



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Machine Id  
**41199**  
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>WC0883275</b>	WC0722759	WC0649846
Sample Date		Client Info		<b>04 Jan 2024</b>	22 Nov 2022	16 Jun 2022
Machine Age	mls	Client Info		<b>408925</b>	402802	394971
Oil Age	mls	Client Info		<b>10000</b>	0	0
Filter Age	mls	Client Info		<b>10000</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>20</b>	9	15
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>8</b>	6	8
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>6</b>	6	12
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</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

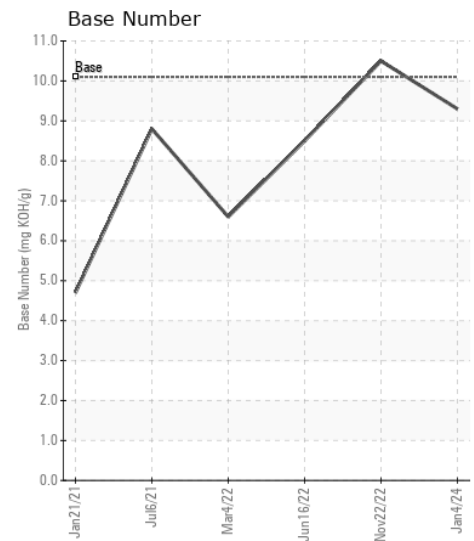
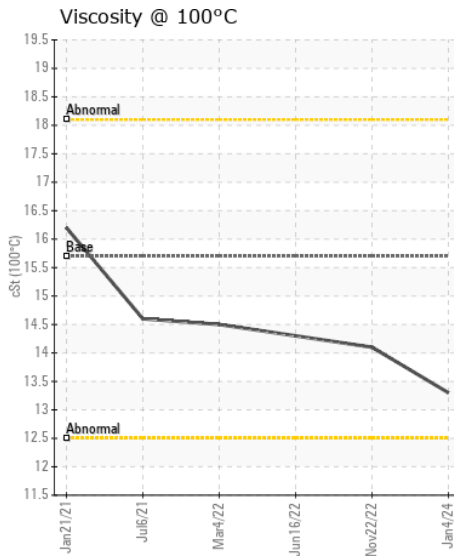
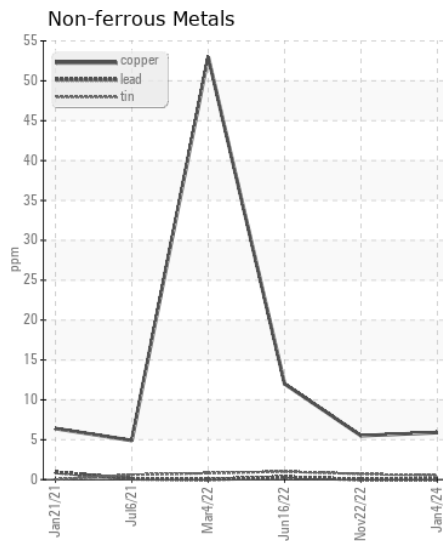
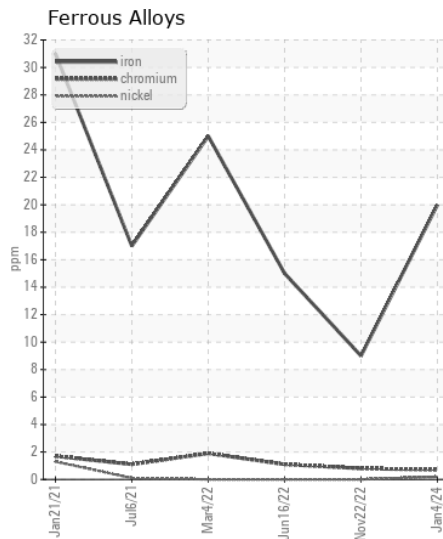
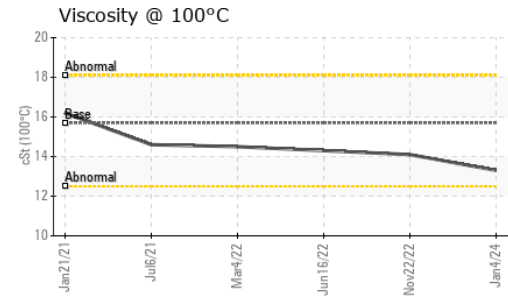
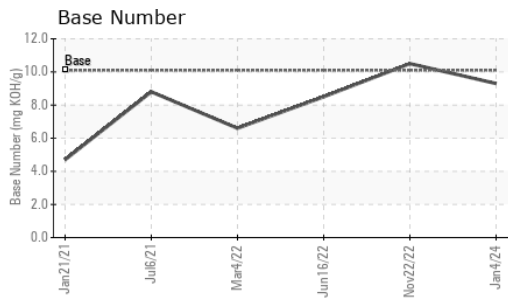
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
Fuel		WC Method	>5	<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	>3	<b>0.3</b>	0.6	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	7.7	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	21.7	22.6
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>&lt;1</b>	<1	2
Boron	ppm	ASTM D5185m	316	<b>5</b>	8	8
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	1.2	<b>59</b>	66	61
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>949</b>	965	928
Calcium	ppm	ASTM D5185m	2292	<b>1059</b>	1185	1166
Phosphorus	ppm	ASTM D5185m	1064	<b>1089</b>	1057	984
Zinc	ppm	ASTM D5185m	1160	<b>1260</b>	1302	1274
Sulfur	ppm	ASTM D5185m	4996	<b>3307</b>	3877	2975
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.6</b>	16.0	18.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>9.3</b>	10.5	8.5
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.3</b>	14.1	14.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0883275 **Received** : 17 Jan 2024  
**Lab Number** : 06063404 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834786 **Diagnostician** : Don Baldrige  
**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)