

OIL ANALYSIS REPORT

Sample Rating Trend





833074 Natural Gas Engine PETRO CANADA DURON GEO LD 15W40 (24 LTR)

DIAGNOSIS Recommendation

Resample at the next service interval to monitor.

Machine Id

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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		GFL0118907	GFL0063925	
Sample Date		Client Info		04 Jul 2024	08 Feb 2024	
Machine Age	hrs	Client Info		1935	1112	
Oil Age	hrs	Client Info		1200	1112	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	ABNORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	
Glycol		WC Method			0.0	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	15	40	
Chromium	ppm	ASTM D5185(m)	>4	<1	<1	
Nickel	ppm	ASTM D5185(m)	>2	<1	1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>3	<1	<1	
Aluminum	ppm	ASTM D5185(m)	>9	1	5	
Lead	ppm	ASTM D5185(m)	>30	0	2	
Copper	ppm	ASTM D5185(m)	>35	3	14	
Tin	ppm	ASTM D5185(m)	>4	<1	1	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base 50	current 7	history1 7	history2
	ppm ppm					
Boron		ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50	7	7	
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	50 5 50	7 <1	7 2	
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50	7 <1 57	7 2 102	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0	7 <1 57 2	7 2 102 9	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780	7 <1 57 2 514	7 2 102 9 643	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870	7 <1 57 2 514 1447 612 855	7 2 102 9 643 1262	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040	7 <1 57 2 514 1447 612 855 1947	7 2 102 9 643 1262 635 752 2330	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040	7 <1 57 2 514 1447 612 855	7 2 102 9 643 1262 635 752	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040	7 <1 57 2 514 1447 612 855 1947	7 2 102 9 643 1262 635 752 2330	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040	7 <1 57 2 514 1447 612 855 1947 <1	7 2 102 9 643 1262 635 752 2330 <1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040 Jimit/base	7 <1 57 2 514 1447 612 855 1947 <1 <1	7 2 102 9 643 1262 635 752 2330 <1 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040 Jimit/base	7 <1 57 2 514 1447 612 855 1947 <1 current 5	7 2 102 9 643 1262 635 752 2330 <1 history1 27	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040 limit/base >+100	7 <1 57 2 514 1447 612 855 1947 <1 current 5 2 <1 current	7 2 102 9 643 1262 635 752 2330 <1 history1 27 3 2 2 <i>history</i> 1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040 imit/base >+100	7 <1 57 2 514 1447 612 855 1947 <1 current 5 2 <1 2 <1 0	7 2 102 9 643 1262 635 752 2330 <1 history1 27 3 2 27 3 22 history1 0	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040 imit/base >+100 	7 <1 57 2 514 1447 612 855 1947 <1 <i>current</i> 5 2 <1 <i>current</i> 0 11.5	7 2 102 9 643 1262 635 752 2330 <1 history1 27 3 2 2 <i>history</i> 1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040 imit/base >+100 	7 <1 57 2 514 1447 612 855 1947 <1 current 5 2 <1 2 <1 0	7 2 102 9 643 1262 635 752 2330 <1 history1 27 3 2 27 3 22 history1 0	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185(m) ASTM D7844* ASTM D7624*	50 5 50 0 560 1510 780 870 2040 imit/base >+100 imit/base	7 <1 57 2 514 1447 612 855 1947 <1 <i>current</i> 5 2 <1 <i>current</i> 0 11.5	7 2 102 9 643 1262 635 752 2330 <1 history1 27 3 2 27 3 2 2 history1 0 10.9	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185(m) ASTM D7844* ASTM D7624*	50 5 50 0 560 1510 780 870 2040 imit/base >+100 	7 <1 57 2 514 1447 612 855 1947 <1 current 5 2 <1 current 0 11.5 22.9	7 2 102 9 643 1262 635 752 2330 <1 history1 27 3 2 2 history1 0 10.9 23.0	 history2 history2 history2



Abnormal

35

31

5²⁵

age 20

15

eb8/24

19

18

12

Feb8/24

Abn

Bas

13 Abnorma

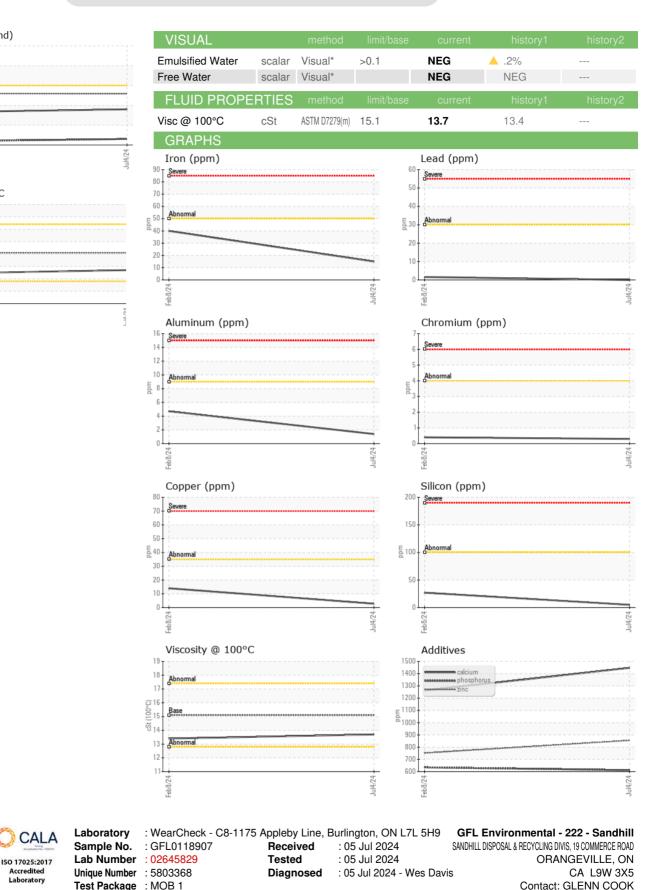
FT-IR (Direct Trend)

Oxidation

Sulfation

Viscosity @ 100°C

OIL ANALYSIS REPORT





To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

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