

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

3793C AUTOCAR

Component **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.

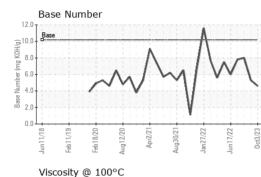


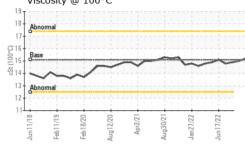


SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0094684	GFL0089317	GFL0056584
Sample Date		Client Info		03 Oct 2023	26 Sep 2023	16 Feb 2023
Machine Age	hrs	Client Info		15178	15125	0
Oil Age	hrs	Client Info		53	2846	1373
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	11	15	9
Chromium	ppm	ASTM D5185m	>4	2	4	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	3	6	1
Lead	ppm	ASTM D5185m	>30	2	<1	0
Copper	ppm	ASTM D5185m	>35	5	4	7
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
_			= 0			
Boron	ppm	ASTM D5185m	50	7	12	30
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	50 5	7 0	12 0	30 0
Barium	ppm	ASTM D5185m	5 50	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	5 50	0 57	0 52	0 50
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0	0 57 <1	0 52 <1	0 50 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560	0 57 <1 631	0 52 <1 589	0 50 <1 534
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510	0 57 <1 631 1795	0 52 <1 589 1607	0 50 <1 534 1555
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 57 <1 631 1795 753	0 52 <1 589 1607 708	0 50 <1 534 1555 758
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 57 <1 631 1795 753 1061	0 52 <1 589 1607 708 963	0 50 <1 534 1555 758 945
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	5 50 0 560 1510 780 870 2040	0 57 <1 631 1795 753 1061 2293	0 52 <1 589 1607 708 963 2282	0 50 <1 534 1555 758 945 2400
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	0 57 <1 631 1795 753 1061 2293 current	0 52 <1 589 1607 708 963 2282 history1	0 50 <1 534 1555 758 945 2400 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 ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100	0 57 <1 631 1795 753 1061 2293 current 6	0 52 <1 589 1607 708 963 2282 history1 7	0 50 <1 534 1555 758 945 2400 history2 6
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 method ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100	0 57 <1 631 1795 753 1061 2293 current 6 7	0 52 <1 589 1607 708 963 2282 history1 7 6	0 50 <1 534 1555 758 945 2400 history2 6 4
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	5 50 0 560 1510 780 870 2040 limit/base >+100	0 57 <1 631 1795 753 1061 2293 current 6 7 1	0 52 <1 589 1607 708 963 2282 history1 7 6 0	0 50 <1 534 1555 758 945 2400 history2 6 4 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100	0 57 <1 631 1795 753 1061 2293 current 6 7 1 1 current	0 52 <1 589 1607 708 963 2282 history1 7 6 0 0 history1	0 50 <1 534 1555 758 945 2400 history2 6 4 2 2 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 ppm ppm ppm	ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 57 <1 631 1795 753 1061 2293 current 6 7 1 1 current 0	0 52 <1 589 1607 708 963 2282 history1 7 6 0 0 history1 0	0 50 <1 534 1555 758 945 2400 history2 6 4 2 2 bistory2 0.1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc 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	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 57 <1 631 1795 753 1061 2293 <u>current</u> 6 7 1 1 <u>current</u> 0 10.6	0 52 <1 589 1607 708 963 2282 history1 7 6 0 0 history1 0 10.4	0 50 <1 534 1555 758 945 2400 history2 6 4 2 2 history2 0.1 8.0
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	5 50 0 560 1510 780 870 2040 limit/base >+100 	0 57 <1 631 1795 753 1061 2293 current 6 7 1 1 current 0 10.6 22.5	0 52 <1 589 1607 708 963 2282 history1 7 6 0 0 history1 0 10.4 22.0	0 50 <1 534 1555 758 945 2400 history2 6 4 2 2 history2 0.1 8.0 19.0

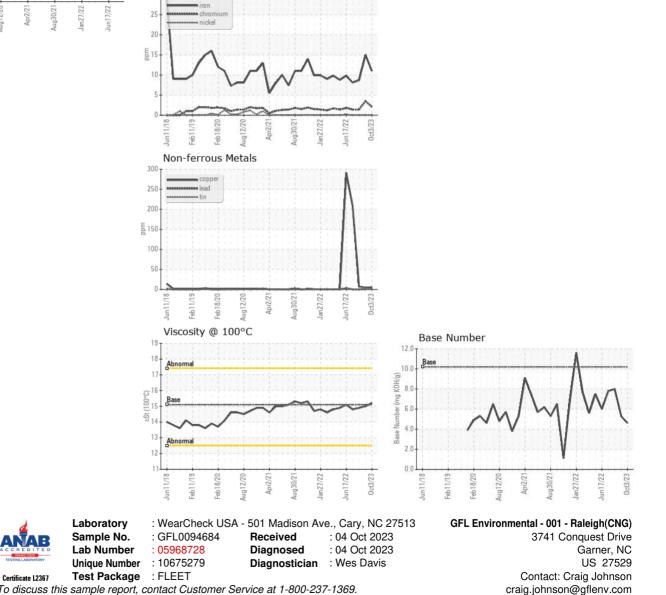


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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	15.2	15.0	14.9
GRAPHS						
Ferrous Alloys						



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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Page 2 of 2

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