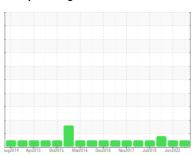


# **OIL ANALYSIS REPORT**

### Sample Rating Trend









Machine Id **7936** Component **Natural Gas Engine** 

PETRO CANADA DURON GEO LD 15W40 (24 GAL)

## DIAGNOSIS Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

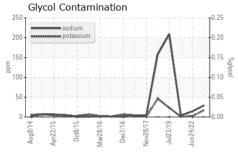
## **Fluid Condition**

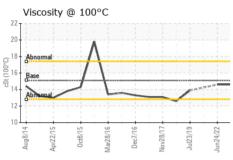
The condition of the oil is acceptable for the time in service.

GEO LD 15W40 (	24 GAL)	Aug2014 Apri	2015 Oct2015 Mar2016	Dec2016 Nov2017 Jul2019	Jun2022	
SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0097576	GFL0049976	GFL0034062
Sample Date		Client Info		15 Feb 2024	24 Jun 2022	13 Sep 2021
Machine Age	hrs	Client Info		11258	8813	6760
Oil Age	hrs	Client Info		904	1525	1200
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINAT	ΓΙΟΝ	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	_S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	22	21	6
Chromium	ppm	ASTM D5185(m)	>4	2	1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>9	7	2	<1
Lead	ppm	ASTM D5185(m)	>30	17	10	<1
Copper	ppm	ASTM D5185(m)	>35	4	5	3
Tin	ppm	ASTM D5185(m)	>4	<1	1	<1
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)	50	5	7	1
Barium	ppm	ASTM D5185(m)	5	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	61	56	0
Manganese	ppm	ASTM D5185(m)	0	1	1	<1
Magnesium	ppm	ASTM D5185(m)	560	540	605	2
Calcium	ppm	ASTM D5185(m)	1510	1775	1725	48
Phosphorus	ppm	ASTM D5185(m)	780	736	752	318
Zinc	ppm	ASTM D5185(m)	870	941	952	360
Sulfur	ppm	ASTM D5185(m)	2040	2192	2104	1168
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINAN	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	6	4	1
Sodium	ppm	ASTM D5185(m)		29	14	3
Potassium	ppm	ASTM D5185(m)	>20	17	2	<1
Glycol	%	ASTM D7922*		0.0		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	
Nitration	Abs/cm	ASTM D7624*	>20	13.4	13.3	
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.5	28.4	
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.7	21.8	



## **OIL ANALYSIS REPORT**





VISUAL	method	limit/base	current	history1	history2
Emulsified Water scalar	Visual*	>0.1	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)	15.1	14.6	14.6	
GRAPHS Iron (ppm)			Lead (ppm)		
90 Severe		60	Severe		
70		50			
Abnormal		E 30	Abnormal		
30		20			
10	$\checkmark \lor$	10			
Aug8/14 - Apr22/15 - Oct8/15 - Oct8/15 - Dec7/16 - Dec7/	Nov28/17-	Jun24/22 +	Aug8/14 Apr22/15	Mar28/16-	Jul23/19 -
Aluminum (ppm)	N if	A   B   B   B   B   B   B   B   B   B   B     Chromium (ppm)			
Severe		7	Severe		
12		5			
Abnormal		E 4	Abnormal		
6		/ 2			_
2		1			$\sqrt{}$
Aug8/14 - Apr22/15 - Oct8/15 - Oct8/16 - Dec7/16 -	Nov28/17- Jul23/19-	Jun24/22	Aug8/14 Apr22/15	Mar28/16 -	Jul23/19 -
Copper (ppm)	ž ¬	٦	Silicon (ppm)	Ψ J	<u> </u>
80 70 Severe		200	Severe		
50	<b>N</b>	150			
E 40 - Abnormal		튑100	Abnormal		
30 20	\/ \	50			
10	V L	0			
Aug8/14 Apr22/15 Oct8/15 Mar28/16	Nov28/17	Jun24/22	Aug8/14- Apr22/15- Oct8/15-	Mar28/16-	Nov28/17 Jul23/19
Viscosity @ 100°C	2 7		Additives	≥ -	2 7 5
20		2500	calcium		
		2000	wassessess zinc		Mr
Abnormal Base Base		1500 E			
Abrosmal	_/	1000	Water Square of the Party of th		NAVE
12		0			A
Aug8/14 Apr22/15 Oct8/15 Mar28/16	Nov28/17 Jul23/19	Jun24/22	Aug8/14 Apr22/15	Mar28/16 - Dec7/16 -	Nov28/17 Jul23/19 Jun24/22



**CALA** ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

Lab Number : 02616628 Unique Number : 5733738

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : GFL0097576 Received : 20 Feb 2024 : 20 Feb 2024

**Tested** Diagnosed : 20 Feb 2024 - Wes Davis

Test Package : MOB 1 ( Additional Tests: Glycol ) 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.

GFL Environmental - 216 15 Bermondsey Road

Toronto, ON CA M4B 1Y9 Contact: Tom Hatzioannidis thatzioannidis@gflenv.com

T: (416)678-9340