



# OIL ANALYSIS REPORT

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

Area  
**[Z20827]**

Machine Id  
**KENWORTH TLL 5**

Component  
**Front Diesel Engine**

Fluid  
**VALVOLINE PREMIUM BLUE (45 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC06176867</b>	WC05892626	WC05924481
Sample Date		Client Info		<b>24 Apr 2024</b>	29 May 2023	02 May 2023
Machine Age	kms	Client Info		<b>951485</b>	1911150	921007
Oil Age	kms	Client Info		<b>30481</b>	56664	9854
Filter Age	kms	Client Info		<b>30481</b>	0	9854
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	<b>20</b>	14	6
Chromium	ppm	ASTM D5185m	>5	<b>2</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	3	<1
Lead	ppm	ASTM D5185m	>150	<b>6</b>	2	2
Copper	ppm	ASTM D5185m	>90	<b>3</b>	2	<1
Tin	ppm	ASTM D5185m	>5	<b>2</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

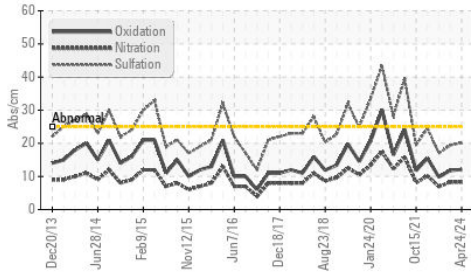
Silicon	ppm	ASTM D5185m	>35	<b>8</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	3
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	<b>0.5</b>	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	8.3	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	19.4	17.0
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

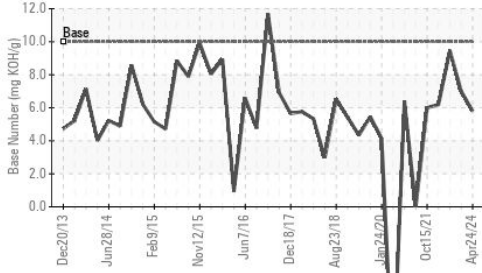
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	1	1
Boron	ppm	ASTM D5185m	2.9	<b>9</b>	9	2
Barium	ppm	ASTM D5185m	0.1	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>7</b>	5	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	18	<b>35</b>	32	22
Calcium	ppm	ASTM D5185m	2936	<b>3265</b>	2474	2485
Phosphorus	ppm	ASTM D5185m	998	<b>1391</b>	954	969
Zinc	ppm	ASTM D5185m	1095	<b>1476</b>	1157	1182
Sulfur	ppm	ASTM D5185m	5469	<b>5497</b>	4539	4697
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.1</b>	11.8	9.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>5.8</b>	7.0	9.47
Visc @ 100°C	cSt	ASTM D445	15.2	<b>13.1</b>	12.9	13.2

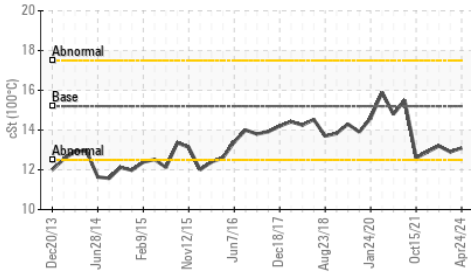
**FT-IR (Direct Trend)**



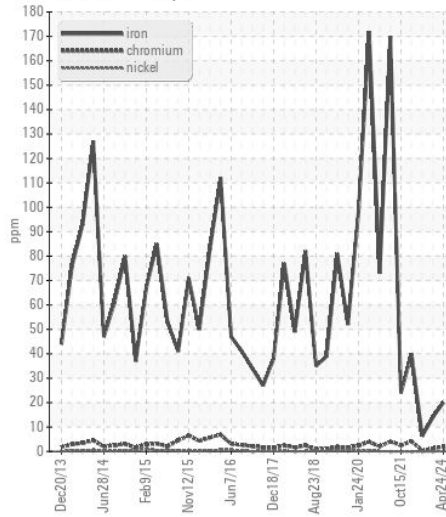
**Base Number**



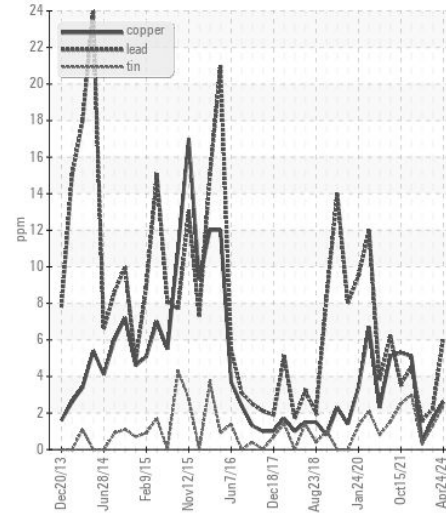
**Viscosity @ 100°C**



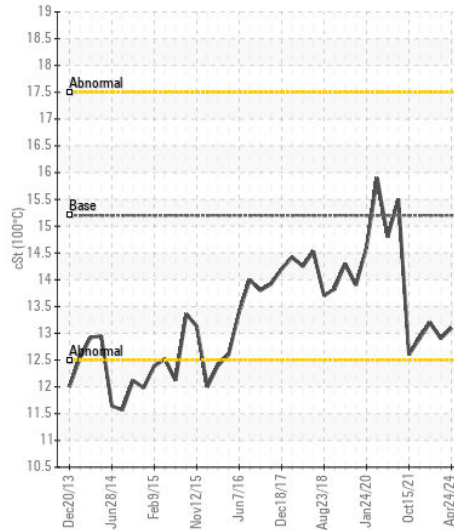
**Ferrous Alloys**



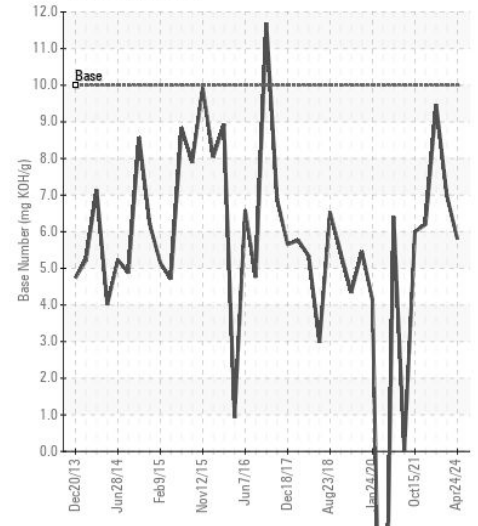
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : WC06176867

**Lab Number** : 06176867

**Unique Number** : 11022920

**Test Package** : FLEET

**Received** : 13 May 2024

**Tested** : 14 May 2024

**Diagnosed** : 14 May 2024 - Wes Davis

**TRANZLIQUID**  
81 HEWLETTS RD  
MOUNT MAUNGANUI, ZZ  
NZ

Contact: AARON LOYE  
aaron@truckline.co.nz

T:  
F:

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)