

## Machine Id 12905 Componen **Diesel Engine** DIESEL ENGINE OIL SAE 5W40 (--- 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		WC0936782	WC0915935	WC0904405
	Sample Date		Client Info		03 Jul 2024	03 May 2024	03 Feb 2024
	Machine Age	mls	Client Info		198323	191704	189872
	Oil Age	mls	Client Info		10000	12000	0
	Filter Age	mls	Client Info		10000	12000	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	12	6	9
	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
All component wear rates are normal.	Nickel	ppm	ASTM D5185m	>4	0	<1	0
	Titanium	ppm	ASTM D5185m		<1	<1	0
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m	>20	10	9	8
	Lead	ppm	ASTM D5185m	>40	0	<1	0
	Copper	ppm	ASTM D5185m	>330	<1	1	0
	Tin	ppm	ASTM D5185m	>15	0	<1	0
	Vanadium	ppm	ASTM D5185m		<1	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m		5	7	4
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	7	6	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	0.3	0.1	0.3
	Nitration	Abs/cm	*ASTM D7624	>20	8.1	6.2	10.0
	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	23.0	24.1
	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	NORM
	Odor	scalar	*Visual	NORML	NORML	NORML	NORM
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m	>44	1	0	0
	Boron	ppm	ASTM D5185m	250	288	396	223
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	10	0	2	0
	Molybdenum	ppm	ASTM D5185m	100	89	137	108
	Manganese	ppm	ASTM D5185m		0	<1	<1
	Magnesium	ppm	ASTM D5185m	450	402	622	696
	Calcium	ppm	ASTM D5185m	3000	1408	1493	1456
	Phosphorus	ppm	ASTM D5185m	1150	1065	755	754
	Zinc	ppm	ASTM D5185m	1350	1228	824	924
	Culture		AOTM DEADE	4050	0000	0000	0.400

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

2898

17.5

6.9

13.3

2609

16.7

9.1

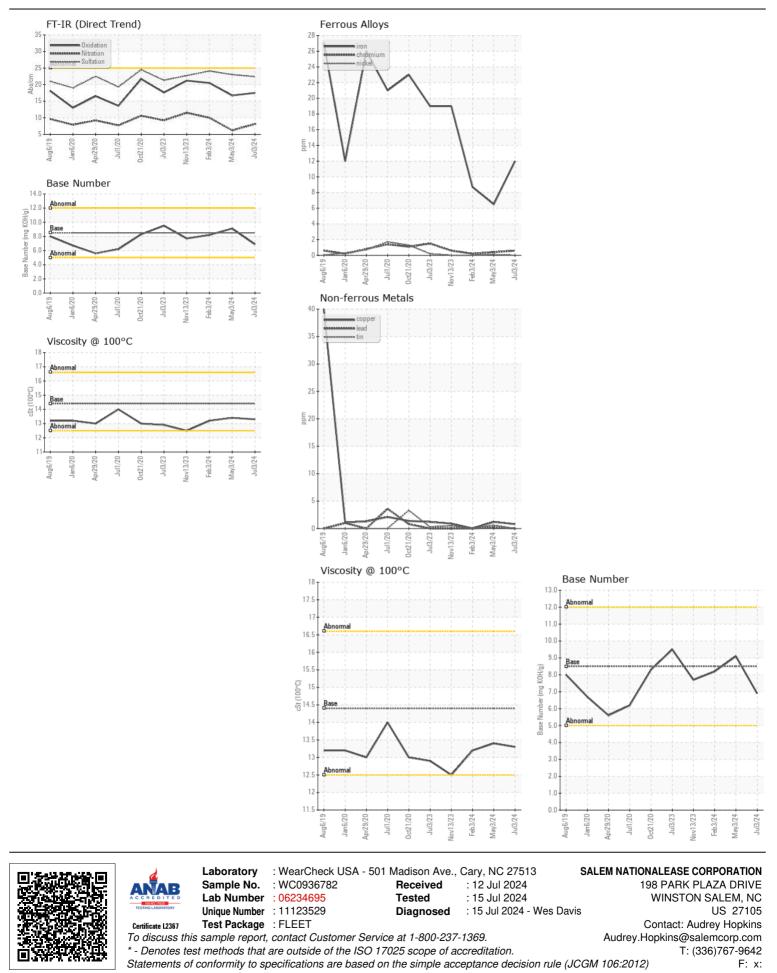
13.4

2480

20.5

8.2

13.2



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