

# **OIL ANALYSIS REPORT**

Sample Rating Trend



731045 Component Natural Gas Engine Fluid PETRO CANADA DURON GEO LD 15W40 (--- LTR)

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0117150	GFL0085898	GFL0064328
Sample Date		Client Info		12 Apr 2024	25 Sep 2023	31 Mar 2023
Machine Age	hrs	Client Info		6491	5361	4294
Oil Age	hrs	Client Info		1200	1200	1200
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	18	11	12
Chromium	ppm	ASTM D5185(m)	>4	2	1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>9	2	2	2
Lead	ppm	ASTM D5185(m)	>30	10	2	1
Copper	ppm	ASTM D5185(m)	>35	2	2	3
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<1
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)	50	6	8	8
Barium	ppm	ASTM D5185(m)	5	<1	<1	0
Molybdenum	ppm	ASTM D5185(m)	50	58	62	62
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	560	622	606	617
Calcium	ppm	ASTM D5185(m)	1510	1695	1601	1773
Phosphorus	ppm	ASTM D5185(m)	780	742	710	797
Zinc	ppm	ASTM D5185(m)	870	951	920	960
Sulfur	ppm	ASTM D5185(m)	2040	2031	2004	2151
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	3	4	4
Sodium	ppm	ASTM D5185(m)		10	8	9
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water	%	ASTM D6304*	>0.1	<b>A</b> 0.104		
ppm Water	ppm	ASTM D6304*	>1000	<u> </u>		
Glycol	%	ASTM D7922*		0.0		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	12.4	11.2	12.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	26.2	23.4	27.5
FLUID DEGRA		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.9	18.4	20.1

## DIAGNOSIS

### Recommendation

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

#### Contamination

There is a moderate concentration of water present in the oil. Test for glycol is negative.

#### Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

WATER



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method

Visual\*

Visual\*

Visual\*

Visual\*

Visual\*

Visual\*

scalar Visual\*

scalar Visual\*

scalar

scalar

scalar

scalar

scalar

scalar

limit/base

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

ise

current

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

current

.2%

NEG

VISUAL

White Metal

Yellow Metal

Precipitate

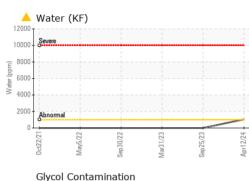
Silt

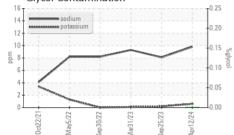
Debris

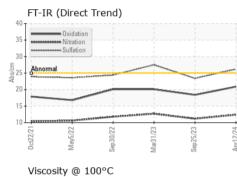
Odor

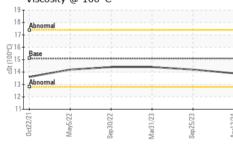
Sand/Dirt

Appearance









	Emulsifie Free Wa			scalar scalar	Visual* Visual*	>0.1
	FLUI	D PRO	PEF	RTIES	method	limit/ba
	Visc @ 1	00°C		cSt	ASTM D7279(m)	15.1
	GRAF	PHS				
1 wdd	Iron (p	<u> </u>	22 + /	23 -	53	24
- udd	Alumin 20 15 - Abnormal 5 - Abnormal	um (ppr	(u Sep30/22	Mar31/23	Sep25/23	Apr12/24
udd	Copper Copper Severe 60 40 Abnormal 20 0	czuskew (ppm)	Sep30/22 -	Mar31/23 -	Sep.25/23-	Apr12/24
cSt (100°C)	0ct22/21	-72/9/NEW @ 100	DoO Sep30/22 -	Mar31/23 -	Sep25/23	Apri2/24
	0ct22/21	May5/22 -	Sep30/22 -	Mar31/23	Sep 25/23	Apr12/24 +

#### 13.9 14.2 14.4 Lead (ppm) 6 50 4 ۲ д 30 20 10 lav5/22 Pu 30/77 Aar31/23 Chromium (ppm) mdo Sep25/23 -Apr12/24 Aav5/22 Pu 30/77 Mar31/23 Silicon (ppm) Severe 200 150 ة 100 50 en30/77 Aar31/23 en75/73 Apr12/24 Water 1.20 0.96 ja 0.72 20.48 0.2 Abnorma 0.00 an30/77 Aar31/23

history1

NORML

history

NEG

NEG

history2

NORML

history2

NEG

NEG

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 209 - Hamilton CALA Sample No. : GFL0117150 Received : 24 Apr 2024 560 Seaman Street Lab Number : 02631087 Tested : 24 Apr 2024 Stoney Creek, ON ISO 17025:2017 Accredited Unique Number : 5772240 Diagnosed : 24 Apr 2024 - Kevin Marson CA L8E 3X7 Laboratory Test Package : MOB 1 (Additional Tests: Glycol, KF, Visual) Contact: Fred Carleton To discuss this sample report, contact Customer Service at 1-800-268-2131. fred.carleton@gflenv.com T: (289)925-6693 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.

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F: (905)664-9008 Submitted By: Fred Carleton

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