

OIL ANALYSIS REPORT

Sample Rating Trend

FUEL

Machine Id

401108

Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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		GFL0096816	GFL0096751	
Sample Date		Client Info		30 Apr 2024	16 Nov 2023	
Machine Age	kms	Client Info		872874	846093	
Oil Age	kms	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				MARGINAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
-	_		11			
WEAR METAL	5	method	limit/base		history1	history2
Iron	ppm	ASTM D5185(m)	>100	37	19	
Chromium	ppm	ASTM D5185(m)	>20	1	<1	
Nickel	ppm	ASTM D5185(m)	>4	0	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>3	0	<1	
Aluminum	ppm	ASTM D5185(m)	>20	3	1	
Lead	ppm	ASTM D5185(m)	>40	5	1	
Copper	ppm	ASTM D5185(m)	>330	4	1	
Tin	ppm	ASTM D5185(m)	>15	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
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Cadmium	ppm	ASTM D5185(m)		0	0	
			limit/base		0 history1	 history2
Cadmium		ASTM D5185(m)	limit/base		-	
Cadmium ADDITIVES	ppm	ASTM D5185(m)		current	history1	
Cadmium ADDITIVES Boron	ppm ppm	ASTM D5185(m) method ASTM D5185(m)	0	current 3	history1 3	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	0 0 60	current 3 1	history1 3 <1	history2
Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60	current 3 1 62	history1 3 <1 57	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60 0 1010 1070	Current 3 1 62 <1 975 1074	history1 3 <1 57 0 927 1023	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60 0 1010 1070 1150	Current 3 1 62 <1 975 1074 958	history1 3 <1 57 0 927 1023 947	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270	Current 3 1 62 <1 975 1074 958 1180	history1 3 <1 57 0 927 1023 947 1148	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60 0 1010 1070 1150	Current 3 1 62 <1 975 1074 958	history1 3 <1 57 0 927 1023 947	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270	Current 3 1 62 <1 975 1074 958 1180	history1 3 <1 57 0 927 1023 947 1148	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 60 0 1010 1070 1150 1270	Current 3 1 62 <1 975 1074 958 1180 2412 <1	history1 3 <1 57 0 927 1023 947 1148 2390	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method 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)	0 0 60 0 1010 1070 1150 1270 2060	Current 3 1 62 <1 975 1074 958 1180 2412 <1	history1 3 <1 57 0 927 1023 947 1148 2390 <1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method 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)	0 0 60 1010 1070 1150 1270 2060	Current 3 1 62 <1 975 1074 958 1180 2412 <1 current	history1 3 <1	history2
Cadmium ADDITIVES 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) method 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)	0 0 60 1010 1070 1150 1270 2060	Current 3 1 62 <1 975 1074 958 1180 2412 <1 current	history1 3 <1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	0 0 60 1010 1070 1150 1270 2060 limit/base	Current 3 1 62 <1 975 1074 958 1180 2412 <1 current 7 17	history1 3 <1 57 0 927 1023 947 1148 2390 <1 history1 4 4 4	history2
Cadmium ADDITIVES 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) method ASTM D5185(m) ASTM D5185(m)	0 0 60 1010 1070 1150 1270 2060 limit/base >25	Current 3 1 62 <1 975 1074 958 1180 2412 <1 current 7 17 3	history1 3 <1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	0 0 60 1010 1070 1150 1270 2060 imit/base >25 >20 >5	Current 3 1 62 <1 975 1074 958 1180 2412 <1 7 17 3 2.6	history1 3 <1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	0 0 0 1010 1070 1150 1270 2060 2060 225 225 >20 >25 20 >5 20	Current 3 1 62 <1 975 1074 958 1180 2412 <1 7 17 3 ▲ 2.6 Current	history1 3 <1	history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D7593*	0 0 0 1010 1070 1150 1270 2060 2060 225 225 >20 >25 20 >5 20	Current 3 1 62 <1 975 1074 958 1180 2412 <1 7 17 3 ▲ 2.6 current 0.8	history1 3 <1	history2 history2 history2



Oxidation

Sulfation

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3

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21 Abs/cm

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18 Abnorma

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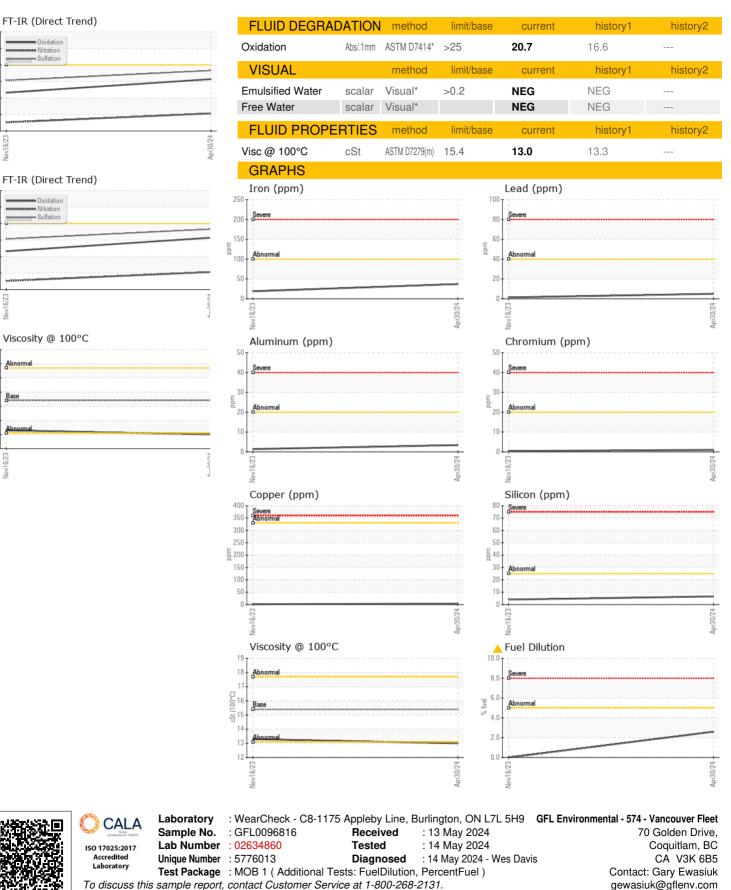
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OIL ANALYSIS REPORT



Validity of results and interpretation are based on the sample and information as supplied. Report Id: GFL574 [WCAMIS] 02634860 (Generated: 05/15/2024 13:06:14) Rev: 1

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

Contact/Location: Gary Ewasiuk - GFL574 Page 2 of 2

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