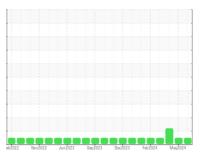


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 731117 Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (--- 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 oil.

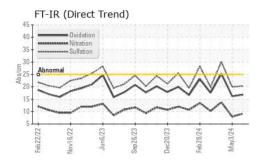
Fluid Condition

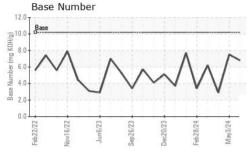
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

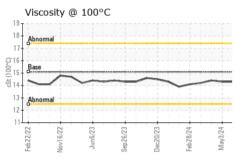
Sample Date Client Info 23 May 2024 03 May 2024 11 Apr 2024 Machine Age hrs Client Info 6737 6633 6491 Oil Age hrs Client Info 1200 0 0 Oil Changed Client Info Changed Not Changd Not Changd Sample Status NORMAL NORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2	GAL)		eb2022 No	ov2022 Jun2023 Se	p2023 Dec2023 Feb2024	May2024	
Sample Date Client Info 23 May 2024 03 May 2024 11 Apr 2024	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 6737 6633 6491 Oil Age hrs Client Info 1200 0 0 Oil Changed Client Info Changed Not Changd Sample Status NoRMAL NORMAL ABNORMAL CONTAMINATION Water WC Method >0.1 NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 11 7 27 Chromium ppm ASTM D5185m >4 1 1 2 Nickel ppm ASTM D5185m >4 1 1 1 1 Titanium ppm ASTM D5185m >3 1 <1 0 0 3 4 14 4 0 0 3 4 14 4 0 0 1 1 1 1 1 1 1 1	Sample Number		Client Info		GFL0120167	GFL0117173	GFL0117175
Oil Age hrs Client Info 1200 0 0 Oil Changed Sample Status Client Info Changed Not Changed N	Sample Date		Client Info		23 May 2024	03 May 2024	11 Apr 2024
Oil Changed Sample Status Client Info Changed NORMAL Not Changd NORMAL Not Changd ABNORMAL 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 DS185m >50 11 7 27 Chromium ppm ASTM DS185m >2 <1	Machine Age	hrs	Client Info		6737	6633	6491
Oil Changed Sample Status Client Info Changed NORMAL Not Changd NORMAL Not Changd ABNORMAL 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 DS185m >50 11 7 27 Chromium ppm ASTM DS185m >2 <1	•	hrs	Client Info		1200	0	0
NORMAL NORMAL ABNORMAL	-		Client Info		Changed	Not Changd	Not Changd
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 11 7 27 Chromium ppm ASTM D5185m >2 <1 1 1 2 Nickel ppm ASTM D5185m >2 <1 0 3 4 1 4 1 2 1 3 3 4 1 4 1 2 1 3 1 1 4 1 2 1 0 0 1 <td< th=""><th>-</th><th></th><th></th><th></th><th>_</th><th>NORMAL</th><th>ABNORMAL</th></td<>	-				_	NORMAL	ABNORMAL
Iron	CONTAMINAT	ION	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium ppm ASTM D5185m >4 1 1 2 Nickel ppm ASTM D5185m >2 <1 1 1 Titanium ppm ASTM D5185m >2 <1 <1 0 Silver ppm ASTM D5185m >3 1 <1 0 Aluminum ppm ASTM D5185m >30 3 4 14 Copper ppm ASTM D5185m >30 3 4 14 Copper ppm ASTM D5185m >35 2 <1 3 Tin ppm ASTM D5185m >4 1 2 1 Vanadium ppm ASTM D5185m >4 1 2 1 Vanadium ppm ASTM D5185m >4 1 2 1 Vanadium ppm ASTM D5185m <1 0 <1 0 Calmium ppm ASTM D5185m 50 25 27 <	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	11	7	27
Titanium	Chromium	ppm	ASTM D5185m	>4	1	1	2
Silver	Nickel	ppm	ASTM D5185m	>2	<1	1	1
Aluminum	Titanium	ppm	ASTM D5185m		<1	<1	0
Lead	Silver	ppm	ASTM D5185m	>3	1	<1	0
Copper ppm ASTM D5185m >35 2 <1	Aluminum	ppm	ASTM D5185m	>9	2	2	3
Tin	Lead	ppm	ASTM D5185m	>30	3	4	14
Vanadium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>35	2	<1	3
Cadmium ppm ASTM D5185m <1	Tin	ppm	ASTM D5185m	>4	1	2	1
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	0	<1
Boron	Cadmium	ppm	ASTM D5185m		<1	2	0
Barium ppm ASTM D5185m 5 <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 54 48 65 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	50	25	27	10
Manganese ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m	5	<1	0	0
Magnesium ppm ASTM D5185m 560 588 628 669 Calcium ppm ASTM D5185m 1510 1583 1761 1904 Phosphorus ppm ASTM D5185m 780 782 927 886 Zinc ppm ASTM D5185m 870 988 1066 1068 Sulfur ppm ASTM D5185m 2040 2530 3272 2880 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 4 5 Sodium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/cm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION *ASTM D7414 <th>Molybdenum</th> <th>ppm</th> <th>ASTM D5185m</th> <th>50</th> <th>54</th> <th>48</th> <th>65</th>	Molybdenum	ppm	ASTM D5185m	50	54	48	65
Calcium ppm ASTM D5185m 1510 1583 1761 1904 Phosphorus ppm ASTM D5185m 780 782 927 886 Zinc ppm ASTM D5185m 870 988 1066 1068 Sulfur ppm ASTM D5185m 2040 2530 3272 2880 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 4 5 Sodium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method	Manganese	ppm	ASTM D5185m	0	<1	1	1
Phosphorus ppm ASTM D5185m 780 782 927 886 Zinc ppm ASTM D5185m 870 988 1066 1068 Sulfur ppm ASTM D5185m 2040 2530 3272 2880 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 4 5 Sodium ppm ASTM D5185m 7 6 10 Potassium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base	Magnesium	ppm	ASTM D5185m	560	588	628	669
Zinc ppm ASTM D5185m 870 988 1066 1068 Sulfur ppm ASTM D5185m 2040 2530 3272 2880 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 4 5 Sodium ppm ASTM D5185m 7 6 10 Potassium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 <	Calcium	ppm	ASTM D5185m	1510	1583	1761	1904
Sulfur ppm ASTM D5185m 2040 2530 3272 2880 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 4 5 Sodium ppm ASTM D5185m 7 6 10 Potassium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	Phosphorus	ppm	ASTM D5185m	780	782	927	886
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 5 4 5 Sodium ppm ASTM D5185m 7 6 10 Potassium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	Zinc	ppm	ASTM D5185m	870	988	1066	1068
Silicon ppm ASTM D5185m >+100 5 4 5 Sodium ppm ASTM D5185m 7 6 10 Potassium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	Sulfur	ppm	ASTM D5185m	2040	2530	3272	2880
Sodium ppm ASTM D5185m 7 6 10 Potassium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 3 2 11 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	Silicon	ppm	ASTM D5185m	>+100	5	4	5
INFRA-RED	Sodium	ppm	ASTM D5185m		7	6	10
Soot % % *ASTM D7844 0.1 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	Potassium	ppm	ASTM D5185m	>20	3	2	11
Nitration Abs/cm *ASTM D7624 >20 9.2 7.9 13.8 Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 20.3 19.9 30.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	Soot %	%	*ASTM D7844		0.1	0.1	0.1
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	Nitration	Abs/cm	*ASTM D7624	>20	9.2	7.9	13.8
Oxidation Abs/.1mm *ASTM D7414 >25 16.8 16.2 25.3	Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	19.9	30.1
	FLUID DEGRA	OATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 10.2 6.8 7.5 ▲ 2.9		Abs/.1mm	*ASTM D7414	>25	16.8	16.2	25.3
	Base Number (BN)	mg KOH/g	ASTM D2896	10.2	6.8	7.5	<u>^</u> 2.9



OIL ANALYSIS REPORT



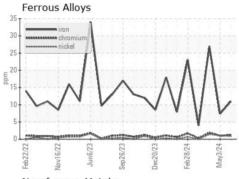


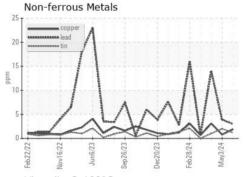


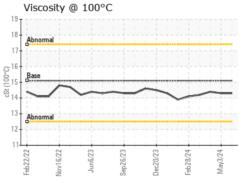
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

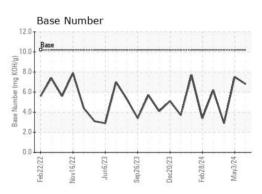
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	14.3	14.4	

GRAPHS













Certificate 12367

Laboratory Sample No. Lab Number : 06191872 Unique Number : 11048624

: GFL0120167

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 28 May 2024 **Tested** : 29 May 2024

Diagnosed : 29 May 2024 - Wes Davis

GFL Environmental - 836 - Kansas City Hauling

7801 East Truman Road Kansas City, MO US 64126

Contact: Loyce Stewart loyce.stewart@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)

Report Id: GFL836 [WUSCAR] 06191872 (Generated: 05/29/2024 10:36:23) Rev: 1

Contact/Location: GFL823,834,836,837,840 - Loyce Stewart - GFL836

T:

F: