



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

Machine Id  
**624982/111705**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 10W30 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0032939</b>	IL0033099	IL0027489
Sample Date		Client Info		<b>14 Jun 2024</b>	12 Dec 2023	16 Jun 2023
Machine Age	mls	Client Info		<b>100217</b>	89510	78319
Oil Age	mls	Client Info		<b>10707</b>	11191	15782
Filter Age	mls	Client Info		<b>10707</b>	11191	15782
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>13</b>	3	25
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	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>8</b>	2	15
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>1</b>	0	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
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.

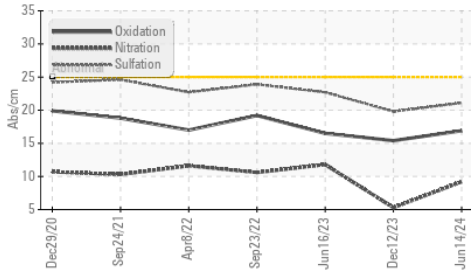
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	8	5
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	8	18
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.5</b>	0.1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	5.3	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	19.8	22.7
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

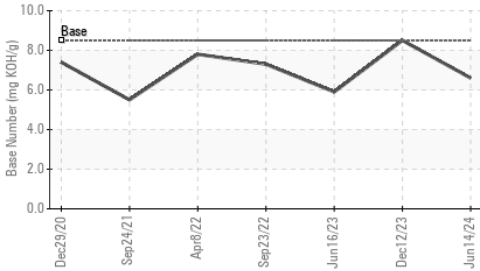
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	<1	3
Boron	ppm	ASTM D5185m	269	<b>113</b>	164	43
Barium	ppm	ASTM D5185m		<b>0</b>	0	12
Molybdenum	ppm	ASTM D5185m	0	<b>21</b>	19	86
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	20	<b>154</b>	124	55
Calcium	ppm	ASTM D5185m	1521	<b>2184</b>	1891	2172
Phosphorus	ppm	ASTM D5185m	948	<b>1070</b>	934	981
Zinc	ppm	ASTM D5185m	893	<b>1292</b>	1092	1206
Sulfur	ppm	ASTM D5185m		<b>4162</b>	3612	4439
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.9</b>	15.4	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.6</b>	8.5	5.9
Visc @ 100°C	cSt	ASTM D445	11.0	<b>11.1</b>	11.8	12.9

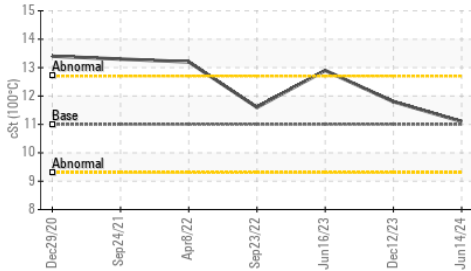
**FT-IR (Direct Trend)**



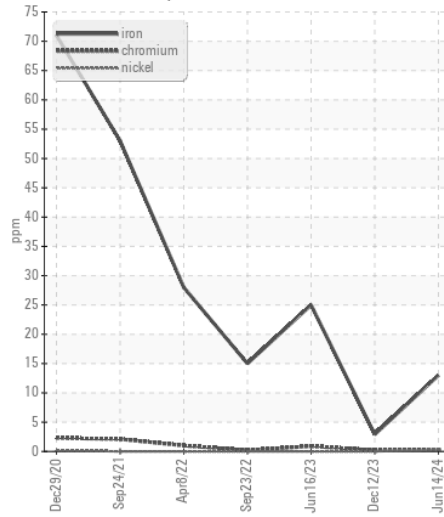
**Base Number**



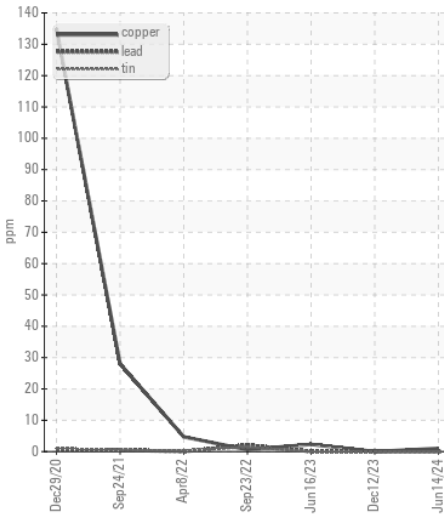
**Viscosity @ 100°C**



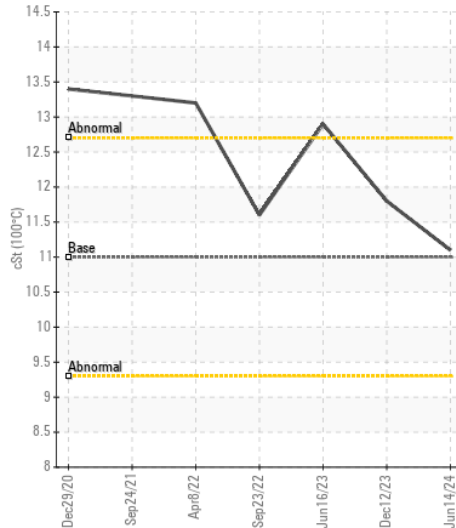
**Ferrous Alloys**



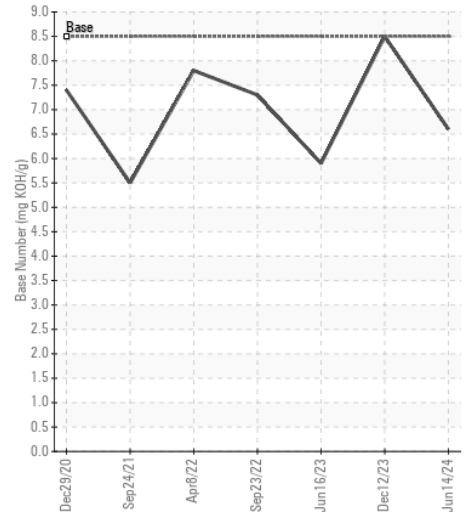
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : IL0032939

**Lab Number** : 06219352

**Unique Number** : 11097549

**Test Package** : FLEET

**Received** : 25 Jun 2024

**Tested** : 25 Jun 2024

**Diagnosed** : 26 Jun 2024 - Wes Davis

**IDEALISE 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)