

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

277 FRONT Component

Diesel Engine

VALVOLINE 15W40 (--- GAL)

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RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Number		Client Info		CU0022469		
	Sample Date	le ve	Client Info		28 May 2024		
	Machine Age Oil Age	hrs	Client Info Client Info		986		
	Filter Age	hrs	Client Info		6 6		
	Oil Changed	hrs	Client Info		Not Changd		
	Filter Changed		Client Info		Not Change		
	Sample Status		Client Into		NORMAL		
WEAR	Iron	ppm	ASTM D5185(m)	>100	9		
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185(m)	>20	<1		
	Nickel	ppm	ASTM D5185(m)	>4	0		
	Titanium	ppm	ASTM D5185(m)		0		
	Silver	ppm	ASTM D5185(m)	>3	0		
	Aluminum	ppm	ASTM D5185(m)	>20	<1		
	Lead	ppm	ASTM D5185(m)	>40	0		
	Copper	ppm	ASTM D5185(m)	>330	1		
	Tin	ppm	ASTM D5185(m)	>15	<1		
	Vanadium	ppm	ASTM D5185(m)		0		
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	4		
	Potassium	ppm	ASTM D5185(m)	>20	- <1		
Fuel content negligible. There is no indication of any contamination in the oil.	Fuel	%	ASTM D3103(III) ASTM D7593*		0.8		
	Water	/0	WC Method		NEG		
	Glycol		WC Method	/ 0.12	NEG		
	Soot %	%	ASTM D7844*	>3	0		
	Nitration	Abs/cm	ASTM D7624*	>20	6.1		
	Sulfation	Abs/.1mm	ASTM D7415*	>30	20.2		
	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		
	Sodium				E	[
FLUID CONDITION	Sodium Boron	ppm ppm	ASTM D5185(m) ASTM D5185(m)	39	5 43		
The condition of the oil is acceptable for the time in service.	Barium	ppm	ASTM D5185(m) ASTM D5185(m)		43		
	Molybdenum	ppm	ASTM D5185(m)		45		
	Manganese	ppm		1	+5 <1		
	Magnesium	ppm	ASTM D5185(m)	616	777		
	Calcium	ppm	ASTM D5185(m)	1554	1150		
	Phosphorus	ppm	ASTM D5185(m)	899	684		
	Zinc	ppm	ASTM D5185(m)	1069	783		
	Sulfur	ppm	ASTM D5185(m)	2624	1896		

Oxidation

Abs/.1mm ASTM D7414* >25

Visc @ 100°C cSt ASTM D7279(m) 13.6

16.5

14.1



