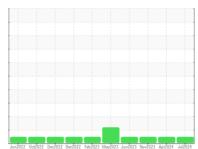


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

946017-260298

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

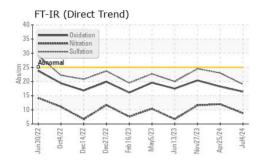
Fluid Condition

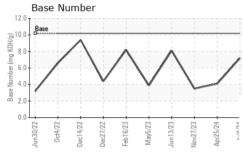
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

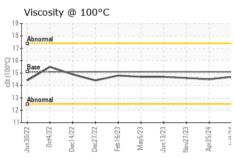
SAMPLE INFORMATION method limit/bass current history1 history2	(28 QTS)		Jun2022 Oct2	022 Dec2022 Dec2022 Feb20	023 May2023 Jun2023 Nov2023 Apra	024 Jul2024	
Sample Date Client Info 04 Jul 2024 25 Apr 2024 27 Nov 2023	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 546 22 339 Oil Age hrs Client Info 600 0 600 Oil Changed Changed Changed Changed Changed Changed Sample Status Image: Client Info Changed Changed Changed NORMAL NORMAL NORMAL CONTAMINATION method limit/bass current history1 history2 Water WC Method 90.1 NEG NEG NEG WEAR METALS method limit/bass current history1 history2 Iron ppm ASTM D5185m >50 8 43 24 Chromium ppm ASTM D5185m >4 <1 2 1 Nickel ppm ASTM D5185m >3 0 0 0 Silver ppm ASTM D5185m >30 0 0 <1 Lead ppm ASTM D5185m >30 0	Sample Number		Client Info		GFL0121828	GFL0106862	GFL0092016
Machine Age hrs Client Info 546 22 339 Oil Age hrs Client Info 600 0 600 Oil Changed Client Info Changed Changed Changed Changed Sample Status Image: Client Info Changed Changed Changed Changed Work Image: Client Info Changed Changed Changed Changed Ward Umer Mode Imititibase current history1 history2 Water WC Method 90.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5186m >50 8 43 24 Chromium ppm ASTM D5186m >4 <1	Sample Date		Client Info		04 Jul 2024	25 Apr 2024	27 Nov 2023
Oil Changed Sample Status Client Info Sample Status Changed NORMAL NORMAL NORMAL NORMAL Changed NORMAL NORMAL NORMAL NORMAL Changed NORMAL NORMAL NORMAL Changed NORMAL NORMAL NORMAL Changed NORMAL NORMAL NORMAL Contract Normal Normal Normal Current Normal Normal Inistory2 Inistory2 Inistory2 MEG NEG	Machine Age	hrs	Client Info		546	22	339
Oil Changed Sample Status Client Info MoRMAL Changed NORMAL Changed NoRMAN Changed NoRMAN Changed NoRMAN Changed NoRMAN Changed NoRMAN Changed NoRMAN Changed NoRMAN Changed NoRMAN Change NoRMAN Change NoRMAN Change NoRMAN		hrs	Client Info		600	0	600
Sample Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 8 43 24 Chromium ppm ASTM D5185m >4 <1	-		Client Info		Changed	Changed	Changed
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 8 43 24 Chromium ppm ASTM D5185m >4 <1					_	NORMAL	NORMAL
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 8 43 24 Chromium ppm ASTM D5185m >4 <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium ppm ASTM D5185m >4 <1 2 1 Nickel ppm ASTM D5185m >2 0 <1	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	8	43	24
Titanium ppm ASTM D5185m <1 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 3 5 3 Lead ppm ASTM D5185m >9 3 5 3 Copper ppm ASTM D5185m >35 <1 1 1 Tin ppm ASTM D5185m >4 0 <1 0 Vanadium ppm ASTM D5185m <1 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 14 6 2 2	Chromium	ppm	ASTM D5185m	>4	<1	2	1
Silver	Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 3 5 3 Lead ppm ASTM D5185m >30 0 0 <1 Copper ppm ASTM D5185m >4 0 <1 1 Tin ppm ASTM D5185m >4 0 <1 0 Vanadium ppm ASTM D5185m >4 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5 0 0 0 0 ADDITIVES method limit/base current history1	Titanium		ASTM D5185m		<1	0	0
Aluminum	Silver	ppm	ASTM D5185m	>3	0	0	0
Lead ppm ASTM D5185m >30 0 0 <1 Copper ppm ASTM D5185m >35 <1 <1 1 Tin ppm ASTM D5185m >4 0 <1 0 Vanadium ppm ASTM D5185m <1 0 <1 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 14 6 2 Barium ppm ASTM D5185m 50 14 6 2 Barium ppm ASTM D5185m 50 0 0 0 0 Molybdenum ppm ASTM D5185m 50 52 52 41 1 Manganese ppm ASTM D5185m 560 593 529 463 Calcium ppm ASTM D5185m 780	Aluminum	ppm	ASTM D5185m	>9	3	5	3
Copper ppm ASTM D5185m >35 <1 <1 1 Tin ppm ASTM D5185m >4 0 <1	Lead		ASTM D5185m	>30	0	0	<1
Tin ppm ASTM D5185m >4 0 <1 0 Vanadium ppm ASTM D5185m <1 0 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 14 6 2 Barium ppm ASTM D5185m 50 0 0 0 Molybdenum ppm ASTM D5185m 50 52 52 41 Mangaese ppm ASTM D5185m 50 593 529 463 Calcium ppm ASTM D5185m 780 593 529 463 Calcium ppm ASTM D5185m 780 518 696 586 Zinc ppm ASTM D5185m 870 967 878 750 Sulfur ppm ASTM D5185m 2040 2324 2614 1782 <td>Copper</td> <td></td> <td>ASTM D5185m</td> <td>>35</td> <th><1</th> <td><1</td> <td>1</td>	Copper		ASTM D5185m	>35	<1	<1	1
Vanadium ppm ASTM D5185m <1 0 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 14 6 2 Barium ppm ASTM D5185m 50 52 52 41 Manganese ppm ASTM D5185m 50 52 52 41 Magnesium ppm ASTM D5185m 560 593 529 463 Calcium ppm ASTM D5185m 560 593 529 463 Calcium ppm ASTM D5185m 780 593 529 463 Zinc ppm ASTM D5185m 780 593 529 463 Zinc ppm ASTM D5185m 780 967 878 750 Sulfur ppm ASTM D5185m >+100 5 9 5 </td <td>• •</td> <td></td> <td>ASTM D5185m</td> <td>>4</td> <th>0</th> <td><1</td> <td>0</td>	• •		ASTM D5185m	>4	0	<1	0
Cadmium ppm ASTM D5185m 0	Vanadium		ASTM D5185m		<1	0	<1
Boron	Cadmium		ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 52 52 41 Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 560 593 529 463 Calcium ppm ASTM D5185m 1510 1545 1518 1251 Phosphorus ppm ASTM D5185m 780 818 696 586 Zinc ppm ASTM D5185m 870 967 878 750 Sulfur ppm ASTM D5185m 2040 2324 2614 1782 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 52 52 41 Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 560 593 529 463 Calcium ppm ASTM D5185m 1510 1545 1518 1251 Phosphorus ppm ASTM D5185m 780 818 696 586 Zinc ppm ASTM D5185m 870 967 878 750 Sulfur ppm ASTM D5185m 2040 2324 2614 1782 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844 0	Boron	ppm	ASTM D5185m	50	14	6	2
Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 560 593 529 463 Calcium ppm ASTM D5185m 1510 1545 1518 1251 Phosphorus ppm ASTM D5185m 780 818 696 586 Zinc ppm ASTM D5185m 870 967 878 750 Sulfur ppm ASTM D5185m 2040 2324 2614 1782 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7415 >30	Barium	ppm	ASTM D5185m	5	0	0	0
Magnesium ppm ASTM D5185m 560 593 529 463 Calcium ppm ASTM D5185m 1510 1545 1518 1251 Phosphorus ppm ASTM D5185m 780 818 696 586 Zinc ppm ASTM D5185m 870 967 878 750 Sulfur ppm ASTM D5185m 2040 2324 2614 1782 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7415 >30 19.0 2	Molybdenum	ppm	ASTM D5185m	50	52	52	41
Calcium ppm ASTM D5185m 1510 1545 1518 1251 Phosphorus ppm ASTM D5185m 780 818 696 586 Zinc ppm ASTM D5185m 870 967 878 750 Sulfur ppm ASTM D5185m 2040 2324 2614 1782 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm <t< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><th>0</th><td><1</td><td><1</td></t<>	Manganese	ppm	ASTM D5185m	0	0	<1	<1
Phosphorus ppm ASTM D5185m 780 818 696 586 Zinc ppm ASTM D5185m 870 967 878 750 Sulfur ppm ASTM D5185m 2040 2324 2614 1782 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414	Magnesium	ppm	ASTM D5185m	560	593	529	463
Zinc ppm ASTM D5185m 870 967 878 750 Sulfur ppm ASTM D5185m 2040 2324 2614 1782 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m 20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % "ASTM D7844 0 0 0 Nitration Abs/cm "ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm "ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm "ASTM D7414 >25 16.4 18.2 20.4	Calcium	ppm	ASTM D5185m	1510	1545	1518	1251
Sulfur ppm ASTM D5185m 2040 2324 2614 1782 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	Phosphorus	ppm	ASTM D5185m	780	818	696	586
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m 4 13 8 Potassium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	Zinc	ppm	ASTM D5185m	870	967	878	750
Silicon ppm ASTM D5185m >+100 5 9 5 Sodium ppm ASTM D5185m 4 13 8 Potassium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	Sulfur	ppm	ASTM D5185m	2040	2324	2614	1782
Sodium ppm ASTM D5185m 4 13 8 Potassium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 1 3 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	Silicon	ppm	ASTM D5185m	>+100	5	9	5
INFRA-RED	Sodium	ppm	ASTM D5185m		4	13	8
Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	Potassium	ppm	ASTM D5185m	>20	1	3	0
Nitration Abs/cm *ASTM D7624 >20 8.8 12.0 11.6 Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	Soot %	%	*ASTM D7844		0	0	0
Sulfation Abs/.1mm *ASTM D7415 >30 19.0 23.0 24.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4	Nitration	Abs/cm	*ASTM D7624	>20	8.8	12.0	11.6
Oxidation Abs/.1mm *ASTM D7414 >25 16.4 18.2 20.4					19.0		24.5
	FLUID DEGRAI	OITAC	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	18.2	20.4
	Base Number (BN)	mg KOH/a	ASTM D2896		7.2	4.1	



OIL ANALYSIS REPORT



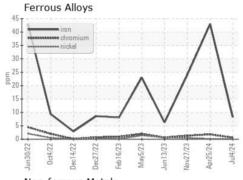


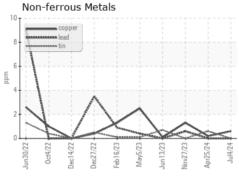


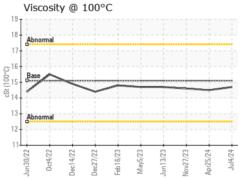
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

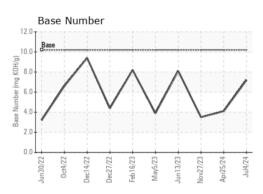
FLUID PROPI	ERIIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.7	14.5	14.6

GRAPHS













Certificate 12367

Laboratory Sample No.

: GFL0121828 Lab Number : 06234674 Unique Number : 11123508

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 12 Jul 2024 **Tested**

Diagnosed

: 15 Jul 2024 : 15 Jul 2024 - Wes Davis

GFL Environmental - 856 - Houston South

8515 Highway 6 South Houston, TX US 77083

Contact: Apolinar Zacarias pzacariascano@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:

F: