

WEAR	
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id E33163 Component Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		WC0933491	WC0760629	
	Sample Date		Client Info		24 Jun 2024	21 Jun 2023	
	Machine Age	hrs	Client Info		2094	1962	
	Oil Age	hrs	Client Info		132	149	
	Filter Age	hrs	Client Info		132	149	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
VEAR				100	<u> </u>		
All component wear rates are normal.	Iron	ppm	ASTM D5185(m)		6	6	
	Chromium	ppm	ASTM D5185(m)		<1	<1	
	Nickel	ppm	ASTM D5185(m)	>4	<1	<1	
	Titanium	ppm	ASTM D5185(m)	0	0	0	
	Silver	ppm	ASTM D5185(m)		<1	<1	
	Aluminum	ppm	ASTM D5185(m)		1	1	
	Lead	ppm	ASTM D5185(m)	>40	<1	<1	
	Copper	ppm	ASTM D5185(m)		3	3	
	Tin	ppm	ASTM D5185(m)	>15	0	0	
	Vanadium	ppm	ASTM D5185(m)		0	0	
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	2	3	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185(m)	>20	8	9	
	Fuel		WC Method	>5	<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	ASTM D7844*	>3	0.1	0	
	Nitration	Abs/cm	ASTM D7624*	>20	7.7	7.7	
	Sulfation	Abs/.1mm	ASTM D7415*	>30	20.6	21.0	
	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
	Sodium		ASTM D5185(m)	<158	2	2	
	Boron	ppm	ASTM D5185(m)		2 157	2 161	
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 D5185(m)	10	0	0	
		ppm	()		0	-	
	Molybdenum	ppm	ASTM D5185(m)	100		<1	
	Manganese	ppm	ASTM D5185(m)	450	0	0	
	Magnesium	ppm	ASTM D5185(m)	450	12	11	

Calcium

Zinc

Sulfur

Oxidation

Base Number (BN)

Visc @ 100°C

Phosphorus

ppm

ppm

ppm

ppm

cSt

Abs/.1mm

ASTM D5185(m)

ASTM D5185(m) ASTM D5185(m) 4250

mg KOH/g ASTM D2896* 8.5

ASTM D7279(m)

ASTM D5185(m) 1150

ASTM D7414* >25

3000

1350

14.4

Contact/Location: Al Lemay - WIN101WIN

2129

1045

1135

2950

17.4

6.91

14.4

2064

916

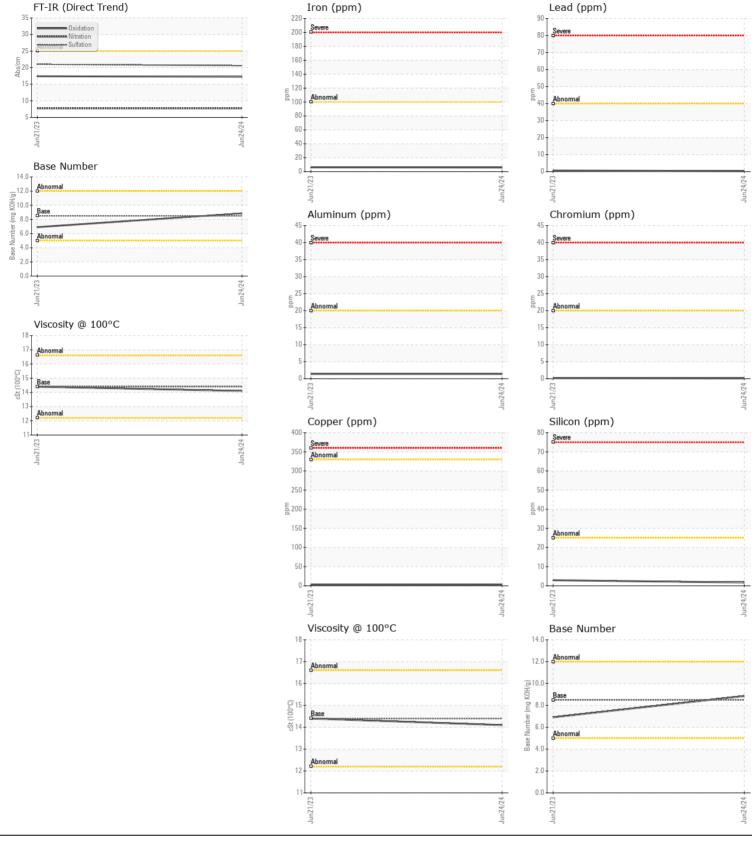
1121

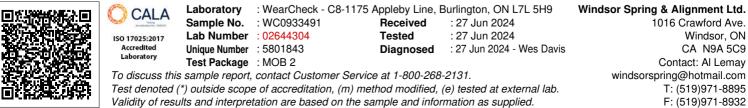
2801

17.2

8.85

14.1





Contact/Location: AI Lemay - WIN101WIN Page 2 of 2