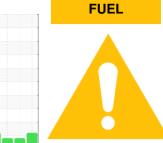


OIL ANALYSIS REPORT

Sample Rating Trend



DIAGNOSIS

monitor this condition.

Contamination

Fluid Condition

presence of contaminants.

Wear

Machine Id 801027 Component Diesel Engine

Fluid

The oil change at the time of sampling has been noted. We recommend an early resample to

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

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

All component wear rates are normal.

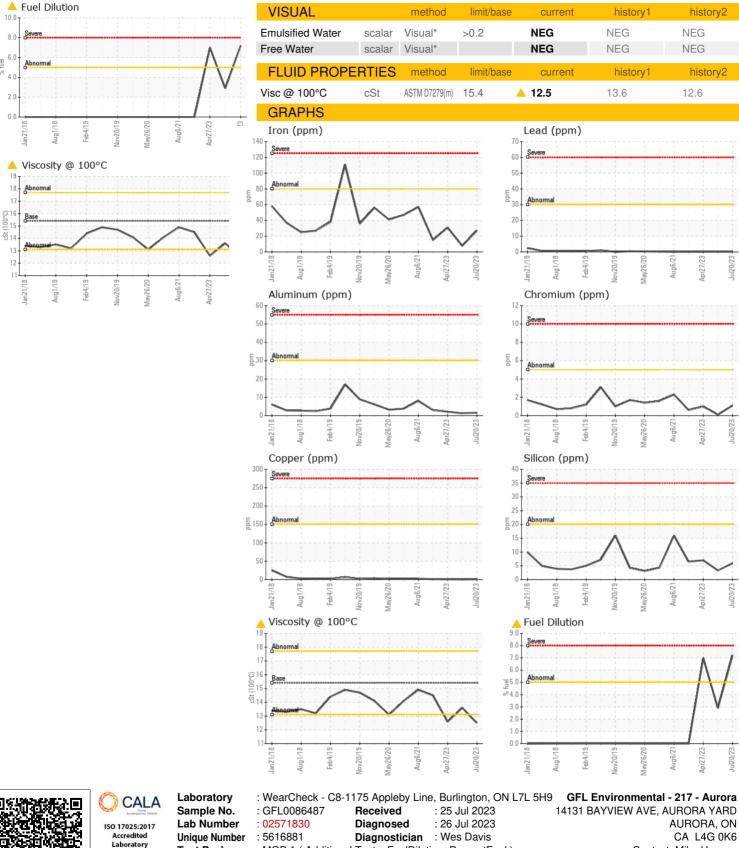
PETRO CANADA DURON SHP 15W40 (22 LTR)

		Jan2018 Aug	2018 Feb2019 Nov201	9 May2020 Aug2021 Apr202	23 Jul2023	
SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0086487	GFL0081991	GFL0081975
Sample Date		Client Info		20 Jul 2023	10 May 2023	27 Apr 2023
Aachine Age	hrs	Client Info		38463	12105	38463
Dil Age	hrs	Client Info		0	0	8472
Dil Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	MARGINAL	ABNORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185(m)	>80	27	8	31
Chromium	ppm	ASTM D5185(m)	>5	1	<1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Fitanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>30	2	1	2
_ead	ppm	ASTM D5185(m)	>30	0	0	0
Copper	ppm	ASTM D5185(m)	>150	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Antimony	ppm	ASTM D5185(m)		0	<1	<1
/anadium	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
Boron	ppm	ASTM D5185(m)	0	8	15	6
Barium	ppm	ASTM D5185(m)	0	0	0	0
lolybdonum						F7
vioiybueriulli	ppm	ASTM D5185(m)	60	57	58	57
	ppm ppm	ASTM D5185(m) ASTM D5185(m)		57 <1	58 <1	57 <1
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Nanganese Nagnesium	ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 1010	<1 904	<1 926	<1 897
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 1010 1070	<1 904 987	<1 926 1109	<1 897 1079
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 1010 1070 1150	<1 904 987 1003	<1 926 1109 1087	<1 897 1079 1028
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 1010 1070 1150 1270	<1 904 987 1003 1129	<1 926 1109 1087 1205	<1 897 1079 1028 1133
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)	0 1010 1070 1150	<1 904 987 1003 1129 2255	<1 926 1109 1087 1205 2662	<1 897 1079 1028 1133 2301
Manganese Magnesium Dalcium Phosphorus Zinc Sulfur Lithium	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)	0 1010 1070 1150 1270 2060	<1 904 987 1003 1129 2255 <1	<1 926 1109 1087 1205 2662 <1	<1 897 1079 1028 1133 2301 <1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	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)	0 1010 1070 1150 1270 2060 limit/base	<1 904 987 1003 1129 2255 <1 current	<1 926 1109 1087 1205 2662 <1 history1	<1 897 1079 1028 1133 2301 <1 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	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)	0 1010 1070 1150 1270 2060	<1 904 987 1003 1129 2255 <1 current 6	<1 926 1109 1087 1205 2662 <1 history1 3	<1 897 1079 1028 1133 2301 <1 history2 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	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)	0 1010 1070 1150 1270 2060 limit/base >20	<1 904 987 1003 1129 2255 <1 current 6 15	<1 926 1109 1087 1205 2662 <1 history1 3 7	<1 897 1079 1028 1133 2301 <1 history2 7 20
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	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)	0 1010 1070 1150 1270 2060 Iimit/base >20	<1 904 987 1003 1129 2255 <1 <u>current</u> 6 15 1	<1 926 1109 1087 1205 2662 <1 history1 3 7 <1	<1 897 1079 1028 1133 2301 <1 history2 7 20 2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	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)	0 1010 1070 1150 1270 2060 limit/base >20	<1 904 987 1003 1129 2255 <1 current 6 15	<1 926 1109 1087 1205 2662 <1 history1 3 7	<1 897 1079 1028 1133 2301 <1 history2 7 20
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	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)	0 1010 1070 1150 1270 2060 Iimit/base >20	<1 904 987 1003 1129 2255 <1 <u>current</u> 6 15 1	<1 926 1109 1087 1205 2662 <1 history1 3 7 <1	<1 897 1079 1028 1133 2301 <1 history2 7 20 2 ∧ 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185(m) ASTM D5185(m)	0 1010 1070 1150 1270 2060 /////////////////////////////////	<1 904 987 1003 1129 2255 <1 current 6 15 1 1 1 × 7.2	<1 926 1109 1087 1205 2662 <1 history1 3 7 <1 ×1 2.9	<1 897 1079 1028 1133 2301 <1 history2 7 20 2 ∧ 7
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel	ppm	ASTM D5185(m) ASTM D5185(m)	0 1010 1070 1150 1270 2060 Iimit/base >20 >20 >5 Iimit/base	<1 904 987 1003 1129 2255 <1 current 6 15 1 1 2 7.2 current	<1 926 1109 1087 1205 2662 <1 history1 3 7 <1 ▲ 2.9 history1	<1 897 1079 1028 1133 2301 <1 history2 7 20 2 √ 7 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Euel INFRA-RED Soot %	ppm	ASTM D5185(m) ASTM D7593*	0 1010 1070 1150 1270 2060 /////////////////////////////////	<1 904 987 1003 1129 2255 <1 current 6 15 1 7.2 current	<1 926 1109 1087 1205 2662 <1 history1 3 7 <1 2.9 history1 0.1	<1 897 1079 1028 1133 2301 <1 10 10 1028 1133 2301 <1 10 10 10 10 10 10 10 10 10 10 10 10 10
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINAN CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Jitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7593* Method ASTM D7594* ASTM D7844* ASTM D7624*	0 1010 1070 1150 1270 2060 Imit/base >20 >20 >5 Imit/base >3 >20	<1 904 987 1003 1129 2255 <1 Current 6 15 1 7.2 Current 0.5 12.1	<1 926 1109 1087 1205 2662 <1 history1 3 7 <1 2.9 history1 0.1 7.2	<1 897 1079 1028 1133 2301 <1 10 102 102 10 10 2 1 1 10 1 10 1 1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Vitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7593* Method ASTM D7594* ASTM D7844* ASTM D7624*	0 1010 1070 1150 1270 2060 imit/base >20 >20 >5 imit/base >3 >20 >3 >30	<1 904 987 1003 1129 2255 <1 current 6 15 1 7.2 current 0.5 12.1 23.5	<1 926 1109 1087 1205 2662 <1 history1 3 7 <1 2.9 history1 0.1 7.2 19.6	<1 897 1079 1028 1133 2301 <10 102 7 20 2 7 20 2 1 10 102 10 10 10 10 10 10 10 10 10 10 10 10 10



% fuel

OIL ANALYSIS REPORT



Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel) 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.

14131 BAYVIEW AVE, AURORA YARD AURORA, ON CA L4G 0K6 Contact: Mike Havens MHavens@gflenv.com T: F: (905)713-2445

or27/73

Aug6/21

history2

history2

NEG

NEG

12.6