

Machine Id  
**4078**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LF0001229</b>	LF0000525	LF0000524
Sample Date		Client Info		<b>08 May 2024</b>	16 Mar 2024	21 Sep 2023
Machine Age	mls	Client Info		<b>956815</b>	935111	0
Oil Age	mls	Client Info		<b>0</b>	0	88173
Filter Age	mls	Client Info		<b>0</b>	0	88173
Oil Changed		Client Info		<b>Changed</b>	N/A	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	MARGINAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>15</b>	11	7
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	1
Lead	ppm	ASTM D5185m	>40	<b>6</b>	4	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	2	<1
Tin	ppm	ASTM D5185m	>15	<b>1</b>	2	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

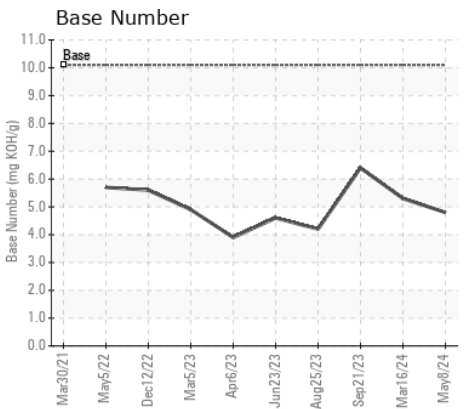
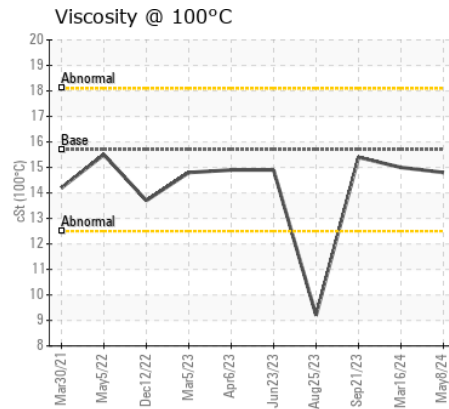
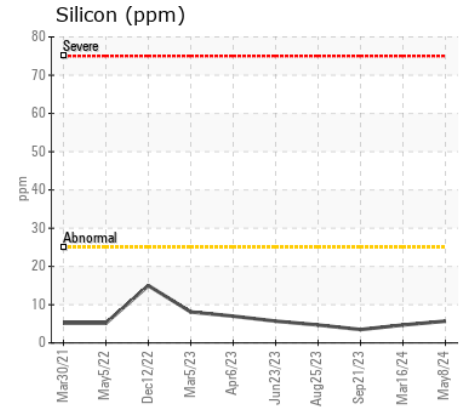
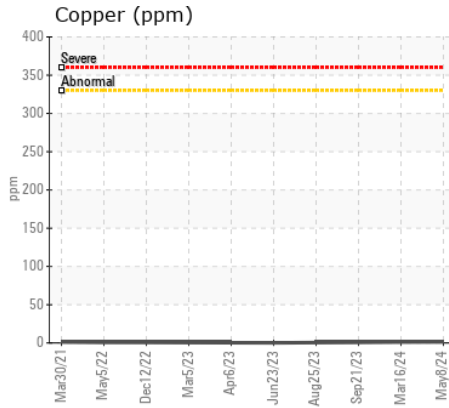
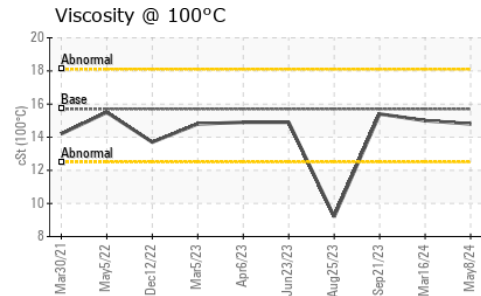
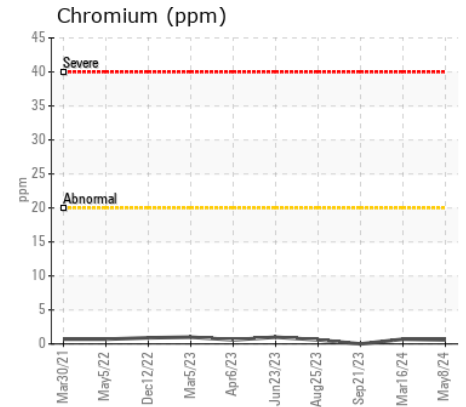
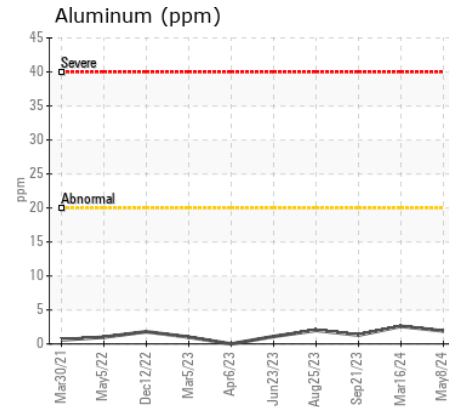
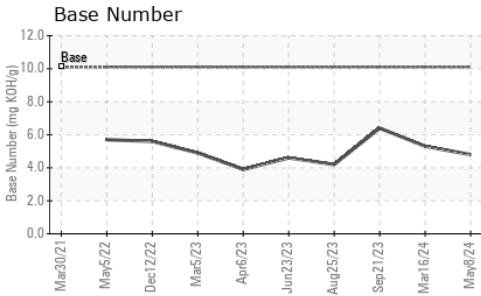
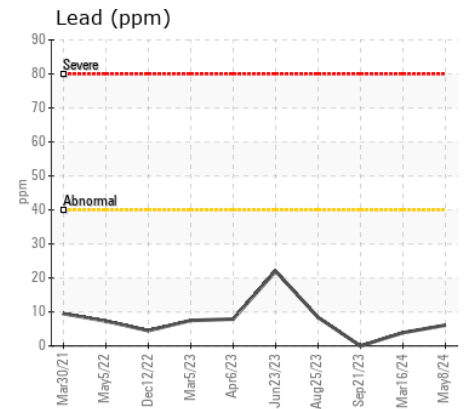
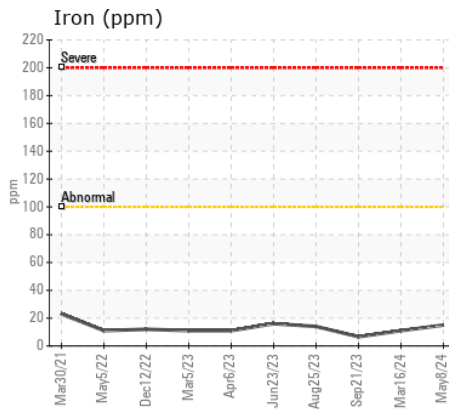
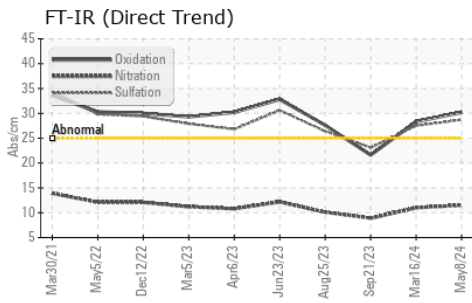
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>7</b>	8	14
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	▲ 2.9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.5</b>	11.0	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>28.7</b>	27.5	23.1
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>&lt;1</b>	0	4
Boron	ppm	ASTM D5185m	316	<b>81</b>	118	141
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	1	13
Molybdenum	ppm	ASTM D5185m	1.2	<b>17</b>	12	6
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	24	<b>176</b>	116	80
Calcium	ppm	ASTM D5185m	2292	<b>1936</b>	2222	1998
Phosphorus	ppm	ASTM D5185m	1064	<b>950</b>	996	885
Zinc	ppm	ASTM D5185m	1160	<b>1170</b>	1194	1079
Sulfur	ppm	ASTM D5185m	4996	<b>3625</b>	3658	3758
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>30.2</b>	28.3	21.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>4.8</b>	5.3	6.4
Visc @ 100°C	cSt	ASTM D445	15.7	<b>14.8</b>	15.0	15.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LF0001229  
**Lab Number** : 06178153  
**Unique Number** : 11029479  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**BARRY LEFROY**  
 139 COX CREEK PKWY S, #165  
 FLORENCE, AL  
 US 35630  
 Contact: BARRY LEFROY  
 lefroymalibu@aol.com  
 T: (951)442-0830  
 F:

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)