

Machine Id **49300** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 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. Please specify the brand, type, and viscosity of the oil on your next sample.	Sample Number		Client Info		WC0925917	WC0670827	WC0522074
	Sample Date		Client Info		13 Apr 2024	28 Dec 2022	21 Oct 2020
	Machine Age	mls	Client Info		319111	214434	0
	Oil Age	mls	Client Info		0	0	0
	Filter Age	mls	Client Info		0	0	0
	Oil Changed		Client Info		Changed	Changed	N/A
	Filter Changed		Client Info		Changed	Changed	N/A
	Sample Status				NORMAL	NORMAL	ABNORMAL
WEAR	Iron	ppm	ASTM D5185m	>100	23	19	30
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	<1	<1	7
	Nickel	ppm	ASTM D5185m	>4	0	<1	<1
	Titanium	ppm	ASTM D5185m		0	0	<1
	Silver	ppm	ASTM D5185m	>3	0	0	<1
	Aluminum	ppm	ASTM D5185m	>20	14	14	<u> 60 </u>
	Lead	ppm	ASTM D5185m	>40	0	2	<1
	Copper	ppm	ASTM D5185m	>330	5	12	145
	Tin	ppm	ASTM D5185m	>15	0	<1	2
	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	4	12	6
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	6	33	1 27
	Fuel		WC Method	>5	<1.0	<1.0	<1.0
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	0.0
	Soot %	%	*ASTM D7844	>3	1.2	0.3	0.5
	Nitration	Abs/cm	*ASTM D7624	>20	11.4	6.3	8.8
	Sulfation	Abs/.1mm	*ASTM D7415	>30	25.5	20.3	22
	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	3	3
	Boron	ppm	ASTM D5185m	250	4	80	7
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	100	63	60	3
	Manganese	ppm	ASTM D5185m		<1	3	1
	Magnesium	ppm	ASTM D5185m	450	1056	476	86
	Calcium	ppm	ASTM D5185m	3000	1168	1674	2115
	Phosphorus	ppm	ASTM D5185m	1150	1086	1012	795
	Zinc	ppm	ASTM D5185m	1350	1357	1298	1005
	Sulfur	ppm	ASTM D5185m	4250	3453	3737	2441
	Outstatt	Alexandre	******	05	01 0	45.0	10.0

Oxidation

Visc @ 100°C cSt

Abs/.1mm *ASTM D7414 >25

ASTM D445 14.4

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

15.3

9.2

11.3

12.9

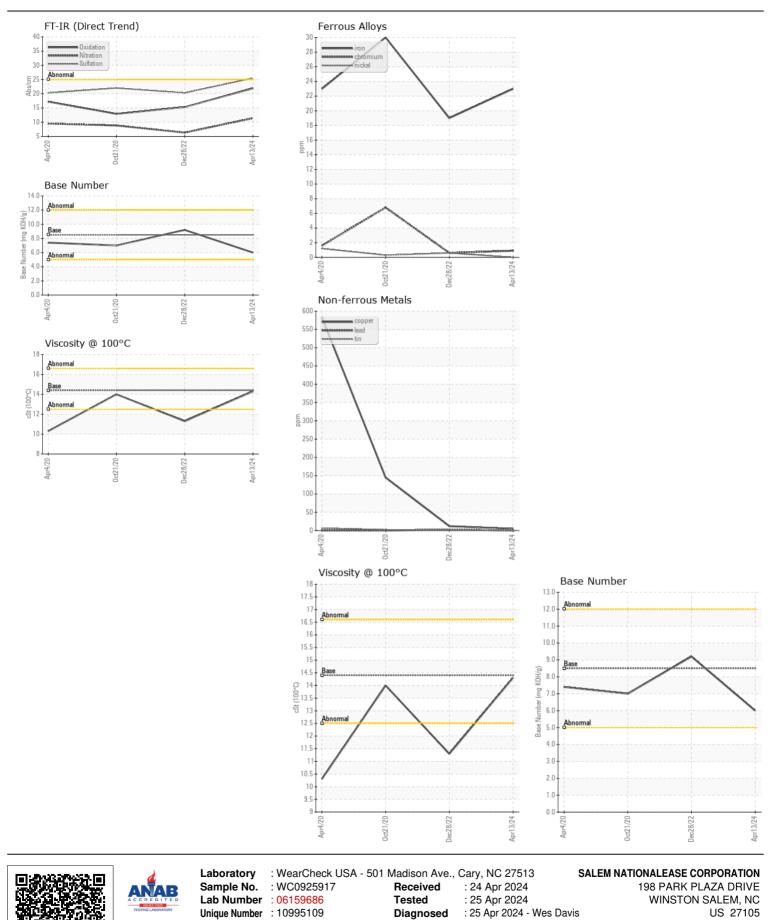
14.0

7

21.9

6.0

14.3



Test Package : FLEET **Contact: Audrey Hopkins** Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. Audrey.Hopkins@salemcorp.com * - 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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