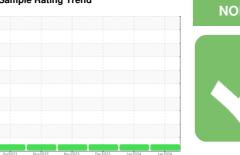


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id 834044 Component **Diesel Engine**

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

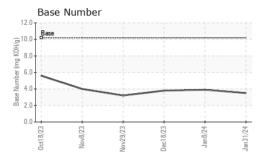
Fluid Condition

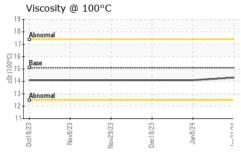
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		0ct2023	Nov2023 Nov2023	Dec2023 Jan2024	Jan 2024	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0102470	GFL0108171	GFL0102427
Sample Date		Client Info		31 Jan 2024	08 Jan 2024	18 Dec 2023
Machine Age	hrs	Client Info		12078	979	837
Oil Age	hrs	Client Info		1133	0	0
Oil Changed		Client Info		N/A	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	50	48	56
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	2	<1	1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	6	4	5
Lead	ppm	ASTM D5185m	>40	3	3	2
Copper	ppm	ASTM D5185m		13	14	19
Tin	ppm		>15	2	2	2
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method				history2
	maa					
Boron	ppm	ASTM D5185m	50	11	13	10
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5	11 <1	13 2	10 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	11 <1 71	13 2 63	10 0 73
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	11 <1 71 12	13 2 63 12	10 0 73 15
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	11 <1 71 12 843	13 2 63 12 856	10 0 73 15 938
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	11 <1 71 12 843 1278	13 2 63 12 856 1321	10 0 73 15 938 1374
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 ASTM D5185m	50 5 50 0 560 1510 780	11 <1 71 12 843 1278 804	13 2 63 12 856 1321 779	10 0 73 15 938 1374 807
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	11 <1 71 12 843 1278	13 2 63 12 856 1321	10 0 73 15 938 1374
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	11 <1 71 12 843 1278 804 1024	13 2 63 12 856 1321 779 987	10 0 73 15 938 1374 807 1069
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040	11 <1 71 12 843 1278 804 1024 2487	13 2 63 12 856 1321 779 987 2307 history1	10 0 73 15 938 1374 807 1069 2731
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040	11 <1 71 12 843 1278 804 1024 2487 current	13 2 63 12 856 1321 779 987 2307 history1	10 0 73 15 938 1374 807 1069 2731 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040	11 <1 71 12 843 1278 804 1024 2487	13 2 63 12 856 1321 779 987 2307 history1	10 0 73 15 938 1374 807 1069 2731
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base	11 <1 71 71 12 843 1278 804 1024 2487 current 26 5	13 2 63 12 856 1321 779 987 2307 history1 27 5	10 0 73 15 938 1374 807 1069 2731 history2 36 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >25 >20	11 <1 71 12 843 1278 804 1024 2487 current 26 5 11 current	13 2 63 12 856 1321 779 987 2307 history1 27 5 9	10 0 73 15 938 1374 807 1069 2731 history2 36 5 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >25 >20 limit/base	11 <1 71 12 843 1278 804 1024 2487 current 26 5 11 current	13 2 63 12 856 1321 779 987 2307 history1 27 5 9 history1 0	10 0 73 15 938 1374 807 1069 2731 history2 36 5 13 history2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >25 >20 limit/base	11 <1 71 12 843 1278 804 1024 2487 current 26 5 11 current 0 12.2	13 2 63 12 856 1321 779 987 2307 history1 27 5 9 history1 0 12.8	10 0 73 15 938 1374 807 1069 2731 history2 36 5 13 history2 0 10.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m ASTM D76185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	50 5 50 0 560 1510 780 870 2040 limit/base >25 >20 limit/base >4 >20 >30	11 <1 71 12 843 1278 804 1024 2487 current 26 5 11 current 0 12.2 25.5	13 2 63 12 856 1321 779 987 2307 history1 27 5 9 history1 0 12.8 24.7	10 0 73 15 938 1374 807 1069 2731 history2 36 5 13 history2 0 10.8 22.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm	ASTM D5185m Method ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	50 5 50 0 560 1510 780 870 2040 limit/base >25 >20 limit/base >4 >20 >30 limit/base	11 <1 71 71 12 843 1278 804 1024 2487 current 26 5 11 current 0 12.2 25.5 current	13 2 63 12 856 1321 779 987 2307 history1 27 5 9 history1 0 12.8 24.7 history1	10 0 73 15 938 1374 807 1069 2731 history2 36 5 13 history2 0 10.8 22.6 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m ASTM D76185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	50 5 50 0 560 1510 780 870 2040 limit/base >25 >20 limit/base >4 >20 >30	11 <1 71 12 843 1278 804 1024 2487 current 26 5 11 current 0 12.2 25.5	13 2 63 12 856 1321 779 987 2307 history1 27 5 9 history1 0 12.8 24.7	10 0 73 15 938 1374 807 1069 2731 history2 36 5 13 history2 0 10.8 22.6



OIL ANALYSIS REPORT



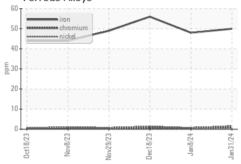


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

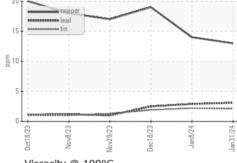
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	14.1	14.1

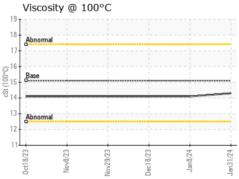
GRAPHS

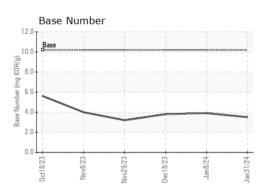
Ferrous Alloys















Certificate L2367

Laboratory Sample No.

Test Package : FLEET

: GFL0102470 Lab Number : 06088037 Unique Number : 10875482

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 13 Feb 2024

Tested : 14 Feb 2024 Diagnosed : 15 Feb 2024 - Don Baldridge

GFL Environmental - 837 - Harrison TS

22820 S State Route 291 Harrisonville, MO US 64701

Contact: JEREMY BROWN jeremyb@gflenv.com

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)

Report Id: GFL837 [WUSCAR] 06088037 (Generated: 02/15/2024 11:28:28) Rev: 1

Submitted By: JEREMY BROWN

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