

OIL ANALYSIS REPORT

Sample Rating Trend



Area (THX0606) 934055

Natural Gas Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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 INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0117828	GFL0117759	GFL0114402
Sample Date		Client Info		28 May 2024	24 Apr 2024	20 Mar 2024
Machine Age	mls	Client Info		29795	2113	22943
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	14	12	27
Chromium	ppm	ASTM D5185m	>4	1	2	3
Nickel	ppm	ASTM D5185m	>2	0	2	1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	21	19	105
Lead	ppm	ASTM D5185m	>30	3	1	5
Copper	ppm	ASTM D5185m	>35	2	2	2
Tin	ppm	ASTM D5185m	>4	<1	2	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		U	I	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 50	current 5	history1 13	history2 8
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 50 5	current 5 0	history1 13 0	history2 8 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 5 50	current 5 0 56	history1 13 0 56	history2 8 0 62
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 5 50 0	current 5 0 56 <1	history1 13 0 56 1	history2 8 0 62 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 5 50 0 560	current 5 0 56 <1 612	history1 13 0 56 1 630	history2 8 0 62 2 683
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 5 50 0 560 1510	Current 5 0 56 <1 612 1820	history1 13 0 56 1 630 1918	history2 8 0 62 2 683 2031
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 5 50 0 560 1510 780	current 5 0 56 <1 612 1820 827 1000	history1 13 0 56 1 630 1918 907 1107	history2 8 0 62 2 683 2031 848
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 5 50 0 560 1510 780 870	Current 5 0 56 <1 612 1820 827 1038 2010	history1 13 0 56 1 630 1918 907 1127	history2 8 0 62 2 683 2031 848 1118
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 50 0 560 1510 780 870 2040	Current 5 0 56 <1 612 1820 827 1038 2946	history1 13 0 56 1 630 1918 907 1127 3301	history2 8 0 62 2 683 2031 848 1118 3328
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 50 0 560 1510 780 870 2040 limit/base	current 5 0 56 <1 612 1820 827 1038 2946 current	history1 13 0 56 1 1 630 1918 907 1127 3301 history1 2	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 50 50 0 560 1510 780 870 2040 limit/base >+100	current 5 0 56 <1 612 1820 827 1038 2946 current 0	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7	history2 8 0 62 2 683 2031 848 1118 3328 history2 8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 50 50 0 560 1510 780 870 2040 2040 2040 2040 2040	current 5 0 56 <1 612 1820 827 1038 2946 current 0 8	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7 51	history2 8 0 62 2 683 2031 848 1118 3328 history2 8 8 8 200
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	limit/base 50 5 50 0 560 1510 780 870 2040 2040 2040 2040 2040 2040	current 5 0 56 <1 612 1820 827 1038 2946 current 0 8 62	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7 51	history2 8 0 62 2 683 2031 848 1118 3328 history2 8 8 8 289
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm	method ASTM D5185m ASTM D5185m	limit/base 50 50 0 560 1510 780 870 2040 2040 >+100 >+100 >20 Limit/base	current 5 0 56 <1 612 1820 827 1038 2946 current 0 8 62 current	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7 51 history1	history2 8 0 62 2 683 2031 848 1118 3328 history2 8 8 8 289 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base 50 50 0 560 1510 780 870 2040 limit/base >+100 	current 5 0 56 <1 612 1820 827 1038 2946 0 8 62 current 0.1	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7 51 history1 0 0	history2 8 0 62 2 683 2031 848 1118 3328 history2 8 8 8 289 history2 0
ADDITIVES 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 TS ppm ppm ppm	method ASTM D5185m	limit/base 50 50 0 560 1510 780 870 2040 2040 >+100 >20 limit/base >20 limit/base	current 5 0 56 <1 612 1820 827 1038 2946 current 0 8 62 current 0.1 11.0	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7 51 history1 0 10.0	history2 8 0 62 2 683 2031 848 1118 3328 history2 8 8 289 history2 0 11.5
ADDITIVES 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 t ppm ppm	method ASTM D5185m	limit/base 50 50 0 560 1510 780 870 2040 limit/base >20 limit/base >20 limit/base	current 5 0 56 <1 612 1820 827 1038 2946 current 0 8 62 current 0.1 11.0 23.4	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7 51 history1 0 10.0 20.9	history2 8 0 62 2 683 2031 848 1118 3328 history2 8 289 history2 0 11.5 25.8
ADDITIVES 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 TS ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	<pre>limit/base 50 5 60 1510 780 870 2040 limit/base >+100 20 limit/base >20 s20 s30</pre>	current 5 0 56 <1 612 1820 827 1038 2946 current 0 8 62 current 0.1 11.0 23.4	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7 51 history1 0 10.0 20.9 history1	history2 8 0 62 2 683 2031 848 1118 3328 history2 8 8 289 history2 0 11.5 25.8 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D78145 *ASTM D7624 *ASTM D7414	limit/base 50 50 50 50 50 1510 780 870 2040 limit/base >20 limit/base >20 s20 s20 limit/base >20 s20 s30 limit/base >25	current 5 0 56 <1 612 1820 827 1038 2946 current 0 8 62 current 0.1 11.0 23.4 current 19.7	history1 13 0 56 1 630 1918 907 1127 3301 history1 8 7 51 history1 0 10.0 20.9 history1 17.8	history2 8 0 62 2 683 2031 848 1118 3328 history2 8 8 289 history2 0 11.5 25.8 history2 21.3



OIL ANALYSIS REPORT





VISUAL		method				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
	DTIES	mathad	limit/booo	ourropt	biotom	history ()
	RHES	method	iimii/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.1	15.2	14.8	15.1
GRAPHS						





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 865 - East Mount Hauling : GFL0117828 Sample No. Received : 04 Jun 2024 7213 East Mount Houston Road Lab Number : 06198799 Tested : 05 Jun 2024 Houston, TX Unique Number : 11060922 Diagnosed : 05 Jun 2024 - Wes Davis US 77050 Test Package : FLEET Contact: TECHNICIAN ACCOUNT Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. wcgfldemo@gmail.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: TECHNICIAN ACCOUNT

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