

OIL ANALYSIS REPORT

Machine Id 3573C AUTOCAR ACX Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (48 QTS)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

🔺 Wear

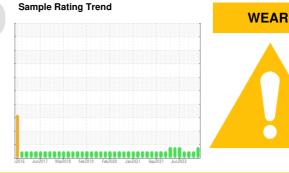
The chromium level is abnormal. All other component wear rates are normal.

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 acceptable for the time in service.



SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0094749	GFL0089358	GFL0056507
Sample Date		Client Info		02 Feb 2024	17 Aug 2023	28 Oct 2022
Machine Age	hrs	Client Info		5756	4512	2476
Oil Age	hrs	Client Info		0	0	148
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINAT		method	limit/base	current	history1	history2
Water		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	47	20	8
Chromium	ppm	ASTM D5185m	>4	▲ 6	4	1
Nickel		ASTM D5185m		<1	<1	<1
	ppm	ASTM D5185m	~~	0	<1	0
Titanium Silver	ppm	ASTM D5185m	2	0	<1	0
Aluminum	ppm		>3	8	6	2
Lead	ppm	ASTM D5185m ASTM D5185m	>9 >30	8	ь 11	<1
	ppm			8	23	19
Copper	ppm	ASTM D5185m	>35	-		
Tin	ppm		>4	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	6	6	29
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5	6 0	6 0	29 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	6 0 58	6 0 55	29 0 47
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	6 0 58 1	6 0 55 1	29 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	6 0 58 1 616	6 0 55 1 572	29 0 47 <1 502
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 58 1 616 1703	6 0 55 1 572 1727	29 0 47 <1 502 1511
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	6 0 58 1 616 1703 760	6 0 55 1 572 1727 689	29 0 47 <1 502 1511 723
Boron Barium Molybdenum Manganese Magnesium Calcium	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	6 0 58 1 616 1703	6 0 55 1 572 1727	29 0 47 <1 502 1511 723 900
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	6 0 58 1 616 1703 760	6 0 55 1 572 1727 689 944 2475	29 0 47 <1 502 1511 723
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	6 0 58 1 616 1703 760 1005	6 0 55 1 572 1727 689 944	29 0 47 <1 502 1511 723 900
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 58 1 616 1703 760 1005 2508	6 0 55 1 572 1727 689 944 2475	29 0 47 <1 502 1511 723 900 2623
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 00 560 1510 780 870 2040	6 0 58 1 616 1703 760 1005 2508 current	6 0 55 1 572 1727 689 944 2475 history1	29 0 47 <1 502 1511 723 900 2623 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	50 5 50 0 560 1510 780 870 2040 limit/base >+100	6 0 58 1 616 1703 760 1005 2508 current 17	6 0 55 1 572 1727 689 944 2475 history1 6	29 0 47 <1 502 1511 723 900 2623 history2 5
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 58 1 616 1703 760 1005 2508 <u>current</u> 17 12	6 0 55 1 572 1727 689 944 2475 history1 6 10	29 0 47 <1 502 1511 723 900 2623 history2 5 6
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 5 50 0 560 1510 780 870 2040 limit/base >+100	6 0 58 1 616 1703 760 1005 2508 current 17 12 2	6 0 55 1 572 1727 689 944 2475 history1 6 10 2	29 0 47 <1 502 1511 723 900 2623 history2 5 6 1
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	50 5 50 0 560 1510 780 870 2040 limit/base >20 limit/base	6 0 58 1 616 1703 760 1005 2508 current 17 12 2 2 current	6 0 55 1 572 1727 689 944 2475 history1 6 10 2 2 history1	29 0 47 <1 502 1511 723 900 2623 history2 5 6 1 1 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 ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >20 limit/base	6 0 58 1 616 1703 760 1005 2508 current 17 12 2 2 current 0	6 0 55 1 572 1727 689 944 2475 history1 6 10 2 history1 0	29 0 47 <1 502 1511 723 900 2623 history2 5 6 1 1 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 00 560 1510 780 870 2040 limit/base >+100 s20	6 0 58 1 616 1703 760 1005 2508 current 17 12 2 2 current 0 0 12.0	6 0 55 1 572 1727 689 944 2475 history1 6 10 2 history1 0 11.2	29 0 47 <1 502 1511 723 900 2623 history2 5 6 1 1 history2 0.1 8.7
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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 560 1510 780 870 2040 Iimit/base >+100 S20 Iimit/base >20	6 0 58 1 616 1703 760 1005 2508 <u>current</u> 17 12 2 2 <u>current</u> 0 12.0 24.2	6 0 55 1 572 1727 689 944 2475 history1 6 10 2 history1 0 11.2 22.7	29 0 47 <1 502 1511 723 900 2623 history2 5 6 1 1 history2 0.1 8.7 21.1
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 TS ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	50 50 560 1510 780 870 2040 bimit/base >+100 j>20 bimit/base >20 >30	6 0 58 1 616 1703 760 1005 2508 current 17 12 2 2 current 0 12.0 24.2 current	6 0 55 1 572 1727 689 944 2475 history1 6 10 2 history1 0 11.2 22.7 history1	29 0 47 <1 502 1511 723 900 2623 history2 5 6 1 1 history2 0.1 8.7 21.1 history2



4.0

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18 Abno

cSt (100°C) Bas

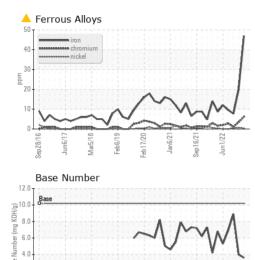
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Base

OIL ANALYSIS REPORT



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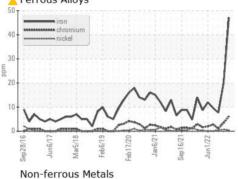
Viscosity @ 100°C

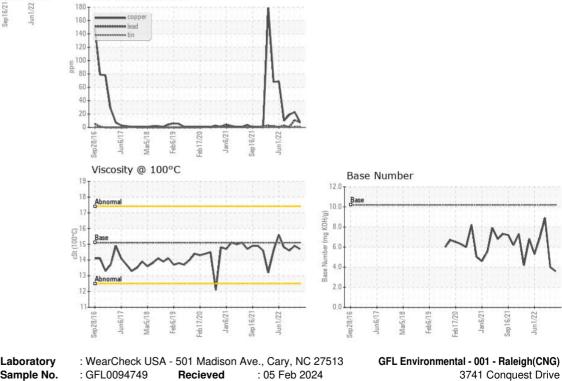
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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	14.7	14.9	14.6
GRAPHS						

Ferrous Alloys

180





Laboratory Sample No. : GFL0094749 : 05 Feb 2024 Lab Number : 07 Feb 2024 Garner, NC : 06079569 Diagnosed : 10861660 Unique Number Diagnostician : Sean Felton US 27529 Test Package : FLEET Contact: Craig Johnson Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. craig.johnson@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (919)662-7100 F: (919)662-7130

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

