

OIL ANALYSIS REPORT

INTERNATIONAL 1242

Component

Diesel Engine

PETRO CANADA 15W40 (--- GAL)

Sample Rating Trend **FUEL**

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

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

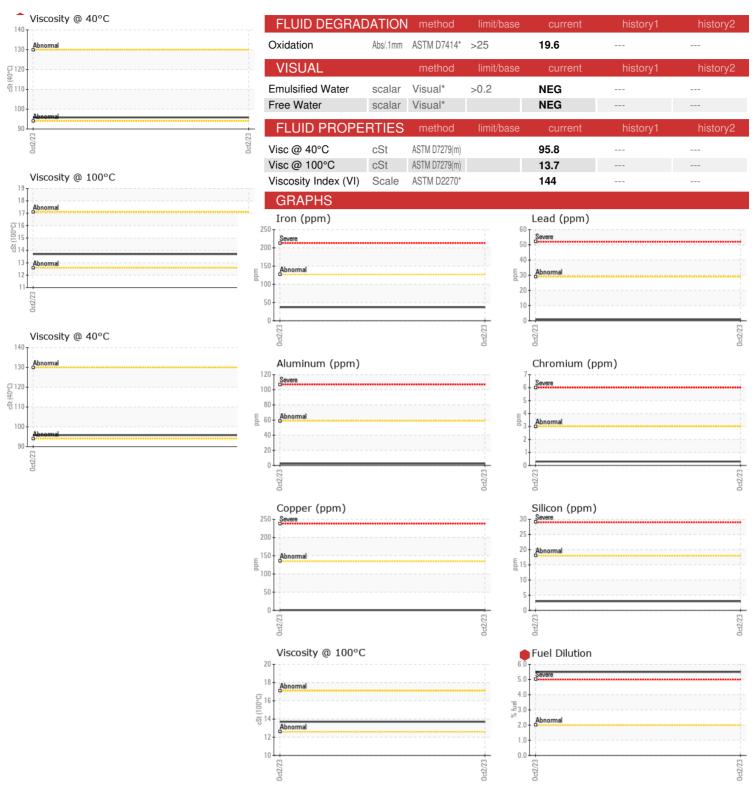
Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

Machine Age kms Client Info 221402					Oct2023		
Sample Date Client Info Q2 Oct 2023	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Date Client Info Q2 Oct 2023	Sample Number		Client Info		PC0081525		
Oil Age kms Client Info 3475	Sample Date		Client Info		02 Oct 2023		
Client Info SEVERE	Machine Age	kms	Client Info		221402		
CONTAMINATION method milit mi	Oil Age	kms	Client Info		3475		
CONTAMINATION	Oil Changed		Client Info		Changed		
Water WC Method >0.2 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >127 37 Chromium ppm ASTM D5185(m) >3 <1	Sample Status				SEVERE		
WEAR METALS	CONTAMINAT	ΓΙΟΝ	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >127 37 Chromium ppm ASTM D5185(m) >3 <1	Water		WC Method	>0.2	NEG		
Tron	Glycol		WC Method		NEG		
Chromium ppm ASTM D5185(m) >3 <1	WEAR METAL	_S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185(m)	>127	37		
Titanium ppm ASTM D5185(m) >2 0 Silver ppm ASTM D5185(m) >2 <1	Chromium		ASTM D5185(m)	>3	<1		
Silver	Nickel	ppm	ASTM D5185(m)	>30	<1		
Aluminum	Titanium	ppm	ASTM D5185(m)	>2	0		
Lead ppm ASTM D5185(m) >29 <1 Copper ppm ASTM D5185(m) >13.5 <1 Tin ppm ASTM D5185(m) >2 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 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 Barium ppm ASTM D5185(m) 57 Ma	Silver	ppm	ASTM D5185(m)	>2	<1		
Copper ppm ASTM D5185(m) >135 <1 Tin ppm ASTM D5185(m) >2 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 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 Barium ppm ASTM D5185(m) 57 Molybdenum ppm ASTM D5185(m) 57 Magnesium ppm ASTM D5185(m) 981 Calcium ppm ASTM D5185(m) 978 Phosphorus ppm ASTM D5185(m)	Aluminum	ppm	ASTM D5185(m)	>59	2		
Trin	Lead	ppm	ASTM D5185(m)	>29	<1		
Antimony ppm ASTM D5185(m) 0	Copper	ppm	ASTM D5185(m)	>135	<1		
Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 Barium ppm ASTM D5185(m) 57 Molybdenum ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 881 Magnesium ppm ASTM D5185(m) 978 Calcium ppm ASTM D5185(m) 922 Phosphorus ppm ASTM D5185(m) 1095 Sulfur ppm ASTM D5185(m) 2335 Lithium ppm ASTM D5185(m) 18 3	Tin	ppm	ASTM D5185(m)	>2	0		
Beryllium	Antimony	ppm	ASTM D5185(m)		0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 Barium ppm ASTM D5185(m) 57 Molybdenum ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 881 Magnesium ppm ASTM D5185(m) 978 Calcium ppm ASTM D5185(m) 922 Phosphorus ppm ASTM D5185(m) 922 Sulfur ppm ASTM D5185(m) 2335 Sulfur ppm ASTM D5185(m) <1	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVES	Beryllium	ppm	ASTM D5185(m)		0		
Boron	Cadmium	ppm	ASTM D5185(m)		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 57 Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 978 Calcium ppm ASTM D5185(m) 922 Phosphorus ppm ASTM D5185(m) 1095 Zinc ppm ASTM D5185(m) 2335 Sulfur ppm ASTM D5185(m) <1 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >18 3 Sodium ppm ASTM D5185(m) >20 0 Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method	Boron	ppm	ASTM D5185(m)		2		
Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 978 Calcium ppm ASTM D5185(m) 922 Phosphorus ppm ASTM D5185(m) 1095 Zinc ppm ASTM D5185(m) 2335 Sulfur ppm ASTM D5185(m) <1	Barium	ppm	ASTM D5185(m)		<1		
Magnesium ppm ASTM D5185(m) 881 Calcium ppm ASTM D5185(m) 978 Phosphorus ppm ASTM D5185(m) 922 Zinc ppm ASTM D5185(m) 1095 Sulfur ppm ASTM D5185(m) 2335 Lithium ppm ASTM D5185(m) <1	Molybdenum	ppm	ASTM D5185(m)		57		
Calcium ppm ASTM D5185(m) 978 Phosphorus ppm ASTM D5185(m) 922 Zinc ppm ASTM D5185(m) 1095 Sulfur ppm ASTM D5185(m) 2335 Lithium ppm ASTM D5185(m) <1	Manganese	ppm	ASTM D5185(m)		0		
Phosphorus ppm ASTM D5185(m) 922 Zinc ppm ASTM D5185(m) 1095 Sulfur ppm ASTM D5185(m) 2335 Lithium ppm ASTM D5185(m) <1	Magnesium	ppm	ASTM D5185(m)		881		
Zinc ppm ASTM D5185(m) 1095 Sulfur ppm ASTM D5185(m) 2335 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >18 3 Sodium ppm ASTM D5185(m) 2 Potassium ppm ASTM D5185(m) >20 0 Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Calcium	ppm	ASTM D5185(m)		978		
Sulfur ppm ASTM D5185(m) 2335 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >18 3 Sodium ppm ASTM D5185(m) 2 Potassium ppm ASTM D5185(m) >20 0 Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Phosphorus	ppm	ASTM D5185(m)		922		
Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >18 3 Sodium ppm ASTM D5185(m) 2 Potassium ppm ASTM D5185(m) >20 0 Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Zinc	ppm	ASTM D5185(m)		1095		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >18 3 Sodium ppm ASTM D5185(m) 2 Potassium ppm ASTM D5185(m) >20 0 Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Sulfur	ppm	ASTM D5185(m)		2335		
Silicon ppm ASTM D5185(m) >18 3 Sodium ppm ASTM D5185(m) 2 Potassium ppm ASTM D5185(m) >20 0 Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Lithium	ppm	ASTM D5185(m)		<1		
Sodium ppm ASTM D5185(m) 2 Potassium ppm ASTM D5185(m) >20 0 Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	CONTAMINA	NTS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185(m) >20 0 Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Silicon	ppm	ASTM D5185(m)	>18	3		
Fuel % ASTM D7593* >2.0 5.5 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Sodium	ppm	ASTM D5185(m)		2		
INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Potassium						
Soot % % ASTM D7844* >3 1.4 Nitration Abs/cm ASTM D7624* >20 9.7	Fuel	%	ASTM D7593*	>2.0	5.5		
Nitration Abs/cm ASTM D7624* >20 9.7	INFRA-RED		method	limit/base	current	history1	history2
	Soot %	%	ASTM D7844*	>3	1.4		
Sulfation Abs/.1mm ASTM D7415* >30 23.5	Nitration	Abs/cm	ASTM D7624*	>20	9.7		
	Sulfation	Abs/.1mm	ASTM D7415*	>30	23.5		



OIL ANALYSIS REPORT





ISO 17025:2017
Accredited
Laboratory

Laboratory Sample No. Lab Number Unique Number

Test Package: MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI) 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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