

## Machine Id 8118822 Componen **Diesel Engine** VALVOLINE 15W40 (--- GAL)

VALVOLINE 15W40 ( GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor. Please specify the component make and model with your next sample.	Sample Number		Client Info		IL0036579	IL0033235	
	Sample Date		Client Info		24 Apr 2024	03 Nov 2023	
	Machine Age	mls	Client Info		157491	142550	
	Oil Age	mls	Client Info		0	0	
	Filter Age	mls	Client Info		0	0	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	N/A	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron	ppm	ASTM D5185m	>100	13	14	
WEAT	Chromium	ppm	ASTM D5185m		<1	1	
All component wear rates are normal.	Nickel		ASTM D5185m		0	0	
	Titanium	ppm	ASTM D5185m	>4	0	<1	
	Silver	ppm		. 0			
		ppm	ASTM D5185m		<1	0	
	Aluminum	ppm	ASTM D5185m		3	3	
	Lead	ppm	ASTM D5185m		1	1	
	Copper	ppm	ASTM D5185m		1	1	
	Tin	ppm	ASTM D5185m	>15	0	<1	
	Vanadium	ppm	ASTM D5185m		<1	<1	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	5	7	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	3	3	
	Fuel		WC Method	>5	<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.4	0.5	
	Nitration	Abs/cm	*ASTM D7624	>20	10.4	10.1	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	23.0	24.0	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2	2	
	Boron	ppm	ASTM D5185m	39	- 61	59	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		64	73	
	Manganese	ppm	ASTM D5185m		<1	<1	
	Magnesium	ppm	ASTM D5185m		619	584	
	Calcium		ASTM D5185m		1464	1275	
		ppm	ASTM D5185m			800	
	Phosphorus	ppm			837		
	Zinc	ppm	ASTM D5185m		1009	1027	
	Sulfur	ppm	ASTM D5185m		3040	2475	
	Oxidation	Abs/.1mm	*ASTM D7414		20.2	20.4	
	Base Number (BN)	mg KOH/g	ASTM D2896	6.9	5.0	5.1	

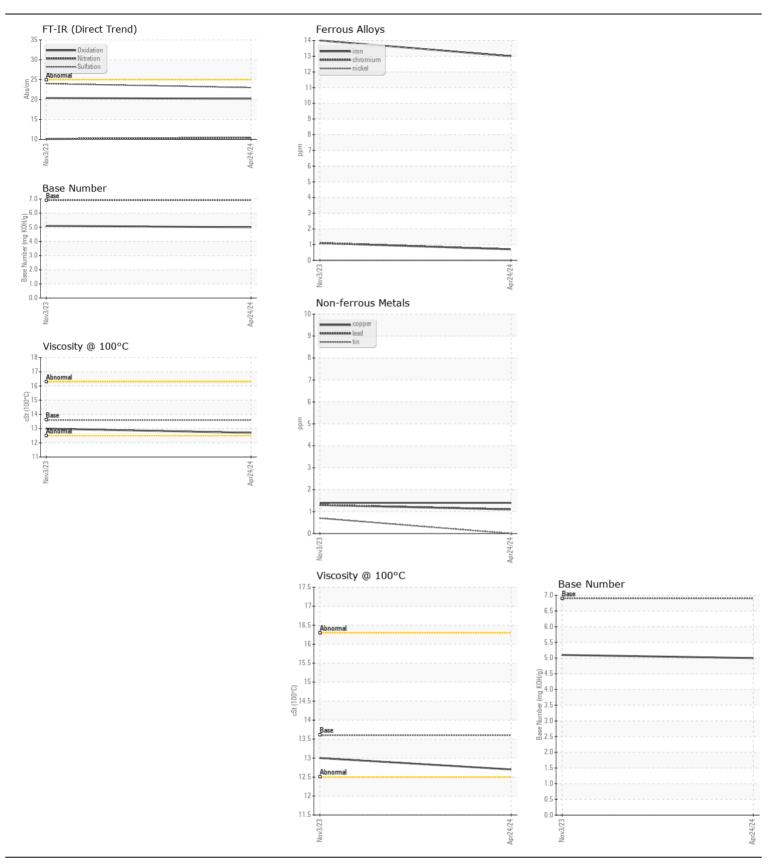
Visc @ 100°C cSt

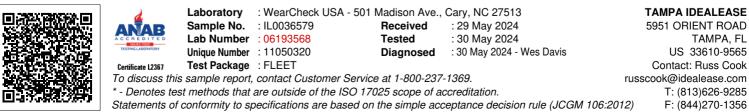
13.0

12.7

ASTM D445 13.6

NORMAL WEAR NORMAL CONTAMINATION FLUID CONDITION NORMAL





Contact/Location: Russ Cook - IDETAMFL Page 2 of 2