

Machine Id **12965** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		WC0929320	WC0841812	WC0842096
Resample at the next service interval to monitor. Please specify the	Sample Date		Client Info		06 May 2024	10 Feb 2024	30 Dec 2023
component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.	Machine Age	mls	Client Info		265520	253020	243379
brand, type, and viscosity of the on on your next sample.	Oil Age	mls	Client Info		0	0	0
	Filter Age	mls	Client Info		0	0	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	<100	34	16	13
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		3	2	1
	Nickel	ppm	ASTM D5185m		ہ <1	<1	0
	Titanium	ppm	ASTM D5185m	~7	<1	0	0
	Silver	ppm	ASTM D5185m	-3	<1	0	0
	Aluminum	ppm	ASTM D5185m		7	6	4
	Lead	ppm	ASTM D5185m		, <1	1	<1
	Copper	ppm	ASTM D5185m		2	1	<1
	Tin	ppm	ASTM D5185m		-	<1	<1
	Vanadium	ppm	ASTM D5185m	210	<1	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	10	7	6
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	7	4	2
	Fuel		WC Method	>5	<1.0	<1.0	<1.0
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.6	0.3	0.3
	Nitration	Abs/cm	*ASTM D7624	>20	9.3	7.7	7.5
	Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	21.8	21.4
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m	>158	1	2	0
	Boron	ppm	ASTM D5185m		284	304	210
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	0
	Molybdenum	ppm	ASTM D5185m		94	86	70
	Manganese	ppm	ASTM D5185m		<1	<1	<1
	Magnesium	ppm	ASTM D5185m	450	419	528	630
	Calcium	ppm	ASTM D5185m		1414	1368	1183
	Phosphorus	ppm	ASTM D5185m		940	1128	1042
	Zinc	ppm	ASTM D5185m		1291	1337	1277
	Sulfur	ppm	ASTM D5185m		3207	3292	3121
	Out de them	AL / 4		05	10.4	10.0	10.0

Oxidation

Visc @ 100°C cSt

16.8

7.2

13.3

16.9

7.7

12.9

19.4

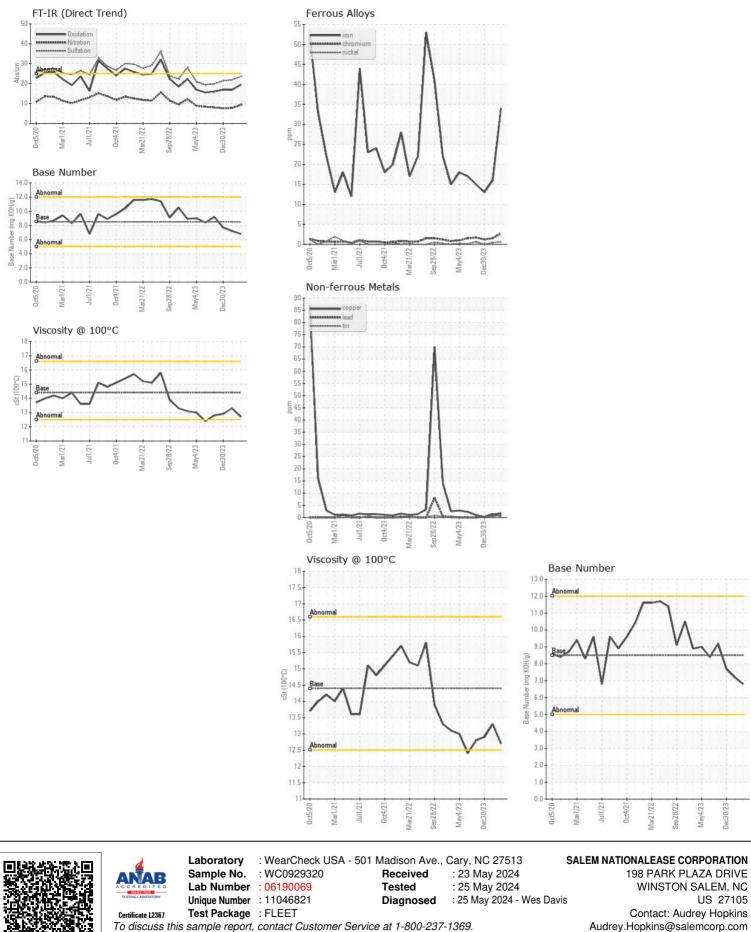
6.8

12.7

Abs/.1mm *ASTM D7414 >25

ASTM D445 14.4

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



To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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