

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id

3588C AUTOCAR ACX

Natural Gas Engine

Fluid PETRO CANADA DURON GEO LD 15W40 (48 QTS)

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

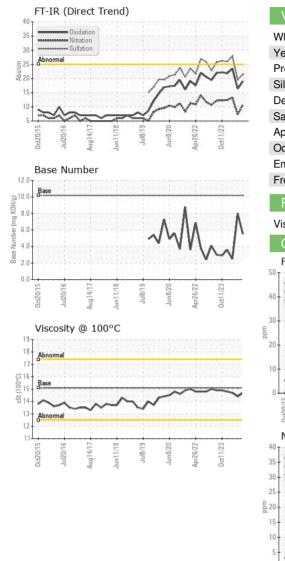
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

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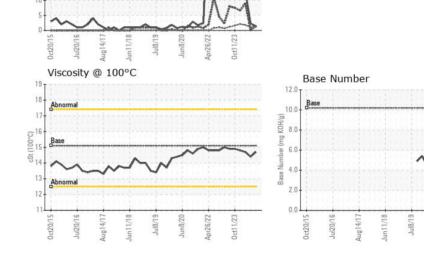
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0117417	GFL0094644	GFL0094757
Sample Date		Client Info		09 Jul 2024	05 Dec 2023	25 Nov 2023
Machine Age	hrs	Client Info		0	43395	43324
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
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	16	17	46
Chromium	ppm	ASTM D5185m	>4	<1	2	6
Nickel	ppm	ASTM D5185m	>2	<1	0	2
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	3	2	8
Lead	ppm	ASTM D5185m	>30	1	<1	9
Copper	ppm	ASTM D5185m	>35	1	2	13
Tin	ppm	ASTM D5185m	>4	1	1	2
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method				history2
ADDITIVES		method	IIIIII/Dase	current	nistory i	mstoryz
Boron	ppm	ASTM D5185m	50	11	33	6
	ppm ppm					
Boron		ASTM D5185m	50	11 3 48	33	6 1 65
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5 50	11 3	33 5	6 1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	11 3 48	33 5 47	6 1 65
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	11 3 48 2	33 5 47 0	6 1 65 2
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	11 3 48 2 653	33 5 47 0 470	6 1 65 2 611
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	11 3 48 2 653 1377	33 5 47 0 470 1338	6 1 65 2 611 1707
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 ASTM D5185m	50 5 50 0 560 1510 780	11 3 48 2 653 1377 732	33 5 47 0 470 1338 699	6 1 65 2 611 1707 734
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	11 3 48 2 653 1377 732 950	33 5 47 0 470 1338 699 790	6 1 65 2 611 1707 734 1008
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 50 560 1510 780 870 2040	11 3 48 2 653 1377 732 950 2812	33 5 47 0 470 1338 699 790 2296	6 1 65 2 611 1707 734 1008 2692
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 ASTM D5185m	50 50 0 560 1510 780 870 2040 Iimit/base	11 3 48 2 653 1377 732 950 2812 current	33 5 47 0 470 1338 699 790 2296 history1	6 1 65 2 611 1707 734 1008 2692 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 method ASTM D5185m	50 50 0 560 1510 780 870 2040 limit/base >+100	11 3 48 2 653 1377 732 950 2812 current 12	33 5 47 0 470 1338 699 790 2296 history1 7	6 1 65 2 611 1707 734 1008 2692 history2 17
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	50 50 0 560 1510 780 870 2040 limit/base >+100	11 3 48 2 653 1377 732 950 2812 current 12 4	33 5 47 0 470 1338 699 790 2296 history1 7 5	6 1 65 2 611 1707 734 1008 2692 history2 17 ▲ 59
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 0 560 1510 780 870 2040 limit/base >+100	11 3 48 2 653 1377 732 950 2812 current 12 4 9	33 5 47 0 470 1338 699 790 2296 history1 7 5 22	6 1 65 2 611 1707 734 1008 2692 17 ▲ 59 ▲ 53
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	50 50 0 560 1510 780 870 2040 2040 >+100 >20 }	11 3 48 2 653 1377 732 950 2812 current 12 4 9 9	33 5 47 0 470 1338 699 790 2296 history1 7 5 22 22 history1	6 1 65 2 611 1707 734 1008 2692 history2 17 ↓ 59 ↓ 53 bistory2
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	ASTM D5185m ASTM D5185m	50 50 0 560 1510 780 870 2040 2040 >+100 >20 }	11 3 48 2 653 1377 732 950 2812 current 12 4 9 9 current 0.1	33 5 47 0 470 1338 699 790 2296 history1 7 5 22 22 history1 0	6 1 65 2 611 1707 734 1008 2692 history2 17 ▲ 59 53 bistory2 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 0 560 1510 780 870 2040 <i>limit/base</i> >+100 20 <i>limit/base</i>	11 3 48 2 653 1377 732 950 2812 <i>current</i> 12 4 9 <i>current</i> 0.1 10.8	33 5 47 0 470 1338 699 790 2296 history1 7 5 22 5 22 history1 0 7.3	6 1 65 2 611 1707 734 1008 2692 history2 17 ▲ 59 53 • 53 history2 0 13.2
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 D5185m	50 50 560 1510 780 870 2040 Iinit/base >+100 520 Iinit/base >20	11 3 48 2 653 1377 732 950 2812 <u>current</u> 12 4 9 <u>current</u> 0.1 10.8 21.4	33 5 47 0 470 1338 699 790 2296 history1 7 5 22 history1 0 7.3 19.6	 6 1 65 2 611 1707 734 1008 2692 history2 17 ▲ 59 ▲ 53 history2 0 13.2 27.8
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 D7844 *ASTM D7844 *ASTM D7415	50 50 560 1510 780 870 2040 imit/base >+100 >20 imit/base >20 >30 imit/base	11 3 48 2 653 1377 732 950 2812 Current 12 4 9 Current 0.1 10.8 21.4 Current	33 5 47 0 470 1338 699 790 2296 history1 7 5 22 history1 0 7.3 19.6 history1	 6 1 65 2 611 1707 734 1008 2692 history2 17 ▲ 59 ▲ 53 history2 0 13.2 27.8 history2



OIL ANALYSIS REPORT



Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE 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 >0.1 NEG NEG NEG Free Water scalar *Visual >0.1 NEG NEG NEG State *Visual >0.1 NEG NEG NEG NEG Scalar *Visual >0.1 NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG							
Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML Moder scalar *Visual NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORME NONE NONE Free Water scalar *Visual NORML NEG NEG NEG FLUID PROPERTIES method limit/base current history1 history2 Visc @ 100°C cSt ASTM D445 15.1 14.7 14.4 14.7 GRAPHS Ferrous Alloys 000 00 00 00 00 00 00 00 00 00 00 00 00	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual >0.1 NEG NEG NEG State *Visual >0.1 NEG NEG NEG NEG State *Visual >0.1 NEG NEG NEG NEG State *Visual >0.1 NEG NEG NEG NEG State *Visual >0.1 NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG NEG	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NORML NORML NORML NORML State of the scalar *Visual NORML NORML NORML NORML NORML Scalar *Visual >0.1 NEG NEG NEG NEG NEG Free Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML Free Water scalar *Visual >0.1 NEG NEG NEG Ferrous Alloys	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG NEG Free Water scalar *Visual NAT 14.7 14.4 14.7 CRAPHS Ferrous Alloys	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt scalar 'Visual NONE NONE NONE NONE NONE Appearance scalar 'Visual NORML NORML NORML NORML NORML Odor scalar 'Visual NORML NORML NORML NORML NORML Emulsified Water scalar 'Visual >0.1 NEG NEG NEG Free Water scalar 'Visual >0.1 NEG NEG NEG Fluid PROPERTIES method limit/base current history1 history2 Visc @ 100°C cSt ASTM D445 15.1 14.7 14.4 14.7 GRAPHS Ferrous Alloys	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance scalar 'Visual NORML NORML NORML NORML NORML NORML Odor scalar 'Visual NORML NORML NORML NORML NORML Emulsified Water scalar 'Visual >0.1 NEG NEG NEG Free Water scalar 'Visual NEG NEG NEG NEG FLUID PROPERTIES method imit/base current history1 history2 Visc @ 100°C cSt ASTM D445 15.1 14.7 14.4 14.7 GRAPHS Ferrous Alloys	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Odor scalar *Visual NORML NOR Idea	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >0.1 NEG NEG NEG NEG Free Water scalar *Visual NEG NEG NEG NEG NEG FLUID PROPERTIES method limit/base current history1 history2 Visc @ 100°C cSt ASTM D445 15.1 14.7 14.4 14.7 GRAPHS Ferrous Alloys	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG NEG NEG NEG FLUID PROPERTIES method limit/base current history1 history2 Visc @ 100°C cSt ASTM D445 15.1 14.7 14.4 14.7 GRAPHS Ferrous Alloys	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
FLUID PROPERTIES method limit/base current history1 history2 Visc @ 100°C cSt ASTM D445 15.1 14.7 14.4 14.7 GRAPHS Ferrous Alloys	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Visc @ 100°C cSt ASTM D445 15.1 14.7 14.4 14.7 GRAPHS Ferrous Alloys	Free Water	scalar	*Visual		NEG	NEG	NEG
GRAPHS Ferrous Alloys	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Ferrous Alloys	Visc @ 100°C	cSt	ASTM D445	15.1	14.7	14.4	14.7
Ferrous Alloys	GRAPHS						
Non-ferrous Metals	Ferrous Allovs						
chromium nickel	⁰ T		IN THE	N			
Non-ferrous Metals	chromium		Λ	1			
SU00200 Non-ferrous Metals	nickel		INN				
Non-ferrous Metals	0-		V				
Non-ferrous Metals	0-						
Storgan Non-ferrous Metals	Λ		1	L			
SU02:00 SU02:00 SU02:0F SU02:0		N	N n				
SU02:00 SU02:00 SU02:0F SU02:0		V	-	2			
Non-ferrous Metals	10 10 10 00	61/8	8/20 - 6/22 -	2			
copper lead tin	Oct2 Jul2 Aug1	Jul	Jun Apr2	30			
5- 	Non-ferrous Meta	ls					
2 ************ lead	1						
	5 - management lead		1				
D							
	5						
	0 - 5 -						



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 001 - Raleigh(CNG) Sample No. : GFL0117417 Received 3741 Conquest Drive : 10 Jul 2024 Lab Number : 06231924 Tested : 10 Jul 2024 Garner, NC Unique Number : 11115417 US 27529 Diagnosed : 10 Jul 2024 - Wes Davis Test Package : FLEET Contact: Ronald Gregory Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. rgregory@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Т: F: (919)662-1730

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

Report Id: GFL001 [WUSCAR] 06231924 (Generated: 07/10/2024 16:37:28) Rev: 1

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