

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id 9165 Component Natural Gas Engine Fluid

PETRO CANADA DURON GEO LD 15W40 (23 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.

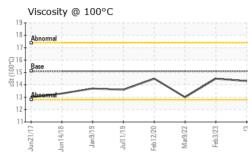
Fluid Condition

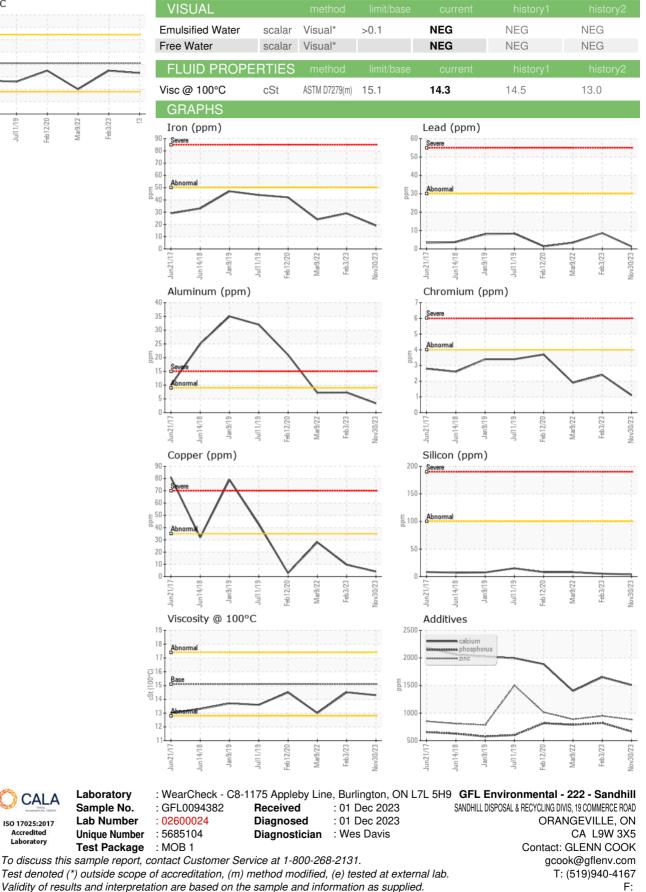
The condition of the oil is acceptable for the time in service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0094382	GFL0063924	GFL0042081
Sample Date		Client Info		30 Nov 2023	03 Feb 2023	09 Mar 2022
Machine Age	hrs	Client Info		21099	14710	13142
Oil Age	hrs	Client Info		1200	14710	0
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 D5185(m)	>50	19	29	24
Chromium	ppm	ASTM D5185(m)	>4	1	2	2
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>9	3	7	7
Lead	ppm	ASTM D5185(m)	>30	1	9	3
Copper	ppm	ASTM D5185(m)	>35	4	10	28
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base 50	current 9	history1 8	history2 24
	ppm ppm		50			
Boron		ASTM D5185(m)	50	9	8	24
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	50 5 50	9 <1	8 0	24 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50	9 <1 53	8 0 57	24 0 51
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0	9 <1 53 0	8 0 57 <1	24 0 51 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560	9 <1 53 0 519	8 0 57 <1 571	24 0 51 <1 622
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)	50 5 50 0 560 1510 780	9 <1 53 0 519 1506	8 0 57 <1 571 1650	24 0 51 <1 622 1402
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	9 <1 53 0 519 1506 665	8 0 57 <1 571 1650 821	24 0 51 <1 622 1402 787
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	9 <1 53 0 519 1506 665 882	8 0 57 <1 571 1650 821 948	24 0 51 <1 622 1402 787 887
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) ASTM D5185(m)	50 5 50 0 560 1510 780 870	9 <1 53 0 519 1506 665 882 1941	8 0 57 <1 571 1650 821 948 2084	24 0 51 <1 622 1402 787 887 1980
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	9 <1 53 0 519 1506 665 882 1941 <1	8 0 57 <1 571 1650 821 948 2084 <1	24 0 51 <1 622 1402 787 887 1980 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	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 50 0 560 1510 780 870 2040 iimit/base	9 <1 53 0 519 1506 665 882 1941 <1 <1	8 0 57 <1 571 1650 821 948 2084 <1 <1 history1	24 0 51 <1 622 1402 787 887 1980 <1 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 50 0 560 1510 780 870 2040 iimit/base	9 <1 53 0 519 1506 665 882 1941 <1 <1 current 4	8 0 57 <1 571 1650 821 948 2084 <1 history1 5	24 0 51 <1 622 1402 787 887 1980 <1 history2 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m)	50 5 50 0 560 1510 780 870 2040 imit/base >+100	9 <1 53 0 519 1506 665 882 1941 <1 <1 current 4 3	8 0 57 <1 571 1650 821 948 2084 <1 2084 <1 history1 5 6	24 0 51 <1 622 1402 787 887 1980 <1 history2 8 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m)	50 50 00 560 1510 780 870 2040 Jimit/base >+100	9 <1 53 0 519 1506 665 882 1941 <1 <1 current 4 3 0	8 0 57 <1 571 1650 821 948 2084 <1 2084 <1 history1 5 6 0	24 0 51 <1 622 1402 787 887 1980 <1 history2 8 4 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m)	50 50 0 560 1510 780 870 2040 2040 >1 imit/base >20 imit/base	9 <1 53 0 519 1506 665 882 1941 <1 <1 current 4 3 0 0	8 0 57 <1 571 1650 821 948 2084 <1 2084 <1 history1 5 6 0 0	24 0 51 <1 622 1402 787 887 1980 <1 history2 8 4 4 <1 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 50 0 560 1510 780 870 2040 2040 >1 imit/base >20 imit/base	9 <1 53 0 519 1506 665 882 1941 <1 <1 current 4 3 0 current 0	8 0 57 <1 571 1650 821 948 2084 <1 bistory1 5 6 0 0 history1 0	24 0 51 <1 622 1402 787 887 1980 <1 history2 8 4 4 <1 history2 0
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 D5185(m)	50 50 560 1510 780 870 2040 imit/base >+100 20 imit/base >20 imit/base	9 <1 53 0 519 1506 665 882 1941 <1 current 4 3 0 current 0 11.1 21.4	8 0 57 <1 571 1650 821 948 2084 <1 bistory1 5 6 0 0 history1 0 6.5 17.9	24 0 51 <1 622 1402 787 887 1980 <1 history2 8 4 <1 history2 0 4.5 14.4
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 ppm	ASTM D5185(m) ASTM D5185(m)	50 50 00 560 1510 780 870 2040 2040 2040 2040 2040 2040 20 20 20 20 20 20 20 20 20 20 20 20 20	9 <1 53 0 519 1506 665 882 1941 <1 current 4 3 0 current 0 11.1	8 0 57 <1 571 1650 821 948 2084 <1 history1 5 6 0 history1 0 6.5	24 0 51 <1 622 1402 787 887 1980 <1 history2 8 4 <1 history2 0 4.5



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