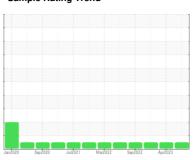


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 9573 Component Diesel Engine

CHEVRON DELO 400 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.

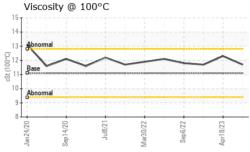
Fluid Condition

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

)		Jan 2020	Sep2020 Jul2021	Mar2022 Sep2022 A	pr2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0853390	WC0796626	WC0702962
Sample Date		Client Info		31 Aug 2023	18 Apr 2023	26 Jan 2023
Machine Age	kms	Client Info		209500	191795	179207
Oil Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	14	29	18
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	4	3
Lead	ppm	ASTM D5185(m)	>40	0	0	<1
Copper	ppm	ASTM D5185(m)	>330	4	4	2
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	<1
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)		43	57	88
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		7	57	55
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		704	425	421
Calcium	ppm	ASTM D5185(m)		1375	1823	1765
Phosphorus	ppm	ASTM D5185(m)	1260	759	1063	1064
Zinc	ppm	ASTM D5185(m)	1400	817	1166	1148
Sulfur	ppm	ASTM D5185(m)		2547	2843	2839
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	8	6	5
Sodium	ppm	ASTM D5185(m)		3	2	2
Potassium	ppm	ASTM D5185(m)	>20	6	10	6
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	1.3	1.8	0.8
Nitration	Abs/cm	ASTM D7624*	>20	9.7	8.6	6.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.1	22.9	22.0
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.4	15.6	14.3



OIL ANALYSIS REPORT



VISUAL		method				history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERTIES						
FLUID PROPERT	TES	method				history2
FLUID PROPERT Visc @ 100°C	cSt		limit/base	current 11.7	history1 12.3	history2 11.7

Visc @ 100°C	cSt	ASTM D7279(m	11.1	11.7	12.3	11.7
GRAPHS						
Iron (ppm)				Lead (ppm)		
250				80 Severe		
200 - Severe		***************************************		70		
150-				60		
100 - Abnormal				Abnormal		
				20 -		
50		\		10		
20-	722	722	723	0102	121-	722
Jan24/20 Sep14/20 Jul8/21	Mar30/22	Sep6/22	Apr18/23	Jan24/20 Sep14/20	Jul8/21	Sep6/22
Aluminum (ppm)				Chromium	(ppm)	
45 Severe				45 40 Severe		
35 -				35		
30				25+		
E 25 20 Abnormal				Abnormal		
15				10		
5		\	\sim	5		
m24/20 + p14/20 +	122	722+	/23	200	Jul8/21-	722
Jan24/20 Sep14/20	Mar30/22	Sep6/22	Apr18/23	Jan24/20 Sep14/20	Jul8/21	Sep6/22 -
Copper (ppm)				Silicon (ppn	n)	
350 Severe Abnormal				Severe		
300				60		
250				50		
150				8 40 Abnormal		
100				Abnormal		
50-				10-		
n24/20 -	- 22/0	Sep 6/22	3/23	4/20+	Jul8/21-	Sep 6/22 -
Jan24/20 Sep14/20	Mar30/22	Sep	Apr18/23	Jan24/20 Sep14/20	Jul8/21-	Sep 6/22 Apr1 8/23
Viscosity @ 100°C				Soot %		
15 7				5.0 Severe		
13 Abnormal						
g 12		~	$\overline{}$	4.0 Abnormal		
00 12 Base			_	83.0		
Abnormal				2.0	/ \/	\ \
9+				1.0		
84 2			23	0.0	21+	3 2



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5633639 Test Package : MOB 1

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : 02580579

: WC0853390

Received Diagnosed

: 06 Sep 2023 : 06 Sep 2023

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