

Machine Id **2318** Component **Diesel Engine** Fluid **SHELL ROTELLA T 15W40 (--- GAL)**

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor. Please specify the component make and model with your next sample.	Sample Number		Client Info		WC0871363	WC0828998	
	Sample Date		Client Info		08 Jan 2024	31 Jul 2023	
	Machine Age	mls	Client Info		0	54385	
	Oil Age	mls	Client Info		20000	20000	
	Filter Age	mls	Client Info		20000	20000	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m	>100	16	15	
	Chromium	ppm	ASTM D5185m		1	2	
	Nickel	ppm	ASTM D5185m		<1	<1	
	Titanium	ppm	ASTM D5185m		0	<1	
	Silver	ppm	ASTM D5185m	>3	0	<1	
	Aluminum	ppm	ASTM D5185m		7	21	
	Lead	ppm	ASTM D5185m		2	2	
	Copper	ppm	ASTM D5185m		-	2	
	Tin	ppm	ASTM D5185m		1	1	
	Vanadium	ppm	ASTM D5185m		<1	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m		8	8	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m		15	46	
	Fuel		WC Method		<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844		0.3	0.2	
	Nitration	Abs/cm	*ASTM D7624	>20	10.2	7.9	
	Sulfation	Abs/.1mm	*ASTM D7415		22.4	22.5	
	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		4	2	
	Boron	ppm	ASTM D5185m	316	30	183	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m	0.0	0	0	
	Molybdenum	ppm	ASTM D5185m	1.2	59	123	
	Manganese	ppm	ASTM D5185m		<1	1	
	Magnesium	ppm	ASTM D5185m	24	525	647	
	Calcium	ppm	ASTM D5185m	2292	1566	1479	
	Phosphorus	ppm	ASTM D5185m	1064	1026	691	
	Zinc	ppm	ASTM D5185m	1160	1240	856	
	Sulfur	ppm	ASTM D5185m	4996	2992	2910	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.1	16.7	
	Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.8	7.3	
		0.	AOTH D 445			10 5	

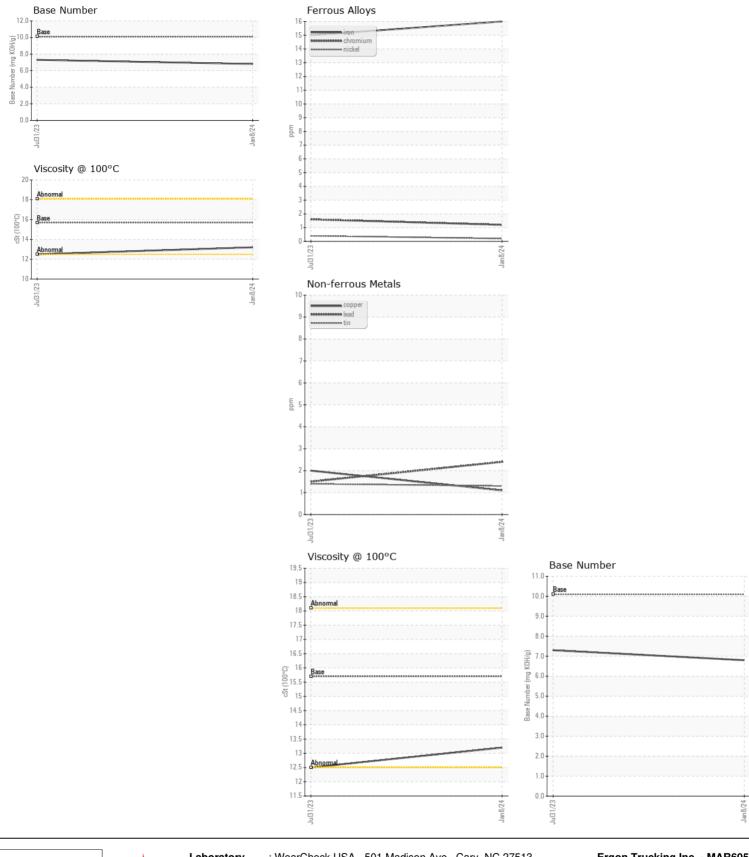
Visc @ 100°C cSt

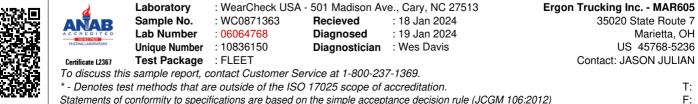
Contact/Location: WEBCHECK IN ERGMAG601 - JASON JULIAN - ERGMAR605

13.2

12.5

ASTM D445 15.7





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)