

Machine Id **INTERNATIONAL 108701** Componer **Diesel Engine**

SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		IL0033009	IL0032772	IL0027558
	Sample Date		Client Info		19 Apr 2024	06 Nov 2023	27 Apr 2023
	Machine Age	mls	Client Info		364806	335321	301184
	Oil Age	mls	Client Info		29485	34137	32912
	Filter Age	mls	Client Info		29485	34137	32912
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	ABNORMAL
WEAR	Iron	ppm	ASTM D5185m	>90	20	17	20
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
	Nickel	ppm	ASTM D5185m		0	0	0
	Titanium	ppm	ASTM D5185m		0	0	0
	Silver	ppm	ASTM D5185m		0	0	0
	Aluminum	ppm	ASTM D5185m		4	5	5
	Lead	ppm	ASTM D5185m		2	5	3
	Copper	ppm	ASTM D5185m		0	0	0
	Tin	ppm	ASTM D5185m		0	<1	0
	Vanadium	ppm	ASTM D5185m		0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon		ASTM D5185m	> 25	5	6	6
CONTAMINATION	Potassium	ppm ppm	ASTM D5185m		8	13	8
There is no indication of any contamination in the oil.	Fuel	ррш	WC Method		ہ <1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method	20.2	NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>6	0.7	0.6	0.4
	Nitration	Abs/cm	*ASTM D7624		10.5	11.1	10.1
	Sulfation	Abs/.1mm	*ASTM D7024		24.4	26.5	23.0
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML	NORML	NORML	NORM
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water		*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Codium						0
	Sodium	ppm	ASTM D5185m	010	2	1	2
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		39	32	35
	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m	1.2	35	29	83
	Manganese	ppm	ASTM D5185m	0.4	0	<1	<1
	Magnesium	ppm	ASTM D5185m		342	162	55
	Calcium	ppm	ASTM D5185m		2066	2034	2260
	Phosphorus	ppm	ASTM D5185m		1059	969	1019
	Zinc	ppm	ASTM D5185m		1337	1252	1323
	Sulfur	ppm	ASTM D5185m		3921	3220	4056
	Oxidation	Abs/.1mm	*ASTM D7414		20.9	22.6	19.3
	Base Number (BN)	mg KOH/g	ASTM D2896	10.1	5.7	5.2	3 .8
						100	

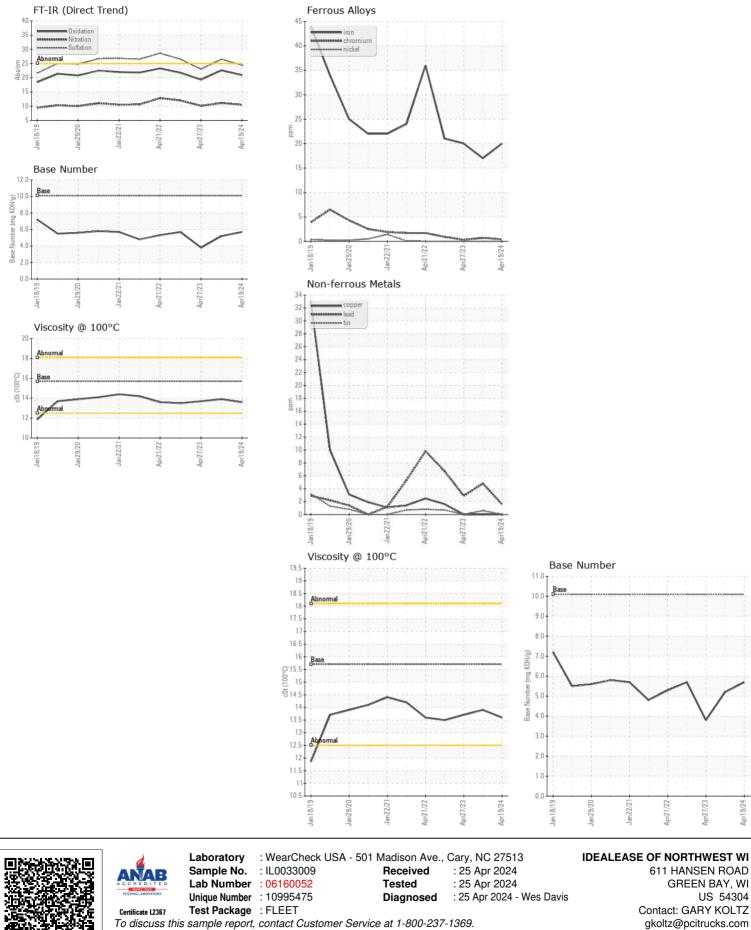
Visc @ 100°C cSt

13.9

13.7

13.6

ASTM D445 15.7



* - 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)

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