



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**INTERNATIONAL 104708**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0033089</b>	IL0020315	IL0016657
Sample Date		Client Info		<b>29 Dec 2023</b>	22 Dec 2021	25 May 2021
Machine Age	mls	Client Info		<b>257460</b>	182025	149314
Oil Age	mls	Client Info		<b>24698</b>	32711	32475
Filter Age	mls	Client Info		<b>24698</b>	32711	32475
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>39</b>	61	▲ 97
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	3
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	6	12
Lead	ppm	ASTM D5185m	>40	<b>3</b>	5	5
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	2	3
Tin	ppm	ASTM D5185m	>15	<b>0</b>	1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

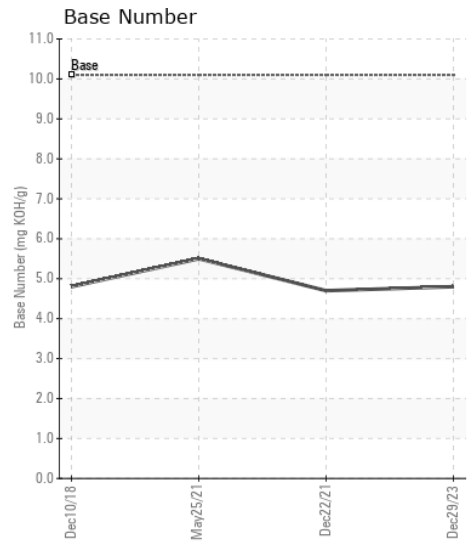
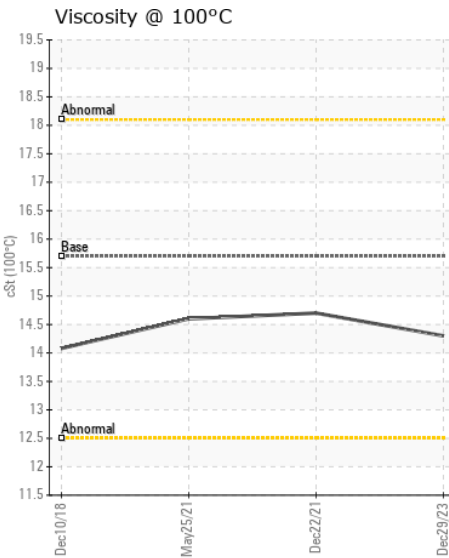
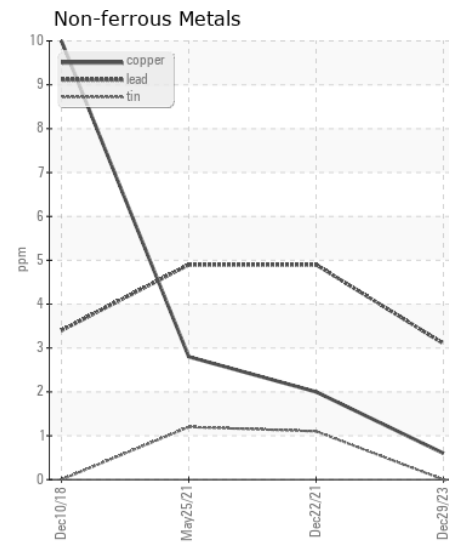
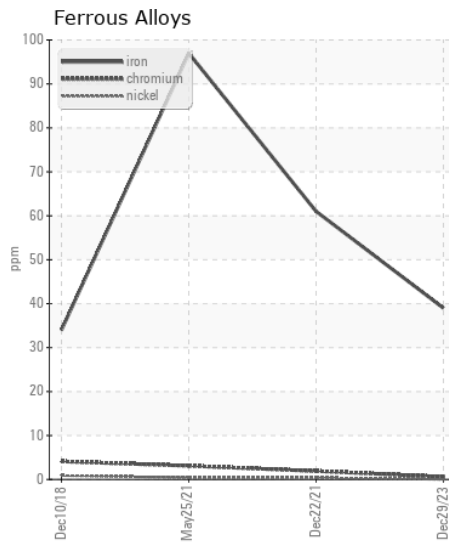
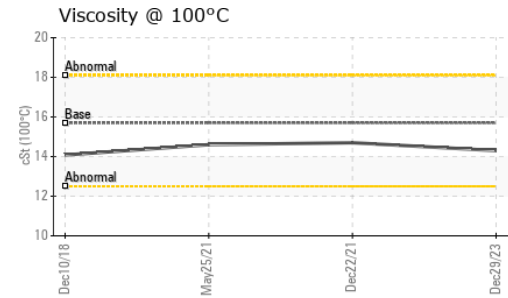
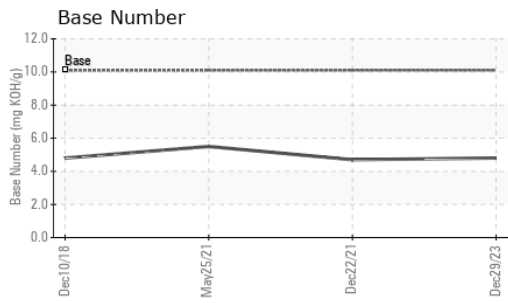
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	18	▲ 49
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.4</b>	0.5	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.9</b>	11.6	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>27.1</b>	30.4	30.4
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 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>2</b>	4	4
Boron	ppm	ASTM D5185m	316	<b>35</b>	37	54
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	3	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>65</b>	15	8
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	2
Magnesium	ppm	ASTM D5185m	24	<b>134</b>	41	77
Calcium	ppm	ASTM D5185m	2292	<b>2223</b>	2429	2162
Phosphorus	ppm	ASTM D5185m	1064	<b>1064</b>	1062	942
Zinc	ppm	ASTM D5185m	1160	<b>1293</b>	1293	1147
Sulfur	ppm	ASTM D5185m	4996	<b>3816</b>	3320	2707
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.7</b>	25.7	25.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>4.8</b>	4.7	5.5
Visc @ 100°C	cSt	ASTM D445	15.7	<b>14.3</b>	14.7	14.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0033089 **Received** : 09 Jan 2024  
**Lab Number** : 06055768 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10821717 **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)