

## Area **RVBF** Machine Id **149907** Component **Diesel Engine**

SHELL 15W40 (--- GAL)

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RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		RPL0021232	RPL0003532	
Resample at the next service interval to monitor.	Sample Date		Client Info		22 May 2024	10 Oct 2022	
	Machine Age	hrs	Client Info		0	0	
	Oil Age	hrs	Client Info		0	0	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Not Changd	Not Changd	
	Filter Changed		Client Info		Not Changd	N/A	
	Sample Status				NORMAL	ABNORMAL	
WEAR	Iron		ASTM D5185m	. 100	42	23	
WEAN	Chromium	ppm	ASTM D5185m		2	23	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0	0	
	Titanium	ppm	ASTM D5185m	>4	0	<1	
	Silver	ppm	ASTM D5185m	. 2	0	<1	
	Aluminum	ppm	ASTM D5185m			6	
		ppm			8	7	
	Lead	ppm	ASTM D5185m		6	1	
	Copper Tin	ppm	ASTM D5185m ASTM D5185m		<1	-1	
		ppm		>15	<1	1	
	Vanadium White Metal	ppm	ASTM D5185m		0	<1 NONE	
		scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	7	<b>a</b> 25	
	Potassium	ppm	ASTM D5185m	>20	5	6	
There is no indication of any contamination in the oil.	Fuel		WC Method	>5	<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.8	0.5	
	Nitration	Abs/cm	*ASTM D7624	>20	13.0	14.2	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	27.7	27.4	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185m	>150	3	3	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m	100	59	14	
	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		110	45	
	Manganese	ppm	ASTM D5185m		<1	1	
	Magnesium	ppm	ASTM D5185m		683	545	
	Calcium	ppm	ASTM D5185m		1448	1692	
	Phosphorus	ppm	ASTM D5185m		865	722	
	Zinc	ppm	ASTM D5185m		1012	949	
	Sulfur	ppm	ASTM D5185m		3408	2522	
	Oxidation		*ASTM D7414	>25	29.3	28.7	

Base Number (BN) mg KOH/g ASTM D2896

ASTM D445

Visc @ 100°C cSt

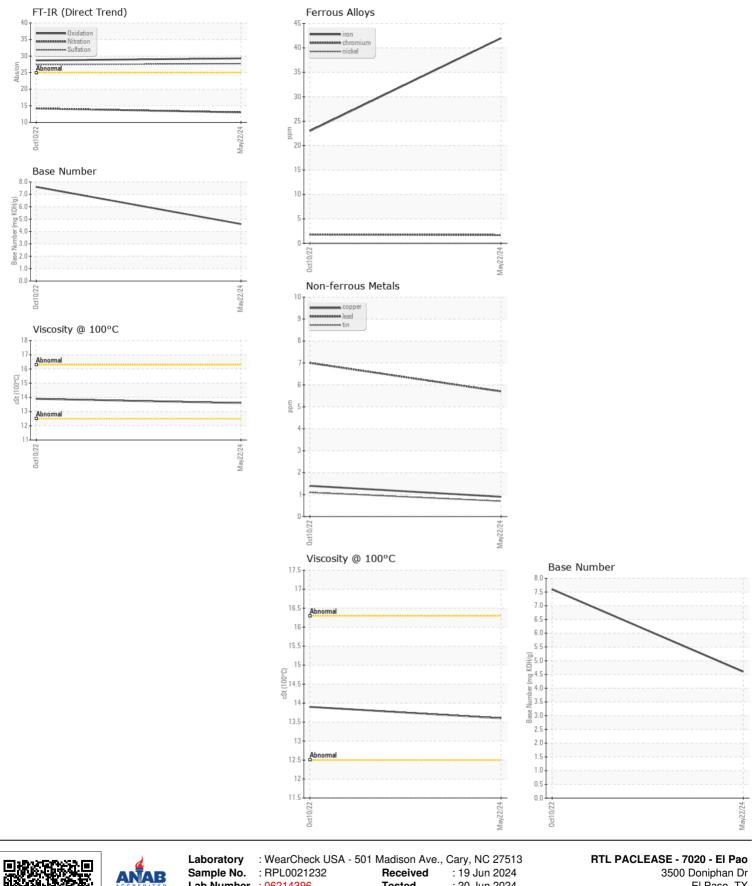
7.6

13.9

4.6

13.6

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL



Lab Number : 06214396 Tested El Paso, TX : 20 Jun 2024 Unique Number : 11087260 Diagnosed : 21 Jun 2024 - Don Baldridge US 79922 Test Package : FLEET Contact: JUAN MARTINEZ Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. martinezj15@rushenterprises.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Т: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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