

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

944024

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

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.

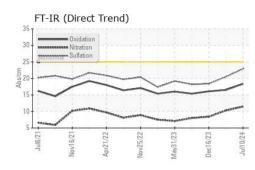
Fluid Condition

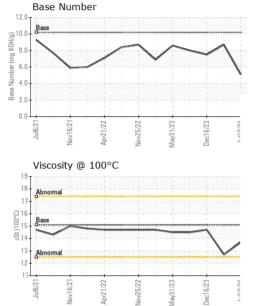
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0119107	GFL0115485	GFL0106966
Sample Date		Client Info		10 Jul 2024	22 Mar 2024	16 Dec 2023
Machine Age	hrs	Client Info		23584	23584	23061
Oil Age	hrs	Client Info		23584	523	694
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	14	20	0
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	6	2	2
Lead	ppm	ASTM D5185m	>30	1	1	0
Copper	ppm	ASTM D5185m	>35	2	<1	<1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	4	4	21
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5	4 0	4 0	21 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	4 0 57	4 0 59	21 0 47
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	4 0 57 0	4 0 59 <1	21 0 47 <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	4 0 57 0 628	4 0 59 <1 875	21 0 47 <1 580
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	4 0 57 0 628 1498	4 0 59 <1 875 1062	21 0 47 <1 580 1460
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	4 0 57 0 628 1498 886	4 0 59 <1 875 1062 1035	21 0 47 <1 580 1460 810
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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	4 0 57 0 628 1498 886 1077	4 0 59 <1 875 1062 1035 1242	21 0 47 <1 580 1460 810 980
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	4 0 57 0 628 1498 886 1077 2589	4 0 59 <1 875 1062 1035 1242 3403	21 0 47 <1 580 1460 810 980 2499
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	4 0 57 0 628 1498 886 1077 2589 current	4 0 59 <1 875 1062 1035 1242 3403 history1	21 0 47 <1 580 1460 810 980 2499 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	4 0 57 0 628 1498 886 1077 2589 current 3	4 0 59 <1 875 1062 1035 1242 3403 history1 3	21 0 47 <1 580 1460 810 980 2499 history2 2
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 2040 2040 2040	4 0 57 0 628 1498 886 1077 2589 current 3 26	4 0 59 <1 875 1062 1035 1242 3403 history1 3 17	21 0 47 <1 580 1460 810 980 2499 history2 2 2 2
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 limit/base >+100	4 0 57 0 628 1498 886 1077 2589 current 3	4 0 59 <1 875 1062 1035 1242 3403 history1 3 17 9	21 0 47 <1 580 1460 810 980 2499 history2 2 2 2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 2040 2040	4 0 57 0 628 1498 886 1077 2589 current 3 26 22 22	4 0 59 <1 875 1062 1035 1242 3403 history1 3 17 9	21 0 47 <1 580 1460 810 980 2499 history2 2 2 2 0 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	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 >+100 >+100 >20 Jimit/base	4 0 57 0 628 1498 886 1077 2589 <u>current</u> 3 26 22 22 <u>current</u> 0.3	4 0 59 <1 875 1062 1035 1242 3403 history1 3 17 9 <u>history1</u> 1.5	21 0 47 <1 580 1460 810 980 2499 history2 2 2 2 2 0 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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 00 560 1510 780 870 2040 imit/base >+100 20 imit/base	4 0 57 0 628 1498 886 1077 2589 <i>current</i> 3 26 22 22 <i>current</i> 0.3 11.5	4 0 59 <1 875 1062 1035 1242 3403 history1 3 17 9 history1 1.5 10.3	21 0 47 <1 580 1460 810 980 2499 history2 2 2 2 2 2 0 history2 0 history2 0 8.4
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 50 560 1510 780 870 2040 imit/base >20 imit/base >20 imit/base	4 0 57 0 628 1498 886 1077 2589 <u>current</u> 3 26 22 22 <u>current</u> 0.3	4 0 59 <1 875 1062 1035 1242 3403 history1 3 17 9 <u>history1</u> 1.5	21 0 47 <1 580 1460 810 980 2499 history2 2 2 2 2 0 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 50 00 560 1510 780 870 2040 imit/base >+100 20 imit/base	4 0 57 0 628 1498 886 1077 2589 <i>current</i> 3 26 22 22 <i>current</i> 0.3 11.5	4 0 59 <1 875 1062 1035 1242 3403 history1 3 17 9 history1 1.5 10.3	21 0 47 <1 580 1460 810 980 2499 history2 2 2 2 2 2 0 history2 0 history2 0 8.4
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 50 560 1510 780 870 2040 imit/base >20 imit/base >20 imit/base	4 0 57 0 628 1498 886 1077 2589 <u>current</u> 3 26 22 22 <u>current</u> 0.3 11.5 22.9	4 0 59 <1 875 1062 1035 1242 3403 history1 3 17 9 <u>history1</u> 1.5 10.3 20.5	21 0 47 <1 580 1460 810 980 2499 history2 2 2 2 0 history2 0 8.4 18.4



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	12.7	14.7
GRAPHS						

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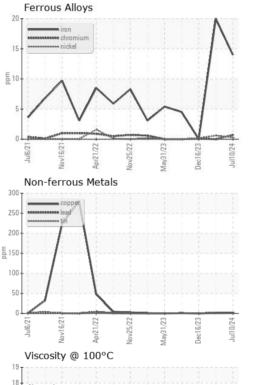
13 Abn

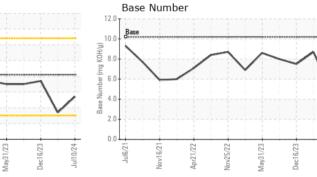
12 11-

Jul6/21.

Nov16/21

Apr21/22





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 882 - Gainesville Sample No. : GFL0119107 Received : 12 Jul 2024 5002 SW 41st Blvd Lab Number : 06234544 Tested : 12 Jul 2024 Gainesville, FL Unique Number : 11123378 Diagnosed : 15 Jul 2024 - Don Baldridge US 32608 Test Package : FLEET Contact: ROBERT CLARK Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. robert.clark@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Nov25/22

Submitted By: CARL MIMS Page 2 of 2

Jul10/24