

Area (P633836) Machine Id

## **OIL ANALYSIS REPORT**

Sample Rating Trend

## NORMAL

#### 3763C Component Natural Gas Engine Fluid

PETRO CANADA DURON GEO LD 15W40 (30 QTS)

### DIAGNOSIS

#### 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.

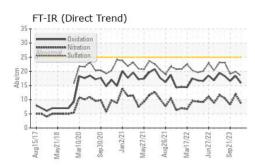
#### Fluid Condition

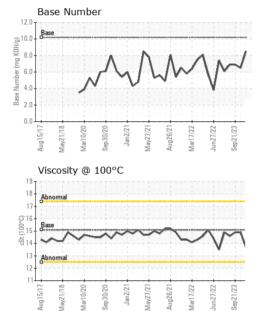
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0117974	GFL0101777	GFL0081014
Sample Date		Client Info		09 May 2024	24 Jan 2024	21 Sep 2023
Machine Age	hrs	Client Info		21182	21125	20979
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
CONTAMINATI	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	19	34	29
Chromium	ppm	ASTM D5185m	>4	1	<u> </u>	5
Nickel	ppm	ASTM D5185m	>2	<1	<1	1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	4	7
Lead	ppm	ASTM D5185m	>30	<1	<1	<1
Copper	ppm	ASTM D5185m	>35	1	4	20
Tin	ppm	ASTM D5185m	>4	<1	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES						
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	Method ASTM D5185m	limit/base	current 36	history1 9	history2 23
	ppm ppm				· · · · · ·	
Boron		ASTM D5185m	50	36	9	23
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5 50	36 2	9 0	23 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	36 2 54	9 0 50	23 0 51
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	36 2 54 <1	9 0 50 1	23 0 51 1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	36 2 54 <1 542	9 0 50 1 539	23 0 51 1 545
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	36 2 54 <1 542 1516	9 0 50 1 539 1577	23 0 51 1 545 1592
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780	36 2 54 <1 542 1516 819	9 0 50 1 539 1577 742	23 0 51 1 545 1592 772
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870	36 2 54 <1 542 1516 819 911	9 0 50 1 539 1577 742 894	23 0 51 1 545 1592 772 957
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040	36 2 54 <1 542 1516 819 911 2621	9 0 50 1 539 1577 742 894 1890	23 0 51 1 545 1592 772 957 2653
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 50 50 560 1510 780 870 2040 >+100	36 2 54 <1 542 1516 819 911 2621 current	9 0 50 1 539 1577 742 894 1890 history1	23 0 51 1 545 1592 772 957 2653 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 2040 2040	36 2 54 <1 542 1516 819 911 2621 current 11	9 0 50 1 539 1577 742 894 1890 history1 21	23 0 51 1 545 1592 772 957 2653 history2 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 2040 2040	36 2 54 <1 542 1516 819 911 2621 <i>current</i> 11 1 3	9 0 50 1 539 1577 742 894 1890 history1 21 7	23 0 51 1 545 1592 772 957 2653 history2 13 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 <b>limit/base</b> >+100	36 2 54 <1 542 1516 819 911 2621 <i>current</i> 11 1 3	9 0 50 1 539 1577 742 894 1890 history1 21 7 <1	23 0 51 1 545 1592 772 957 2653 history2 13 7 15
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >20 limit/base	36 2 54 <1 542 1516 819 911 2621 current 11 1 3 3	9 0 50 1 539 1577 742 894 1890 history1 21 7 <1 history1	23 0 51 1 545 1592 772 957 2653 history2 13 7 15 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 <b>limit/base</b> >+100 >20 <b>limit/base</b>	36 2 54 <1 542 1516 819 911 2621 <i>current</i> 11 1 3 <i>current</i> 0.1	9 0 50 1 539 1577 742 894 1890 history1 21 7 <1 21 7 <1 0.1	23 0 51 1 545 1592 772 957 2653 history2 13 7 15 history2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 <b>limit/base</b> >+100 >20 <b>limit/base</b>	36 2 54 <1 542 1516 819 911 2621 current 11 1 3 current 0.1 8.7	9 0 50 1 539 1577 742 894 1890 history1 21 7 <1 21 7 <1 history1 0.1 11.9	23 0 51 1 545 1592 772 957 2653 history2 13 7 15 history2 0 8.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 560 1510 780 870 2040 imit/base >+100 220 imit/base >20 >30	36 2 54 <1 542 1516 819 911 2621 <i>current</i> 11 1 3 <i>current</i> 0.1 8.7 18.4 <i>current</i>	9 0 50 1 539 1577 742 894 1890 history1 21 7 <1 21 7 <1 0.1 11.9 19.9	23 0 51 1 545 1592 772 957 2653 history2 13 7 15 history2 0 8.2 19.1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 50 1510 780 870 2040 <b>imit/base</b> >+100 20 <b>imit/base</b> >20 <b>imit/base</b> >30	36 2 54 <1 542 1516 819 911 2621 <i>current</i> 11 1 3 <i>current</i> 0.1 8.7 18.4	9 0 50 1 539 1577 742 894 1890 history1 21 7 <1 21 7 <1 0.1 11.9 19.9 history1	23 0 51 1 545 1592 772 957 2653 history2 13 7 15 history2 0 8.2 19.1



# **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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	13.7	14.9	14.9
GRAPHS						

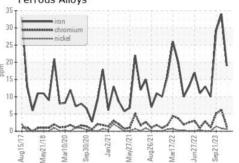
Ferrous Alloys

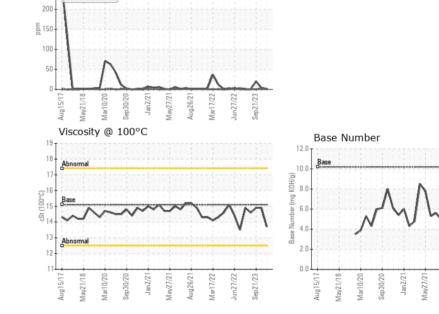
Non-ferrous Metals

head

300

250





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 030 - Conway Myrtle Beach Sample No. : GFL0117974 Received : 10 May 2024 3010 HWY 378 Lab Number : 06176518 Tested : 13 May 2024 Conway, SC US 29527 Unique Number : 11022571 Diagnosed : 13 May 2024 - Wes Davis Test Package : FLEET Contact: ARCILIO RUEZ Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. aruiz@gflenv.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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Submitted By: TECHNICIAN ACCOUNT

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Page 2 of 2