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## Machine Id 31024 Component **Diesel Engine** SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION	Test
Descendent the most service istance by most iter. Discussions of the	Sample Nur
Resample at the next service interval to monitor. Please specify the component make and model with your next sample.	Sample Da
component make and model with your next sample.	Machine A
	Oil Age
	Filter Age
	Oil Change
	Filter Chan
	Sample Sta
WEAD	Iron
WEAR	
All component wear rates are normal.	Chromium
All component wear rates are normal.	Nickel
	Titanium
	Silver
	Aluminum

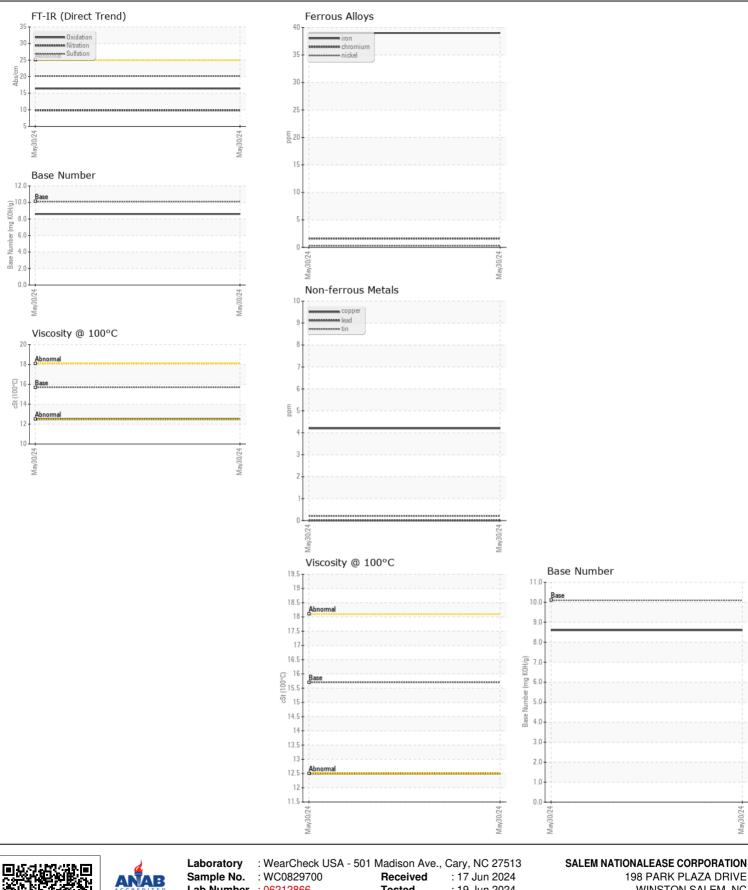
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	NTAMINATION
<u> </u>	

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0829700		
Sample Date		Client Info		30 May 2024		
Machine Age	mls	Client Info		18191		
Oil Age	mls	Client Info		11000		
Filter Age	mls	Client Info		11000		
Oil Changed		Client Info		Changed		
Filter Changed		Client Info		Changed		
Sample Status				NORMAL		
Iron	ppm	ASTM D5185m	>100	39		
Chromium	ppm	ASTM D5185m	>20	2		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	7		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	4		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Silicon	ppm	ASTM D5185m	>25	10		
Potassium	ppm	ASTM D5185m	>20	10		
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
Soot %	%	*ASTM D7844	>3	0.6		
Nitration	Abs/cm	*ASTM D7624	>20	9.8		
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
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Sodium	ppm	ASTM D5185m	010	3		
Boron	ppm	ASTM D5185m		4		
Barium	ppm	ASTM D5185m	0.0	0		
Molybdenum	ppm	ASTM D5185m	1.2	60		
Manganese	ppm	ASTM D5185m	0.1	2		
Magnesium	ppm	ASTM D5185m	24	964		
Calcium	ppm	ASTM D5185m	2292	1119		
Phosphorus	ppm	ASTM D5185m	1064	1067		
Zinc	ppm	ASTM D5185m	1160	1285		
Sulfur	ppm	ASTM D5185m	4996	3599		
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4		
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	8.6		
Visc @ 100°C	cSt	ASTM D445	15.7	12.5		

## **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.



Lab Number : 06212866 Tested WINSTON SALEM, NC : 19 Jun 2024 Diagnosed Unique Number : 11085730 : 19 Jun 2024 - Angela Borella US 27105 Test Package : FLEET **Contact: Audrey Hopkins** Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. Audrey.Hopkins@salemcorp.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (336)767-9642 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: x:

Contact/Location: Audrey Hopkins - SALWIN Page 2 of 2