

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 945007-260239

Component Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (7 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.

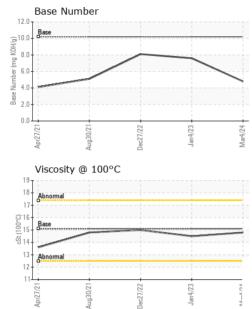
Fluid Condition

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

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0114561	GFL0050195	GFL0050198
Sample Date		Client Info		04 Mar 2024	04 Jan 2023	27 Dec 2022
Machine Age	hrs	Client Info		5503	3034	2962
Oil Age	hrs	Client Info		2542	800	900
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	ATTENTION	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	7	10	7
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m		2	2	2
Lead	ppm	ASTM D5185m	>30	0	<1	2
Copper	ppm	ASTM D5185m		0	<1	<1
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Antimony	ppm	ASTM D5185m	~			
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
	ррш	AGTIM DJ TOJIH		U	-	
ADDITIVES		method				history2
ADDITIVES		method	iiiiii/base			
Boron	ppm	ASTM D5185m	50	9	22	10
Boron Barium	ppm ppm				22 0	10 0
Boron		ASTM D5185m	50	9	22	10
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5 50 0	9 1	22 0 59 <1	10 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	9 1 50	22 0 59	10 0 58
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	9 1 50 0	22 0 59 <1	10 0 58 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	9 1 50 0 559	22 0 59 <1 580	10 0 58 <1 557
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	9 1 50 0 559 1530	22 0 59 <1 580 1693	10 0 58 <1 557 1544
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	50 5 50 0 560 1510 780	9 1 50 0 559 1530 718	22 0 59 <1 580 1693 868	10 0 58 <1 557 1544 750
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870	9 1 50 0 559 1530 718 935	22 0 59 <1 580 1693 868 1013 3073 history1	10 0 58 <1 557 1544 750 988
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	50 5 50 0 560 1510 780 870 2040	9 1 50 0 559 1530 718 935 2061	22 0 59 <1 580 1693 868 1013 3073	10 0 58 <1 557 1544 750 988 2687
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	50 5 50 0 560 1510 780 870 2040	9 1 50 0 559 1530 718 935 2061 current	22 0 59 <1 580 1693 868 1013 3073 history1	10 0 58 <1 557 1544 750 988 2687 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 ASTM D5185m	50 5 50 0 560 1510 780 870 2040	9 1 50 0 559 1530 718 935 2061 current 3	22 0 59 <1 580 1693 868 1013 3073 history1 7	10 0 58 <1 557 1544 750 988 2687 history2 5
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 ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100	9 1 50 0 559 1530 718 935 2061 current 3 2	22 0 59 <1 580 1693 868 1013 3073 history1 7 7 121	10 0 58 <1 557 1544 750 988 2687 bistory2 5 304
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 50 00 560 1510 780 870 2040 limit/base >+100	9 1 50 0 559 1530 718 935 2061 current 3 2 2 0	22 0 59 <1 580 1693 868 1013 3073 history1 7 7 121 <1	10 0 58 <1 557 1544 750 988 2687 history2 5 304 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 ppm ppm	ASTM D5185m ASTM D5185m	50 50 0 560 1510 780 870 2040 Iimit/base >+100 >20 Iimit/base	9 1 50 0 559 1530 718 935 2061 current 3 2 0 current	22 0 59 <1 580 1693 868 1013 3073 history1 7 7 121 <1 4 history1	10 0 58 <1 557 1544 750 988 2687 history2 5 304 2 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	50 50 0 560 1510 780 870 2040 Iimit/base >+100 >20 Iimit/base	9 1 50 0 559 1530 718 935 2061 current 3 2 0 current 0	22 0 59 <1 580 1693 868 1013 3073 history1 7 7 121 <1 21 <1 history1 0.1	10 0 58 <1 557 1544 750 988 2687 history2 5 304 2 2 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 50 00 560 1510 780 870 2040 imit/base >+100 >20 imit/base	9 1 50 0 559 1530 718 935 2061 current 3 2 0 current 0 10.5	22 0 59 <1 580 1693 868 1013 3073 history1 7 121 <1 121 <1 <1 bistory1 0.1 8.2	10 0 58 <1 557 1544 750 988 2687 history2 5 304 2 304 2 history2 0.1 9.8
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 D5185m	50 50 560 1510 780 870 2040 imit/base >+100 220 imit/base >20	9 1 50 0 559 1530 718 935 2061 <i>current</i> 3 2 0 <i>current</i> 0 10.5 21.5	22 0 59 <1 580 1693 868 1013 3073 history1 7 121 <1 <1 history1 0.1 8.2 19.4	10 0 58 <1 557 1544 750 988 2687 history2 5 304 2 2 history2 0.1 9.8 21.1
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 D7844	50 50 560 1510 780 870 2040 >+100 >+100 >20 imit/base >20 >20 >30	9 1 50 0 559 1530 718 935 2061 current 3 2 0 current 0 10.5 21.5 current	22 0 59 <1 580 1693 868 1013 3073 history1 7 121 <1 121 <1 <1 history1 0.1 8.2 19.4 history1	10 0 58 <1 557 1544 750 988 2687 history2 5 304 2 5 304 2 v history2 0.1 9.8 21.1 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	>0.1	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	14.8	14.5	15.0
GRAPHS						
Ferrous Alloys						
iron						
- management chromium						
)						
3		\sim				
	-					
•						
	A Desta D	Constant of the other designs to the other designs				
Apr27/21 Aug30/21	Dec27/22	Jan4/23	Mar4/24			
Aug	-Ca	10	10			
		7	2			
Non-ferrous Meta		۔ 	2			
copper		7	2			
copper lead			M			
copper lead			M			
copper lead		7	2			
copper lead		7	2			
copper lead			2			
copper lead			2			
copper lead tin			2			
copper lead tin	ls 22					
copper lead	ls	L Januar Sector	Mart/24			
Copper lead 12/12/06 ^{bm} Viscosity @ 100°C	Is Dec2/122			Base Number		
Viscosity @ 100°C	Is Dec2/122			Base Number		
Copper lead	Is Dec2/122		621+BEW 12.0	Base Number		
Copper lead tin tin tin tin tin tin tin tin tin tin	Is Dec2/122		12.0 10.0	I		
Copper lead tin tin tin tin tin tin tin tin tin tin	Is Dec2/122		12.0 10.0	I		
Copper lead tin tin tin tin tin tin tin tin tin tin	Is Dec2/122		12.0 10.0	I		
Copper lead tin tin tin tin tin tin tin tin tin tin	Is Dec2/122		12.0 (D)HOX 8.0 Ш И И И И И И И И И И И И И И И И И И	I		

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Apr27/21.

Mar4/24 -

: 05 Mar 2024

: 06 Mar 2024

: 06 Mar 2024 - Wes Davis



Test Package : FLEET Contact: RON FERAGOTTI Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. * - 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)

Dec27/22

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received

Diagnosed

Tested

Jan4/23 -

T: F:

Tavares, FL

US 32778

Mar4/24 -

Laboratory

Sample No.

Lab Number : 06109144

Unique Number : 10912641

12 11

Apr27/21

: GFL0114561

Aug30/21

Jan4/23 -

Dec27/22.

GFL Environmental - 884 - Lake County - Tavares

321 Southridge Industrial Way

Aug30/21