



# OIL ANALYSIS REPORT

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

Machine Id  
**191**  
Component  
**Front Diesel Engine**  
Fluid  
**VALVOLINE PREMIUM BLUE 2000 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0787433</b>	WC0787430	WC0731990
Sample Date		Client Info		<b>02 Jan 2024</b>	04 Sep 2023	19 Aug 2022
Machine Age	mls	Client Info		<b>507000</b>	482000	436000
Oil Age	mls	Client Info		<b>25000</b>	26000	16000
Filter Age	mls	Client Info		<b>25000</b>	26000	16000
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>56</b>	66	21
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	3	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	5	4
Lead	ppm	ASTM D5185m	>40	<b>5</b>	10	7
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

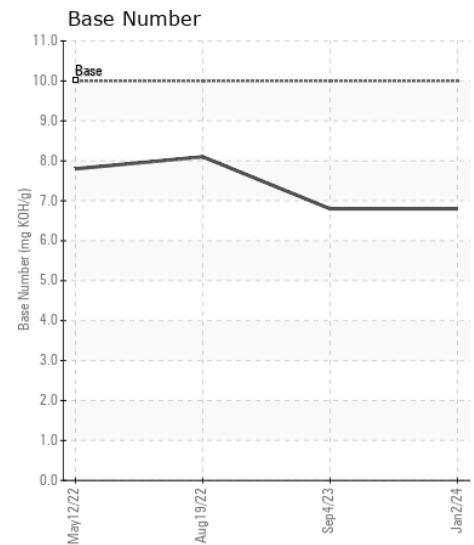
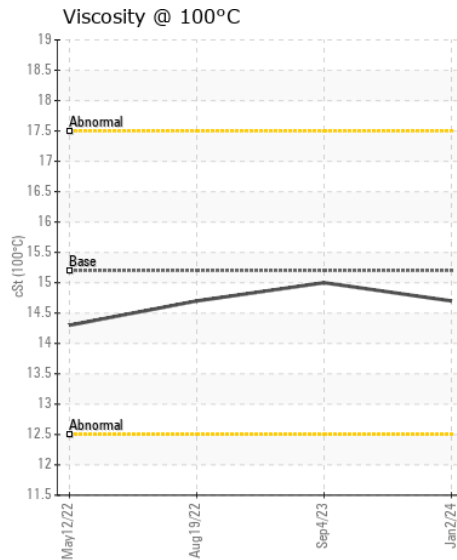
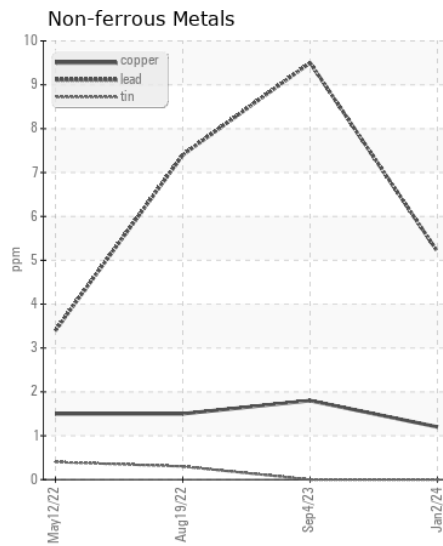
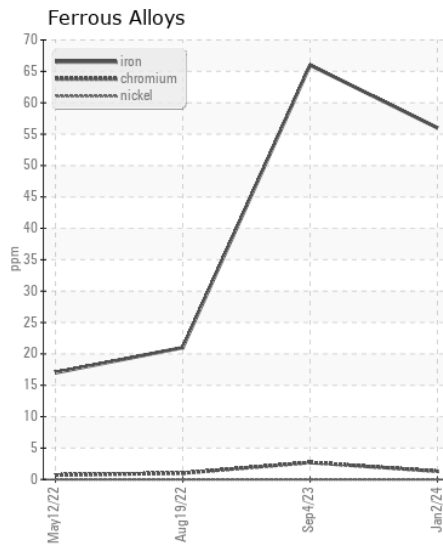
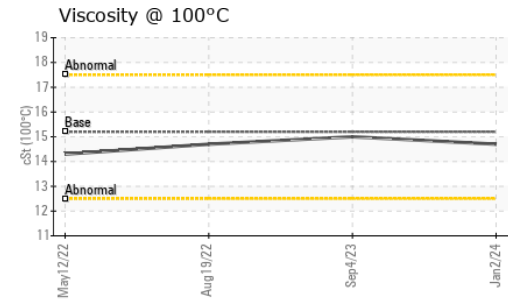
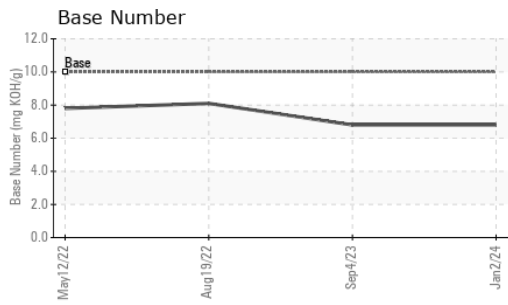
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	8	6
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	4	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>0.9</b>	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.0</b>	13.5	13.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.7</b>	25.7	25.3
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>3</b>	4	3
Boron	ppm	ASTM D5185m		<b>27</b>	21	22
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>56</b>	57	49
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>836</b>	879	776
Calcium	ppm	ASTM D5185m		<b>1369</b>	1410	1275
Phosphorus	ppm	ASTM D5185m		<b>806</b>	779	716
Zinc	ppm	ASTM D5185m		<b>955</b>	989	940
Sulfur	ppm	ASTM D5185m		<b>2352</b>	2387	2602
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.1</b>	23.7	23.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>6.8</b>	6.8	8.1
Visc @ 100°C	cSt	ASTM D445	15.2	<b>14.7</b>	15.0	14.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0787433 **Received** : 12 Jan 2024  
**Lab Number** : 06059977 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10831359 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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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