



# OIL ANALYSIS REPORT

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

Machine Id  
**2307**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0871359</b>	WC0828994	PCA0076236
Sample Date		Client Info		<b>12 Apr 2024</b>	27 Oct 2023	11 Aug 2023
Machine Age	mls	Client Info		<b>148000</b>	0	95280
Oil Age	mls	Client Info		<b>20000</b>	20000	20000
Filter Age	mls	Client Info		<b>20000</b>	20000	20000
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>17</b>	15	20
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>9</b>	7	10
Lead	ppm	ASTM D5185m	>40	<b>2</b>	2	4
Copper	ppm	ASTM D5185m	>330	<b>1</b>	<1	1
Tin	ppm	ASTM D5185m	>15	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	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.

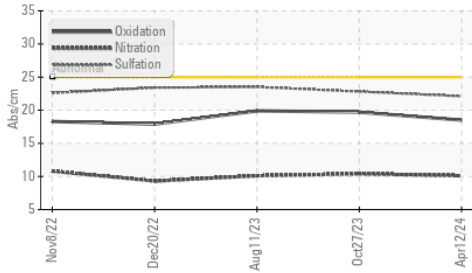
Silicon	ppm	ASTM D5185m	>25	<b>8</b>	8	8
Potassium	ppm	ASTM D5185m	>20	<b>20</b>	17	22
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.4</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.1</b>	10.4	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.1</b>	22.8	23.5
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

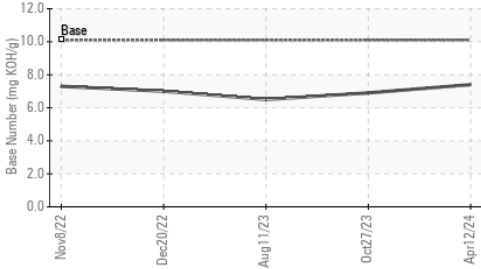
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	4	2
Boron	ppm	ASTM D5185m	316	<b>28</b>	26	117
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>56</b>	56	130
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>465</b>	516	615
Calcium	ppm	ASTM D5185m	2292	<b>1559</b>	1551	1491
Phosphorus	ppm	ASTM D5185m	1064	<b>1046</b>	1016	625
Zinc	ppm	ASTM D5185m	1160	<b>1196</b>	1244	798
Sulfur	ppm	ASTM D5185m	4996	<b>3183</b>	3005	2288
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.5</b>	19.7	19.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>7.4</b>	6.9	6.5
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.5</b>	13.5	12.7

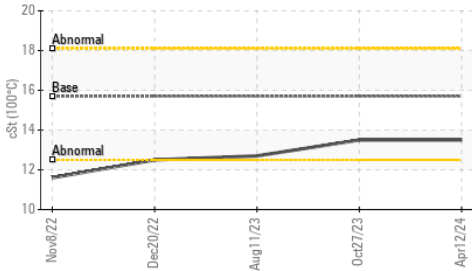
**FT-IR (Direct Trend)**



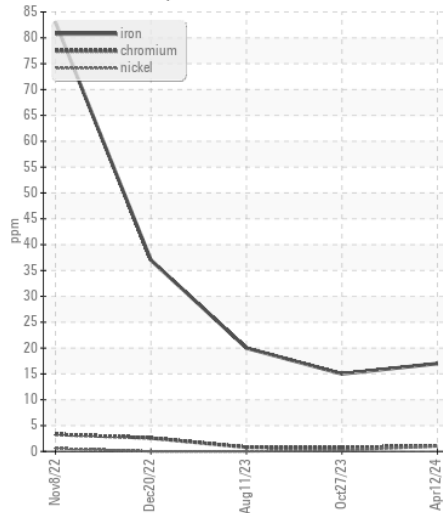
**Base Number**



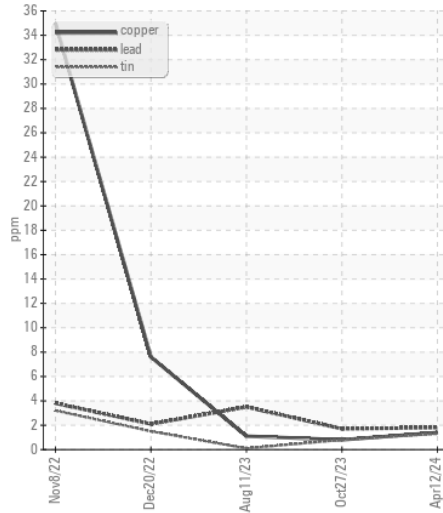
**Viscosity @ 100°C**



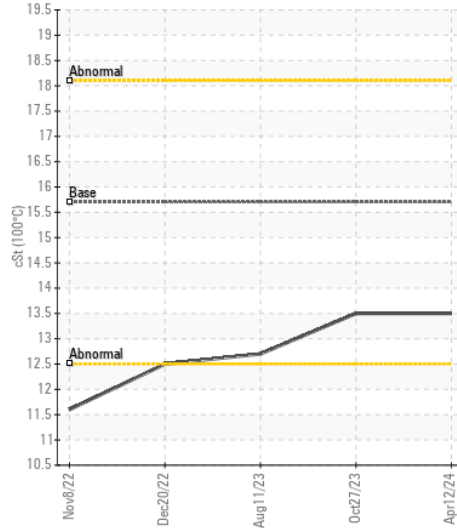
**Ferrous Alloys**



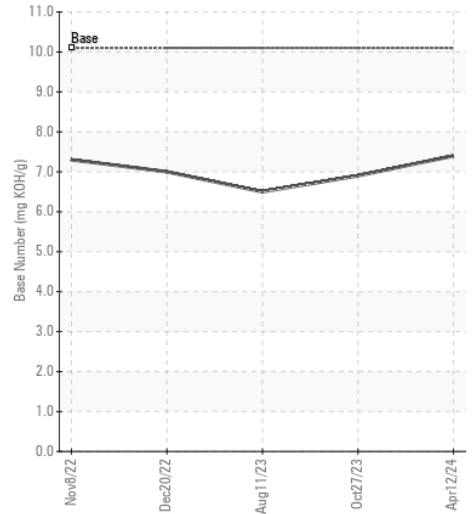
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0871359  
**Lab Number** : 06156761  
**Unique Number** : 10992184  
**Test Package** : FLEET  
**Received** : 22 Apr 2024  
**Tested** : 23 Apr 2024  
**Diagnosed** : 23 Apr 2024 - Wes Davis

**Ergon Trucking Inc. - MAR605**  
 35020 State Route 7  
 Marietta, OH  
 US 45768-5236  
 Contact: JASON JULIAN

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)

T:  
F: