

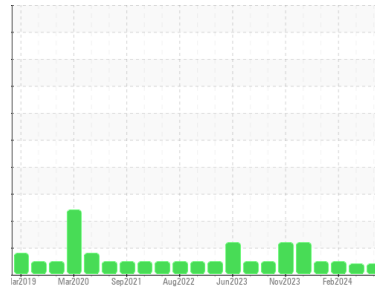


OIL ANALYSIS REPORT



Machine Id
422027-402279
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY



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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0115414	GFL0102948	GFL0074799
Sample Date	Client Info		13 May 2024	18 Apr 2024	27 Feb 2024
Machine Age	hrs	Client Info	24215	24065	23884
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ATTENTION	ATTENTION	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	5	2	5
Chromium	ppm	ASTM D5185m >20	<1	<1	0
Nickel	ppm	ASTM D5185m >5	<1	<1	0
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	2	3
Lead	ppm	ASTM D5185m >40	<1	<1	0
Copper	ppm	ASTM D5185m >330	1	<1	<1
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	6	6	72
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	5	7	65
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	56	76	850
Calcium	ppm	ASTM D5185m 1070	2134	2206	1269
Phosphorus	ppm	ASTM D5185m 1150	845	950	1081
Zinc	ppm	ASTM D5185m 1270	1020	1038	1256
Sulfur	ppm	ASTM D5185m 2060	3929	3916	3298

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	6	6
Sodium	ppm	ASTM D5185m	0	<1	2
Potassium	ppm	ASTM D5185m >20	3	3	2
Fuel	%	ASTM D3524 >3.0	0.0	0.7	<1.0

INFRA-RED

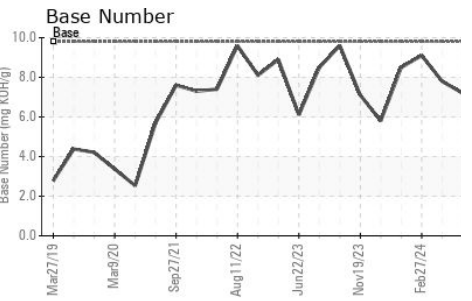
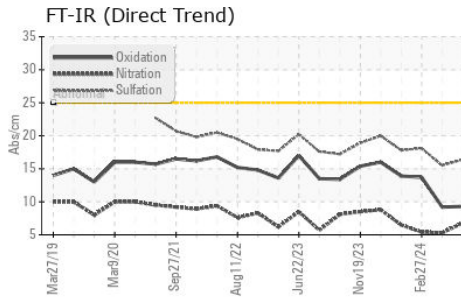
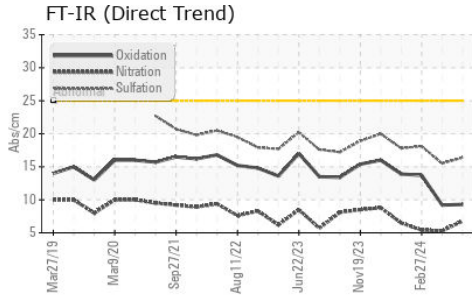
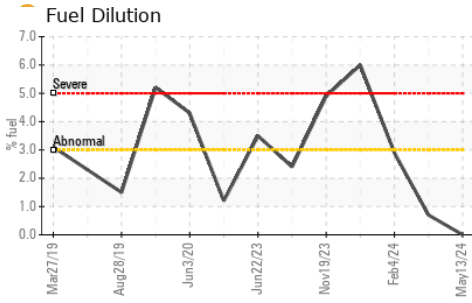
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	6.8	5.3	5.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	16.4	15.5	18.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	9.3	9.2	13.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.2	7.8	9.1



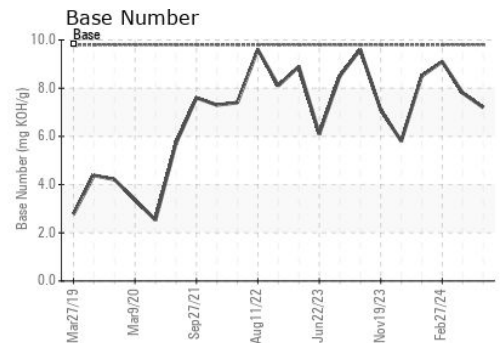
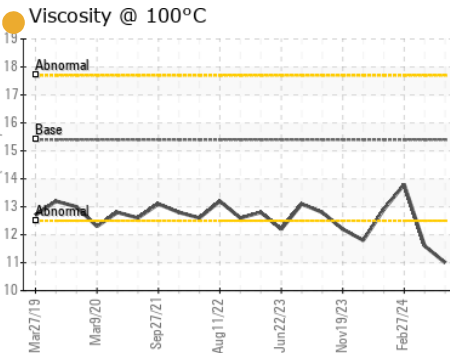
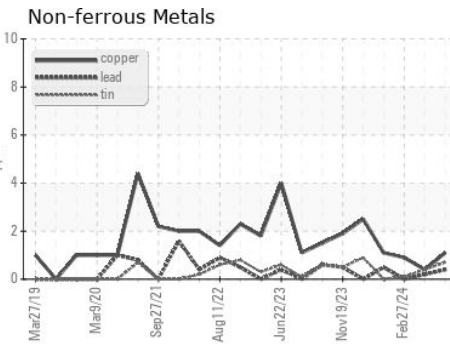
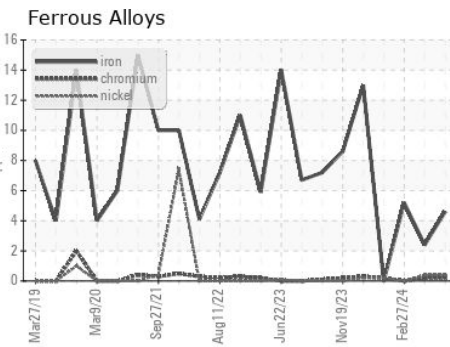
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	11.0	11.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115414
Lab Number : 06178123
Unique Number : 11029449
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 13 May 2024

Tested : 17 May 2024

Diagnosed : 17 May 2024 - Jonathan Hester

GFL Environmental - 816 - WCA of South Arkansas
 3083 Smackover Hwy
 El Dorado, AR
 US 71730

Contact: Mike Howell
 mike.howell@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)

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