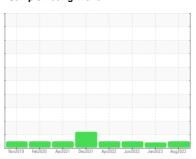


# **OIL ANALYSIS REPORT**

**Sample Rating Trend** 







Machine Id **9484** Component

**Diesel Engine** 

**DIESEL ENGINE OIL SAE 10W30 (--- GAL)** 

### DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) 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

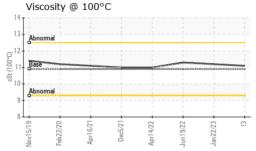
## **Fluid Condition**

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

	MPLE INFORMATION		eb2020 Apr2021 Dec20	21 Apr2022 Jun2022 Jan2023	Aug2023				
SAMPLE INFORMATION		method	limit/base	current	history1	history2			
Sample Number		Client Info		WC0853323	WC0702969	WC0702548			
Sample Date		Client Info		27 Aug 2023	22 Jan 2023	19 Jun 2022			
Machine Age	kms	Client Info		292452	340471	323723			
Oil Age	kms	Client Info		0	0	WC0702548 19 Jun 2022 323723 0 Not Changd NORMAL history2 <1.0 NEG history2 8 <1 <1 <1 0 <1 2 1 1 <1 0 0 0 0 history2 78 0 4 <1 711 1320 696 790 2521 0 history2			
Oil Changed		Client Info		Not Changd	Changed	Not Changd			
Sample Status				NORMAL	ABNORMAL	NORMAL			
CONTAMINATION	1	method	limit/base	current	history1	history2			
Fuel		WC Method	>3.0	<1.0	1.8	<1.0			
Glycol		WC Method		NEG	NEG	NEG			
WEAR METALS		method	limit/base	current	history1	history2			
Iron	ppm	ASTM D5185(m)	>165	26	30	8			
Chromium	ppm	ASTM D5185(m)	>5	1	1	<1			
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1			
Titanium	ppm	ASTM D5185(m)	>2	0	<1	0			
Silver	ppm	ASTM D5185(m)	>2	<1	0	<1			
Aluminum	ppm	ASTM D5185(m)	>20	9	7	2			
Lead	ppm	ASTM D5185(m)	>150	5	4	1			
Copper	ppm	ASTM D5185(m)	>90	1	2	1			
Tin	ppm	ASTM D5185(m)	>5	<1	<1	<1			
Antimony	ppm	ASTM D5185(m)		0	<1	0			
Vanadium	ppm	ASTM D5185(m)		0	0	0			
Beryllium	ppm	ASTM D5185(m)		0	0	0			
Cadmium	ppm	ASTM D5185(m)		0	0	0			
ADDITIVES		method	limit/base	current	history1	history2			
Boron	ppm	ASTM D5185(m)	250	32	31	78			
Barium	ppm	ASTM D5185(m)	10	0	0	0			
Molybdenum	ppm	ASTM D5185(m)	100	4	16	4			
Manganese	ppm	ASTM D5185(m)		<1	<1	<1			
Magnesium	ppm	ASTM D5185(m)	450	728	661	711			
Calcium	ppm	ASTM D5185(m)	3000	1366	1530	1320			
Phosphorus	ppm	ASTM D5185(m)	1150	723	817				
Zinc	ppm	ASTM D5185(m)	1350	790	883				
Sulfur	ppm	ASTM D5185(m)	4250	2506	2625				
Lithium	ppm	ASTM D5185(m)		<1	<1	0			
CONTAMINANTS		method	limit/base	current	history1	history2			
Silicon	ppm	ASTM D5185(m)	>35	5	5	4			
Sodium	ppm	ASTM D5185(m)		3	5	3			
Potassium	ppm	ASTM D5185(m)	>20	19	14	4			
INFRA-RED		method	limit/base	current	history1	history2			
Soot %	%	ASTM D7844*	>7.5	0.2	0.1	0			
Nitration	Abs/cm	ASTM D7624*	>20	11.4	11.4	8.7			
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.5	25.3	21.0			
FLUID DEGRADA	TION	method	limit/base	current	history1	history2			
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.7	19.6	14.1			



## **OIL ANALYSIS REPORT**



VISUAL		method				history2	
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	NEG	
FLUID PROPERT	method	limit/base	current	history1	history2		
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	11.1	▲ 11.2	11.3	
GRAPHS							
Iron (nnm)				Lead (nnm)			

ron (p	pm)						300	Lea	d (ppi	m)					
Severe							250	Sever	re						
							200								
Abnormal							툂 150	Abno	ormal						
							100								
			_				50								
20 -	71-	71-1	22	7 22	23	23	(	جيار	20	-12/	721	22-	22	- 23	
Feb 22/20	Apr16/21	Dec5/21	Apr14/22	Jun19/22	Jan22/23	Aug27/23		Nov15/19	Feb22/20	Apr16/21	Dec5/21	Apr14/22	Jun19/22	Jan22/23	
Aluminu	ım (ppr	n)						Chr	omiur	n (ppr	n)				
Severe							12	Course	re						
							8	i							
Abnormal							mdd 6	l i	amal .						
							4		zititea						-
							2		\_			_			-
20	/21	/21	722	722	73	73	(	) LE	20	/21	/21	22	722	23	
Feb22/20	Apr16/21	Dec5/21	Apr14/22	Jun19/22	Jan22/23	Aug27/23		Nov15/19	Feb22/20	Apr16/21	Dec5/21	Apr14/22	Jun19/22	Jan22/23	
	(ppm)						70	Silic	con (p	pm)					
Severe							60	C	re						
							50	1							
Abnormal							E 40	Abno	ormal						
							20								
							10								-
700/	12/9		727	722	/23	123	(	JĘ.	720-	12/5	-12/	722	722-	723-	
Feb22/20	Apr16/21	Dec5/21-	Apr14/22	Jun19/22	Jan22/23	Aug27/23		Nov15/19	Feb22/20	Apr16/21	Dec5/21.	Apr14/22	Jun19/22	Jan22/23	
/iscosit	y @ 10	0°C					10.0		ot %						
								Sever							
Abnormal							8.0	0	ormal						
Base							Soot %								
Abnomial							4.0	) -							
Abnormal							2.0	)							
2/20		/21	pr14/22	22	an22/23	23	0.0	15/19	20	12/	/21	22	22	23	_
ab22/20.	pr16/21.	Dec5/21.	14	ın19/22 ·	n22	ıg27/23 .		v15	sb22/20	pr16/21	Dec5/21	pr14/22	ın19/22	an 22/23 .	



**CALA** ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5632312

: WC0853323 : 02579252

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received

Diagnosed

: 30 Aug 2023 : 30 Aug 2023

Diagnostician : Wes Davis

Test Package : MOB 1 To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

**Rush Truck Centres** 7450 Torbram Rd. Mississauga, ON CA L4T 1G9 Contact: Serdar Okur

sokur@rushtruckcentres.ca T: (905)671-7600