

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id 731114

Component Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

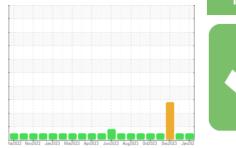
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

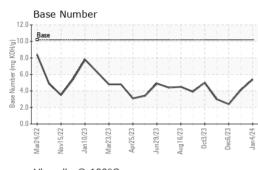
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

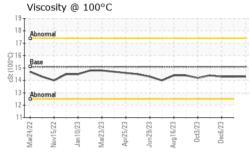


SAMPLE INFORM	MAT <u>ION</u>	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0103283	GFL0099983	GFL0099975
Sample Date		Client Info		04 Jan 2024	13 Dec 2023	06 Dec 2023
Machine Age	hrs	Client Info		6750	6612	6565
Oil Age	hrs	Client Info		0	1200	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	ABNORMAL
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	11	44	1 02
Chromium	ppm	ASTM D5185m	>4	1	<1	<u> </u>
Nickel	ppm	ASTM D5185m	>2	<1	<1	5
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>9	2	5	14
Lead	ppm	ASTM D5185m	>30	3	0	11
Copper	ppm	ASTM D5185m	>35	<1	13	3
Tin	ppm	ASTM D5185m	>4	1	2	2
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
			Provide America			In the second
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	current 12	history1 10	nistory2 8
	ppm ppm					
Boron		ASTM D5185m	50	12	10	8
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5	12 0	10 0	8 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	12 0 54	10 0 51	8 0 76
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	12 0 54 <1	10 0 51 12	8 0 76 4
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	12 0 54 <1 581	10 0 51 12 736	8 0 76 4 654
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	12 0 54 <1 581 1614	10 0 51 12 736 1304	8 0 76 4 654 1867
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	12 0 54 <1 581 1614 809	10 0 51 12 736 1304 662	8 0 76 4 654 1867 827
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	12 0 54 <1 581 1614 809 986	10 0 51 12 736 1304 662 946	8 0 76 4 654 1867 827 1072
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 50 560 1510 780 870 2040	12 0 54 <1 581 1614 809 986 2503	10 0 51 12 736 1304 662 946 2276	8 0 76 4 654 1867 827 1072 2499
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	50 50 0 560 1510 780 870 2040 Iimit/base	12 0 54 <1 581 1614 809 986 2503 current	10 0 51 12 736 1304 662 946 2276 history1	8 0 76 4 654 1867 827 1072 2499 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 50 0 560 1510 780 870 2040 limit/base >+100	12 0 54 <1 581 1614 809 986 2503 current 5	10 0 51 12 736 1304 662 946 2276 history1 26	8 0 76 4 654 1867 827 1072 2499 history2 55
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 50 0 560 1510 780 870 2040 limit/base >+100	12 0 54 <1 581 1614 809 986 2503 current 5 7	10 0 51 12 736 1304 662 946 2276 history1 26 4	8 0 76 4 654 1867 827 1072 2499 history2 55 14
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 0 560 1510 780 870 2040 limit/base >+100	12 0 54 <1 581 1614 809 986 2503 <u>current</u> 5 7 0	10 0 51 12 736 1304 662 946 2276 history1 26 4 7	8 0 76 4 654 1867 827 1072 2499 history2 55 14 55
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 50 0 560 1510 780 870 2040 limit/base >+100	12 0 54 <1 581 1614 809 986 2503 current 5 7 0 0	10 0 51 12 736 1304 662 946 2276 history1 26 4 7 7 history1	8 0 76 4 654 1867 827 1072 2499 history2 55 14 55 14 5 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 0 560 1510 780 870 2040 2040 >+100 >20 20 }	12 0 54 <1 581 1614 809 986 2503 <i>current</i> 5 7 0 <i>current</i> 0	10 0 51 12 736 1304 662 946 2276 history1 26 4 7 26 4 7 <i>history1</i> 0.1	8 0 76 4 654 1867 827 1072 2499 history2 55 14 55 14 55 14 5 5
Boron 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	50 50 0 560 1510 780 870 2040 <i>limit/base</i> >+100 20 <i>limit/base</i>	12 0 54 <1 581 1614 809 986 2503 <i>current</i> 5 7 0 <i>current</i> 0.2 9.8	10 0 51 12 736 1304 662 946 2276 history1 26 4 7 26 4 7 history1 0.1 12.1	8 0 76 4 654 1867 827 1072 2499 history2 55 14 55 14 5 5 history2 0.1 13.1
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 D7624	50 50 0 560 1510 780 870 2040 imit/base >+100 20 imit/base >20 30 imit/base	12 0 54 <1 581 1614 809 986 2503 <i>current</i> 5 7 0 <i>current</i> 0.2 9.8 20.0	10 0 51 12 736 1304 662 946 2276 history1 26 4 7 <u>history1</u> 0.1 12.1 23.1	8 0 76 4 654 1867 827 1072 2499 history2 55 14 55 14 5 5 history2 0.1 13.1 28.4 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185m ASTM D5185m	50 50 560 1510 780 870 2040 Iinit/base >20 Iinit/base >20 Iinit/base	12 0 54 <1 581 1614 809 986 2503 <u>current</u> 5 7 0 <u>current</u> 0.2 9.8 20.0	10 0 51 12 736 1304 662 946 2276 history1 26 4 7 26 4 7 history1 0.1 12.1 23.1	8 0 76 4 654 1867 827 1072 2499 history2 55 14 55 14 5 5 history2 0.1 13.1 28.4

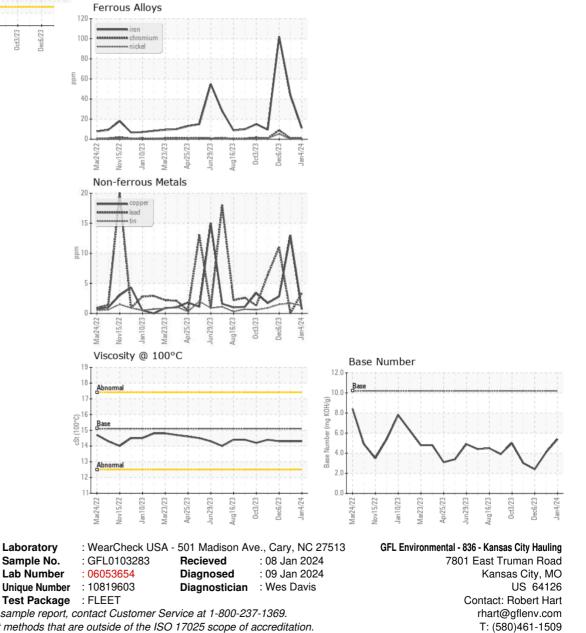


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	14.3	14.3	14.3
GRAPHS						



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

Contact/Location: See also GFL823, 834, 837, 840 - Robert Hart - GFL836

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