



# OIL ANALYSIS REPORT

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

Machine Id  
**1063**  
 Component  
**Front 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>WC0837761</b>	WC0837799	WC0694077
Sample Date		Client Info		<b>04 Mar 2024</b>	20 Oct 2023	24 Jun 2023
Machine Age	mls	Client Info		<b>0</b>	492567	454545
Oil Age	mls	Client Info		<b>40000</b>	35022	31314
Filter Age	mls	Client Info		<b>40000</b>	35022	31314
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>63</b>	33	18
Chromium	ppm	ASTM D5185m	>20	<b>6</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	6	3
Lead	ppm	ASTM D5185m	>40	<b>6</b>	6	2
Copper	ppm	ASTM D5185m	>330	<b>2</b>	0	0
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.

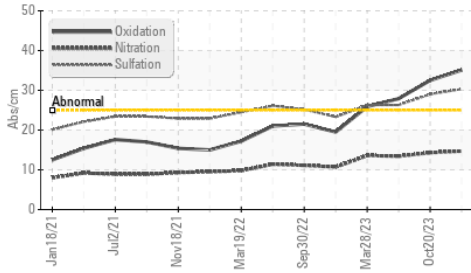
Silicon	ppm	ASTM D5185m	>25	<b>13</b>	11	8
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	7	1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	0.8	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>14.7</b>	14.3	13.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>30.3</b>	29.0	26.3
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

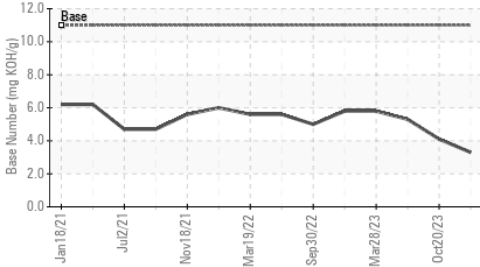
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>5</b>	2	6
Boron	ppm	ASTM D5185m		<b>23</b>	21	22
Barium	ppm	ASTM D5185m		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>51</b>	52	57
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>774</b>	859	815
Calcium	ppm	ASTM D5185m		<b>1249</b>	1307	1255
Phosphorus	ppm	ASTM D5185m	800	<b>801</b>	765	733
Zinc	ppm	ASTM D5185m	890	<b>933</b>	978	926
Sulfur	ppm	ASTM D5185m		<b>2608</b>	2318	2688
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>35.1</b>	32.5	27.9
Base Number (BN)	mg KOH/g	ASTM D2896	11	<b>3.3</b>	4.1	5.3
Visc @ 100°C	cSt	ASTM D445	12.0	<b>11.1</b>	12.0	11.7

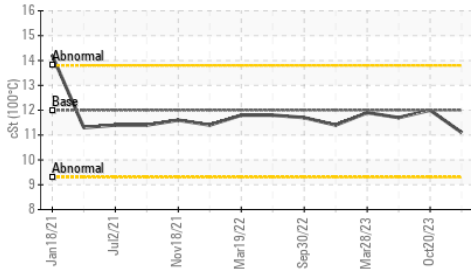
**FT-IR (Direct Trend)**



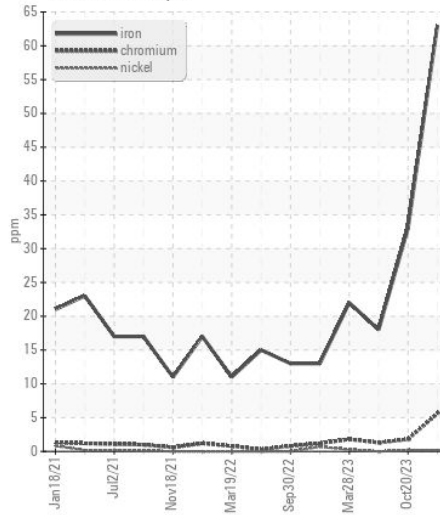
**Base Number**



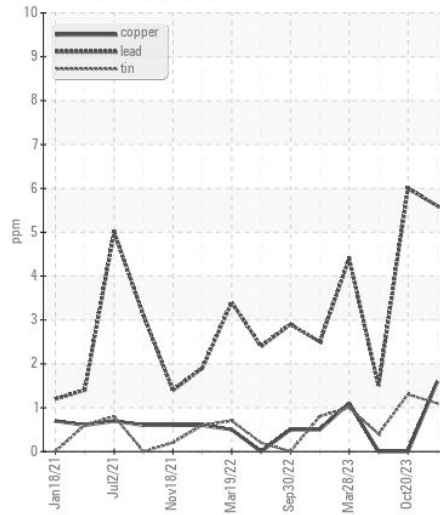
**Viscosity @ 100°C**



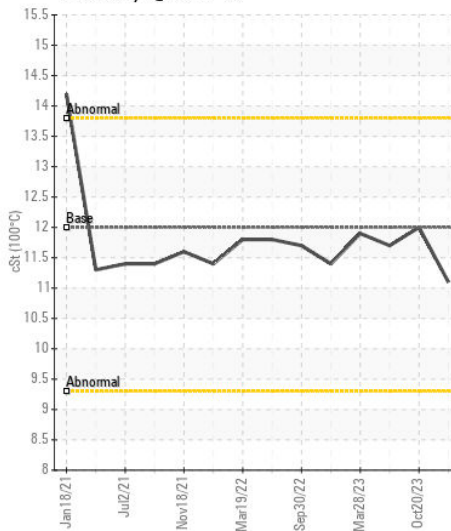
**Ferrous Alloys**



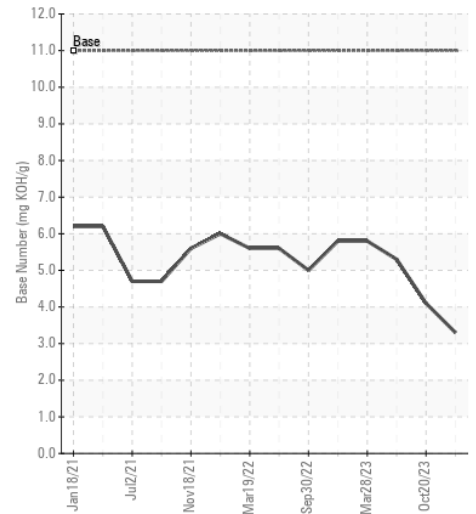
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0837761  
**Lab Number** : 06231957  
**Unique Number** : 11115450  
**Test Package** : FLEET

**Received** : 10 Jul 2024  
**Tested** : 10 Jul 2024  
**Diagnosed** : 11 Jul 2024 - Don Baldridge

**LIBERTY LINEHAUL WEST INC**  
 1501 CHAPIN ROAD  
 MONTEBELLO, CA  
 US 90640

Contact: GREG DUBUQUE  
 greg@libertylinehaulwest.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)

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