

OIL ANALYSIS REPORT

3841C AUTOCAR ACX

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (48 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

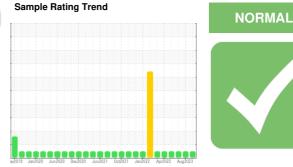
All component wear rates are normal.

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.

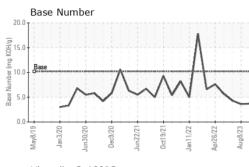


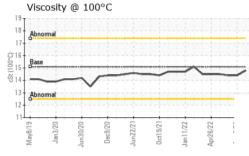
-		ay2019 Jan20		lun2021 Oct2021 Jan2022 Apr20		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0103224	GFL0089324	GFL0087136
Sample Date		Client Info		09 Jan 2024	08 Aug 2023	19 Jul 2023
Machine Age	hrs	Client Info		13682	12475	12301
Oil Age	hrs	Client Info		1207	174	3484
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	8	8	9
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	2	3
Lead	ppm	ASTM D5185m	>30	19	9	4
Copper	ppm	ASTM D5185m	>35	4	3	6
Tin	ppm	ASTM D5185m	>4	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
						4.4
Boron	ppm	ASTM D5185m	50	13	8	11
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	50 5	13 0	8	0
				-		
Barium	ppm	ASTM D5185m	5	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	5 50	0 52	0 53	0 56
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0	0 52 0	0 53 <1	0 56 <1
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560	0 52 0 617	0 53 <1 589	0 56 <1 617
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510	0 52 0 617 1691	0 53 <1 589 1760	0 56 <1 617 1831
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780	0 52 0 617 1691 771	0 53 <1 589 1760 729	0 56 <1 617 1831 782
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	5 50 0 560 1510 780 870	0 52 0 617 1691 771 1083 2259	0 53 <1 589 1760 729 1022	0 56 <1 617 1831 782 1059
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	5 50 0 560 1510 780 870 2040 limit/base	0 52 0 617 1691 771 1083 2259	0 53 <1 589 1760 729 1022 2827	0 56 <1 617 1831 782 1059 3043
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	5 50 0 560 1510 780 870 2040 limit/base >+100	0 52 0 617 1691 771 1083 2259 current	0 53 <1 589 1760 729 1022 2827 history1	0 56 <1 617 1831 782 1059 3043 history2
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 method	5 50 0 560 1510 780 870 2040 2040 >+100	0 52 0 617 1691 771 1083 2259 current 6	0 53 <1 589 1760 729 1022 2827 history1 6	0 56 <1 617 1831 782 1059 3043 history2
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 method ASTM D5185m	5 50 0 560 1510 780 870 2040 2040 >+100	0 52 0 617 1691 771 1083 2259 current 6 7 <1	0 53 <1 589 1760 729 1022 2827 history1 6 6 6	0 56 <1 617 1831 782 1059 3043 history2 9 7
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	5 50 0 560 1510 780 870 2040 limit/base >+100	0 52 0 617 1691 771 1083 2259 current 6 7 <1	0 53 <1 589 1760 729 1022 2827 history1 6 6 6 6 <1	0 56 <1 617 1831 782 1059 3043 <u>history2</u> 9 7 0
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	5 50 0 560 1510 780 870 2040 limit/base >+100 \$20	0 52 0 617 1691 771 1083 2259 current 6 7 <1 current	0 53 <1 589 1760 729 1022 2827 history1 6 6 6 <1 history1	0 56 <1 617 1831 782 1059 3043 history2 9 7 0 history2
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	5 50 0 560 1510 780 870 2040 limit/base >+100 \$20	0 52 0 617 1691 771 1083 2259 current 6 7 <1 current 0	0 53 <1 589 1760 729 1022 2827 history1 6 6 6 6 <1 history1 0	0 56 <1 617 1831 782 1059 3043 history2 9 7 0 history2 0
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	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 52 0 617 1691 771 1083 2259 current 6 7 <1 current 0 12.3 26.8	0 53 <1 589 1760 729 1022 2827 history1 6 6 6 6 <1 history1 0 11.3	0 56 <1 617 1831 782 1059 3043 history2 9 7 0 7 0 history2 0 history2
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	5 50 0 560 1510 780 870 2040 2040 2040 2040 2040 2040 2040 20	0 52 0 617 1691 771 1083 2259 current 6 7 <1 current 0 12.3 26.8	0 53 <1 589 1760 729 1022 2827 history1 6 6 6 <1 history1 0 11.3 24.1	0 56 <1 617 1831 782 1059 3043 history2 9 7 0 7 0 history2 0 11.4 23.9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAC	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415	5 50 0 560 1510 780 870 2040 2040 2040 >+100 ->20 20 20 20 20 20 20 20 20 20 20 20 20 2	0 52 0 617 1691 771 1083 2259 current 6 7 <1 current 0 12.3 26.8 current	0 53 <1 589 1760 729 1022 2827 <u>history1</u> 6 6 6 6 <1 <u>history1</u> 0 11.3 24.1 <u>history1</u>	0 56 <1 617 1831 782 1059 3043 history2 9 7 0 0 history2 0 11.4 23.9 history2



OIL ANALYSIS REPORT

VISUAL





	VISUAL		method	limit/bas	se current	history1	history2
A	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Λ	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Vh	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
× _	Debris	scalar	*Visual	NONE	NONE	NONE	MODER
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Jan 1 1/22 Apr26/22 Aug8/23	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Jan 1 Apr2 Aug	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/bas	se current	history1	history2
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Visc @ 100°C	cSt	ASTM D445	15.1	14.8	14.4	14.4
	GRAPHS						
	Ferrous Alloys						
5	60 iron		111111				
Jan 1 1/22 Apr26/22	50 - nessesses chromium						
Γ. A	40-40-		- A				
	툍 30 -						
	20-		11				
			11				
		~	JU	\sim			
		21	52	33			
	May8/19 Jan3/20 Jun30/20 Dec9/20	Jun22/21 Oct19/21	Jan 11/22 Apr26/22	Aug8/23			
	Non-ferrous Metal	· ·					
	³⁵ T		1000000000				
	30 - copper						
	25		A				
	e 20 -			1-0-2-			
	E 20- 15-			1			
	10-			1			
	5-			K			
			-AI				
	May8/19 Jan3/20 Jun30/20 Dec9/20	Jun22/21 Oct19/21	Jan 11/22 Apr26/22	Aug8/23			
	Ma Jan Jun	Jun Oct	Jan	Aur			
	Viscosity @ 100°C				Base Number		
	19				^{18.0}		
	Abnormal				16.0		I SA I SI I SI SI
				KOH/	14.0 12.0 10.0 8.0 6.0 4.0		
	Base 15 8 14				10.0 - Base	· ^ ·	
	·314	\sim	~~~~		8.0	$\Lambda \Lambda$	Nh
	13 - Abnormal			a	6.0 4.0	$/ \sim v$	V
	12				2.0		
	11		2	~	0.0		2
	May8/19 Jan3/20 Jun30/20 Dec9/20	Jun22/21 Oct19/21	Jan 1 1/22 Apr26/22	Aug8/23	May8/19 Jan3/20 Jun30/20	Dec9/20 Jun22/21 Oct19/21	Jan 1 1/22 Apr 26/22 Aug 8/23
		- P	J _č A	4	ر ب		Ļ Ą A
Laboratory	: WearCheck USA - 5	01 Madis	son Ave., Ca	ry, NC 27	513 GFL Env		- Raleigh(CNG)
Sample No.	: GFL0103224	Recieved	i :11.	Jan 2024			Conquest Drive
Lab Number		Diagnos		Jan 2024			Garner, NC
Unique Number Test Package	: 10823658 I : FLEET	Diagnost	ician : we	s Davis		Contact	US 27529 Craig Johnson
	. FLEE I contact Customer Servi	ico at 1-8	00-237-1360	2			on@aflenv.com

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)

Certificate L2367

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