

# **OIL ANALYSIS REPORT**

### Sample Rating Trend

NORMAL



# Diesel Engine

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

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a components first oil change.

#### Contamination

There is no indication of any contamination in the oil.

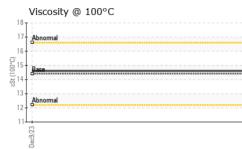
### Fluid Condition

The condition of the oil is acceptable for the time in service.

			11 11 11	Dec2023		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WA0020745		
Sample Date		Client Info		09 Dec 2023		
Machine Age	hrs	Client Info		3		
Oil Age	hrs	Client Info		3		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	6		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>4	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>3	<1		
Aluminum	ppm	ASTM D5185(m)	>20	1		
Lead	ppm	ASTM D5185(m)	>40	1		
Copper	ppm	ASTM D5185(m)	>330	46		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	10		
Barium	ppm	ASTM D5185(m)	10	<1		
Molybdenum	ppm	ASTM D5185(m)	100	3		
Manganese	ppm	ASTM D5185(m)		0		
Magnesium	ppm	ASTM D5185(m)	450	26		
Calcium	ppm	ASTM D5185(m)	3000	2227		
Phosphorus	ppm	ASTM D5185(m)	1150	861		
Zinc	ppm	ASTM D5185(m)	1350	982		
Sulfur	ppm	ASTM D5185(m)	4250	2944		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5		
Sodium	ppm	ASTM D5185(m)	>158	3		
Potassium	ppm	ASTM D5185(m)	>20	<1		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0		
Nitration	Abs/cm	ASTM D7624*	>20	5.0		
Sulfation	Abs/.1mm	ASTM D7415*	>30	15.7		



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°C	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	ASTM D7414*	>25	8.9		
	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
	Precipitate	scalar	Visual*	NONE	NONE		
Dec9/23 -	Silt	scalar	Visual*	NONE	NONE		
De	Debris	scalar	Visual*	NONE	VLITE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	NORML		
	Odor Emulsified Water	scalar scalar	Visual* Visual*	NORML >0.2	NORML NEG		
	Free Water	scalar	Visual*	20.L	NEG		
	FLUID PROPERT		method	limit/base		history1	history2
					current 14.6		
	Visc @ 100°C GRAPHS	cSt	ASTM D7279(m)	14.4	14.0		
	Iron (ppm)				Lead (ppm)		
	250 T				T		
	200 - Gevere			80	i i		
Edd	150 - Abnormal			면 60 면 40	Abnormal		
	50 -			20			
				123			/23
	Dec9/23			Dec9/23	Dec9/23		Dec9/23
	Aluminum (ppm)				Chromium (pp	m)	
	50 40 Severe			50	Saura		
5	1				-		
	20 - Abnormal			======================================	- Abnormal		-
	10			10			
	Dec9/23			Dec9/23	Dec9/23		Dec9/23 -
				De			De
	Copper (ppm)			80	Silicon (ppm)		
	300 -			60	-		
	200			<u>통</u> 40			
	100-			20	Abnormai		
	0			(			
	Dec3/23			Dec9/23	Dec9/23		Dec9/23
	 Viscosity @ 100°C				Soot %		
	18 Abnormal			6.0			
Į.	Base				7		
1.050U 1.450	Abnormal			2.0	Abnormal		
	104			0.0	//23		/23
	Dec9/23			Dec9/23	Dec9/23		Dec9/23
CALLA Iso 17025:2017 Accredited Laboratory Sample No. Lab Number Unique Number	: 02603390	75 Apple Received Diagnose Diagnost Tests: Vis	ed : 15 l ician : We		7L 5H9	BAY 10	7 <b>GLOBAL INC</b> ) 2256-29 ST E CALGARY, AB CA T1Y 7G4