



# OIL ANALYSIS REPORT

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

Area  
**TRUCK - URBAN**  
Machine Id  
**FREIGHTLINER 102**  
Component  
**Diesel Engine**  
Fluid  
**SHELL Rotella T5 15W-40 (10 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PE0004123</b>	PE0000487	PE0002442
Sample Date		Client Info		<b>12 Jun 2024</b>	15 Mar 2024	10 Jan 2024
Machine Age	hrs	Client Info		<b>9378</b>	8388	7625
Oil Age	hrs	Client Info		<b>480</b>	763	540
Filter Age	hrs	Client Info		<b>480</b>	763	540
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	>200	<b>13</b>	10	11
Chromium	ppm	ASTM D5185m	>6	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	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	>50	<b>9</b>	7	6
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>1</b>	1	2
Tin	ppm	ASTM D5185m	>6	<b>&lt;1</b>	2	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

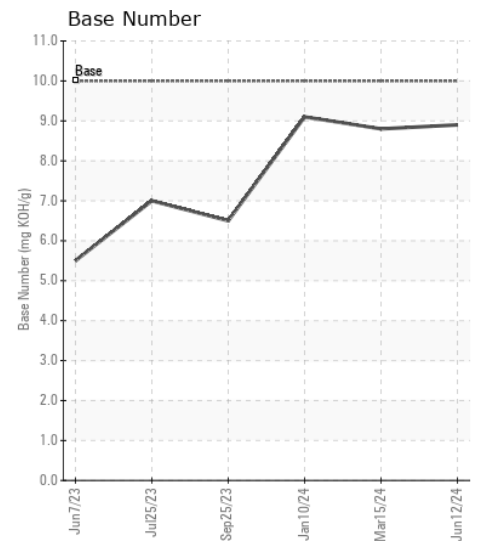
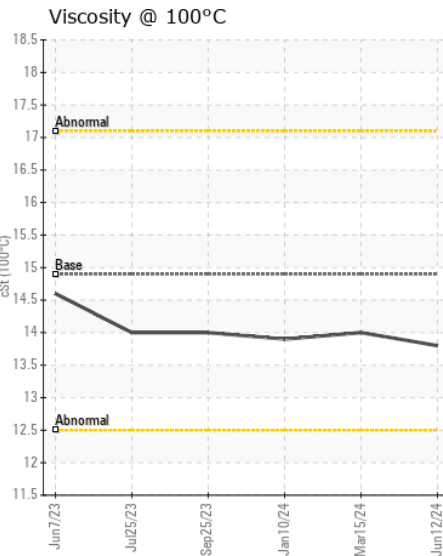
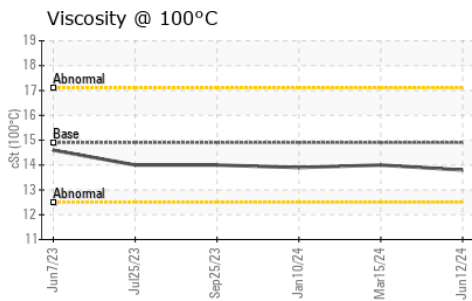
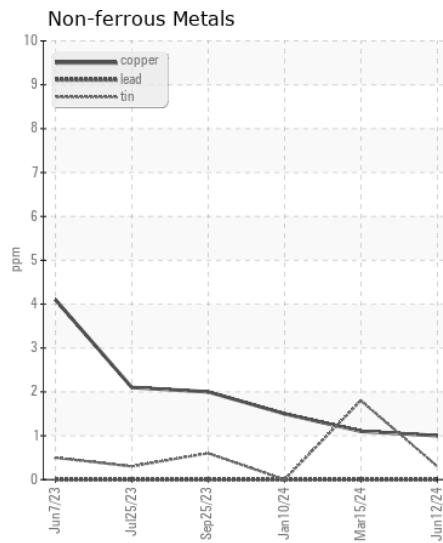
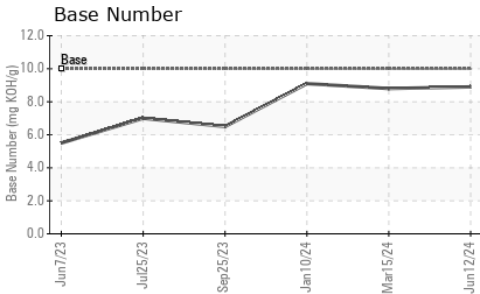
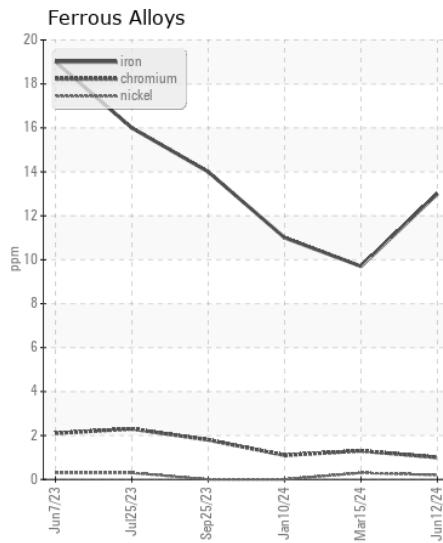
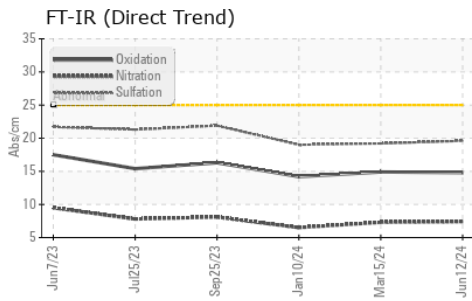
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>5</b>	4	3
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	1	<1
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	>3	<b>0.3</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.4</b>	7.3	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	19.2	19.0
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	<1
Boron	ppm	ASTM D5185m		<b>8</b>	6	21
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>63</b>	59	63
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>948</b>	928	942
Calcium	ppm	ASTM D5185m		<b>1204</b>	1177	1204
Phosphorus	ppm	ASTM D5185m		<b>1107</b>	1013	1074
Zinc	ppm	ASTM D5185m		<b>1348</b>	1283	1336
Sulfur	ppm	ASTM D5185m		<b>3784</b>	3709	3258
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	14.9	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>8.9</b>	8.8	9.1
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.8</b>	14.0	13.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PE0004123  
**Lab Number** : 06217471  
**Unique Number** : 11090335  
**Test Package** : CONST ( Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN )

**Received** : 21 Jun 2024  
**Tested** : 25 Jun 2024  
**Diagnosed** : 25 Jun 2024 - Sean Felton

**PetroCard - Aberdeen**  
 110 Commerce St  
 Aberdeen, WA  
 US 98520  
 Contact: ED ROZMARYN  
 erozmaryn@petrocard.com

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: