



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Machine Id  
**22170**  
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>WC0909696</b>	WC0866878	WC0832011
Sample Date		Client Info		<b>27 May 2024</b>	01 Feb 2024	16 Oct 2023
Machine Age	mls	Client Info		<b>128981</b>	118351	107214
Oil Age	mls	Client Info		<b>10630</b>	11137	6614
Filter Age	mls	Client Info		<b>10630</b>	11137	6614
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	>100	<b>14</b>	9	8
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	4	4
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

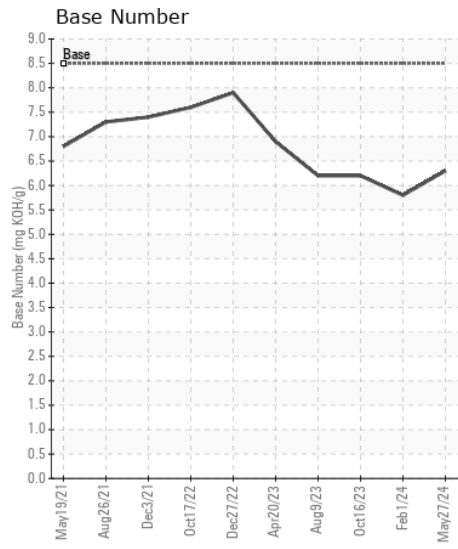
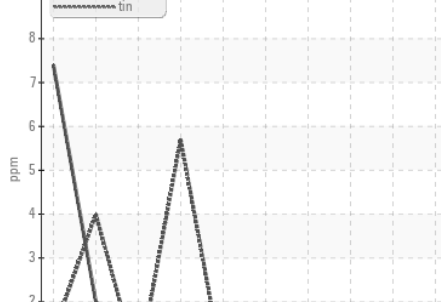
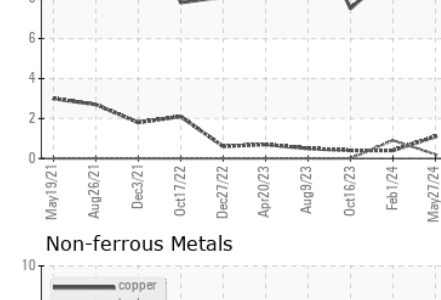
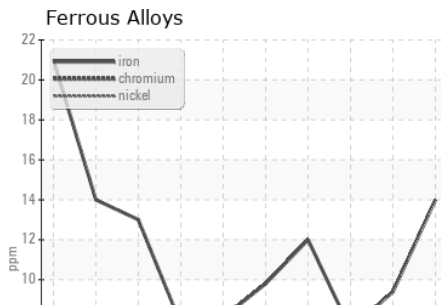
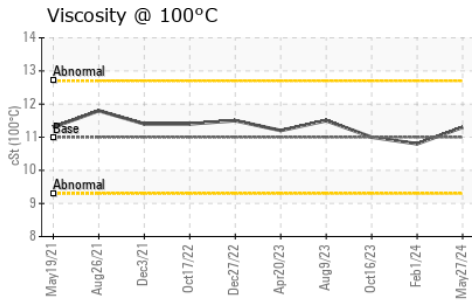
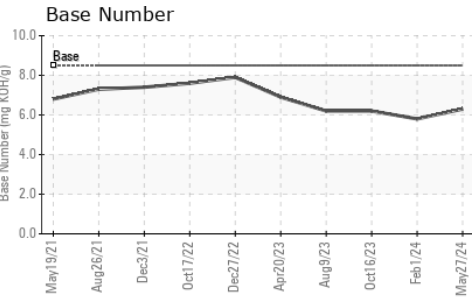
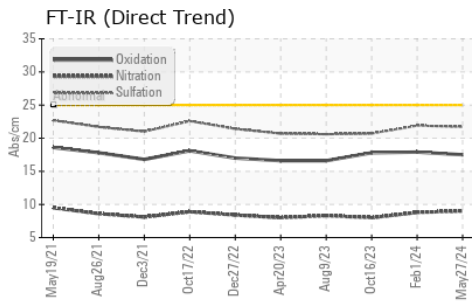
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>16</b>	13	15
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>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	8.8	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.7</b>	21.9	20.7
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>1</b>	3	2
Boron	ppm	ASTM D5185m	269	<b>139</b>	121	135
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>6</b>	7	9
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	20	<b>52</b>	59	73
Calcium	ppm	ASTM D5185m	1521	<b>2089</b>	1979	2074
Phosphorus	ppm	ASTM D5185m	948	<b>1007</b>	952	926
Zinc	ppm	ASTM D5185m	893	<b>1187</b>	1136	1196
Sulfur	ppm	ASTM D5185m		<b>3679</b>	3225	3360
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.5</b>	17.9	17.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.3</b>	5.8	6.2
Visc @ 100°C	cSt	ASTM D445	11.0	<b>11.3</b>	10.8	11.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0909696  
**Lab Number** : 06197374  
**Unique Number** : 11059497  
**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)