

Machine Id

## NORMAL WEAR CONTAMINATION NORMAL **FLUID CONDITION** NORMAL

## 731044

Component Natural Gas Engine

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110258	GFL0085853	GFL0064283
Sample Date		Client Info		13 Feb 2024	15 Aug 2023	16 Feb 2023
Machine Age	hrs	Client Info		6166	5077	4046
Oil Age	hrs	Client Info		1200	1200	1200
Filter Age	hrs	Client Info		1200	1200	1200
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>50	13	12	12
Chromium	ppm	ASTM D5185(m)	>4	2	2	2
Nickel	ppm	ASTM D5185(m)	>2	<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)	>9	3	2	2
Lead	ppm	ASTM D5185(m)	>30	5	3	2
Copper	ppm	ASTM D5185(m)	>35	1	1	1
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>+100	4	4	4
Potassium	ppm	ASTM D5185(m)	>20	7	<1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method				
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	2.8	11.1	12.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	7.4	24.8	27.1
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		8	9	9
Sodium Boron	ppm ppm	ASTM D5185(m) ASTM D5185(m)	50	8 6	9 7	5
Boron	ppm	ASTM D5185(m)	5	6	7	5
Boron Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m)	5 50	6 0	7 0	5 0
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 50 0	6 0 58	7 0 57	5 0 53
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 50 0 560	6 0 58 0	7 0 57 <1	5 0 53 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 50 0 560 1510	6 0 58 0 619	7 0 57 <1 606	5 0 53 <1 571
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	5 50 0 560 1510	6 0 58 0 619 1664	7 0 57 <1 606 1643	5 0 53 <1 571 1668
-	Sample Number Sample Date Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status Chromium Chromium Nickel Titanium Silver Aluminum Lead Copper Aluminum Lead Copper Silicon Potassium Silicon Potassium Silicon Soot % Nitration	Sample NumberSample DateMachine AgehrsMachine AgehrsOil AgehrsFilter AgehrsOil ChangedrFilter Changedsample StatusSample StatusppmChromiumppmNickelppmSilverppmSilverppmLeadppmTinppmSiliconppmSiliconppmVanadiumppmWaterGlycolscorSulfationAbs/nm	Sample NumberClient InfoSample DateClient InfoMachine AgehrsClient InfoOil AgehrsClient InfoFilter AgehrsClient InfoOil ChangedClient InfoFilter ChangedClient InfoFilter ChangedClient InfoSample StatusClient InfoChromiumppmASTM D5185(m)NickelppmASTM D5185(m)SilverppmASTM D5185(m)SilverppmASTM D5185(m)LeadppmASTM D5185(m)CopperppmASTM D5185(m)TinppmASTM D5185(m)VanadiumppmASTM D5185(m)SiliconppmASTM D5185(m)VaterVC MethodGlycol%ASTM D5185(m)NitrationAbs/cmASTM D7844*NitrationAbs/cmASTM D7624*SulfationAbs/:1mmASTM D7415*	Sample NumberClient InfoSample DateClient InfoMachine AgehrsClient InfoOil AgehrsClient InfoFilter AgehrsClient InfoOil ChangedClient InfoIterFilter ChangedClient InfoIterFilter ChangedClient InfoIterFilter ChangedClient InfoIterSample StatusClient InfoIterIronppmASTM D5185(m)>50ChromiumppmASTM D5185(m)>2TitaniumppmASTM D5185(m)>3SilverppmASTM D5185(m)>3LeadppmASTM D5185(m)>3TinppmASTM D5185(m)>4VanadiumppmASTM D5185(m)>4SiliconppmASTM D5185(m)>20WaterwC Method>0.11Glycol%ASTM D5185(m)>20NitrationAbs/cmASTM D7624*>20SulfationAbs/tmASTM D7624*>20	Sample NumberClient InfoGFL0110258Sample DateClient Info13 Feb 2024Machine AgehrsClient Info1200Oil AgehrsClient Info1200Filter AgehrsClient Info1200Oil ChangedClient InfoChangedFilter ChangedClient InfoChangedSample StatusClient InfoChangedIronppmASTM D5185(m)>50NickelppmASTM D5185(m)>2NickelppmASTM D5185(m)>3SilverppmASTM D5185(m)>3AluminumppmASTM D5185(m)>3LeadppmASTM D5185(m)>3CopperppmASTM D5185(m)>3SiliconppmASTM D5185(m)>4SiliconppmASTM D5185(m)>20SiliconppmASTM D5185(m)>20SiliconppmASTM D5185(m)>20SiliconppmASTM D5185(m)>20SiliconppmASTM D5185(m)>20Soot %%ASTM D5185(m)>20NitrationAbs/cmASTM D7624*>20Soot %%ASTM D7624*>20SulfationAbs/cmASTM D7624*>30	Sample NumberIClient InfoIGFL0110258GFL0085853Sample DateClient Info13 Feb 202415 Aug 2023Machine AgehrsClient Info61665077Oil AgehrsClient Info12001200Filter AgehrsClient InfoI2001200Oil ChangedClient InfoI200ChangedChangedFilter ChangedClient InfoChangedChangedChangedSample StatusClient InfoNORMALNORMALNORMALIronppmASTM D5185(m)>501312NickelppmASTM D5185(m)>422NickelppmASTM D5185(m)>2<1

Oxidation

Visc @ 100°C cSt

Abs/.1mm ASTM D7414\* >25

ASTM D7279(m) 15.1

Submitted By: Fred Carleton

18.6

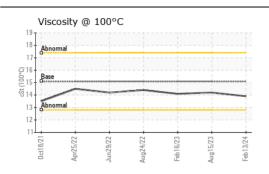
14.2

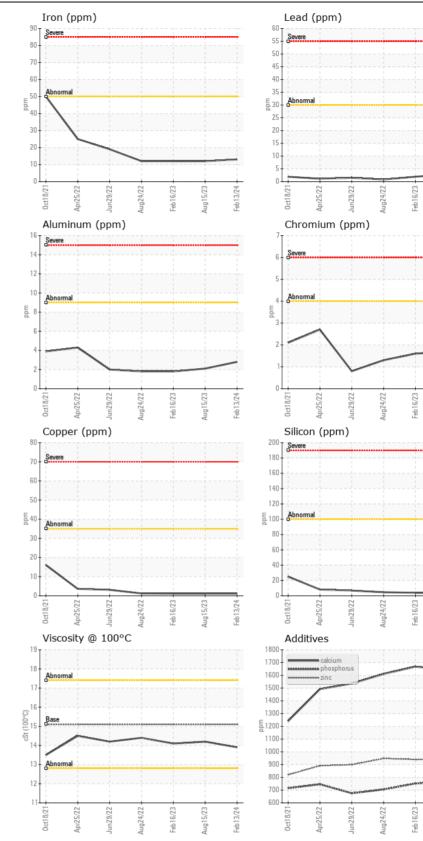
4.4

13.9

21.0

14.1







: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 209 - Hamilton Laboratory CALA Sample No. Received : GFL0110258 : 15 Feb 2024 560 Seaman Street Lab Number : 02615884 Tested : 15 Feb 2024 Stoney Creek, ON ISO 17025:2017 Accredited : 15 Feb 2024 - Wes Davis CA L8E 3X7 Unique Number : 5732994 Diagnosed Laboratory Test Package : MOB 1 Contact: Fred Carleton To discuss this sample report, contact Customer Service at 1-800-268-2131. fred.carleton@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.

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Aug15/23

Feb13/24

Feb13/24

Aug 15/23

Aug15/23

Aug15/23 -

Feb 13/24

Feb 13/2/