Filter Age	mls	Client Info		<b>23758</b>	24594	24439
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>11</b>	12	10
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
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>3</b>	3	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	2	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	4	3
Tin	ppm	ASTM D5185m	>15	<b>0</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>0</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.

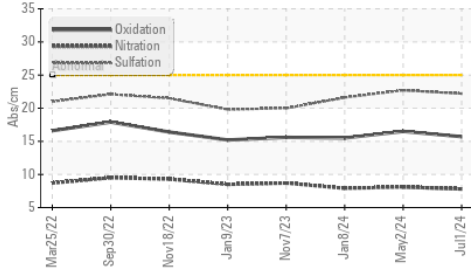
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	8	4
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	3	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.8</b>	8.1	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.2</b>	22.7	21.6
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

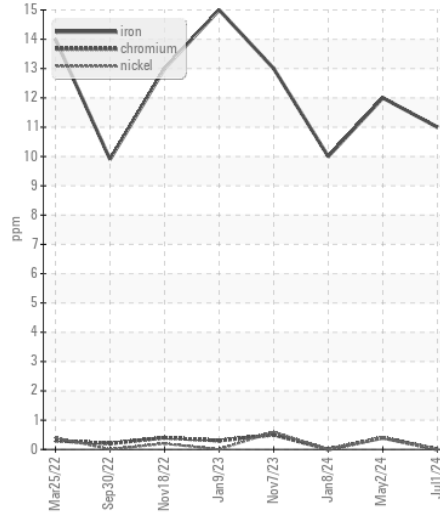
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	0	2
Boron	ppm	ASTM D5185m	316	<b>166</b>	203	163
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>85</b>	88	92
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>390</b>	417	530
Calcium	ppm	ASTM D5185m	2292	<b>1447</b>	1417	1330
Phosphorus	ppm	ASTM D5185m	1064	<b>1010</b>	1051	939
Zinc	ppm	ASTM D5185m	1160	<b>1249</b>	1205	1128
Sulfur	ppm	ASTM D5185m	4996	<b>3457</b>	3279	2773
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.7</b>	16.5	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>5.8</b>	5.1	6.3
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.2</b>	12.9	12.9

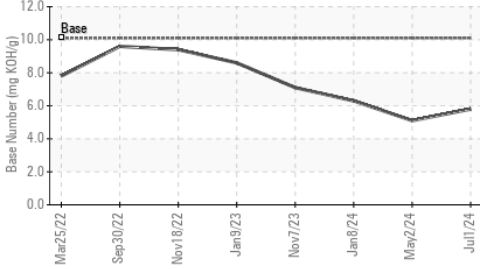
**FT-IR (Direct Trend)**



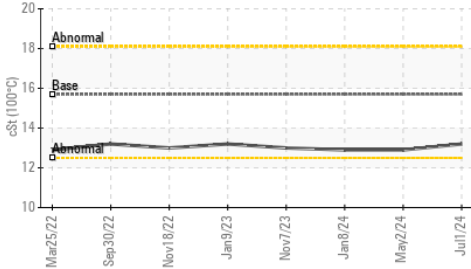
**Ferrous Alloys**



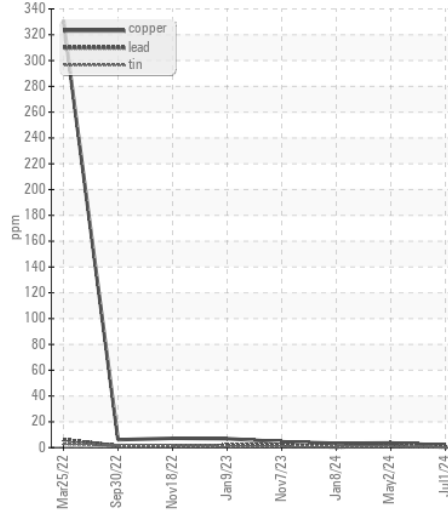
**Base Number**



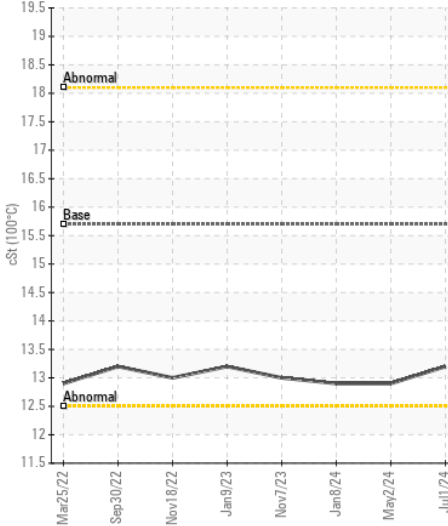
**Viscosity @ 100°C**



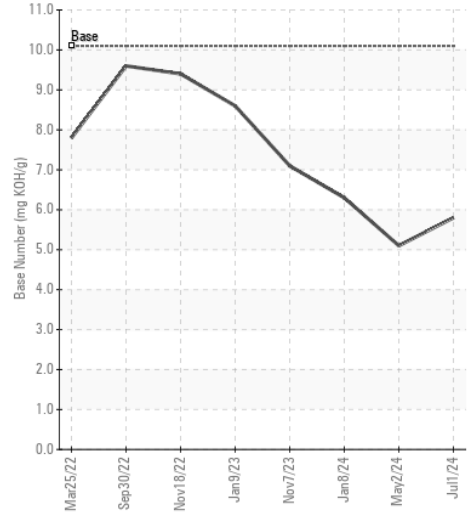
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0938681  
**Lab Number** : 06229439  
**Unique Number** : 11112932  
**Test Package** : FLEET

**Received** : 05 Jul 2024  
**Tested** : 09 Jul 2024  
**Diagnosed** : 09 Jul 2024 - Wes Davis

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

Contact: Audrey Hopkins  
 Audrey.Hopkins@salemcorp.com

T: (336)767-9642

F: x:

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)