

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

749000 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 INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0121832	GFL0106757	GFL0092052
Sample Date		Client Info		09 Jul 2024	28 Mar 2024	14 Dec 2023
Machine Age	hrs	Client Info		16103	15505	14860
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
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	10	11	8
Chromium	ppm	ASTM D5185m	>4	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	3	2	2
Lead	ppm	ASTM D5185m	>30	0	<1	1
Copper	ppm	ASTM D5185m	>35	<1	<1	<1
Tin	ppm	ASTM D5185m	>4	0	1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	50	6	12	18
Boron Barium	ppm ppm		50 5		12 0	18 0
Boron Barium Molybdenum		ASTM D5185m	50 5 50	6 0 55	12	18 0 52
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	50 5 50 0	6 0 55 0	12 0 54 <1	18 0 52 <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	6 0 55 0 535	12 0 54 <1 629	18 0 52 <1 550
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	6 0 55 0 535 1641	12 0 54 <1 629 1651	18 0 52 <1 550 1541
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	6 0 55 0 535 1641 695	12 0 54 <1 629 1651 813	18 0 52 <1 550 1541 734
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 ASTM D5185m	50 5 50 0 560 1510 780 870	6 0 55 0 535 1641 695 926	12 0 54 <1 629 1651 813 1067	18 0 52 <1 550 1541 734 962
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	6 0 55 0 535 1641 695	12 0 54 <1 629 1651 813	18 0 52 <1 550 1541 734
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	6 0 55 0 535 1641 695 926 2150 current	12 0 54 <1 629 1651 813 1067	18 0 52 <1 550 1541 734 962
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 ASTM D5185m	50 5 50 0 560 1510 780 870 2040	6 0 555 0 535 1641 695 926 2150 current 3	12 0 54 <1 629 1651 813 1067 3250 history1 4	18 0 52 <1 550 1541 734 962 2443
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 50 00 560 1510 780 870 2040	6 0 55 0 535 1641 695 926 2150 current	12 0 54 <1 629 1651 813 1067 3250 history1	18 0 52 <1 550 1541 734 962 2443 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 limit/base >+100	6 0 555 0 535 1641 695 926 2150 current 3	12 0 54 <1 629 1651 813 1067 3250 history1 4	18 0 52 <1 550 1541 734 962 2443 history2 4
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 5 50 0 560 1510 780 870 2040 limit/base >+100	6 0 555 0 535 1641 695 926 2150 current 3 14	12 0 54 <1 629 1651 813 1067 3250 history1 4 14	18 0 52 <1 550 1541 734 962 2443 history2 4 18
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	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 limit/base >+100	6 0 555 0 535 1641 695 926 2150 current 3 14 10 current 0	12 0 54 <1 629 1651 813 1067 3250 history1 4 14 14	18 0 52 <1 550 1541 734 962 2443 history2 4 18 14
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >20 limit/base	6 0 555 0 535 1641 695 926 2150 current 3 14 10 current	12 0 54 <1 629 1651 813 1067 3250 history1 4 14 14 11 history1	18 0 52 <1 550 1541 734 962 2443 history2 4 18 18 14 18 14 history2 0.1 9.1
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 limit/base >20 limit/base	6 0 555 0 535 1641 695 926 2150 current 3 14 10 current 0	12 0 54 <1 629 1651 813 1067 3250 history1 4 14 11 11 history1 0	18 0 52 <1 550 1541 734 962 2443 history2 4 18 18 14 14 history2 0.1
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 50 00 560 1510 780 870 2040 imit/base >+100 20 imit/base	6 0 55 0 535 1641 695 926 2150 <i>current</i> 3 14 10 <i>current</i> 0 10.2	12 0 54 <1 629 1651 813 1067 3250 history1 4 14 11 11 history1 0 9.9	18 0 52 <1 550 1541 734 962 2443 history2 4 18 18 14 18 14 history2 0.1 9.1
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 imit/base >20 imit/base >20 imit/base	6 0 555 0 535 1641 695 926 2150 current 3 14 10 current 0 10.2 21.0	12 0 54 <1 629 1651 813 1067 3250 history1 4 14 11 11 history1 0 9.9 20.4	18 0 52 <1 550 1541 734 962 2443 history2 4 18 14 14 history2 0.1 9,1 19,4



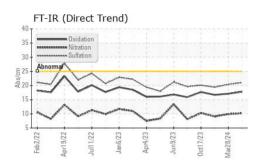
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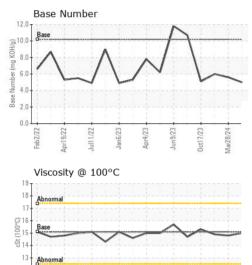
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OIL ANALYSIS REPORT





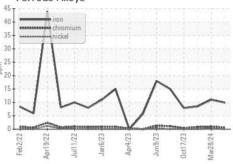
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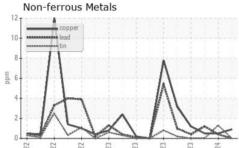
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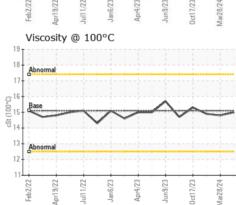
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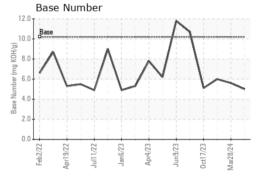
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	15.0	14.8	14.9
GRAPHS						

Ferrous Alloys









Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 856 - Houston South Sample No. : GFL0121832 Received : 12 Jul 2024 8515 Highway 6 South Lab Number : 06234676 Tested : 15 Jul 2024 Houston, TX Unique Number : 11123510 Diagnosed : 15 Jul 2024 - Wes Davis US 77083 Test Package : FLEET Contact: Jose Gonzalez Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jgonzalez2@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: Apolinar Zacarias Page 2 of 2