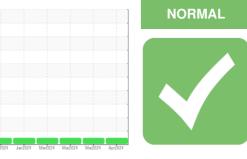


## **OIL ANALYSIS REPORT**

Sample Rating Trend



#### Area (42KM5B) Machine Id 834053 Component Natural Gas Eng Fluid PETRO CANADA

Component Natural Gas Engine Fluid PETRO CANADA DURON GEO LD 15W40 (--- GAL)

### 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.

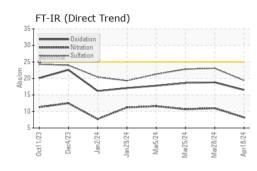
### Fluid Condition

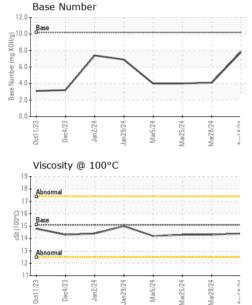
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0118813	GFL0114164	GFL0114170
Sample Date		Client Info		18 Apr 2024	28 Mar 2024	25 Mar 2024
Machine Age	hrs	Client Info		1339	1194	1163
Oil Age	hrs	Client Info		145	1194	1037
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	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	8	30	25
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>9	3	4	5
Lead	ppm	ASTM D5185m	>30	1	2	2
Copper	ppm	ASTM D5185m	>35	2	6	7
Tin	ppm	ASTM D5185m	>4	1	1	2
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 50	current 28	history1 8	history2 9
	ppm ppm					9 <1
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	28 0 51	8 0 54	9 <1 55
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5 50	28 0	8 0 54 2	9 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	28 0 51	8 0 54	9 <1 55
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	28 0 51 1	8 0 54 2	9 <1 55 2 547 1663
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780	28 0 51 1 522 1474 779	8 0 54 2 613 1829 787	9 <1 55 2 547 1663 754
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	28 0 51 1 522 1474 779 889	8 0 54 2 613 1829	9 <1 55 2 547 1663 754 1001
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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	28 0 51 1 522 1474 779	8 0 54 2 613 1829 787	9 <1 55 2 547 1663 754
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	28 0 51 1 522 1474 779 889	8 0 54 2 613 1829 787 1122	9 <1 55 2 547 1663 754 1001
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	28 0 51 1 522 1474 779 889 2571	8 0 54 2 613 1829 787 1122 3121	9 <1 55 2 547 1663 754 1001 2496
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	50 5 50 0 560 1510 780 870 2040	28 0 51 1 522 1474 779 889 2571 current	8 0 54 2 613 1829 787 1122 3121 history1	9 <1 55 2 547 1663 754 1001 2496 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 <b>method</b>	50 50 50 560 1510 780 870 2040 <b>limit/base</b> >+100	28 0 51 1 522 1474 779 889 2571 current 6	8 0 54 2 613 1829 787 1122 3121 history1 8	9 <1 55 2 547 1663 754 1001 2496 history2 10
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 ASTM D5185m	50 50 50 560 1510 780 870 2040 <b>limit/base</b> >+100	28 0 51 1 522 1474 779 889 2571 current 6 4	8 0 54 2 613 1829 787 1122 3121 history1 8 7 4 4 history1	9 <1 55 2 547 1663 754 1001 2496 history2 10 8 5 5 history2
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 50 00 560 1510 780 870 2040 <b>limit/base</b> >+100	28 0 51 1 522 1474 779 889 2571 current 6 4 6 4 6 current 0	8 0 54 2 613 1829 787 1122 3121 history1 8 7 4 history1 0	9 <1 55 2 547 1663 754 1001 2496 <b>history2</b> 10 8 5 5 <b>history2</b> 0
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 <b>limit/base</b> >20 <b>limit/base</b>	28 0 51 1 522 1474 779 889 2571 current 6 4 6 4 6 2 4 6	8 0 54 2 613 1829 787 1122 3121 history1 8 7 4 4 history1	9 <1 55 2 547 1663 754 1001 2496 history2 10 8 5 5 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> >20 <b>limit/base</b>	28 0 51 1 522 1474 779 889 2571 current 6 4 6 4 6 current 0	8 0 54 2 613 1829 787 1122 3121 history1 8 7 4 history1 0	9 <1 55 2 547 1663 754 1001 2496 history2 10 8 5 5 history2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus 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 2040 2040 >+100 >20 imit/base	28 0 51 1 522 1474 779 889 2571 <i>current</i> 6 4 6 <i>current</i> 0 8.2	8 0 54 2 613 1829 787 1122 3121 history1 8 7 4 history1 0 11.0	9 <1 55 2 547 1663 754 1001 2496 history2 10 8 5 5 history2 0 10.7
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 50 150 1510 780 870 2040 <b>imit/base</b> >20 <b>imit/base</b> >20 <b>imit/base</b>	28 0 51 1 522 1474 779 889 2571 <i>current</i> 6 4 6 4 6 <i>current</i> 0 8.2 19.4	8 0 54 2 613 1829 787 1122 3121 history1 8 7 4 <b>history1</b> 0 11.0 23.1	9 <1 55 2 547 1663 754 1001 2496 history2 10 8 5 5 history2 0 10.7 22.8



# **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	14.4	14.3	14.3
GRAPHS						

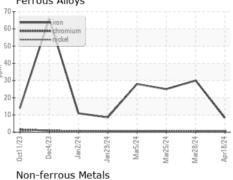
Ferrous Alloys

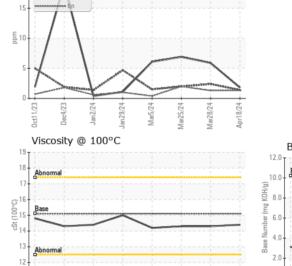
20

11

0ct11/23 -

Dec4/23



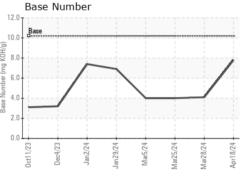


Mar5/24

Apr18/24 -

Mar28/24

Mar25/24



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 836 - Kansas City Hauling Sample No. : GFL0118813 Received : 22 Apr 2024 7801 East Truman Road Lab Number : 06156747 Tested : 23 Apr 2024 Kansas City, MO Unique Number : 10992170 Diagnosed : 23 Apr 2024 - Wes Davis US 64126 Test Package : FLEET Contact: Loyce Stewart Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. loyce.stewart@gflenv.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F:

an29/24

Jan2/24

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