

## Machine Id **14130** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

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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		WC0912573	WC0891646	WC0861061
	Sample Date		Client Info		22 Mar 2024	27 Dec 2023	13 Oct 2023
	Machine Age	mls	Client Info		0	0	134758
	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	5	5	4
	Chromium	ppm	ASTM D5185m		0	<1	0
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0	0	<1
	Titanium	ppm	ASTM D5185m		0	0	0
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m		3	2	2
	Lead	ppm	ASTM D5185m		0	0	<1
	Copper	ppm	ASTM D5185m		<1	<1	0
	Tin	ppm	ASTM D5185m		<1	0	<1
	Vanadium	ppm	ASTM D5185m	10	0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
			viouul			HONL	HOILE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	2	3	3
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	4	2	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	0.2	0.1	0.2
	Nitration	Abs/cm	*ASTM D7624	>20	6.5	5.6	6.1
	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	18.0	18.8
	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	2	0	2
	Boron		ASTM D5185m		2	<1	2
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 ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		59	65	56
	Manganese	ppm	ASTM D5185m		<1	0	<1
	Magnesium	ppm	ASTM D5185m	450	962	1067	919
	Calcium	ppm	ASTM D5185m		1051	1156	1009
	Phosphorus	ppm	ASTM D5185m		1078	1089	1084
	Zinc	ppm	ASTM D5185m		1238	1297	1209
	200	PPIII	NO THE DUTUUII	1000	1200	1201	1203

Sulfur

Oxidation

Visc @ 100°C cSt

ppm ASTM D5185m 4250

ASTM D445 14.4

Abs/.1mm \*ASTM D7414 >25

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

3574

13.9

9.9

13.1

3272

10.2

14.7

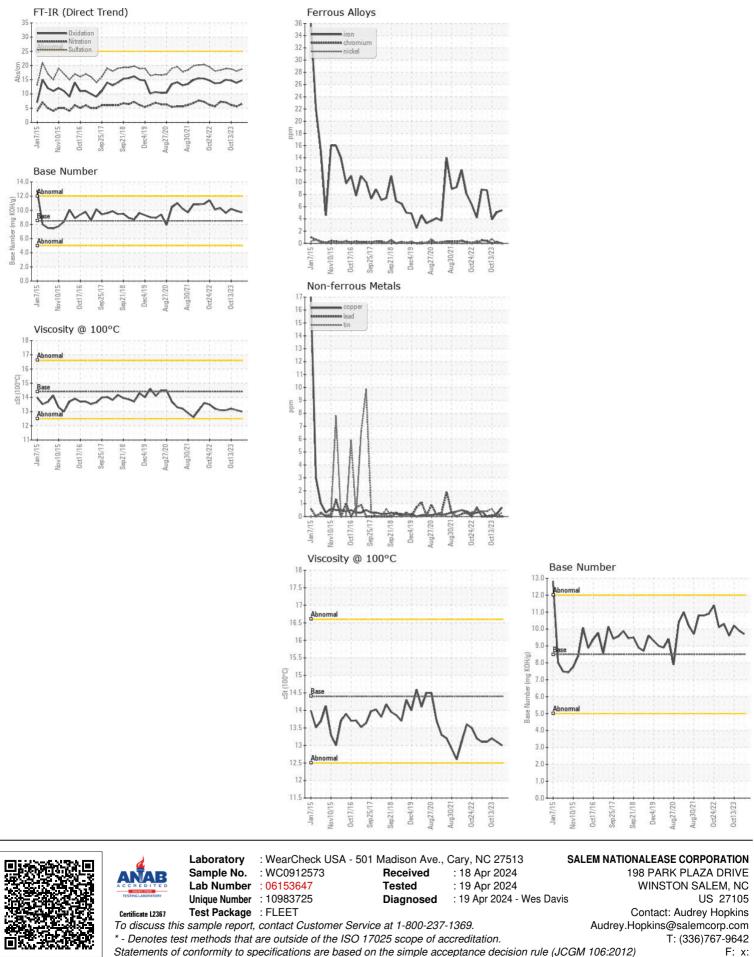
13.2

3813

14.8

9.7

13.0



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

Contact/Location: Audrey Hopkins - SALWIN Page 2 of 2