

OIL ANALYSIS REPORT

[43026681] Machine Id 9496

Component **Diesel Engine**

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

Septiol 9 Novitol 9 Januti 200 Oct. 2020 Mark 2021 Januti 2023 Mark 2023 Oct. 2023 Januti 2024

Sample Rating Trend



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

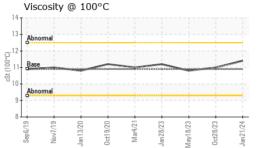
Fluid Condition

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

		Sep2019 No	/2019 Jan2020 Oct2020	Mar2021 Jan2023 May2023 Oct20	23 Jan 2024	
SAMPLE INFORM	MOITAN	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0853171	WC0853196	WC0796445
Sample Date		Client Info		21 Jan 2024	28 Oct 2023	18 May 2023
Machine Age	kms	Client Info		502573	480408	451076
Oil Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	MARGINAL	ABNORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<u>^</u> 2.5	△ 3.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>165	26	30	12
Chromium	ppm	ASTM D5185(m)	>5	<1	1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	5	3	2
Lead	ppm	ASTM D5185(m)	>150	3	6	1
Copper	ppm	ASTM D5185(m)	>90	2	2	<1
Tin	ppm	ASTM D5185(m)	>5	<1	<1	0
Antimony	ppm	ASTM D5185(m)		0	0	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	27	29	57
Barium	ppm	ASTM D5185(m)	10	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	100	2	3	3
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	450	743	738	702
Calcium	ppm	ASTM D5185(m)	3000	1363	1357	1353
Phosphorus	ppm	ASTM D5185(m)	1150	699	682	724
Zinc	ppm	ASTM D5185(m)	1350	776	769	737
Sulfur Lithium	ppm	ASTM D5185(m) ASTM D5185(m)	4250	2591	2454 <1	2524 <1
	ppm	()		<1		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>35	6	5	4
Sodium	ppm	ASTM D5185(m)		2	3	2
Potassium	ppm	ASTM D5185(m)	>20	13	4	3
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>7.5	0.2	0.4	0.1
Nitration	Abs/cm	ASTM D7624*	>20	10.1	11.4	9.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.4	25.9	20.7



OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base current		history1	history2		
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.0	23.7	16.8		
VISUAL		method	limit/base	current	history1	history2		
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG		
Free Water	scalar	Visual*		NEG	NEG NEG			
FLUID PROPERTIES		method	limit/base	current	history1	history2		
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	11.4	11.0	△ 10.8		

'isc @ 100°C	cSt	ASTM D7279(r	n) 10.9	11.4	11	1.0		<u> </u>	8.0	
GRAPHS										
Iron (ppm)				Lead (ppr	n)					
Severe				Severe 250						-
L				200						
Abnormal	+		4	Abnormal						
				100-						
				50-						
Sep6/19 Nov7/19	12/1	- 1/23	/23+	0	.02/	Mar4/21	/Z3	.53	1/23	
Sep 6/19 Nov7/19 Jan 13/20	Oct19/20	Jan 28/23 May 18/23	Oct28/23 Jan21/24	Sep6/19 Nov7/19	Jan 13/20 Oct 19/20	Mar	Jan28/23	May18/23	0ct28/23	
Aluminum (ppm)			Chromiun	n (ppm)					
Severe	-	****	-	12 Severe						
				8						
Abnormal				Abnormal						
1	ii		11	4-						-
				2-		_	_			
Sep 6/19	Mar4/21	- 1/23	/23+	Sep 6/19	-02/	1/21+	-KZ/) EZ/	1/23	_
Sep6/19 Nov7/19 Jan13/20	Oct19/20 Mar4/21	Jan 28/23 May 18/23	Oct28/23 Jan21/24	Sep6/19 Nov7/19	Jan 13/20 Oct 19/20	Mar4/21	Jan28/23	May18/23	0ct28/23	
Copper (ppm)				Silicon (p	om)					
Severe				Severe						
				50-						
Abnormal				Abnormal						
				20						
				10						
Sep6/19 Nov7/19	Oct19/20	8/23	8/23	Sep6/19 	Jan 13/20 +	Mar4/21+	8/23	8/23	0ct28/23 +	_
Sep6/19 Nov7/19 Jan13/20	Oct19/20 Mar4/21	Jan 28/23 May 18/23	Oct28/23 Jan21/24	Sepi	Jan13	Mar	Jan28/23	May18/23	0ct2	
Viscosity @ 100	°C			Soot %						
				Severe						
Abnormal				8.0 - Abnormal	1 1					
Base				500 4 0						
Abnormal										
0				2.0						
6 6 0	Mar4/21	Jan28/23	Oct28/23 + Jan21/24 + Jan21/24	Sep6/19	Jan 13/20	Mar4/21	Jan28/23	May18/23	0ct28/23	
Sep6/19 Nov7/19 Jan13/20	2 2	2 2	Oct28/23 Jan21/24	5 5	5 5	and a	5	5	5.5	



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5711904

: WC0853171 : 02610818

Test Package : MOB 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Recieved : 24 Jan 2024

Diagnosed : 24 Jan 2024 Diagnostician : Wes Davis

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