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Machine Id 11865 Component Diesel Engine 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. Please specify the brand, type, and viscosity of the oil on your next sample.	Sample Number		Client Info		WC0883295	WC0796005	WC0795913
	Sample Date		Client Info		01 Feb 2024	17 Aug 2023	24 May 2023
	Machine Age	mls	Client Info		265487	213179	0
	Oil Age	mls	Client Info		0	25000	25000
	Filter Age	mls	Client Info		0	25000	25000
	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	17	21	15
	Chromium	ppm	ASTM D5185m		<1	<1	<1
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0	0	<1
	Titanium	ppm	ASTM D5185m	21	0	0	0
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m		5	6	2
	Lead	ppm	ASTM D5185m		0	0	0
	Copper	ppm	ASTM D5185m		3	3	2
	Tin	ppm	ASTM D5185m		<1	<1	0
	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		4	4	4
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m		1	4	4
	Fuel		WC Method		<1.0	<1.0	<1.0
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844		0.9	1	0.8
	Nitration	Abs/cm	*ASTM D7624	>20	8.9	10.9	9.7
	Sulfation	Abs/.1mm	*ASTM D7415		23.8	23.5	22.0
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE NORML	NONE NORML	NONE
	Appearance Odor	scalar scalar	*Visual *Visual	NORML NORML	NORML	NORML	NORML
	Emulsified Water		*Visual	>0.2	NORME		
		scalar	visuai	>0.2	NEG	NEG	NEG
FLUID CONDITION							1
	Sodium	ppm	ASTM D5185m	>158	2	2	1
	Sodium Boron	ppm ppm	ASTM D5185m ASTM D5185m		2 181	2	7
The BN result indicates that there is suitable alkalinity remaining in the				250		2 1 0	
	Boron	ppm	ASTM D5185m	250 10	181	1	7
The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	250 10	181 0	1 0	7
The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	181 0 78	1 0 71	7 2 66
The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	181 0 78 <1	1 0 71 <1	7 2 66 <1
The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	181 0 78 <1 466	1 0 71 <1 1108	7 2 66 <1 988
The BN result indicates that there is suitable alkalinity remaining in the	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	181 0 78 <1 466 1287	1 0 71 <1 1108 1252	7 2 66 <1 988 1211

Sulfur

Oxidation

Visc @ 100°C cSt

ppm ASTM D5185m 4250

Abs/.1mm *ASTM D7414 >25

ASTM D445 14.4

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

2647

18.4

6.6

13.0

3857

19.9

7.3

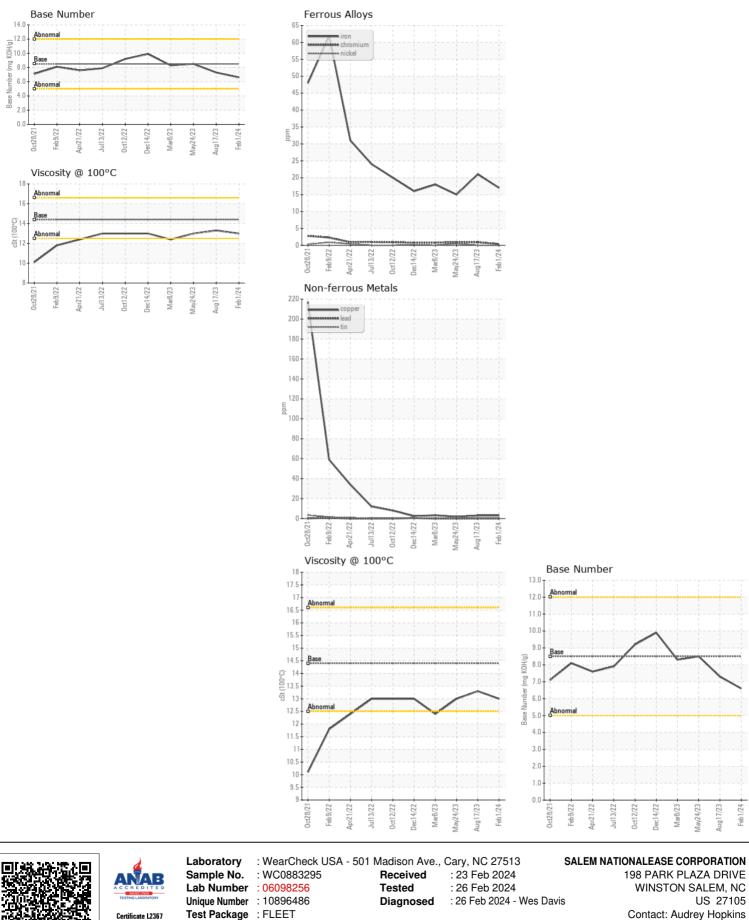
13.3

3437

18.0

8.5

13.0



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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