

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area (N0720V) Machine Id 745003-361564

Component Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (7 LTR)

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.

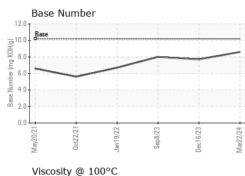
Fluid Condition

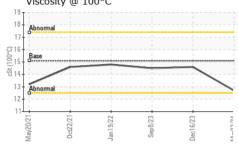
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0115486	GFL0106962	GFL0089717
Sample Date		Client Info		22 Mar 2024	16 Dec 2023	08 Sep 2023
Machine Age	hrs	Client Info		14989	14733	14337
Oil Age	hrs	Client Info		256	396	3164
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	21	3	4
Chromium	ppm	ASTM D5185m	>4	<1	<1	<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	<1	1	<1
Lead	ppm	ASTM D5185m	>30	<1	1	0
Copper	ppm	ASTM D5185m	>35	<1	<1	<1
Tin	ppm	ASTM D5185m	>4	0	0	<1
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
	1-1-			-		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 50	current 2	history1 26	history2 27
				2		
Boron	ppm	ASTM D5185m	50		26	27
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	2 0 58	26 0	27 0
Boron Barium	ppm ppm ppm	ASTM D5185m ASTM D5185m	50 5 50	2 0	26 0 48	27 0 52
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	2 0 58 <1	26 0 48 0	27 0 52 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	2 0 58 <1 900	26 0 48 0 522	27 0 52 <1 612
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	2 0 58 <1 900 1099	26 0 48 0 522 1415	27 0 52 <1 612 1675
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780	2 0 58 <1 900 1099 1005	26 0 48 0 522 1415 700	27 0 52 <1 612 1675 808
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	2 0 58 <1 900 1099 1005 1184	26 0 48 0 522 1415 700 871	27 0 52 <1 612 1675 808 999
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 limit/base	2 0 58 <1 900 1099 1005 1184 3440	26 0 48 0 522 1415 700 871 2288	27 0 52 <1 612 1675 808 999 3040
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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 limit/base	2 0 58 <1 900 1099 1005 1184 3440 current	26 0 48 0 522 1415 700 871 2288 history1	27 0 52 <1 612 1675 808 999 3040 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 ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 2040 2040	2 0 58 <1 900 1099 1005 1184 3440 current 3	26 0 48 0 522 1415 700 871 2288 history1 2	27 0 52 <1 612 1675 808 999 3040 history2 3
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 method ASTM D5185m	50 5 50 0 560 1510 780 870 2040 2040 2040 2040	2 0 58 <1 900 1099 1005 1184 3440 current 3 17	26 0 48 0 522 1415 700 871 2288 history1 2 4	27 0 52 <1 612 1675 808 999 3040 history2 3 5
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 50 00 560 1510 780 870 2040 limit/base >+100	2 0 58 <1 900 1099 1005 1184 3440 current 3 17 6	26 0 48 0 522 1415 700 871 2288 history1 2 4 0	27 0 52 <1 612 1675 808 999 3040 history2 3 5 <1
Boron 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	50 5 50 0 560 1510 780 870 2040 Imit/base >+100 >20 Imit/base	2 0 58 <1 900 1099 1005 1184 3440 current 3 17 6 current	26 0 48 0 522 1415 700 871 2288 history1 2 4 0 0	27 0 52 <1 612 1675 808 999 3040 history2 3 5 <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	ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 Imit/base >+100 >20 Imit/base	2 0 58 <1 900 1099 1005 1184 3440 <u>current</u> 3 17 6 <u>current</u> 1.5	26 0 48 0 522 1415 700 871 2288 history1 2 4 0 history1 0.1	27 0 52 <1 612 1675 808 999 3040 history2 3 5 <1 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc 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 00 560 1510 780 870 2040 Iimit/base >+100 20 Iimit/base	2 0 58 <1 900 1099 1005 1184 3440 <i>current</i> 3 17 6 <i>current</i> 1.5 10.4	26 0 48 0 522 1415 700 871 2288 history1 2 2 4 0 <i>history1</i> 0.1 8.4	27 0 52 <1 612 1675 808 999 3040 history2 3 5 <1 5 <1 history2 0.1 8.1
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 ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	50 50 560 1510 780 870 2040 >+100 >+100 >20 imit/base >20 >20 >30	2 0 58 <1 900 1099 1005 1184 3440 <i>current</i> 3 17 6 <i>current</i> 1.5 10.4 21.3 <i>current</i>	26 0 48 0 522 1415 700 871 2288 history1 2 2 4 0 history1 0.1 8.4 18.7 history1	27 0 52 <1 612 1675 808 999 3040 history2 3 5 <1 history2 0.1 8.1 18.3 history2
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 50 150 1510 780 870 2040 imit/base >20 imit/base >20 imit/base	2 0 58 <1 900 1099 1005 1184 3440 <u>current</u> 3 17 6 <u>current</u> 1.5 10.4 21.3	26 0 48 0 522 1415 700 871 2288 history1 2 4 0 0 history1 0.1 8.4 18.7	27 0 52 <1 612 1675 808 999 3040 history2 3 5 <1 history2 0.1 8.1 18.3

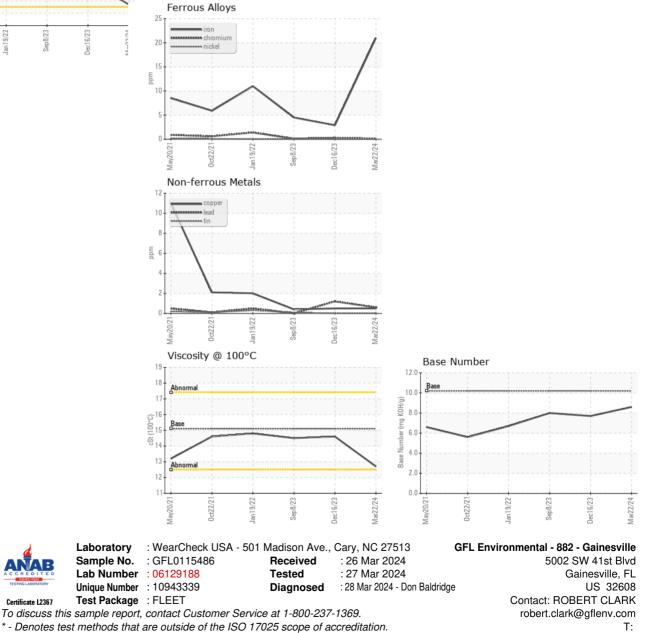


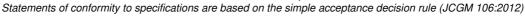
OIL ANALYSIS REPORT





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	12.7	14.6	14.5
GRAPHS						





Certificate L2367

Submitted By: STEPHEN WEIL

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