

Machine Id **1385** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

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		WC0870714	WC0697052	
	Sample Date		Client Info		05 Dec 2023	01 Aug 2022	
compenent mane and meder man year next cample.	Machine Age	mls	Client Info		218850	204162	
	Oil Age	mls	Client Info		0	0	
	Filter Age	mls	Client Info		0	0	
	Oil Changed		Client Info		Not Changd	Not Changd	
	Filter Changed		Client Info		Not Changd	Not Changd	
	Sample Status				NORMAL	NORMAL	
WEAD	Iron			. 100	4.4	10	
WEAR All component wear rates are normal.	Iron Chromium	ppm	ASTM D5185m ASTM D5185m		14 <1	16 <1	
	Nickel	ppm	ASTM D5185m		<1 <1	0	
	Titanium	ppm	ASTM D5185m	>4	0	0	
	Silver	ppm	ASTM D5185m	. 2	0	0	
		ppm					
	Aluminum Lead	ppm	ASTM D5185m ASTM D5185m		3 0	4	
	Copper	ppm	ASTM D5185m		4	77	
	Tin	ppm	ASTM D5185m		4 <1	<1	
	Vanadium	ppm	ASTM D5185m	>15	0	<1	
	White Metal	ppm scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
		Scalai	visuai			NONL	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	9	10	
	Potassium	ppm	ASTM D5185m	>20	2	4	
There is no indication of any contamination in the oil.	Fuel		WC Method	>5	<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.3	0.2	
	Nitration	Abs/cm	*ASTM D7624	>20	8.9	10.3	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	20.3	
	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	
	0			450	•	4	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2	4	
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		33	46	
	Barium	ppm	ASTM D5185m		3	0	
	Molybdenum	ppm	ASTM D5185m	100	79	74	
	Manganese	ppm	ASTM D5185m	450	0	<1	
	Magnesium	ppm	ASTM D5185m		160	30	
	Calcium	ppm	ASTM D5185m		1920	1863	
	Phosphorus	ppm	ASTM D5185m		972	867	
	Zinc	ppm	ASTM D5185m		1170	1042	
	Sulfur	ppm	ASTM D5185m		3680	3267	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	15.2	

Base Number (BN) mg KOH/g ASTM D2896 8.5

ASTM D445 14.4

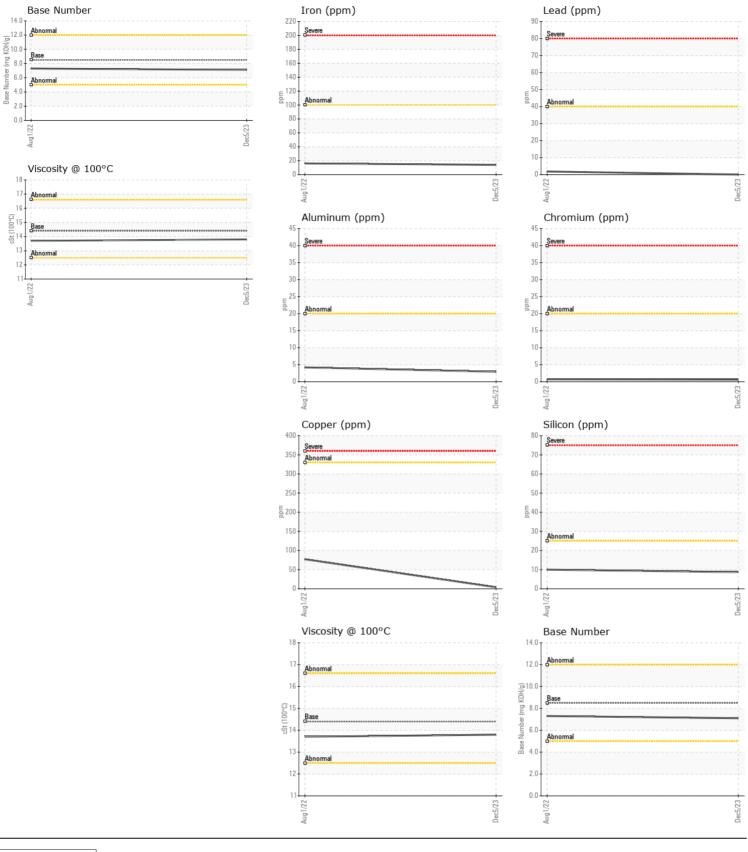
Visc@100°C cSt

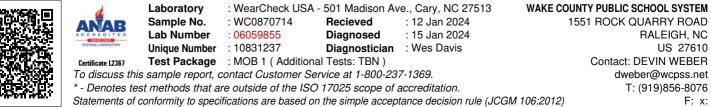
13.7

7.1

13.8

7.3 ---





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Contact/Location: DEVIN WEBER - WCPRAL