



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

Machine Id  
**INTERNATIONAL 110804**  
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>IL0033091</b>	IL0027491	IL0027730
Sample Date		Client Info		<b>26 Dec 2023</b>	28 Jun 2023	27 Oct 2022
Machine Age	mls	Client Info		<b>265420</b>	238965	206496
Oil Age	mls	Client Info		<b>26455</b>	32469	32230
Filter Age	mls	Client Info		<b>26455</b>	32469	32230
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>27</b>	35	28
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	3	6
Lead	ppm	ASTM D5185m	>40	<b>1</b>	3	4
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<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

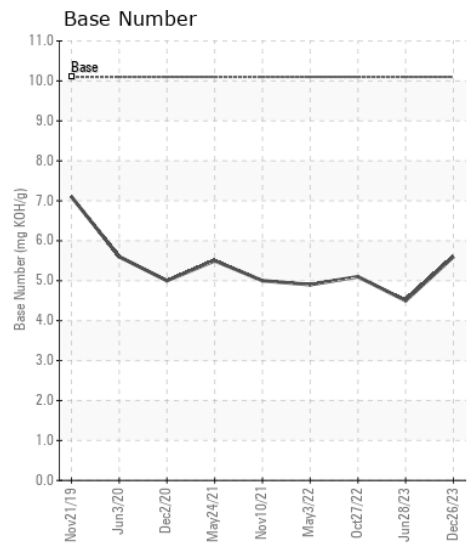
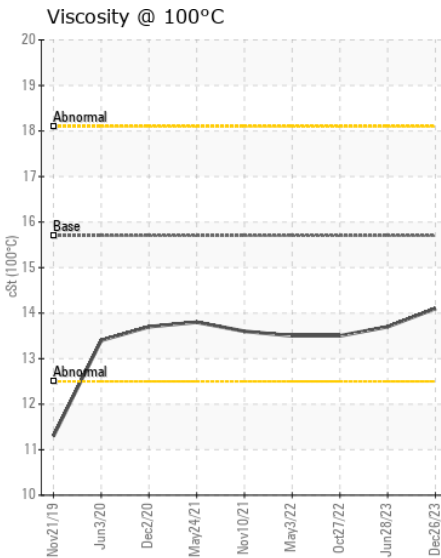
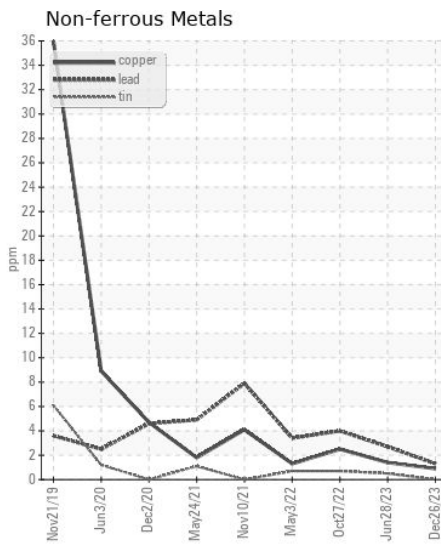
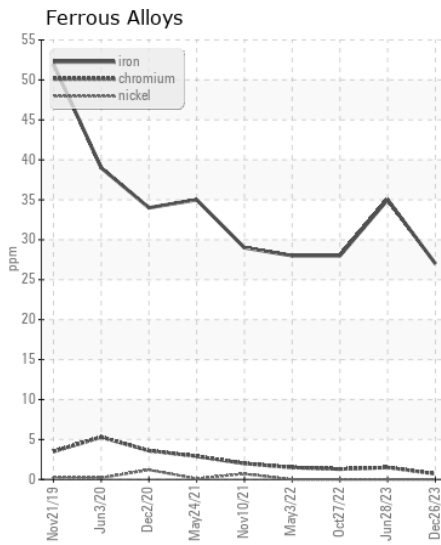
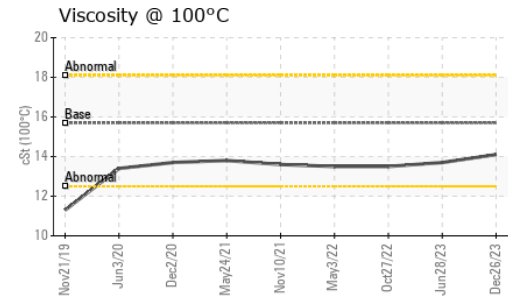
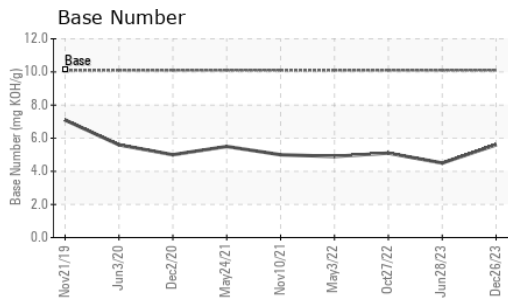
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>12</b>	7	10
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>1.1</b>	0.9	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.8</b>	12.4	13.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.4</b>	28.8	28.9
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>	2	2
Boron	ppm	ASTM D5185m	316	<b>41</b>	27	15
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	12	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>33</b>	77	86
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>230</b>	48	55
Calcium	ppm	ASTM D5185m	2292	<b>2076</b>	2090	2171
Phosphorus	ppm	ASTM D5185m	1064	<b>996</b>	947	952
Zinc	ppm	ASTM D5185m	1160	<b>1289</b>	1203	1176
Sulfur	ppm	ASTM D5185m	4996	<b>3197</b>	3989	3839
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.0</b>	23.7	23.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>5.6</b>	4.5	5.1
Visc @ 100°C	cSt	ASTM D445	15.7	<b>14.1</b>	13.7	13.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0033091 **Received** : 09 Jan 2024  
**Lab Number** : 06055774 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10821723 **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)