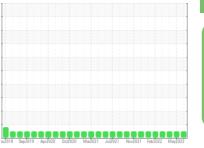


OIL ANALYSIS REPORT

SAMPLE INFORMATION method

Sample Rating Trend

NORMAL





Component Natural Gas Engine Fluid

PETRO CANADA DURON GEO LD 15W40 (8 GAL)

DIAGNOSIS

Machine Id 3815C

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

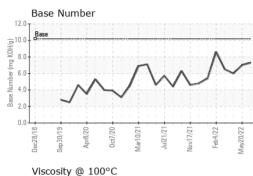
Fluid Condition

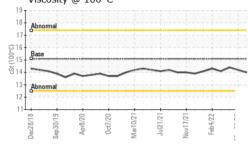
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Date Client Info 19 May 2023 20 May 2022 21 Apr 2022 Machine Age hrs Client Info 77799 8898 8721 Oil Age hrs Client Info 77799 8898 8721 Oil Changed L Client Info 77799 177 546 Oil Changed L Client Info NORMAL NORMAL NORMAL WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185 >50 3 4 5 Chromium ppm ASTM D5185 >2 0 0 0 Nickel ppm ASTM D5185 >3 0 1 1 2 Lead ppm ASTM D5185 >30 1 1 1 1 Vanadium ppm ASTM D5185 S0 29 42 16 Cadmium ppm ASTM D5185 S0 29 42 16 <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>GFL0069706</th> <th>GFL0043310</th> <th>GFL0043336</th>	Sample Number		Client Info		GFL0069706	GFL0043310	GFL0043336
Oil Age hrs Client Info 77799 177 546 Oil Changed Client Info Changed N/A Changed Sample Status Image Image N/A Changed WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185m >50 3 4 5 Chromium ppm ASTM D5185m >50 3 4 5 Chromium ppm ASTM D5185m >2 0 0 0 Nickel ppm ASTM D5185m >9 0 1 2 Lead ppm ASTM D5185m >9 0 1 2 Lead ppm ASTM D5185m >35 <1 <1 <1 Cadmium ppm ASTM D5185m >35 <1 <1 <1 Cadmium ppm ASTM D5185m >50 53 46 45 Magnesium	Sample Date		Client Info		19 May 2023	20 May 2022	21 Apr 2022
Oil Changed Sample Status Client Info Changed NORMAL N/A Changed NORMAL NORMAL NORMAL WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >50 3 4 5 Chromium ppm ASTM D5185m >20 0 0 0 Nickel ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >3 0 41 0 Silver ppm ASTM D5185m >3 0 41 2 Lead ppm ASTM D5185m >3 0 41 41 41 41 Vanadium ppm ASTM D5185m >30 <1	Machine Age	hrs	Client Info		77799	8898	8721
Sample Status Image: Status NORMAL NORMAL NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 3 4 5 Chromium ppm ASTM D5185m >2 0 0 0 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >3 0 <1 0 Aluminum ppm ASTM D5185m >30 <1 <1 <1 Copper ppm ASTM D5185m >30 <1 <1 <1 <1 Vanadium ppm ASTM D5185m >4 <1 <1 <1 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 0 Cadmium ppm ASTM D5185m 50 53 46 45 5	Oil Age	hrs	Client Info		77799	177	546
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 3 4 5 Chromium ppm ASTM D5185m >4 0 <1 <1 Nickel ppm ASTM D5185m >4 0 <1 <1 0 Silver ppm ASTM D5185m >3 0 <1 0 0 Aluminum ppm ASTM D5185m >3 0 <1 1 0 Aluminum ppm ASTM D5185m >9 0 1 2 1 Copper ppm ASTM D5185m >30 <1 <1 1	Oil Changed		Client Info		Changed	N/A	Changed
Iron ppm ASTM D5185m >50 3 4 0 <1	Sample Status				NORMAL	NORMAL	NORMAL
Math. ppm ASTM D5185m >4 0 -1 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >2 0 0 0 Titanium ppm ASTM D5185m >3 0 <1 0 Silver ppm ASTM D5185m >3 0 <1 0 Aluminum ppm ASTM D5185m >9 0 1 2 Lead ppm ASTM D5185m >30 <1 <1 1 Copper ppm ASTM D5185m >35 <1 <1 <1 Vanadium ppm ASTM D5185m >4 <1 <1 <1 Vanadium ppm ASTM D5185m >4 <1 <1 <1 Vanadium ppm ASTM D5185m 50 29 42 16 Barium ppm ASTM D5185m 50 53 46 45 Magnesium ppm ASTM D5185m 50 624 552 511 Calcium ppm ASTM D5185m 780 794 <	Iron	ppm	ASTM D5185m	>50	-	4	5
Titanium ppm ASTM D5185m <th>Chromium</th> <th>ppm</th> <th>ASTM D5185m</th> <th>>4</th> <th>0</th> <th><1</th> <th><1</th>	Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Silver ppm ASTM D5185m >3 0 <1	Nickel	ppm	ASTM D5185m	>2	0	0	0
Aluminum ppm ASTM D5185m >9 0 1 2 Lead ppm ASTM D5185m >30 <1 <1 <1 Copper ppm ASTM D5185m >35 <1 <1 <1 Tin ppm ASTM D5185m >4 <1 <1 <1 Vanadium ppm ASTM D5185m >4 <1 <1 <1 Vanadium ppm ASTM D5185m >4 <1 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 50 29 42 16 Barium ppm ASTM D5185m 50 53 46 45 Magnaese ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 780 771 705 Zinc ppm ASTM D5185m 780 1011 925	Titanium	ppm	ASTM D5185m		<1	<1	0
Lead ppm ASTM D5185m >30 <1	Silver	ppm	ASTM D5185m	>3	0	<1	0
Copper ppm ASTM D5185m >35 <1	Aluminum	ppm	ASTM D5185m	>9	0	1	2
Tin ppm ASTM D5185m >4 <1	Lead	ppm	ASTM D5185m	>30	<1	<1	<1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 29 42 16 Barium ppm ASTM D5185m 50 0 0 0 Molybdenum ppm ASTM D5185m 50 53 46 45 Manganese ppm ASTM D5185m 50 53 46 45 Manganesium ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 780 794 771 705 Zinc ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINATY method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 28 <th< th=""><th>Copper</th><th>ppm</th><th>ASTM D5185m</th><th>>35</th><th><1</th><th><1</th><th><1</th></th<>	Copper	ppm	ASTM D5185m	>35	<1	<1	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 29 42 16 Barium ppm ASTM D5185m 50 0 0 0 Molybdenum ppm ASTM D5185m 50 53 46 45 Manganese ppm ASTM D5185m 50 53 46 45 Magnesium ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 780 794 771 705 Zinc ppm ASTM D5185m 870 1011 925 928 Sulfur ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINANTS method Imit/base current history1 history2 Solium ppm ASTM D5185m >+100 38	Tin	ppm	ASTM D5185m	>4	<1	<1	<1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 29 42 16 Barium ppm ASTM D5185m 50 0 0 0 Molybdenum ppm ASTM D5185m 50 53 46 45 Manganese ppm ASTM D5185m 50 624 552 511 Calcium ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 780 794 771 705 Zinc ppm ASTM D5185m 780 1011 925 928 Sulfur ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 38 4 5 Sodium ppm ASTM D5185m >20	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 50 29 42 16 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 53 46 45 Manganese ppm ASTM D5185m 0 <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 53 46 45 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 1510 1568 1620 1614 Phosphorus ppm ASTM D5185m 780 794 771 705 Zinc ppm ASTM D5185m 780 1011 925 928 Sulfur ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 53 46 45 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 1510 1568 1620 1614 Phosphorus ppm ASTM D5185m 780 794 771 705 Zinc ppm ASTM D5185m 870 1011 925 928 Sulfur ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >40 5 5 Sodium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current <th>Boron</th> <th>ppm</th> <th>ASTM D5185m</th> <th>50</th> <th>29</th> <th>42</th> <th></th>	Boron	ppm	ASTM D5185m	50	29	42	
Manganese ppm ASTM D5185m 0 <1	Barium	ppm	ASTM D5185m	5	0	0	0
Magnesium ppm ASTM D5185m 560 624 552 511 Calcium ppm ASTM D5185m 1510 1568 1620 1614 Phosphorus ppm ASTM D5185m 780 794 771 705 Zinc ppm ASTM D5185m 870 1011 925 928 Sulfur ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 38 4 5 Sodium ppm ASTM D5185m >+20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0.1 0.1 Nitration Abs/.1mm *ASTM D7624 >20 8.0 8.1 10.9 Sulfation Abs/.1mm *ASTM D7415 >3	Molybdenum	ppm	ASTM D5185m	50	53	46	45
Calcium ppm ASTM D5185m 1510 1568 1620 1614 Phosphorus ppm ASTM D5185m 780 794 771 705 Zinc ppm ASTM D5185m 870 1011 925 928 Sulfur ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 38 4 5 Sodium ppm ASTM D5185m >+100 38 4 4 Potassium ppm ASTM D5185m >20 2 <1	Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Phosphorus ppm ASTM D5185m 780 794 771 705 Zinc ppm ASTM D5185m 870 1011 925 928 Sulfur ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 38 4 5 Sodium ppm ASTM D5185m >+100 38 4 5 Sodium ppm ASTM D5185m >20 2 <10	Magnesium	ppm	ASTM D5185m	560	624	552	511
Zinc ppm ASTM D5185m 870 1011 925 928 Sulfur ppm ASTM D5185m 2040 2834 2255 2065 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 38 4 5 Sodium ppm ASTM D5185m >+100 38 4 4 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 8.1 10.9 Sulfation Abs/.tmm *ASTM D7844 0 0.1 0.1 9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.tmm *ASTM D7614 >25 <th>Calcium</th> <th>ppm</th> <th>ASTM D5185m</th> <th>1510</th> <th>1568</th> <th>1620</th> <th>1614</th>	Calcium	ppm	ASTM D5185m	1510	1568	1620	1614
SulfurppmASTM D5185m2040283422552065CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>+1003845SodiumppmASTM D5185m>+1003844PotassiumppmASTM D5185m>202<10INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D784400.10.1NitrationAbs/cm*ASTM D7624>208.08.110.9SulfationAbs/lmm*ASTM D7415>3019.218.822.9FLUID DEGRADATION methodlimit/basecurrenthistory1history2OxidationAbs/lmm*ASTM D7414>2515.715.518.5	Phosphorus	ppm	ASTM D5185m	780	794	771	705
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 38 4 5 Sodium ppm ASTM D5185m >+100 38 4 4 Potassium ppm ASTM D5185m >20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 8.1 10.9 Sulfation Abs/.tmm *ASTM D7615 >30 19.2 18.8 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.tmm *ASTM D7414 >25 15.7 15.5 18.5	Zinc	ppm	ASTM D5185m	870	1011	925	928
Silicon ppm ASTM D5185m >+100 38 4 5 Sodium ppm ASTM D5185m >+100 5 4 4 Potassium ppm ASTM D5185m >20 2 <1	Sulfur	ppm	ASTM D5185m	2040	2834	2255	2065
Sodium ppm ASTM D5185m 5 4 4 Potassium ppm ASTM D5185m<>20 2 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 8.1 10.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.8 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.5 18.5	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 <1	Silicon	ppm	ASTM D5185m	>+100	38	4	5
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 8.1 10.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.8 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.5 18.5	Sodium	ppm	ASTM D5185m		5	4	4
Soot % % *ASTM D7844 0 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.0 8.1 10.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.8 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.5 18.5	Potassium	ppm	ASTM D5185m	>20	2	<1	0
Nitration Abs/cm *ASTM D7624 >20 8.0 8.1 10.9 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.8 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.5 18.5	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.8 22.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.5 18.5	Soot %	%	*ASTM D7844		0	0.1	0.1
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.5 18.5	Nitration	Abs/cm	*ASTM D7624	>20	8.0	8.1	10.9
Oxidation Abs/.1mm *ASTM D7414 >25 15.7 15.5 18.5	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	18.8	22.9
	FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 10.2 7.3 7 6	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	15.5	18.5
	Base Number (BN)	mg KOH/g	ASTM D2896	10.2	7.3	7	6



OIL ANALYSIS REPORT



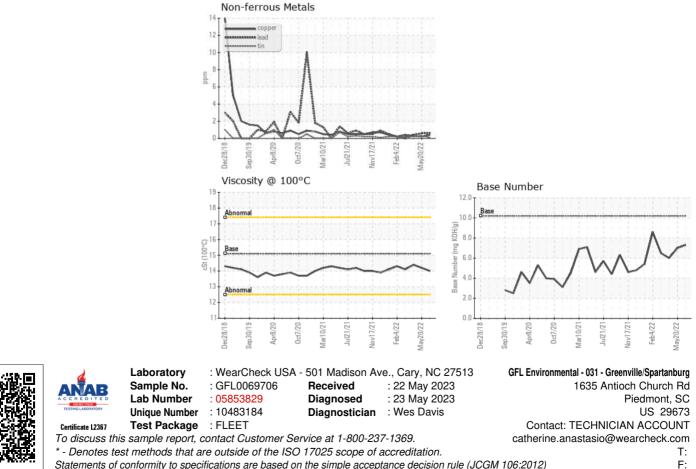


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Dec28/18

Sep 30/19

VISUAL		method	limit/base	current	history1	history2
Vhite Metal	scalar	*Visual	NONE	NONE	NONE	NONE
ellow 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	LIGHT	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 PROPE	ERTIES	method	limit/base	current	history1	history2
/isc @ 100°C	cSt	ASTM D445	15.1	14.0	14.2	14.4
GRAPHS						
Ferrous Alloys						
- contraction chromium						
nickel						
j .						
5						



Mar10/21

Jul21/21

0ct7/20

Feb4/22