



# OIL ANALYSIS REPORT

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

Machine Id  
**KENWORTH 1055**  
 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>WC0837755</b>	WC0837795	WC0694172
Sample Date		Client Info		<b>20 Jan 2024</b>	10 Oct 2023	06 Jul 2023
Machine Age	mls	Client Info		<b>653989</b>	610862	579548
Oil Age	mls	Client Info		<b>40000</b>	40000	25042
Filter Age	mls	Client Info		<b>40000</b>	40000	25042
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>37</b>	31	19
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	3	3
Lead	ppm	ASTM D5185m	>40	<b>3</b>	4	3
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m	>15	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	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.

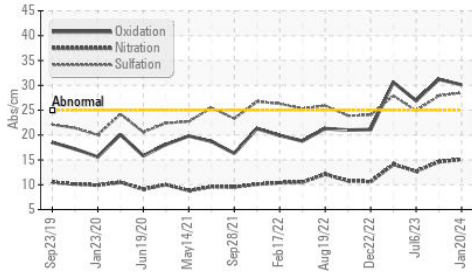
Silicon	ppm	ASTM D5185m	>25	<b>9</b>	11	10
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	3	4
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.7	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>15.1</b>	14.6	12.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>28.5</b>	27.9	24.9
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

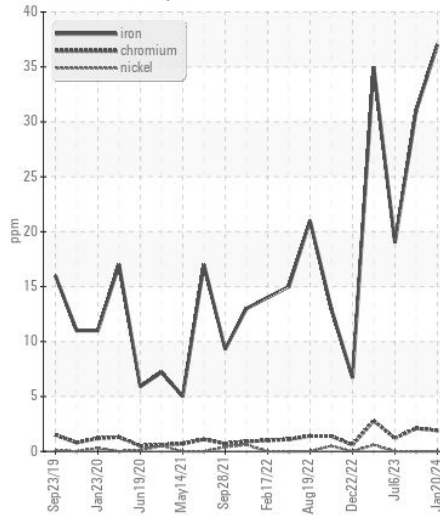
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>6</b>	6	16
Boron	ppm	ASTM D5185m		<b>35</b>	25	27
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>56</b>	58	67
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>859</b>	954	914
Calcium	ppm	ASTM D5185m		<b>1554</b>	1346	1379
Phosphorus	ppm	ASTM D5185m	800	<b>957</b>	816	781
Zinc	ppm	ASTM D5185m	890	<b>1122</b>	1032	1018
Sulfur	ppm	ASTM D5185m		<b>3113</b>	2358	2962
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>30.1</b>	31.2	26.9
Base Number (BN)	mg KOH/g	ASTM D2896	11	<b>5.7</b>	5.4	5.8
Visc @ 100°C	cSt	ASTM D445	12.0	<b>12.5</b>	12.3	11.8

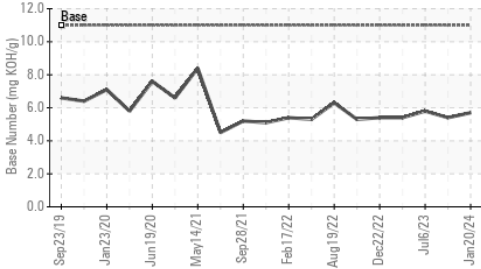
**FT-IR (Direct Trend)**



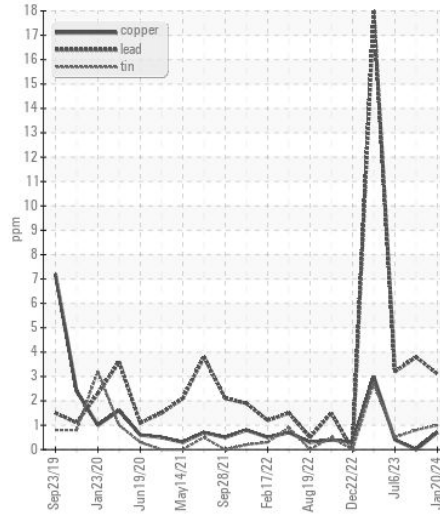
**Ferrous Alloys**



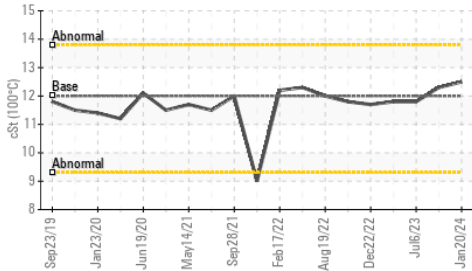
**Base Number**



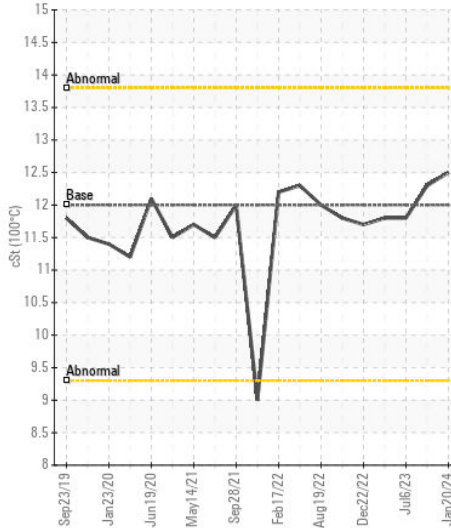
**Non-ferrous Metals**



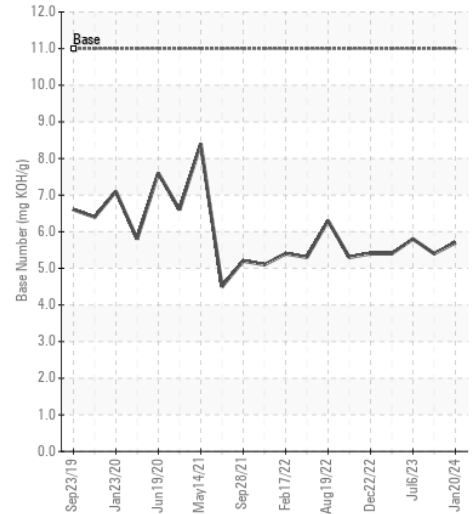
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0837755  
**Lab Number** : 06231959  
**Unique Number** : 11115452  
**Test Package** : FLEET

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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)