



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**113066**

Component  
**Diesel Engine**

Fluid  
**SHELL ROTELLA T 10W30 (--- GAL)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0033086</b>	IL0027444	IL0027660
Sample Date		Client Info		<b>04 Jan 2024</b>	13 Jul 2023	04 Jan 2023
Machine Age	mls	Client Info		<b>156089</b>	132473	109960
Oil Age	mls	Client Info		<b>23616</b>	22513	17379
Filter Age	mls	Client Info		<b>23616</b>	22513	17379
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>28</b>	25	26
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>13</b>	13	17
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

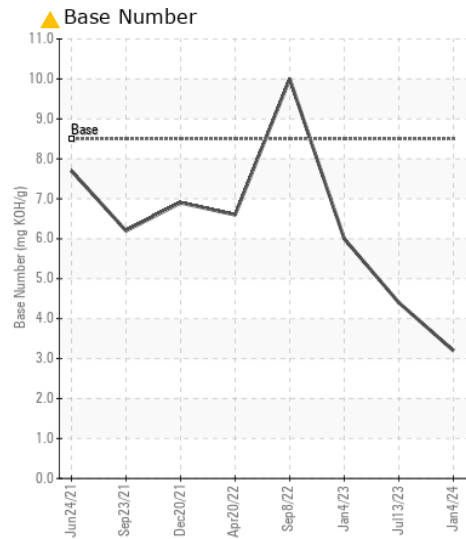
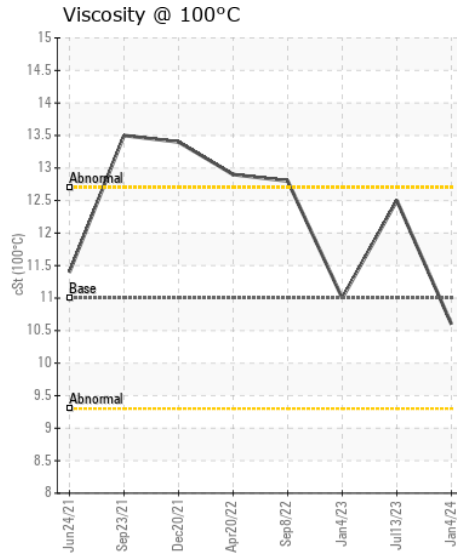
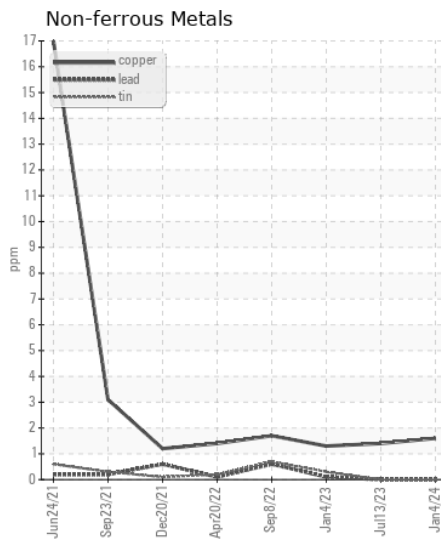
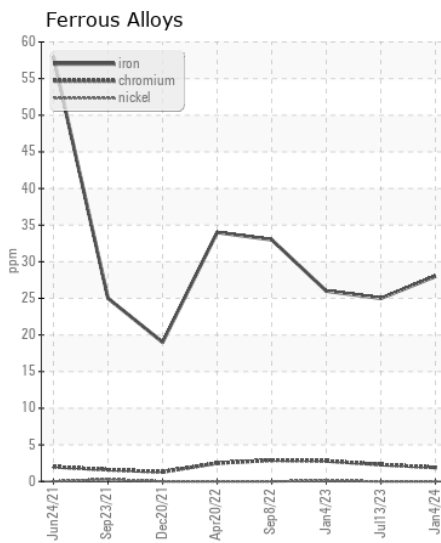
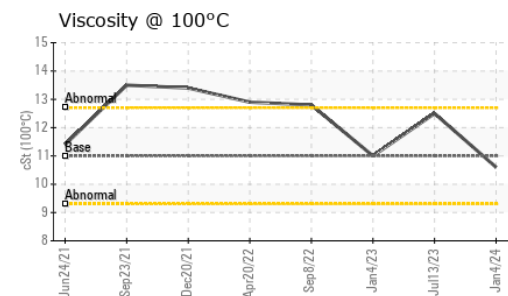
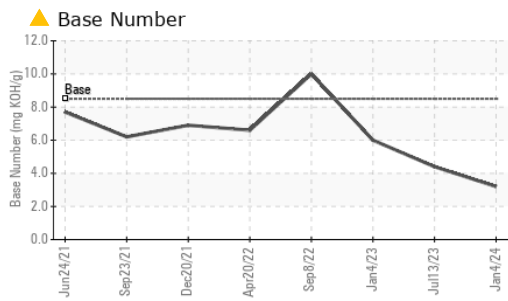
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	8
Potassium	ppm	ASTM D5185m	>20	<b>20</b>	13	19
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	▲ 4.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.5</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.7</b>	11.1	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.8</b>	23.9	23.4
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 level is low. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	2	3
Boron	ppm	ASTM D5185m	269	<b>50</b>	8	103
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>43</b>	79	12
Manganese	ppm	ASTM D5185m		<b>0</b>	1	<1
Magnesium	ppm	ASTM D5185m	20	<b>202</b>	35	37
Calcium	ppm	ASTM D5185m	1521	<b>1900</b>	2218	2217
Phosphorus	ppm	ASTM D5185m	948	<b>845</b>	888	922
Zinc	ppm	ASTM D5185m	893	<b>1082</b>	1116	1143
Sulfur	ppm	ASTM D5185m		<b>3309</b>	4193	3608
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>28.1</b>	20.4	19.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	▲ <b>3.2</b>	4.4	6
Visc @ 100°C	cSt	ASTM D445	11.0	<b>10.6</b>	12.5	▲ 11.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0033086 **Received** : 09 Jan 2024  
**Lab Number** : 06055771 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10821720 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET

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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)