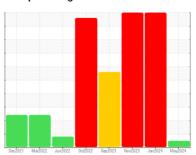


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 929024-540

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Sample only)

Wear

All component wear rates are normal.

Contamination

No evidence of coolant present in the oil. There is no indication of any contamination in the oil.

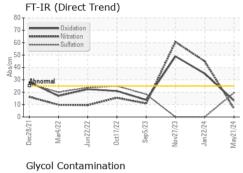
Fluid Condition

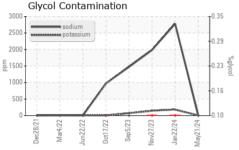
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

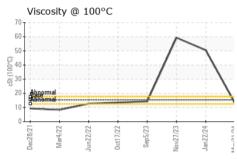
GAL)		Dec2021 N	Tar2022 Jun2022 Oct202	2 Sep2023 Nov2023 Jan2024	May2024	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0116211	GFL0094880	GFL0100039
Sample Date		Client Info		21 May 2024	22 Jan 2024	27 Nov 2023
Machine Age	hrs	Client Info		19308	19266	9493
Oil Age	hrs	Client Info		42	0	142
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	SEVERE	SEVERE
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	19	4 248	2 35
Chromium	ppm	ASTM D5185m	>20	<1	15	13
Nickel	ppm	ASTM D5185m	>4	0	2	<1
Titanium	ppm	ASTM D5185m		5	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	1 2	6
Lead	ppm	ASTM D5185m	>40	0	2	4
Copper	ppm	ASTM D5185m	>330	9	50	40
Tin	ppm	ASTM D5185m	>15	0	2	3
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron			0			
DOIOII	ppm	ASTM D5185m	0	265	346	236
Barium	ppm ppm	ASTM D5185m ASTM D5185m	0	265 0	346 0	236
Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m ASTM D5185m	0	0 60	0 138	0 131
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0	0 60 2	0 138 3	0 131 2
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010	0 60 2 533	0 138 3 646	0 131 2 662
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070	0 60 2 533 1374	0 138 3 646 739	0 131 2 662 771
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 60 0 1010 1070 1150	0 60 2 533 1374 844	0 138 3 646 739 752	0 131 2 662 771 843
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	0 60 0 1010 1070 1150 1270	0 60 2 533 1374 844 972	0 138 3 646 739 752 905	0 131 2 662 771 843 1069
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	0 60 0 1010 1070 1150 1270 2060	0 60 2 533 1374 844 972 3321	0 138 3 646 739 752 905 2434	0 131 2 662 771 843 1069 2816
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 ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 60 2 533 1374 844 972 3321 current	0 138 3 646 739 752 905 2434 history1	0 131 2 662 771 843 1069 2816
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060	0 60 2 533 1374 844 972 3321 current	0 138 3 646 739 752 905 2434 history1 ▲ 83	0 131 2 662 771 843 1069 2816 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base	0 60 2 533 1374 844 972 3321 current 17	0 138 3 646 739 752 905 2434 history1 ▲ 83	0 131 2 662 771 843 1069 2816 history2 124 1984
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base	0 60 2 533 1374 844 972 3321 current 17 39	0 138 3 646 739 752 905 2434 history1 ▲ 83 △ 2777 ▲ 183	0 131 2 662 771 843 1069 2816 history2 1984 146
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol	ppm	ASTM D5185m Method ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	0 60 2 533 1374 844 972 3321 current 17 39 3 NEG	0 138 3 646 739 752 905 2434 history1 ▲ 83 ▲ 2777 ▲ 183 ▲ 0.10	0 131 2 662 771 843 1069 2816 history2 ▲ 72 ▲ 1984 ▲ 146 ▲ 0.10
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm	ASTM D5185m *ASTM D5185m	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	0 60 2 533 1374 844 972 3321 current 17 39 3 NEG	0 138 3 646 739 752 905 2434 history1 ▲ 83 ▲ 2777 ▲ 183 ▲ 0.10 history1	0 131 2 662 771 843 1069 2816 history2 ▲ 72 ▲ 1984 ▲ 146 ▲ 0.10
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm	ASTM D5185m **ASTM D5185m ASTM D5185m **ASTM D5185m ASTM D5185m **ASTM D7844	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20	0 60 2 533 1374 844 972 3321 current 17 39 3 NEG current	0 138 3 646 739 752 905 2434 history1 ▲ 83 ▲ 2777 ▲ 183 ▲ 0.10 history1 0.8	0 131 2 662 771 843 1069 2816 history2 ▲ 72 ▲ 1984 ▲ 0.10 history2 0.9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76144	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20	0 60 2 533 1374 844 972 3321 current 17 39 3 NEG current 0.5 6.9	0 138 3 646 739 752 905 2434 history1 ▲ 83 ▲ 2777 ▲ 183 ▲ 0.10 history1 0.8 45.0	0 131 2 662 771 843 1069 2816 history2 ▲ 72 ▲ 1984 ▲ 146 ▲ 0.10 history2 0.9 60.6
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76144	0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	0 60 2 533 1374 844 972 3321 current 17 39 3 NEG current 0.5 6.9 19.5	0 138 3 646 739 752 905 2434 history1 ▲ 83 ▲ 2777 ▲ 183 ▲ 0.10 history1 0.8 45.0 0.0	0 131 2 662 771 843 1069 2816 history2 ▲ 72 ▲ 1984 ▲ 146 ▲ 0.10 history2 0.9 60.6 0.0

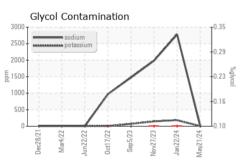


OIL ANALYSIS REPORT





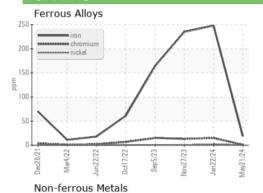


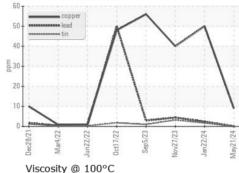


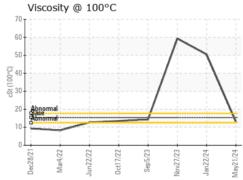
VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

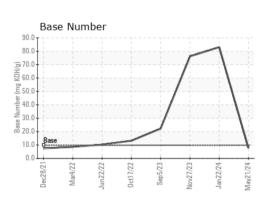
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	50.5	59.3	

GRAPHS













Certificate 12367

Laboratory Sample No.

: GFL0116211 Lab Number : 06191743 Unique Number : 11048495 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 May 2024 **Tested**

: 30 May 2024 Diagnosed : 30 May 2024 - Jonathan Hester

GFL Environmental - 626 - Cadillac Hauling

1501 Ron Wilson St Cadillac, MI US 49601

Contact: GARY BREWER gbrewerjr@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: GFL626 [WUSCAR] 06191743 (Generated: 05/30/2024 17:23:09) Rev: 1

Submitted By: also GFL632 and GFL638 - Glenda Standen

T:

F: