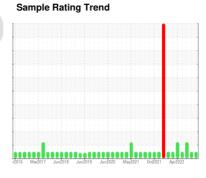


OIL ANALYSIS REPORT

Area **(YA115774)** 10366C

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (30 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

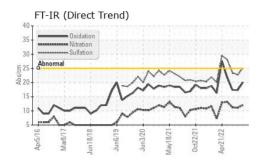
Fluid Condition

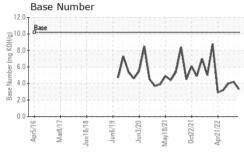
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

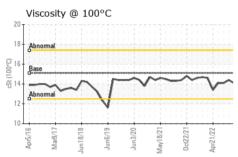
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0123400	GFL0082441	GFL0050728
Sample Date		Client Info		18 Jun 2024	07 Sep 2023	28 Mar 2023
Machine Age	hrs	Client Info		99606	5583	4440
Oil Age	hrs	Client Info		99606	1145	1207
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method				0.0
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	46	20	22
Chromium	ppm	ASTM D5185m	>4	4	2	2
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	4	3	5
Lead	ppm	ASTM D5185m	>30	7	3	1
Copper	ppm	ASTM D5185m	>35	7	4	3
Tin	ppm	ASTM D5185m	>4	0	2	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 5	history1	history2
	ppm					
Boron		ASTM D5185m	50	5	5	7
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5 50	5 <1	5 44	7 <1
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	5 <1 59	5 44 52	7 <1 60
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	5 <1 59 4	5 44 52 1	7 <1 60 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	5 <1 59 4 656	5 44 52 1 512	7 <1 60 <1 458
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	5 <1 59 4 656 1852	5 44 52 1 512 1465	7 <1 60 <1 458 1489
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	50 5 50 0 560 1510 780	5 <1 59 4 656 1852 823	5 44 52 1 512 1465 652	7 <1 60 <1 458 1489 616
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 ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870	5 <1 59 4 656 1852 823 1129	5 44 52 1 512 1465 652 896	7 <1 60 <1 458 1489 616 898
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040	5 <1 59 4 656 1852 823 1129 3141	5 44 52 1 512 1465 652 896 2575	7 <1 60 <1 458 1489 616 898 2359
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base	5 <1 59 4 656 1852 823 1129 3141 current	5 44 52 1 512 1465 652 896 2575 history1 5 40	7 <1 60 <1 458 1489 616 898 2359 history2 7 310
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base	5 <1 59 4 656 1852 823 1129 3141 current 12	5 44 52 1 512 1465 652 896 2575 history1	7 <1 60 <1 458 1489 616 898 2359 history2 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100	5 <1 59 4 656 1852 823 1129 3141 current 12 16	5 44 52 1 512 1465 652 896 2575 history1 5 40	7 <1 60 <1 458 1489 616 898 2359 history2 7 310
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100 >20	5 <1 59 4 656 1852 823 1129 3141 current 12 16 6	5 44 52 1 512 1465 652 896 2575 history1 5 40 6	7 <1 60 <1 458 1489 616 898 2359 history2 7 310 8
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	50 5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	5 <1 59 4 656 1852 823 1129 3141 current 12 16 6 current	5 44 52 1 512 1465 652 896 2575 history1 5 40 6	7 <1 60 <1 458 1489 616 898 2359 history2 7 310 8 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m Method *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 >20 limit/base	5 <1 59 4 656 1852 823 1129 3141 current 12 16 6 current 0	5 44 52 1 512 1465 652 896 2575 history1 5 40 6 history1 0.1	7 <1 60 <1 458 1489 616 898 2359 history2 7 310 8 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 method ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	5 <1 59 4 656 1852 823 1129 3141 current 12 16 6 current 0 12.0	5 44 52 1 512 1465 652 896 2575 history1 5 40 6 history1 0.1 11.1	7 <1 60 <1 458 1489 616 898 2359 history2 7 310 8 history2 0.1 11.2
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 ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	50 5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	5 <1 59 4 656 1852 823 1129 3141 current 12 16 6 current 0 12.0 25.2	5 44 52 1 512 1465 652 896 2575 history1 5 40 6 history1 0.1 11.1 22.7	7 <1 60 <1 458 1489 616 898 2359 history2 7 310 8 history2 0.1 11.2 23.5



OIL ANALYSIS REPORT



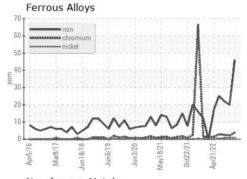


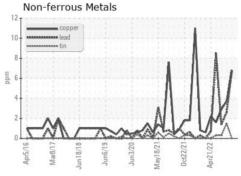


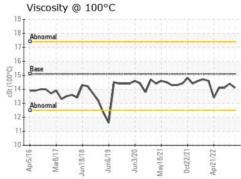
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

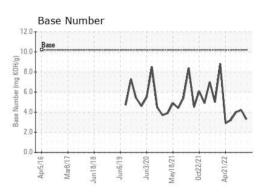
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.1	14.4	14.1

GRAPHS













Laboratory Sample No. Lab Number : 06215683 Unique Number : 11088547

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0123400

Received : 20 Jun 2024 **Tested** : 21 Jun 2024

Diagnosed : 22 Jun 2024 - Don Baldridge

GFL Environmental - 007 - Brunswick 2809 Galloway Road Bolivia, NC

US 28422 Contact: DONALD CRAVEN dcraven@gflenv.com

F: (910)253-4179

Test Package : FLEET Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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)

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