



# OIL ANALYSIS REPORT

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

Machine Id  
**KENWORTH 1056**  
 Component  
**Diesel Engine**  
 Fluid  
**VALVOLINE PREMIUM BLUE GEN2 SAE 10W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0837742</b>	WC0837753	WC0837793
Sample Date		Client Info		<b>02 Jun 2024</b>	24 Jan 2024	07 Oct 2023
Machine Age	mls	Client Info		<b>602217</b>	39000	524355
Oil Age	mls	Client Info		<b>40000</b>	39000	38712
Filter Age	mls	Client Info		<b>40000</b>	39000	38712
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>28</b>	35	39
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	5	4
Lead	ppm	ASTM D5185m	>40	<b>4</b>	5	11
Copper	ppm	ASTM D5185m	>330	<b>2</b>	<1	0
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	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

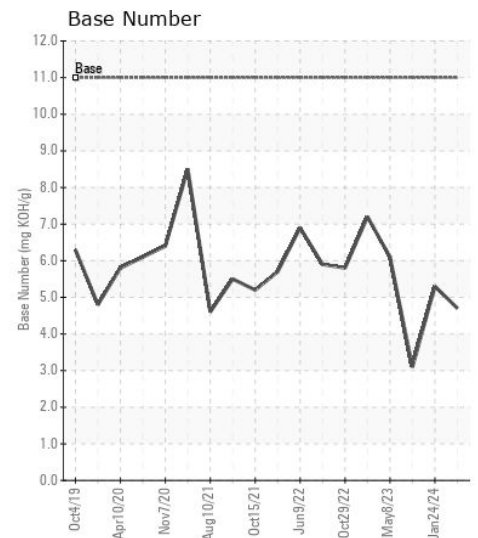
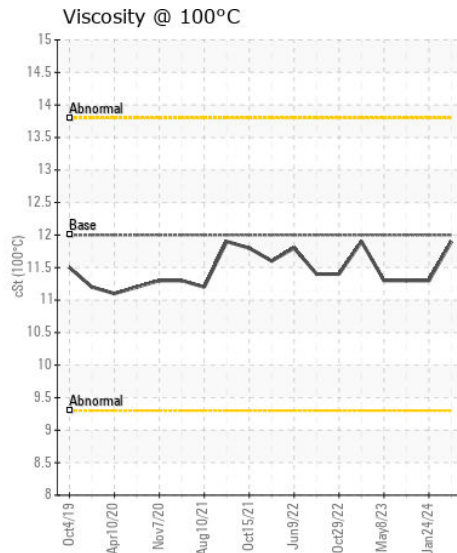
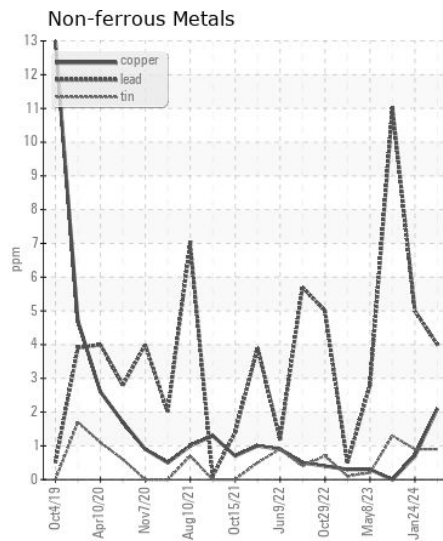
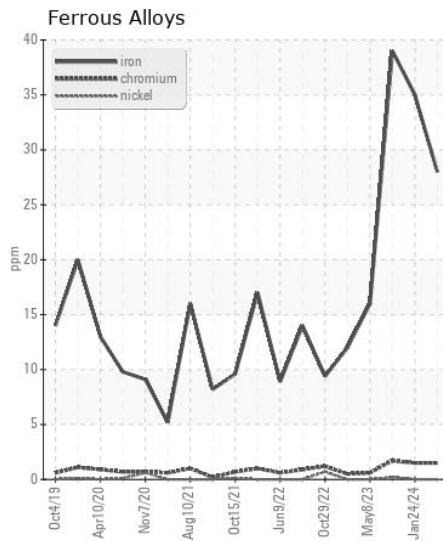
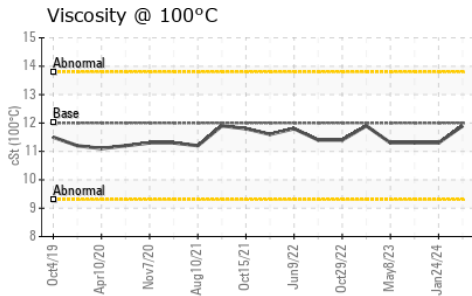
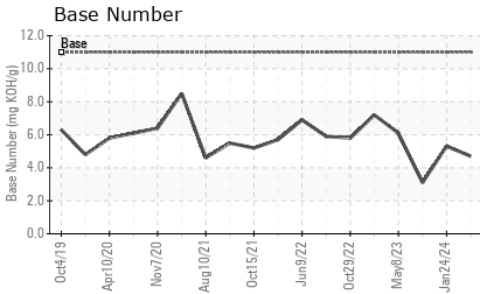
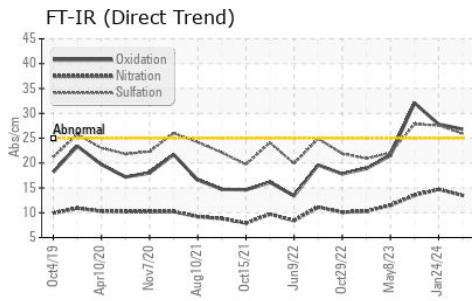
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	7	8
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	4	2
Fuel		WC Method	>5	<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>0.7</b>	1	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.5</b>	14.7	13.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.9</b>	27.6	27.8
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>5</b>	5	3
Boron	ppm	ASTM D5185m		<b>30</b>	21	17
Barium	ppm	ASTM D5185m		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>53</b>	52	55
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>792</b>	761	864
Calcium	ppm	ASTM D5185m		<b>1287</b>	1236	1222
Phosphorus	ppm	ASTM D5185m	800	<b>786</b>	765	717
Zinc	ppm	ASTM D5185m	890	<b>944</b>	913	942
Sulfur	ppm	ASTM D5185m		<b>2819</b>	2684	2321
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>26.8</b>	27.8	32.1
Base Number (BN)	mg KOH/g	ASTM D2896	11	<b>4.7</b>	5.3	▲ 3.1
Visc @ 100°C	cSt	ASTM D445	12.0	<b>11.9</b>	11.3	11.3



Certificate L2367

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

**Sample No.** : WC0837742

**Lab Number** : 06231982

**Unique Number** : 11115475

**Test Package** : FLEET

**Received** : 10 Jul 2024

**Tested** : 10 Jul 2024

**Diagnosed** : 11 Jul 2024 - Don Baldridge

**LIBERTY LINEHAUL WEST INC**

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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)