



# WEAR CHECK

## 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>WC0787430</b>	WC0731990	WC0654992
Sample Date		Client Info		<b>04 Sep 2023</b>	19 Aug 2022	12 May 2022
Machine Age	mls	Client Info		<b>482000</b>	436000	419000
Oil Age	mls	Client Info		<b>26000</b>	16000	14000
Filter Age	mls	Client Info		<b>26000</b>	16000	14000
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>66</b>	21	17
Chromium	ppm	ASTM D5185m	>20	<b>3</b>	1	<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>5</b>	4	3
Lead	ppm	ASTM D5185m	>40	<b>10</b>	7	3
Copper	ppm	ASTM D5185m	>330	<b>2</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

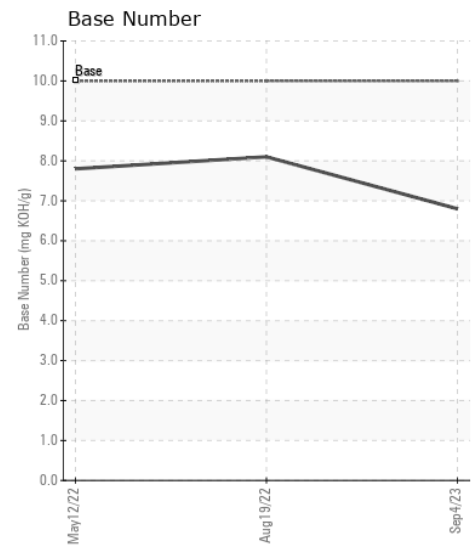
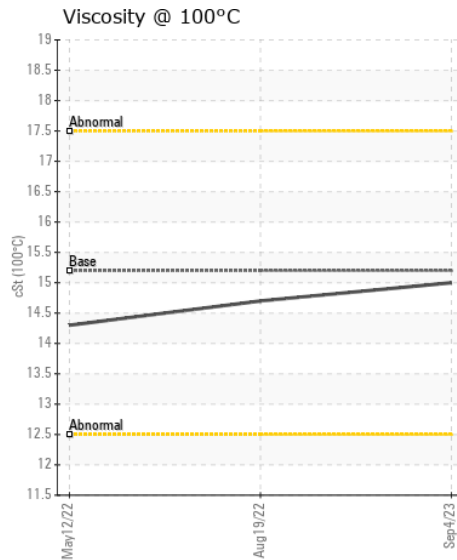
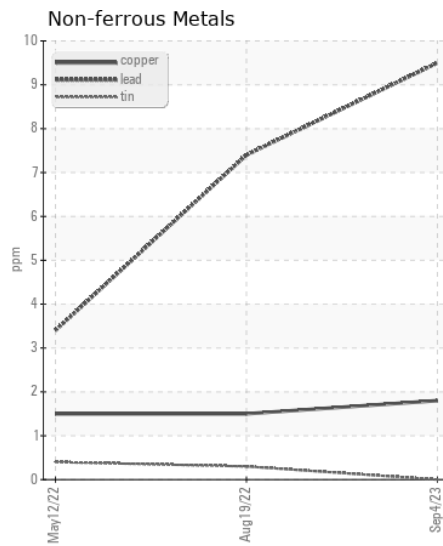
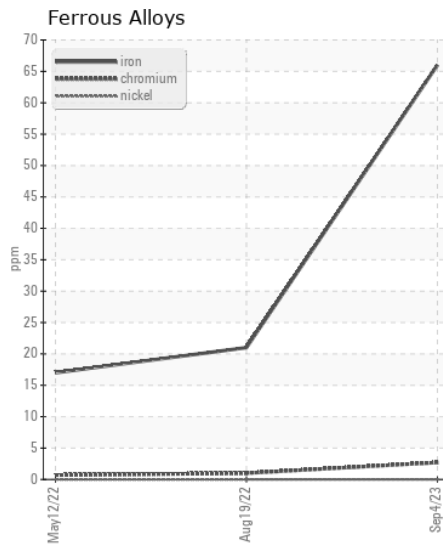
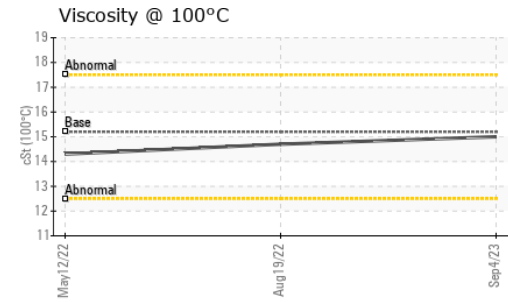
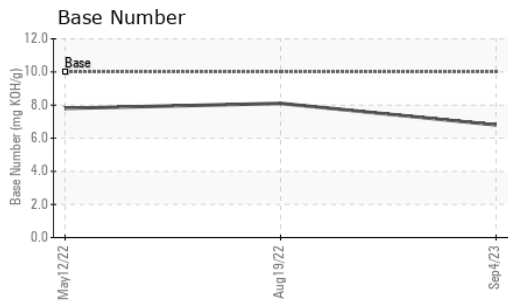
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	1	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>0.9</b>	0.7	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.5</b>	13.1	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.7</b>	25.3	22.4
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>4</b>	3	2
Boron	ppm	ASTM D5185m		<b>21</b>	22	35
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>57</b>	49	53
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>879</b>	776	825
Calcium	ppm	ASTM D5185m		<b>1410</b>	1275	1404
Phosphorus	ppm	ASTM D5185m		<b>779</b>	716	827
Zinc	ppm	ASTM D5185m		<b>989</b>	940	1040
Sulfur	ppm	ASTM D5185m		<b>2387</b>	2602	2093
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.7</b>	23.6	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>6.8</b>	8.1	7.8
Visc @ 100°C	cSt	ASTM D445	15.2	<b>15.0</b>	14.7	14.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0787430 **Received** : 12 Jan 2024  
**Lab Number** : 06059975 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10831357 **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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