

Machine Id **41562** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (46 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. Please specify the brand, type, and viscosity of the oil on your next sample.	Sample Number		Client Info		WC0829770	WC0829890	WC0829618
	Sample Date		Client Info		24 Mar 2024	23 Jan 2024	20 Oct 2023
	Machine Age	mls	Client Info		0	113841	96385
	Oil Age	mls	Client Info		0	0	0
	Filter Age	mls	Client Info		0	0	0
	Oil Changed		Client Info		N/A	Changed	Changed
	Filter Changed		Client Info		N/A	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>100	23	16	22
	Chromium	ppm	ASTM D5185m		<1	<1	<1
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0	0	<1
	Titanium	ppm	ASTM D5185m		5	<1	<1
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m		4	2	3
	Lead	ppm	ASTM D5185m		14	1	4
	Copper	ppm	ASTM D5185m	>330	<1	<1	<1
	Tin	ppm	ASTM D5185m	>15	<1	<1	<1
	Vanadium	ppm	ASTM D5185m		0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	\ 25	6	4	4
CONTAMINATION	Potassium	ppm	ASTM D5185m		5	4	3
There is no indication of any contamination in the oil.	Fuel	ρριιι	WC Method		<1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method	20.2	NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.7	0.9	0.8
	Nitration	Abs/cm	*ASTM D7624		11.5	9.9	10.3
	Sulfation	Abs/.1mm	*ASTM D7415		24.8	21.0	22.0
	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	<u>\158</u>	2	0	<1
	Boron	ppm	ASTM D5185m		57	1	1
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	<1	0
	Molybdenum	ppm	ASTM D5185m		86	68	70
	Manganese	ppm	ASTM D5185m		<1	0	0
	Magnesium	ppm	ASTM D5185m	450	857	990	1022
	Calcium	ppm	ASTM D5185m		1591	1153	1152
	Phosphorus	ppm	ASTM D5185m		863	1086	1144
	Zinc	ppm	ASTM D5185m		1017	1301	1331
	Sulfur	ppm	ASTM D5185m		3539	3419	3801
	Outstation	AL / 4	****	05	10.0	10.0	17.0

Oxidation

Visc @ 100°C cSt

Abs/.1mm *ASTM D7414 >25

ASTM D445 14.4

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

16.2

8.8

13.1

17.2

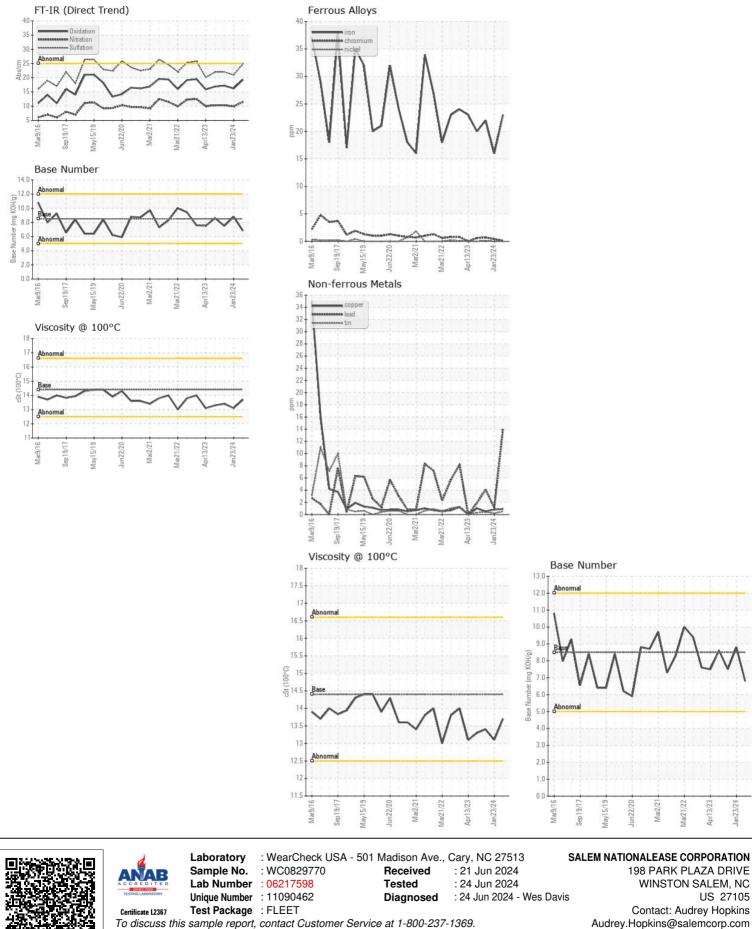
7.5

13.4

19.3

6.8

13.7



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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