



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**HC1117**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T4 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0936046</b>	WC0809348	WC0687061
Sample Date		Client Info		<b>16 May 2024</b>	01 Apr 2023	21 Sep 2022
Machine Age	hrs	Client Info		<b>7614</b>	5767	4942
Oil Age	hrs	Client Info		<b>1847</b>	500	566
Filter Age	hrs	Client Info		<b>1847</b>	500	566
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>5</b>	2	4
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>2</b>	0	4
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	<1	3
Lead	ppm	ASTM D5185m	>40	<b>14</b>	0	2
Copper	ppm	ASTM D5185m	>330	<b>4</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<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

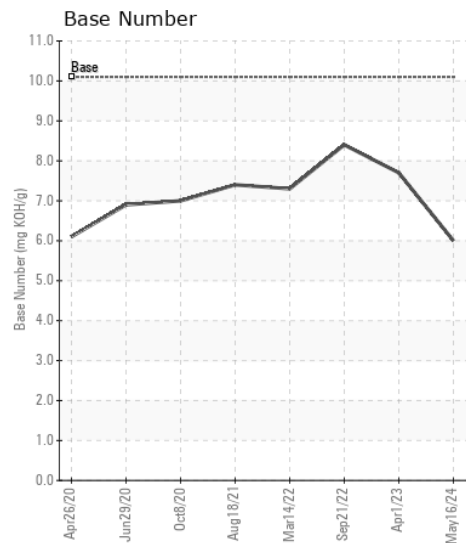
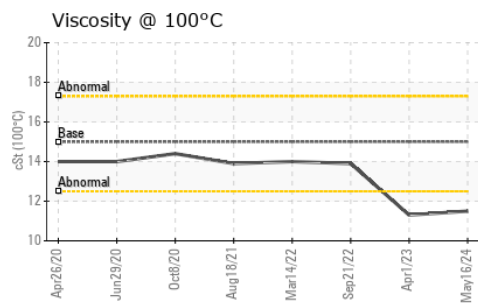
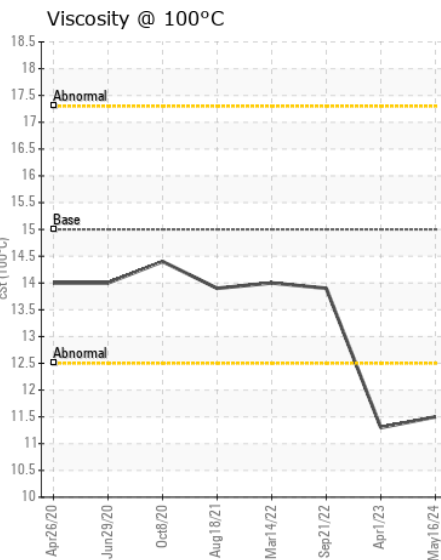
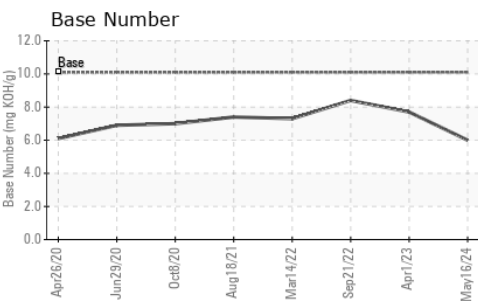
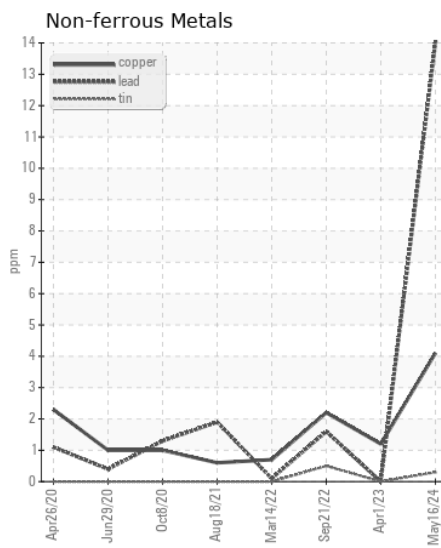
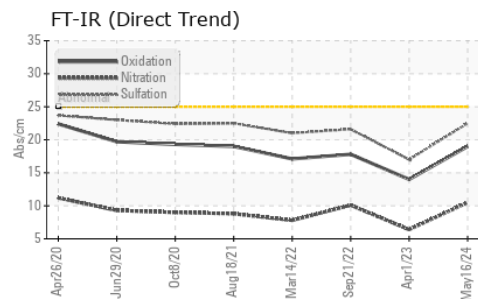
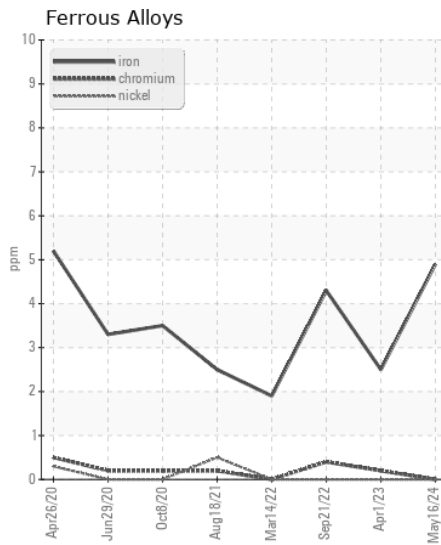
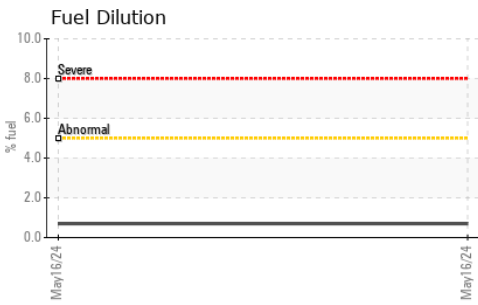
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	2
Fuel	%	ASTM D3524	>5	<b>0.7</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>0.1</b>	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.5</b>	6.4	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.5</b>	17.0	21.6
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>2</b>	2	2
Boron	ppm	ASTM D5185m		<b>88</b>	72	28
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>80</b>	62	47
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>825</b>	672	759
Calcium	ppm	ASTM D5185m		<b>1329</b>	1471	1507
Phosphorus	ppm	ASTM D5185m		<b>916</b>	1013	1088
Zinc	ppm	ASTM D5185m		<b>1125</b>	1224	1315
Sulfur	ppm	ASTM D5185m		<b>3382</b>	3923	3759
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.0</b>	14.0	17.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>6.0</b>	7.7	8.4
Visc @ 100°C	cSt	ASTM D445	15	<b>11.5</b>	11.3	13.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0936046 **Received** : 24 May 2024  
**Lab Number** : 06191616 **Tested** : 29 May 2024  
**Unique Number** : 11048368 **Diagnosed** : 29 May 2024 - Angela Borella  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

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)

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