

## NORMAL WEAR NORMAL CONTAMINATION **FLUID CONDITION** NORMAL

## [155883]

## 25456854

**Diesel Engine** 

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

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RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		CU0023272		
	Sample Date		Client Info		12 Jun 2024		
	Machine Age	hrs	Client Info		34		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185(m)		6		
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185(m)		0		
	Nickel	ppm	ASTM D5185(m)	>2	<1		
	Titanium	ppm	ASTM D5185(m)		<1		
	Silver	ppm	ASTM D5185(m)		<1		
	Aluminum	ppm	ASTM D5185(m)	>20	1		
	Lead	ppm	ASTM D5185(m)	>40	8		
	Copper	ppm	ASTM D5185(m)	>330	166		
	Tin	ppm	ASTM D5185(m)	>15	0		
	Vanadium	ppm	ASTM D5185(m)		0		
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	VLITE		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	12		
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)		<1		
	Fuel		WC Method		<1.0		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	ASTM D7844*	>6	0		
	Nitration	Abs/cm	ASTM D7624*	>20	7.1		
	Sulfation	Abs/.1mm	ASTM D7415*	>30	18.9		
	Silt	scalar	Visual*	NONE	NONE		
	Debris	scalar	Visual*	NONE	NONE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML		
	Emulsified Water	scalar	Visual*	>0.2	NEG		
	0						
LUID CONDITION	Sodium	ppm	ASTM D5185(m)		4		
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)		39		
	Barium	ppm	ASTM D5185(m)		1		
	Molybdenum	ppm	ASTM D5185(m)		51		
	Manganese	ppm	ASTM D5185(m)		2		
	Magnesium	ppm	ASTM D5185(m)		658		
	Calcium	ppm	ASTM D5185(m)		1543		
	Phosphorus	ppm	ASTM D5185(m)		704		
	Zinc	ppm	ASTM D5185(m)		823		
	Sulfur	ppm	ASTM D5185(m)		2063		
	Oxidation	Abs/.1mm	ASTM D7414*		16.7		
	Visc @ 40°C	cSt	ASTM D7279(m)		106		
	Visc @ 100°C	cSt	ASTM D7279(m)	14.8	14.2		
	Viscosity Index (VI)	Scale	ASTM D2270*	133	136		



