

OIL ANALYSIS REPORT



Machine Id 351054

Component Diesel Engine

Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0107920		
Sample Date		Client Info		27 Feb 2024		
Machine Age	hrs	Client Info		15351		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				ABNORMAL		
CONTAMINATI	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	18		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>4	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>3	0		
Aluminum	ppm	ASTM D5185(m)	>20	10		
Lead	ppm	ASTM D5185(m)	>40	<1		
Copper	ppm	ASTM D5185(m)	>330	1		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
Cadmium ADDITIVES	ppm	ASTM D5185(m) method	limit/base	0 current	 history1	history2
ADDITIVES Boron	ppm ppm	ASTM D5185(m) method ASTM D5185(m)	limit/base 0	0 current 122	 history1 	 history2
Cadmium ADDITIVES Boron Barium	ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m)	limit/base 0 0	0 current 122 0	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base 0 0 60	0 current 122 0 7	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base 0 0 60 0	0 current 122 0 7 0	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium	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)	limit/base 0 0 60 0 1010	0 current 122 0 7 0 219	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	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)	limit/base 0 0 60 0 1010 1070	0 current 122 0 7 0 219 2051	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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)	limit/base 0 60 0 1010 1070 1150	0 current 122 0 7 0 219 2051 997	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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)	limit/base 0 60 0 1010 1070 1150 1270	0 current 122 0 7 0 219 2051 997 1128	 history1 	 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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)	limit/base 0 60 0 1010 1070 1150 1270 2060	0 current 122 0 7 0 219 2051 997 1128 3107	 history1 -	 history2 -
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	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) ASTM D5185(m)	limit/base 0 60 0 1010 1070 1150 1270 2060	0 current 122 0 7 0 219 2051 997 1128 3107 <1	 history1 -	 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)	limit/base 0 60 0 1010 1070 1150 1270 2060 limit/base	0 current 122 0 7 0 219 2051 997 1128 3107 <1 current	 history1 -	 history2 -
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm	ASTM D5185(m) ASTM D5185(m)	limit/base 0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 current 122 0 7 0 219 2051 997 1128 3107 <1 current 4	 history1 -	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base 0 60 0 1010 1070 1150 1270 2060 limit/base >25	0 current 122 0 7 0 219 2051 997 1128 3107 <1 current 4 4	history1	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	ASTM D5185(m) ASTM D5185(m)	limit/base 0 60 0 1010 1070 1150 1270 2060 limit/base >25 	0 current 122 0 7 0 219 2051 997 1128 3107 <1 2 3107 <1 2 4 4 4 6	history1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm	ASTM D5185(m) Method ASTM D5185(m) ASTM D5185(m)	limit/base 0 60 0 1010 1070 1150 1270 2060 Jimit/base >25 >20 >20 >20	0 current 122 0 7 0 219 2051 997 1128 3107 <1 current 4 4 4 6 ≥.6	history1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	limit/base 0 60 0 1010 1070 1150 1270 2060 J limit/base >25 >20 >20	0 current 122 0 7 0 219 2051 997 1128 3107 <1 current 4 4 4 6 2.6 0.0	history1	history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANI Silicon Sodium Potassium Fuel Glycol INFRA-RED	ppm ppm % %	ASTM D5185(m) ASTM D5185(m)	limit/base 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >20 >2.0	0 current 122 0 7 0 219 2051 997 1128 3107 <1 current 4 4 6 2.6 0.0 current	 history1 history1 history1 	history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANI Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot %	ppm ppm pp	ASTM D5185(m) ASTM D	limit/base 0 60 0 1010 1070 1150 1270 2060 limit/base >20 >2.0 limit/base >3	0 current 122 0 7 0 219 2051 997 1128 3107 <1 current 4 4 4 6 2.6 0.0 current 0	 history1 	history2 history2
Cadmium ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANI Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7593* ASTM D7593* ASTM D7593* ASTM D7593* ASTM D7844* ASTM D7844*	limit/base 0 60 0 1010 1070 1150 1270 2060 limit/base >20 >2.0 limit/base >3 >20	0 current 122 0 7 0 219 2051 997 1128 3107 <1 current 4 4 4 2.6 0.0 current 0 9.2	 history1 history1 history1 	history2



ppm

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mdd

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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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