

## Machine Id 141541 Component **Diesel Engine** DIESEL ENGINE OIL SAE 15W40 (--- GAL)

## RECOMMENDATION

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.

## **WEAR**

All component wear rates are normal.

## CONTAMINATION

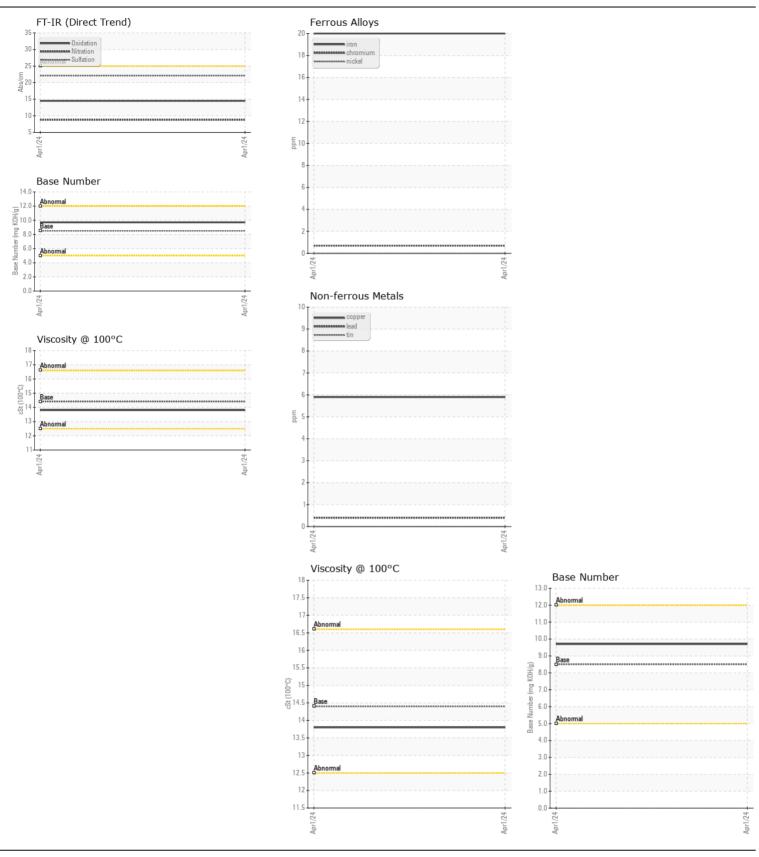
**FLUID CONDITION** 

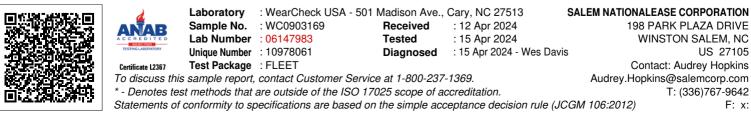
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

The BN result indicates that there is suitable alkalinity remaining in the

oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0903169		
Sample Date		Client Info		01 Apr 2024		
Machine Age	mls	Client Info		111228		
Oil Age	mls	Client Info		60000		
Filter Age	mls	Client Info		60000		
Oil Changed		Client Info		Changed		
Filter Changed		Client Info		Changed		
Sample Status				NORMAL		
Iron	ppm	ASTM D5185m	>100	20		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	3		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	6		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m		<1		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Silicon			05	F		
	ppm	ASTM D5185m ASTM D5185m	>25	5 10		
Potassium Fuel	ppm	WC Method	>20 >5	-		
				<1.0		
Water		WC Method WC Method	>0.2	NEG		
Glycol Soot %	%	*ASTM D7844	. 0	NEG 1.8		
Nitration	70 Abs/cm	*ASTM D7644	>3 >20			
Sulfation	Abs/.1mm	*ASTM D7624	>20	8.8 22.1		
Silt						
	scalar	*Visual	NONE	NONE NONE		
Debris	scalar	*Visual	NONE	-		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NORML NEG		
	scalar	*Visual	>0.2	NEG		
Sodium	ppm	ASTM D5185m	>158	3		
Boron	ppm	ASTM D5185m	250	8		
Barium	ppm	ASTM D5185m	10	<1		
Molybdenum	ppm	ASTM D5185m	100	56		
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m	450	865		
Calcium	ppm	ASTM D5185m	3000	1185		
Phosphorus	ppm	ASTM D5185m	1150	979		
Zinc	ppm	ASTM D5185m	1350	1126		
Sulfur	ppm	ASTM D5185m	4250	3338		
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5		
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.7		
Visc @ 100°C	cSt	ASTM D445	14.4	13.8		





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