

# **OIL ANALYSIS REPORT**

Sample Rating Trend





Component Natural Gas Engine

VALVOLINE PREMIUM BLUE 9200 15W40 (--- GAL)

## DIAGNOSIS

## Recommendation

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

## Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

The condition of the oil is acceptable for the time in service.

( GAL)			Nov2023	Dec2023		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0878160	WC0830267	
Sample Date		Client Info		22 Dec 2023	01 Nov 2023	
Machine Age	kms	Client Info		17686	7076	
Oil Age	kms	Client Info		0	0	
Oil Changed		Client Info		Changed	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	14	31	
Chromium	ppm	ASTM D5185(m)	>4	<1	0	
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>3	0	<1	
Aluminum	ppm	ASTM D5185(m)	>9	2	3	
Lead	ppm	ASTM D5185(m)	>30	<1	1	
Copper	ppm	ASTM D5185(m)	>35	4	15	
Tin	ppm	ASTM D5185(m)	>4	<1	<1	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		8	32	
Barium	ppm	ASTM D5185(m)		<1	3	
Molybdenum	ppm	ASTM D5185(m)		57	93	
Manganese	ppm	ASTM D5185(m)		1	9	
Magnesium	ppm	ASTM D5185(m)		722	575	
Calcium	ppm	ASTM D5185(m)		1185	1123	
Phosphorus	ppm	ASTM D5185(m)		601	559	
Zinc	ppm	ASTM D5185(m)		784	619	
Sulfur	ppm	ASTM D5185(m)		1939	1933	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	11	38	
Sodium	ppm	ASTM D5185(m)		2	3	
Potassium	ppm	ASTM D5185(m)	>20	2	<1	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	
Nitration	Abs/cm	ASTM D7624*	>20	11.8	7.5	
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.2	20.2	
FLUID DEGRADA		method	limit/base	current	history1	history2
	Abs/.1mm	ASTM D7414*	>25	20.6	14.2	
CAUCUION			- 20	20.0		

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°C		VISUAL		method	limit/base	current	history1	history2
		White Metal	scalar	Visual*	NONE	NONE		
		Yellow Metal	scalar	Visual*	NONE	NONE		
		Precipitate	scalar	Visual*	NONE	NONE		
		Silt	scalar	Visual*	NONE	NONE		
		Debris	scalar	Visual*	NONE	NONE		
		Sand/Dirt	scalar	Visual*	NONE	NONE		
	Dec22/23	Appearance	scalar	Visual*	NORML	NORML		
	Dec	Odor	scalar	Visual*	NORML	NORML	NORML	
		Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	
		Free Water	scalar	Visual*		NEG	NEG	
		FLUID PROPERT	IES	method	limit/base	current	history1	history2
		Visc @ 100°C	cSt	ASTM D7279(m)	14.8	14.3	13.0	
		GRAPHS						
	1	Iron (ppm)				Lead (ppm)		
		00 Severe			60	0		
		0			40			
	L	40 Abnormal			<u> </u>	Abnormal		-
		20			20	1		
		0						
		Nov1/23			Dec22/23	Nov1/23		Dec22/23
		No			Deci	No		Dec
		Aluminum (ppm)			5	Chromium (ppr	m)	
		Savara				Severe		
		19					************************	-
	dd	10 Abnormal			Ed 4	Abnormal		-
		5						
		0			(			
		Nov1/23			Dec22/23	Nov1/23		Dec22/23
					Der			Der
		Copper (ppm)			200	Silicon (ppm)		
		Severe						
		60 -			150			
	mdd	40 - Abnormal			틆 100			
		20			50	)		
		0						
		Nov1/23			Dec22/23	Nov1/23		Dec22/23
		∠ Viscosity @ 100°C			De			De
		<sup>18</sup> Abnormal			1400	Additives		
		16			1200	calcium		
	cSt (100°C)	Base				- Zinc		
		Abnormal			<sup>≞</sup> 800	•	· · · · · · · · · · · · · · · · · · ·	A hand have been done at her with the set of
		12			600	-	******	
		10			400 22	53+1		
		Nov1/23			Dec22/23	Nov1/23		Dec22/23
Iso 17025:2017 Accredited Laboratory To discuss this sa Test denoted (*) c	ample No. ab Number nique Number est Package umple report, co putside scope o	: 02605817 : 5698902 : MOB 1 ( Additional <sup>-</sup> ontact Customer Servi f accreditation, (m) m	Recieved Diagnose Diagnose Tests: Vis ice at 1-8 ethod mo	d : 02 ed : 02 tician : We sual ) 800-268-213 odified, (e) te	Jan 2024 Jan 2024 s Davis 1. ested at extern	2200 UPPER . nal lab.	JAMES,, MOUNTAIN T MOU Contae ron.skinne	DF HAMILTON RANSIT STOREROOM INT HOPE, ON CA LOR 1W0 ct: Ron Skinner er@hamilton.ca T:
		ion are based on the s					F:	(905)679-4502

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