



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**113870**  
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>IL0032943</b>	IL0032978	IL0027467
Sample Date		Client Info		<b>17 Jun 2024</b>	05 Mar 2024	15 Aug 2023
Machine Age	mls	Client Info		<b>83943</b>	67224	45274
Oil Age	mls	Client Info		<b>16719</b>	21950	18138
Filter Age	mls	Client Info		<b>16719</b>	21950	18138
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>25</b>	48	39
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	4	3
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>22</b>	76	72
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	3
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

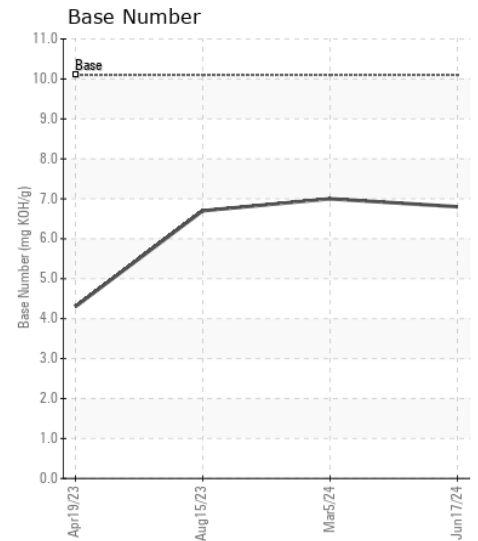
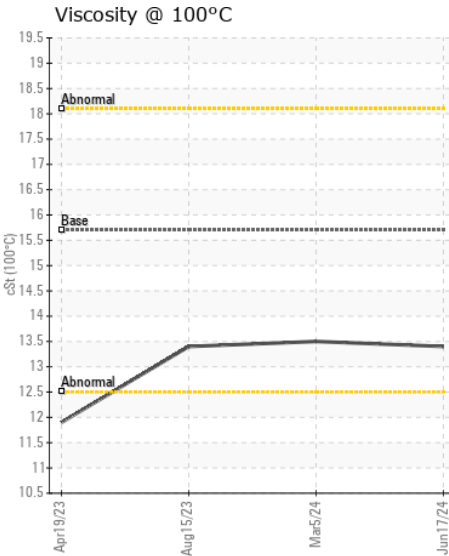
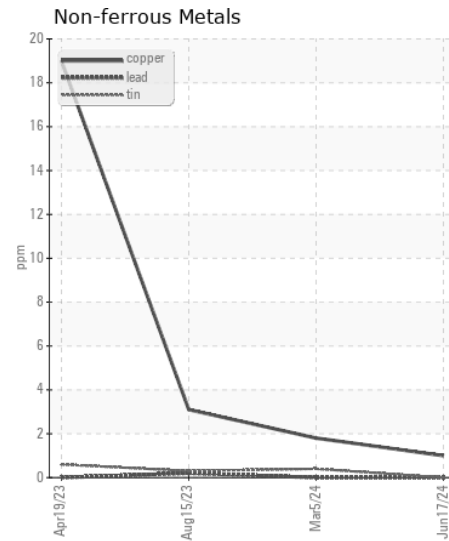
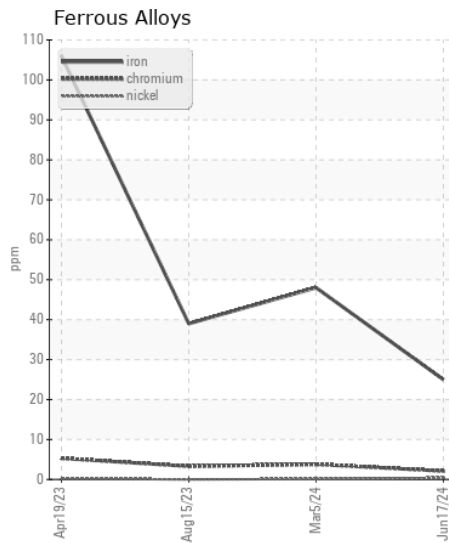
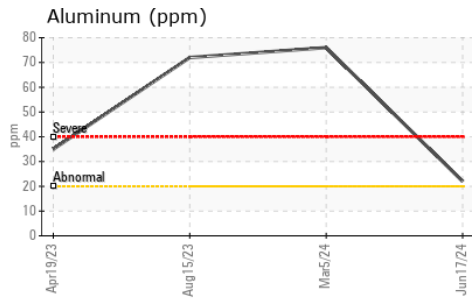
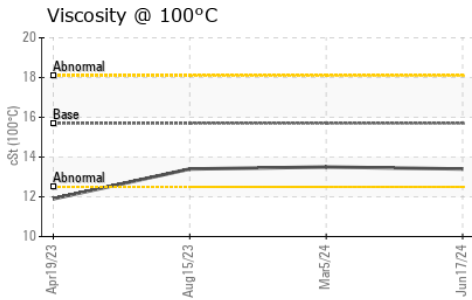
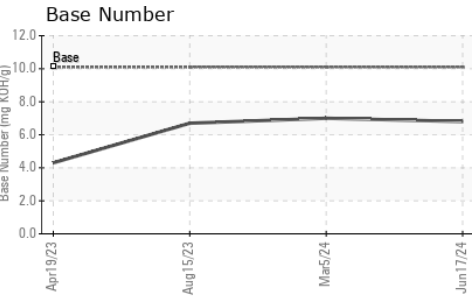
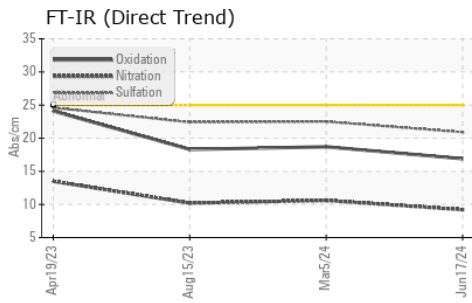
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	10	10
Potassium	ppm	ASTM D5185m	>20	<b>46</b>	161	165
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>0.6</b>	1	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	10.6	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.9</b>	22.5	22.4
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>3</b>	2	4
Boron	ppm	ASTM D5185m	316	<b>74</b>	54	68
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>25</b>	30	30
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m	24	<b>283</b>	288	211
Calcium	ppm	ASTM D5185m	2292	<b>1998</b>	1846	2041
Phosphorus	ppm	ASTM D5185m	1064	<b>1059</b>	992	943
Zinc	ppm	ASTM D5185m	1160	<b>1290</b>	1217	1190
Sulfur	ppm	ASTM D5185m	4996	<b>3886</b>	3346	3786
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.9</b>	18.7	18.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>6.8</b>	7.0	6.7
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.4</b>	13.5	13.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0032943  
**Lab Number** : 06219358  
**Unique Number** : 11097555  
**Test Package** : FLEET

**Received** : 25 Jun 2024  
**Tested** : 25 Jun 2024  
**Diagnosed** : 25 Jun 2024 - Wes Davis

**IDEALEASE OF NORTHWEST WI**  
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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)