

Machine Id 13902 Component Diesel Engine DIESEL ENGINE OIL SAE 5W40 (--- QTS)

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	Oil and filter change at the time of sampling has been noted.
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	corrective action is recommended at this time. Resample at the

No the next service interval to monitor.

WEAR

All component wear rates are normal.

RECOMMENDATION

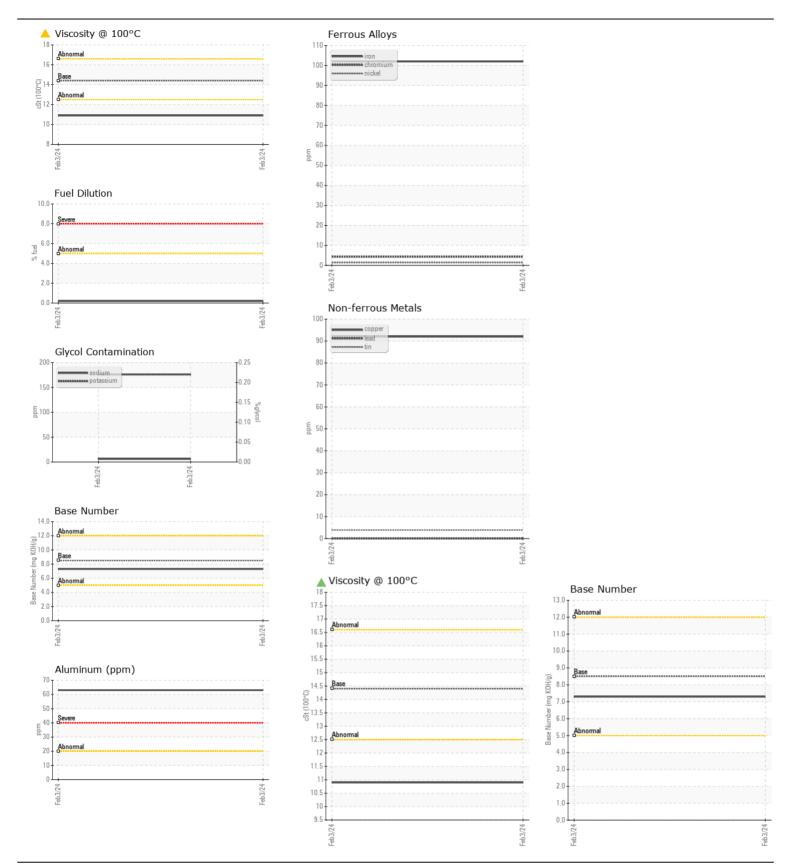
CONTAMINATION

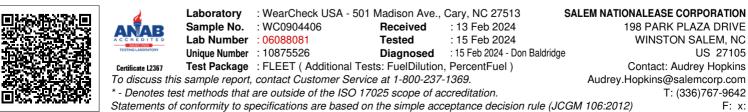
Fuel content negligible. Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0904406		
Sample Date		Client Info		03 Feb 2024		
Machine Age	mls	Client Info		43343		
Oil Age	mls	Client Info		0		
Filter Age	mls	Client Info		0		
Oil Changed		Client Info		Changed		
Filter Changed		Client Info		Changed		
Sample Status				ATTENTION		
Iron	ppm	ASTM D5185m	>100	102		
Chromium	ppm	ASTM D5185m	>20	4		
Nickel	ppm	ASTM D5185m	>4	1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>20	63		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	92		
Tin	ppm	ASTM D5185m	>15	4		
Vanadium	ppm	ASTM D5185m		0		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Silicon	ppm	ASTM D5185m	>25	9		
Potassium	ppm	ASTM D5185m	>20	176		
Fuel	%	ASTM D3524	>5	0.2		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
Soot %	%	*ASTM D7844	>3	1		
Nitration	Abs/cm	*ASTM D7624	>20	11.5		
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.0		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Cadium			4.4	¢		
Sodium	ppm	ASTM D5185m	>44 250	6 19		
Boron	ppm	ASTM D5185m				
Barium	ppm	ASTM D5185m	10	0		
Molybdenum	ppm	ASTM D5185m	100	48		
Manganese	ppm	ASTM D5185m	450	6		
Magnesium	ppm	ASTM D5185m	450	625 1675		
Calcium	ppm	ASTM D5185m	3000	1675		
Phosphorus	ppm	ASTM D5185m	1150	773		
Zinc	ppm	ASTM D5185m	1350	951		
Sulfur	ppm	ASTM D5185m	4250	1984		
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.0		
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.3		
Visc @ 100°C	cSt	ASTM D445	14.4	10.9		

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.





Contact/Location: Audrey Hopkins - SALWIN