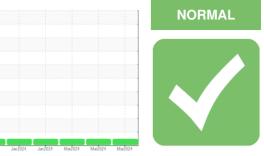


# **OIL ANALYSIS REPORT**

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.

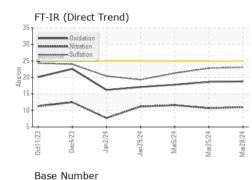
### Fluid Condition

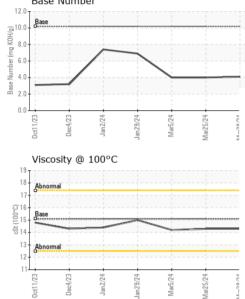
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0114164	GFL0114170	GFL0114122
Sample Date		Client Info		28 Mar 2024	25 Mar 2024	05 Mar 2024
Machine Age	hrs	Client Info		1194	1163	1037
Oil Age	hrs	Client Info		1194	1037	1037
Oil Changed		Client Info		Changed	Not Changd	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	30	25	28
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	4	5	3
Lead	ppm	ASTM D5185m	>30	2	2	2
Copper	ppm	ASTM D5185m	>35	6	7	6
Tin	ppm	ASTM D5185m	>4	1	2	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 50	current 8	history1 9	history2 7
	ppm ppm					
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	8 0 54	9 <1 55	7 <1 51
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5 50	8 0	9 <1	7 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	8 0 54	9 <1 55	7 <1 51 2 578
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	8 0 54 2	9 <1 55 2 547 1663	7 <1 51 2 578 1700
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	8 0 54 2 613 1829 787	9 <1 55 2 547 1663 754	7 <1 51 2 578 1700 762
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 780	8 0 54 2 613 1829 787 1122	9 <1 55 2 547 1663 754 1001	7 <1 51 2 578 1700
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	8 0 54 2 613 1829 787	9 <1 55 2 547 1663 754	7 <1 51 2 578 1700 762
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	8 0 54 2 613 1829 787 1122	9 <1 55 2 547 1663 754 1001	7 <1 51 2 578 1700 762 1014
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	8 0 54 2 613 1829 787 1122 3121	9 <1 55 2 547 1663 754 1001 2496	7 <1 51 2 578 1700 762 1014 2971
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	8 0 54 2 613 1829 787 1122 3121 current	9 <1 55 2 547 1663 754 1001 2496 history1	7 <1 51 2 578 1700 762 1014 2971 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	8 0 54 2 613 1829 787 1122 3121 current 8	9 <1 55 2 547 1663 754 1001 2496 history1 10	7 <1 51 2 578 1700 762 1014 2971 history2 8
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 ASTM D5185m	50 50 50 560 1510 780 870 2040 <b>limit/base</b> >+100	8 0 54 2 613 1829 787 1122 3121 current 8 7	9 <1 55 2 547 1663 754 1001 2496 history1 10 8	7 <1 51 2 578 1700 762 1014 2971 history2 8 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 50 00 560 1510 780 870 2040 <b>limit/base</b> >+100	8 0 54 2 613 1829 787 1122 3121 current 8 7 4	9 <1 55 2 547 1663 754 1001 2496 history1 10 8 5	7 <1 51 2 578 1700 762 1014 2971 history2 8 7 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	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>	8 0 54 2 613 1829 787 1122 3121 current 8 7 4 2	9 <1 55 2 547 1663 754 1001 2496 history1 10 8 5 5 history1	7 <1 51 2 578 1700 762 1014 2971 history2 8 7 2 kistory2
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 2040 >+100 >20 >20 imit/base >20	8 0 54 2 613 1829 787 1122 3121 current 8 7 4 2 4 0	9 <1 55 2 547 1663 754 1001 2496 history1 10 8 5 5 history1 0	7 <1 51 2 578 1700 762 1014 2971 history2 8 7 2 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 t ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 >+100 >20 20 20 20 20 20 20 20	8 0 54 2 613 1829 787 1122 3121 current 8 7 4 current 0 11.0	9 <1 55 2 547 1663 754 1001 2496 history1 10 8 5 5 history1 0 10.7	7 <1 51 2 578 1700 762 1014 2971 history2 8 7 2 history2 0 11.6
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 trs 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>	8 0 54 2 613 1829 787 1122 3121 current 8 7 4 current 0 11.0 23.1	9 <1 55 2 547 1663 754 1001 2496 history1 10 8 5 5 history1 0 10.7 22.8	7 <1 51 2 578 1700 762 1014 2971 history2 8 7 2 history2 0 11.6 21.3



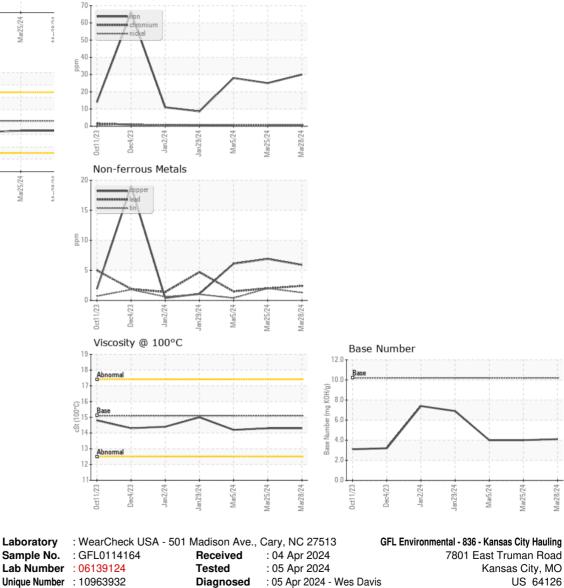
# **OIL ANALYSIS REPORT**





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	14.3	14.3	14.2
GRAPHS						

Ferrous Alloys





 Certificate 12367
 Test Package
 : FLEET

 To discuss this sample report, contact Customer Service at 1-800-237-1369.
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 \* - 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)

7801 East Truman Road 7801 East Truman Road Kansas City, MO US 64126 Contact: Loyce Stewart loyce.stewart@gflenv.com T: 20 106:2012) F:

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Submitted By: JEREMY BROWN

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