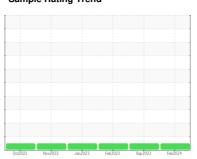


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id 831050 Component Diesel Engine Fluid

PETRO CANADA DURON GEO LD 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

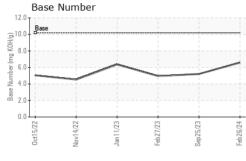
Fluid Condition

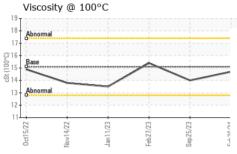
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

`		0ct2022	Nov2022 Jan2023	Feb2023 Sep2023	Feb 2024	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0112393	GFL0091631	GFL0070733
Sample Date		Client Info		26 Feb 2024	25 Sep 2023	27 Feb 2023
Machine Age	hrs	Client Info		3313	2618	1547
Oil Age	hrs	Client Info		0	1072	561
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	19	17	25
Chromium	ppm	ASTM D5185(m)	>20	2	2	2
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	3	3	2
Lead	ppm	ASTM D5185(m)	>40	2	2	<1
Copper	ppm	ASTM D5185(m)		1	2	5
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium Cadmium	ppm	ASTM D5185(m)		0	0	0
	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	50	8	6	8
Barium	ppm	ASTM D5185(m)	5	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	50	53	56	54
Manganese	ppm	ASTM D5185(m)	0	<1	<1	2
Magnesium	ppm	ASTM D5185(m)	560	567	585	570
Calcium	ppm	ASTM D5185(m)	1510	1657	1658	1637
Phosphorus	ppm	ASTM D5185(m)	780	722	734	720
Zinc	ppm	ASTM D5185(m)	870	920	963	905
Sulfur	ppm	ASTM D5185(m)	2040	2073	1974	2053
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	4	5	9
Sodium	ppm	ASTM D5185(m)		9	10	9
Potassium	ppm	ASTM D5185(m)	>20	3	8	1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	12.4	11.6	9.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.6	26.2	22.1



OIL ANALYSIS REPORT





FLUID DEGRADATION me		method	ethod limit/base		current	histo	history1		history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25		19.6	21.2		15.5		
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2		6.59	5.21		4.95		
VISUAL		method	limit/b	oase	current	histo	ory1	histo	ry2	
Emulsified Water Free Water	scalar	Visual*	>0.2		NEG NEG	NEG NEG		NEG NEG		
	scalar		11 11-11						0	
FLUID PROPE Visc @ 100°C	cSt	method ASTM D7279(m)	limit/b	oase	current	histo	ory I	history2 15.4		
GRAPHS	COL	ASTIVI D7279(III)	13.1		14.7	14.0		13.4		
Iron (ppm)				L	ead (ppm)					
300 Severe		i		100	Severe					
200				80 - 6]=====================================	1				
Abnormal				E	Abnormal					
100				20-						
0	3	3		ياه	7	3	3			
Oct15/22 Nov14/22 Jan11/23	Feb27/23	Sep25/23 .	Feb26/24	0~15/22	Nov14/22	Jan11/23	-eb27/23	Sep25/23	Feb26/24	
Aluminum (ppm)		03		(Chromium (,		03		
Severe Severe				50	Severe					
30				40 - c						
Abnormal				E	Abnormal					
10				10-						
3 2 2	3	3	=	ياه	2	3	3		4	
Oct15/22 Nov14/22 Jan11/23	Feb27/23	Sep25/23 -	Feb26/24	0~15.02	Nov14/22	Jan11/23	Feb27/23	Sep25/23	Feb26/24	
Copper (ppm)				9	- Silicon (ppm			**		
Severe Abnormal				80 T	Severe					
300				60						
E 200				튭40+	Abnormal					
100				20 -						
22 22 23	- 53	- 53		يا	- 22	- 53		23	24	
Oct15/22 Nov14/22 Jan11/23	Feb27/23	Sep25/23	Feb26/24	0~15/22	Nov14/22	Jan11/23	Feb27/23 -	Sep25/23	Feb26/24 -	
Viscosity @ 100°C				12.0 T	Base Numbe	er				
18 Abnormal					Base					
0				Base Number (mg KOH/g) 6.0 - 0.4 4.0 - 0.4						
S 14 Abnormal				0.0 mper			<u> </u>			
12				2.0-						
727	73	23	124	0.0	727	/23	/23	/23	724	
Oct15/22 Nov14/22 Jan11/23	Feb27/23	Sep25/23	Feb26/24	0.415,722	Nov14/22	Jan11/23	Feb27/23	Sep25/23	Feb26/24	



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

Lab Number : 02619525 Unique Number : 5736635

Test Package : MOB 2

: GFL0112393 Received **Tested**

Diagnosed

: 04 Mar 2024 : 05 Mar 2024

: 05 Mar 2024 - Kevin Marson

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County 220 Carmek Blvd Rocky View County, AB

CA T1X 1X1 Contact: GFL Calgary

calgarymaintenance@gflenv.com

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.

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Submitted By: GFL Calgary

F: (403)369-6163