



# OIL ANALYSIS REPORT

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

Area  
**[Z20829]**

Machine Id  
**KENWORTH TLL 40**

Component  
**Front Diesel Engine**

Fluid  
**VALVOLINE PREMIUM BLUE (47 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC06176865</b>	WC05892631	WC05699633
Sample Date		Client Info		<b>10 Apr 2024</b>	09 May 2023	19 Oct 2022
Machine Age	kms	Client Info		<b>1210382</b>	179798	1152561
Oil Age	kms	Client Info		<b>30584</b>	27237	16741
Filter Age	kms	Client Info		<b>30584</b>	0	16741
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>24</b>	20	26
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	4
Lead	ppm	ASTM D5185m	>40	<b>4</b>	3	5
Copper	ppm	ASTM D5185m	>330	<b>3</b>	4	10
Tin	ppm	ASTM D5185m	>15	<b>2</b>	2	2
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

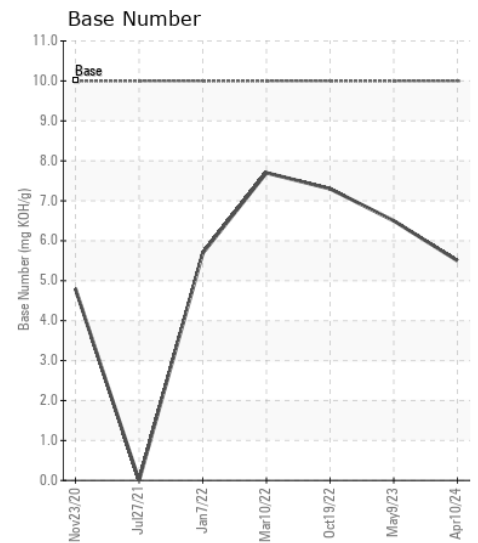
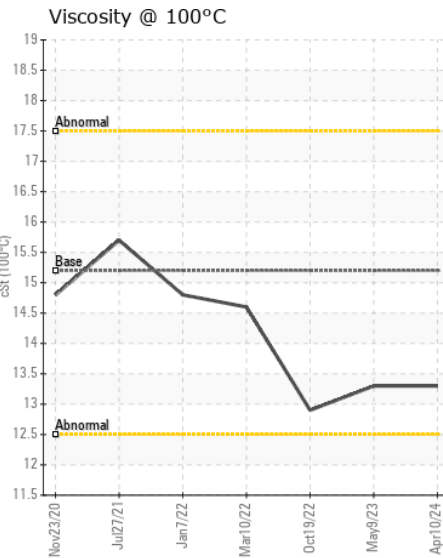
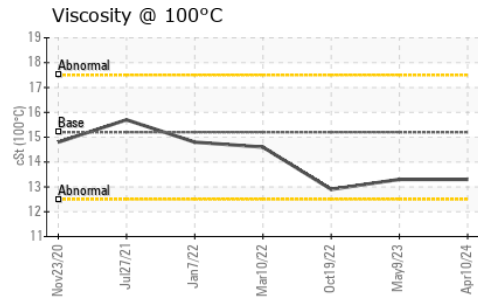
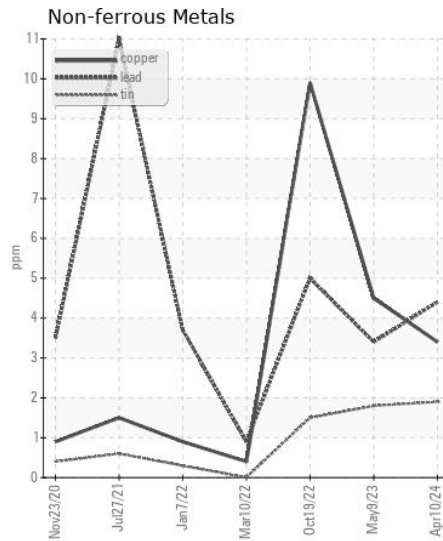
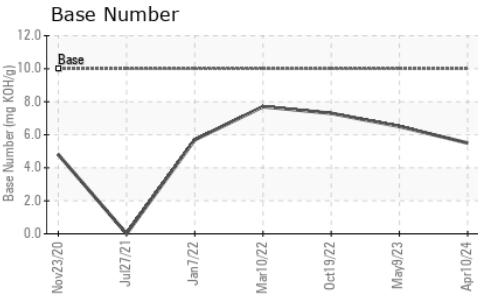
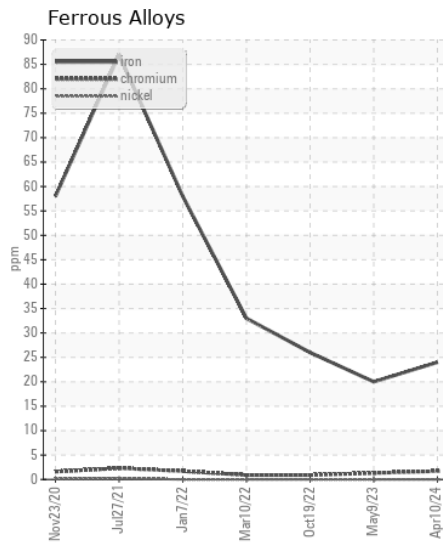
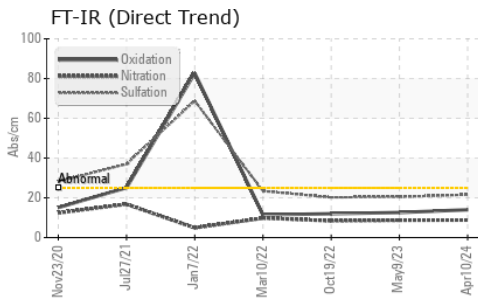
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>13</b>	17	▲ 47
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	0
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>0.8</b>	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	8.7	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.6</b>	20.5	20.2
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>	5	23
Boron	ppm	ASTM D5185m	2.9	<b>7</b>	4	0
Barium	ppm	ASTM D5185m	0.1	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>2</b>	2	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	2
Magnesium	ppm	ASTM D5185m	18	<b>62</b>	40	24
Calcium	ppm	ASTM D5185m	2936	<b>2418</b>	2436	2343
Phosphorus	ppm	ASTM D5185m	998	<b>1021</b>	927	880
Zinc	ppm	ASTM D5185m	1095	<b>1069</b>	1133	971
Sulfur	ppm	ASTM D5185m	5469	<b>3905</b>	4300	3921
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.0</b>	12.6	12.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>5.5</b>	6.5	7.3
Visc @ 100°C	cSt	ASTM D445	15.2	<b>13.3</b>	13.3	12.9



Certificate L2367

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

Sample No. : WC06176865

Lab Number : 06176865

Unique Number : 11022918

Test Package : FLEET

Received : 13 May 2024

Tested : 14 May 2024

Diagnosed : 14 May 2024 - Sean Felton

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

Contact: AARON LOYE  
aaron@truckline.co.nz

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: