

## **OIL ANALYSIS REPORT**

Sample Rating Trend

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### VISCOSITY

Machine Id

# 3580C AUTOCAR ACX

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

#### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. 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.

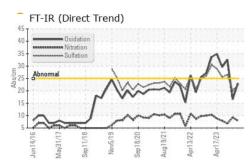
#### Fluid Condition

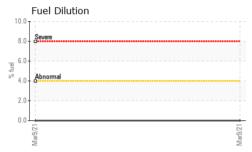
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

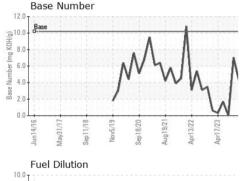
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0127945	GFL0117429	GFL0094734
Sample Date		Client Info		12 Jul 2024	03 Jun 2024	14 Oct 2023
Machine Age	hrs	Client Info		6906	6574	4750
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				ATTENTION	NORMAL	ABNORMAL
CONTAMINATIO	NC	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS	3	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	5	13	13
Chromium	ppm	ASTM D5185m	>4	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	3	2	2
Lead	ppm	ASTM D5185m	>30	0	0	3
Copper	ppm	ASTM D5185m	>35	0	<1	<1
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		and the second	Director de la companya		In the American Market	biotory ()
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	24	nistory i 17	17
	ppm ppm					
Boron		ASTM D5185m	50	24	17	17
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5 50	24 0	17 <1	17 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	24 0 34	17 <1 53	17 0 17
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	24 0 34 0	17 <1 53 <1	17 0 17 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	24 0 34 0 402	17 <1 53 <1 678	17 0 17 0 150
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	24 0 34 0 402 1120	17 <1 53 <1 678 1358	17 0 17 0 150 521
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	24 0 34 0 402 1120 558	17 <1 53 <1 678 1358 874	17 0 17 0 150 521 360
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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	24 0 34 0 402 1120 558 681	17 <1 53 <1 678 1358 874 1010	17 0 17 0 150 521 360 266
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 5 50 0 560 1510 780 870 2040 <b>limit/base</b>	24 0 34 0 402 1120 558 681 1952	17 <1 53 <1 678 1358 874 1010 2842	17 0 17 0 150 521 360 266 1535
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	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 5 50 0 560 1510 780 870 2040 <b>limit/base</b> >+100	24 0 34 0 402 1120 558 681 1952 current	17 <1 53 <1 678 1358 874 1010 2842 history1	17 0 17 0 150 521 360 266 1535 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm ppm ppm ppm ppm ppm ppm ppm S	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 <b>limit/base</b> >+100	24 0 34 0 402 1120 558 681 1952 current 4	17 <1 53 <1 678 1358 874 1010 2842 history1 5	17 0 17 0 150 521 360 266 1535 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm S ppm	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 <b>limit/base</b> >+100	24 0 34 0 402 1120 558 681 1952 current 4 3	17 <1 53 <1 678 1358 874 1010 2842 history1 5 6	17 0 17 0 150 521 360 266 1535 history2 4 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm S ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 <b>limit/base</b> >+100	24 0 34 0 402 1120 558 681 1952 current 4 3 2	17 <1 53 <1 678 1358 874 1010 2842 history1 5 6 6 6	17 0 17 0 150 521 360 266 1535 history2 4 2 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 <b>limit/base</b> >+100 >20 <b>limit/base</b>	24 0 34 0 402 1120 558 681 1952 current 4 3 2 2	17 <1 53 <1 678 1358 874 1010 2842 history1 5 6 6 6 6	17 0 17 0 150 521 360 266 1535 history2 4 2 1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 <b>Imit/base</b> >+100 >20 <b>Imit/base</b>	24 0 34 0 402 1120 558 681 1952 current 4 3 2 current 0	17 <1 53 <1 678 1358 874 1010 2842 history1 5 6 6 6 6 6 history1 0.4	17 0 17 0 150 521 360 266 1535 history2 4 2 1 1 history2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 <b>Imit/base</b> >+100 >20 <b>Imit/base</b>	24 0 34 0 402 1120 558 681 1952 current 4 3 2 current 0 7.9	17 <1 53 <1 678 1358 874 1010 2842 history1 5 6 6 6 6 history1 0.4 9.3	17 0 17 0 521 360 266 1535 history2 4 2 1 history2 0 6.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 50 150 1510 780 870 2040 imit/base >+100 >20 imit/base >20 >30 imit/base	24 0 34 0 402 1120 558 681 1952 current 4 3 2 current 0 7.9 22.3	17 <1 53 <1 678 1358 874 1010 2842 history1 5 6 6 6 6 <b>history1</b> 0.4 9.3 20.0	17 0 17 0 150 521 360 266 1535 history2 4 2 1 1 history2 0 6.8 26.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD. Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	50 5 50 0 1510 780 870 2040 <b>imit/base</b> >20 <b>imit/base</b> >20 <b>imit/base</b> >20	24 0 34 0 402 1120 558 681 1952 current 4 3 2 current 0 7.9 22.3 current	17 <1 53 <1 678 1358 874 1010 2842 history1 5 6 6 6 6 history1 0.4 9.3 20.0 history1	17 0 17 0 521 360 266 1535 history2 4 2 1 history2 0 6.8 26.5 history2



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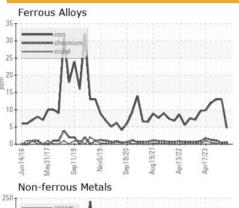








VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	<mark> </mark> 11.5	14.2	8.5
GRAPHS						

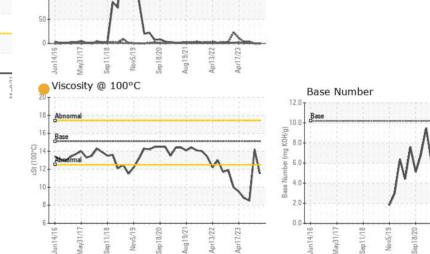


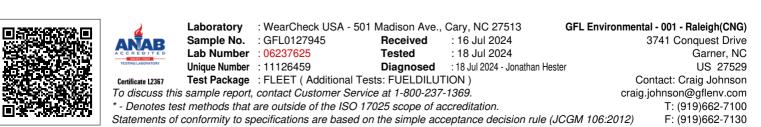
200

150

100

ppm





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Submitted By: aka Keith - Ronald Gregory

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