

OIL ANALYSIS REPORT

Sample Rating Trend





Component Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

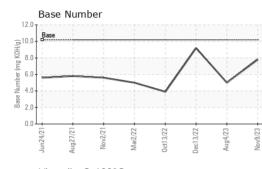
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

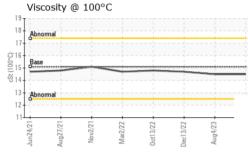
	istory2
	058151
Sample Date Client Info 09 Nov 2023 04 Aug 2023 13 De	c 2022
Machine Age mls Client Info 16092 7413 14441	7
Oil Age mls Client Info 2220 7413 0	
Oil Changed Client Info Changed Not C	hangd
Sample Status NORMAL ATTENTION NORM	/IAL
WEAR METALS method limit/base current history1 hi	istory2
Iron ppm ASTM D5185m >50 4 21 2	
Chromium ppm ASTM D5185m >4 <1	
Nickel ppm ASTM D5185m >2 <1	
Titanium ppm ASTM D5185m <1	
Silver ppm ASTM D5185m >3 <1	
Aluminum ppm ASTM D5185m >9 2 <1	
Lead ppm ASTM D5185m >30 <1 2 <1	
Copper ppm ASTM D5185m >35 1 2 0	
Tin ppm ASTM D5185m >4 <1	
Vanadium ppm ASTM D5185m <1	
Cadmium ppm ASTM D5185m <1	
ADDITIVES method limit/base current history1 hi	istory2
Boron ppm ASTM D5185m 50 26 6 27	
Barium ppm ASTM D5185m 5 0 0 1	
Molybdenum ppm ASTM D5185m 50 51 83 49	
Manganese ppm ASTM D5185m 0 <1	
Magnesium ppm ASTM D5185m 560 555 639 540)
Calcium ppm ASTM D5185m 1510 1490 1512 148	93
Phosphorus ppm ASTM D5185m 780 795 680 755	5
)
Zinc ppm ASTM D5185m 870 933 906 919	
Zinc ppm ASTM D5185m 870 933 906 915 Sulfur ppm ASTM D5185m 2040 2532 2746 268	38
Sulfur ppm ASTM D5185m 2040 2532 2746 268	istory2
Sulfur ppm ASTM D5185m 2040 2532 2746 268	
SulfurppmASTM D5185m204025322746268CONTAMINANTSmethodlimit/basecurrenthistory1history1	
Sulfur ppm ASTM D5185m 2040 2532 2746 268 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 3 13 11	
Sulfur ppm ASTM D5185m 2040 2532 2746 268 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m 2 4 91 2 Potassium ppm ASTM D5185m >20 2 37 0	
Sulfur ppm ASTM D5185m 2040 2532 2746 268 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m 2 4 91 2 Potassium ppm ASTM D5185m >20 2 37 0	istory2
Sulfur ppm ASTM D5185m 2040 2532 2746 268 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m >+20 2 4 91 2 Potassium ppm ASTM D5185m >20 2 37 0 INFRA-RED method limit/base current history1 history1	istory2
Sulfur ppm ASTM D5185m 2040 2532 2746 268 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m >20 2 A 91 2 Potassium ppm ASTM D5185m >20 2 37 0 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0 0.1 0.1	istory2
Sulfur ppm ASTM D5185m 2040 2532 2746 268 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m >20 2 37 0 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.4 9.2 7.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 20.4 20.	istory2
Sulfur ppm ASTM D5185m 2040 2532 2746 268 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m >+100 3 13 11 Sodium ppm ASTM D5185m >20 2 37 0 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0 0.1 0.1 Nitration Abs/cm *ASTM D7624 >20 8.4 9.2 7.1 Sulfation Abs/.1mm *ASTM D7415 >30 18.8 20.4 20	istory2 istory2 7 istory2



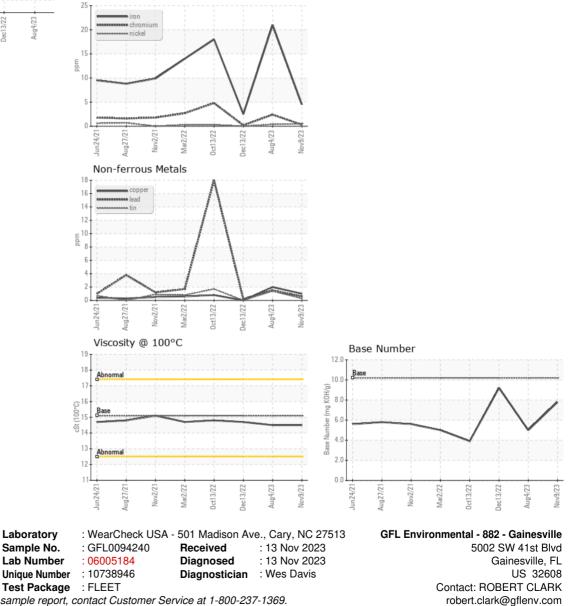
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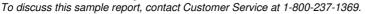
Ferrous Alloys





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	LIGHT	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	>0.1	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	15.1	14.5	14.5	14.7
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: STEPHEN WEIL

Page 2 of 2

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