

## Machine Id 6320228 Component Diesel Engine VALVOLINE 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.	Sample Number		Client Info		IL0035069		
	Sample Date		Client Info		20 Jan 2024		
	Machine Age	mls	Client Info		0		
	Oil Age	mls	Client Info		0		
	Filter Age	mls	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR	Iron		ASTM D5185m	>100	24		
WEAN	Chromium	ppm ppm	ASTM D5185m		1		
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0		
	Titanium		ASTM D5185m	24	0		
	Silver	ppm	ASTM D5185m	2	0		
	Aluminum	ppm	ASTM D5185m		9		
	Lead	ppm	ASTM D5185m		9		
	Copper	ppm ppm	ASTM D5185m	-	4		
	Tin		ASTM D5185m		4 0		
	Vanadium	ppm	ASTM D5185m	>15	0		
	White Metal	ppm	*Visual	NONE	NONE		
		scalar					
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	10		
	Potassium	ppm	ASTM D5185m	>20	21		
Light fuel dilution occurring. No other contaminants were detected in the oil.	Fuel	%	ASTM D3524	>5	1.4		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>3	0.4		
	Nitration	Abs/cm	*ASTM D7624	>20	9.4		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1		
	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		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		116		
	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		67		
	Manganese	ppm	ASTM D5185m		0		
	Magnesium	ppm	ASTM D5185m		572		
	Calcium	ppm	ASTM D5185m		1221		
	Phosphorus	ppm	ASTM D5185m		814		
	Zinc	ppm		1069	967		
	Sulfur	ppm	ASTM D5185m	2624	2654		
	0.11.11	AL / 4	*AOTH DIALS	0.5			

Oxidation

Visc @ 100°C cSt

Abs/.1mm \*ASTM D7414 >25

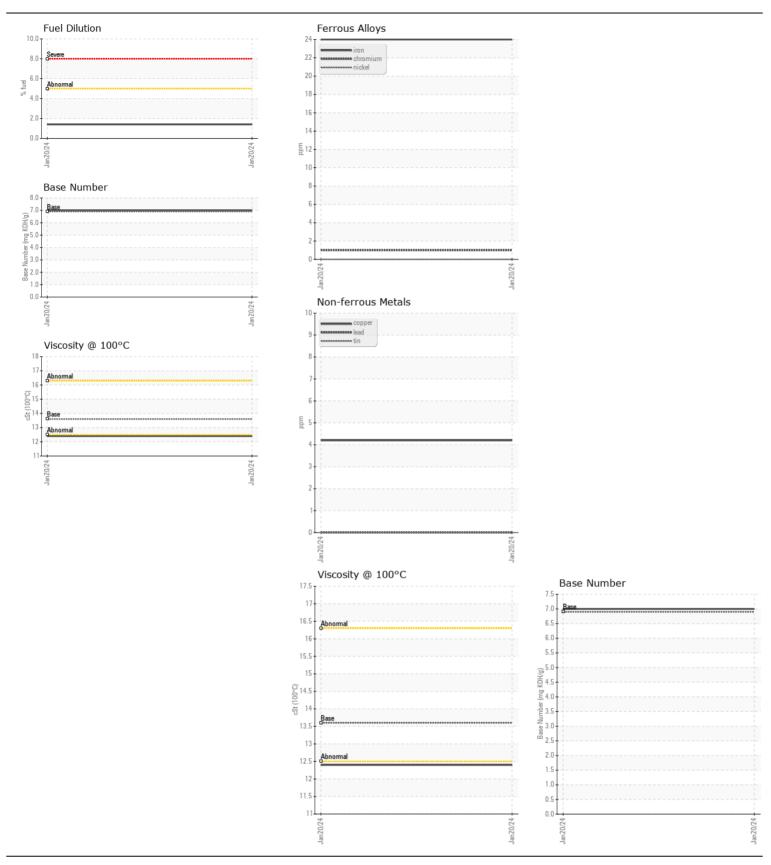
ASTM D445 13.6

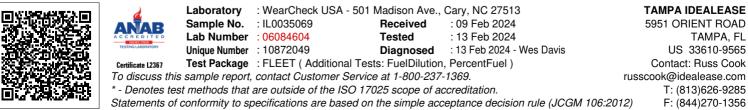
Base Number (BN) mg KOH/g ASTM D2896 6.9

18.1

7.0

12.4





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Page 2 of 2