

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend

### NORMAL



**Natural Gas Engine** 

PETRO CANADA DURON GEO LD 15W40 (40 GAL)

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

#### Wear

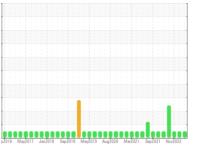
All component wear rates are normal.

#### Contamination

Fuel content negligible. 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.

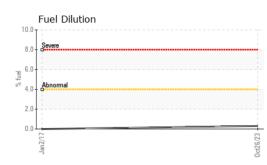


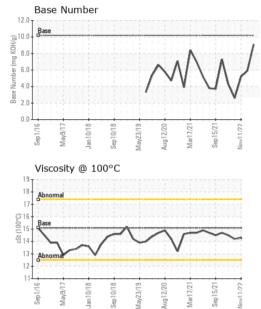


SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0092704	GFL0072401	GFL0048914
Sample Date		Client Info		26 Oct 2023	27 Jun 2023	11 Nov 2022
Machine Age	hrs	Client Info		18085	18085	0
Oil Age	hrs	Client Info		652	606	547
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	37	25	22
Chromium	ppm	ASTM D5185m	>4	2	3	3
Nickel	ppm	ASTM D5185m	>2	1	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	<1	4
Lead	ppm	ASTM D5185m	>30	<1	<1	2
Copper	ppm	ASTM D5185m	>35	2	2	6
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	32	14	6
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	53	51	56
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	560	555	550	596
Calcium	ppm	ASTM D5185m	1510	1445	1436	1566
Phosphorus	ppm	ASTM D5185m	780	778	749	781
Zinc	ppm	ASTM D5185m	870	911	947	1012
Sulfur	ppm	ASTM D5185m	2040	2742	2697	3093
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	17	7	9
Sodium	ppm	ASTM D5185m		<1	5	6
Potassium	ppm	ASTM D5185m	>20	2	1	2
Fuel	%	ASTM D3524	>4.0	0.3		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.5	9.5	13.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.9	21.5	26.3
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.1	17.5	21.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	9.1	5.9	5.2
	0 - 9					



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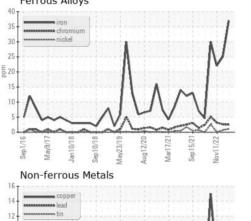


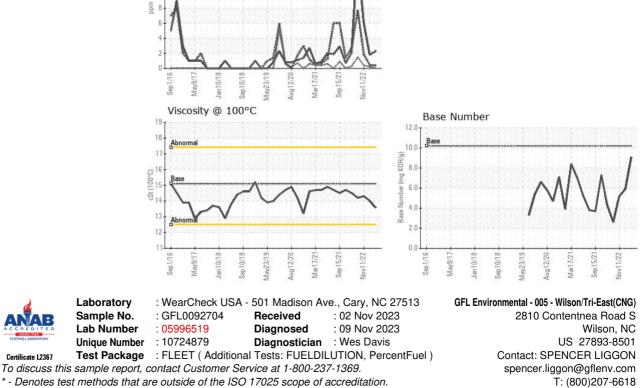


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	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	13.57	14.0	14.3
GRAPHS						

Ferrous Alloys

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\* - 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

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