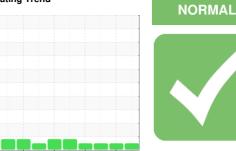


OIL ANALYSIS REPORT

SAMPLE INFORMATION method





Machine Id 827037-1041

Component **Diesel Engine** Fluic

PETRO CANADA DURON SHP 15W40 (--- 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.

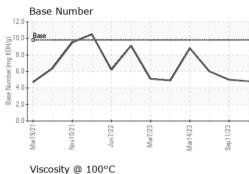
Fluid Condition

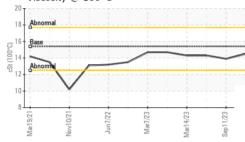
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR		method	limit/base	current	nistory i	nistory2
Sample Number		Client Info		GFL0090477	GFL0090539	GFL0083937
Sample Date		Client Info		08 Nov 2023	11 Sep 2023	25 May 2023
Machine Age	hrs	Client Info		6592	6450	6265
Oil Age	hrs	Client Info		580	185	585
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
		and the set	Preside Manager		In the transmitter	la fa La Mu
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	71	54	43
Chromium	ppm	ASTM D5185m	>5	2	2	1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	2	1
Lead	ppm	ASTM D5185m	>30	3	2	2
Copper	ppm	ASTM D5185m	>150	3	3	2
Tin	ppm	ASTM D5185m	>5	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES			limit/base			history2
ADDITIVES		method	IIIIII/Dase	current	history1	TIIStOLYZ
Boron	ppm	ASTM D5185m	0	2	2	6
Boron Barium	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	2	2	6
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	2 0	2 0 64 <1	6 0 64 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	2 0 63	2 0 64	6 0 64
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	2 0 63 <1 953 1086	2 0 64 <1	6 0 64 <1 902 1126
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	2 0 63 <1 953 1086 1021	2 0 64 <1 990 1179 1026	6 0 64 <1 902 1126 1010
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	2 0 63 <1 953 1086 1021 1305	2 0 64 <1 990 1179 1026 1278	6 0 64 <1 902 1126 1010 1244
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	2 0 63 <1 953 1086 1021	2 0 64 <1 990 1179 1026	6 0 64 <1 902 1126 1010
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	2 0 63 <1 953 1086 1021 1305	2 0 64 <1 990 1179 1026 1278	6 0 64 <1 902 1126 1010 1244
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	2 0 63 <1 953 1086 1021 1305 2583	2 0 64 <1 990 1179 1026 1278 3214	6 0 64 <1 902 1126 1010 1244 3113
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	2 0 63 <1 953 1086 1021 1305 2583 current	2 0 64 <1 990 1179 1026 1278 3214 history1	6 0 64 <1 902 1126 1010 1244 3113 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	0 0 60 1010 1070 1150 1270 2060 kimit/base >20	2 0 63 <1 953 1086 1021 1305 2583 current 5	2 0 64 <1 990 1179 1026 1278 3214 history1 5	6 0 64 <1 902 1126 1010 1244 3113 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 kimit/base >20	2 0 63 <1 953 1086 1021 1305 2583 current 5 8	2 0 64 <1 990 1179 1026 1278 3214 history1 5 10	6 0 64 <1 902 1126 1010 1244 3113 history2 3 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >20	2 0 63 <1 953 1086 1021 1305 2583 <i>current</i> 5 8 2	2 0 64 <1 990 1179 1026 1278 3214 history1 5 10 4	6 0 64 <1 902 1126 1010 1244 3113 history2 3 7 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 2060 220 20 20 20 20 20 20	2 0 63 <1 953 1086 1021 1305 2583 current 5 8 2 2 8 2	2 0 64 <1 990 1179 1026 1278 3214 history1 5 10 4 history1	6 0 64 <1 902 1126 1010 1244 3113 history2 3 7 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 2060 2060 220 20 20 20 20 20 20	2 0 63 <1 953 1086 1021 1305 2583 <i>current</i> 5 8 2 2 <i>current</i> 0.2	2 0 64 <1 990 1179 1026 1278 3214 history1 5 10 4 history1 1	6 0 64 <1 902 1126 1010 1244 3113 history2 3 7 2 3 7 2 history2 0.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i> >3 >20	2 0 63 <1 953 1086 1021 1305 2583 <i>current</i> 5 8 2 2 <i>current</i> 0.2 9.6	2 0 64 <1 990 1179 1026 1278 3214 history1 5 10 4 history1 1 1 13.8	6 0 64 <1 902 1126 1010 1244 3113 history2 3 7 2 3 7 2 9 history2 0.9 13.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >20 imit/base >3 >20 >3 >20	2 0 63 <1 953 1086 1021 1305 2583 current 5 8 2 2 current 0.2 9.6 21.7	2 0 64 <1 990 1179 1026 1278 3214 history1 5 10 4 <u>history1</u> 1 1 13.8 26.0	6 0 64 <1 902 1126 1010 1244 3113 history2 3 7 2 3 7 2 history2 0.9 13.3 24.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >20 <i>limit/base</i> >3 >20 <i>limit/base</i> >3 >30	2 0 63 <1 953 1086 1021 1305 2583 <i>current</i> 5 8 2 2 <i>current</i> 0.2 9.6 21.7 <i>current</i>	2 0 64 <1 990 1179 1026 1278 3214 history1 5 10 4 history1 1 13.8 26.0 history1	6 0 64 <1 902 1126 1010 1244 3113 history2 3 7 2 3 7 2 bistory2 0.9 13.3 24.8 history2

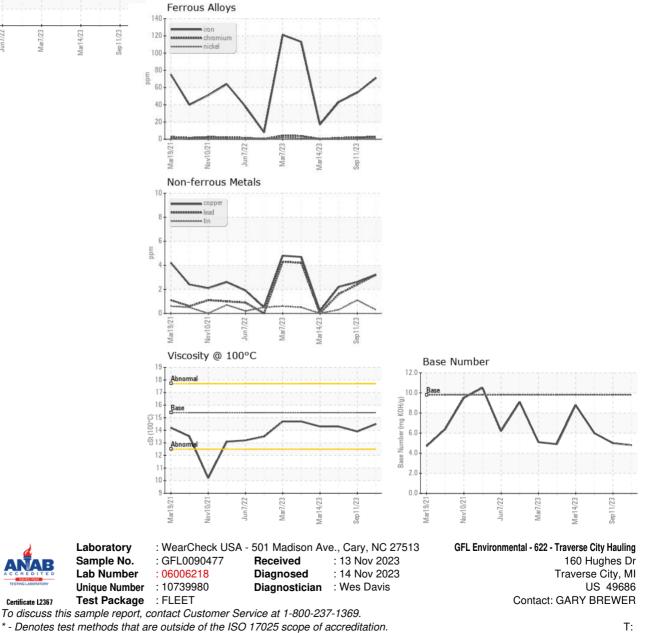


OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.5	13.9	14.3
GRAPHS						



* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

Submitted By: TECHNICIAN ACCOUNT

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