



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
921011
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (40 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110279	GFL0102815	GFL0090502
Sample Date		Client Info		23 Feb 2024	02 Dec 2023	25 Aug 2023
Machine Age	hrs	Client Info		13315	13303	13249
Oil Age	hrs	Client Info		580	13249	590
Filter Age	hrs	Client Info		580	54	590
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				ATTENTION	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	8	8	58
Chromium	ppm	ASTM D5185m	>20	2	<1	3
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	4
Lead	ppm	ASTM D5185m	>40	<1	<1	5
Copper	ppm	ASTM D5185m	>330	2	2	6
Tin	ppm	ASTM D5185m	>15	<1	0	2
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

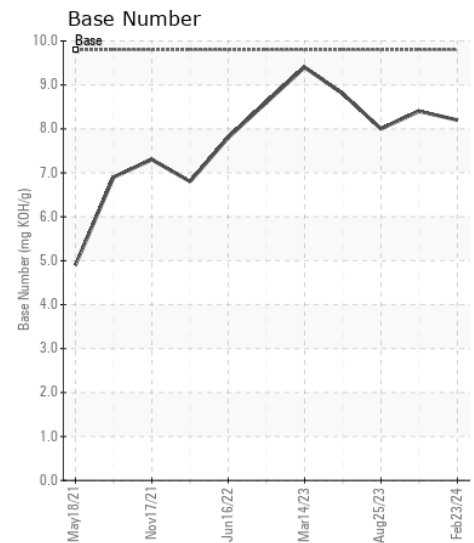
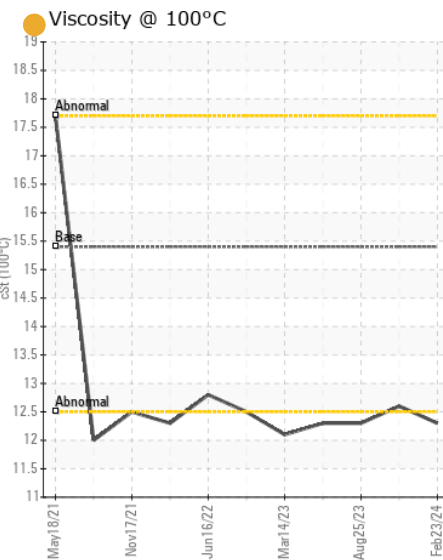
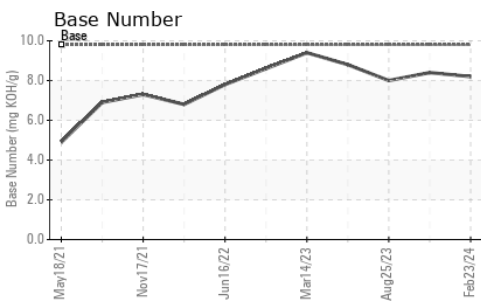
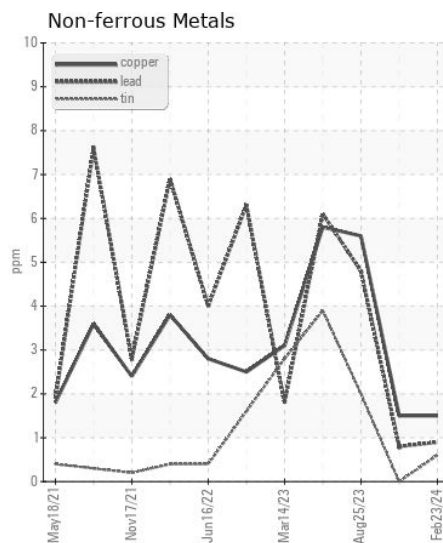
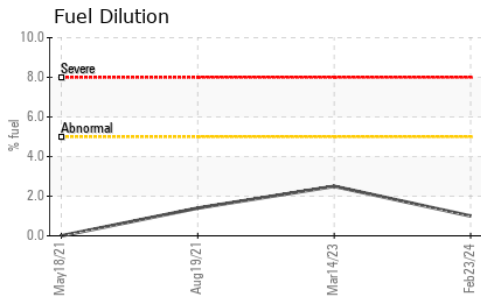
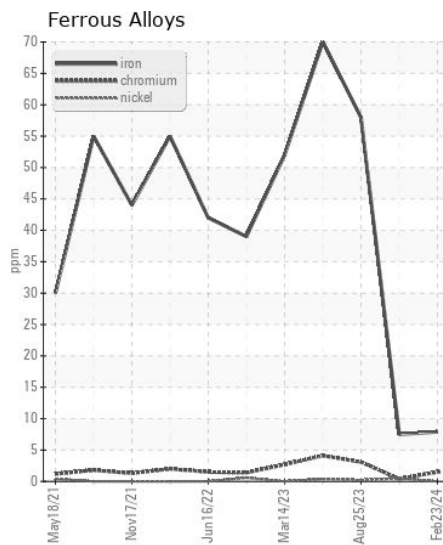
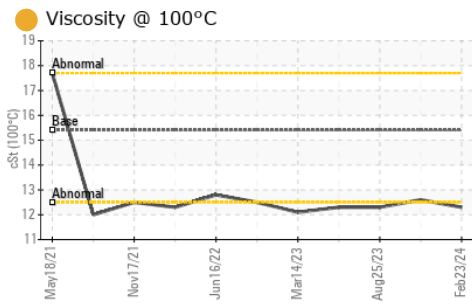
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	5
Potassium	ppm	ASTM D5185m	>20	2	3	6
Fuel	%	ASTM D3524	>5	1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	1.9
Nitration	Abs/cm	*ASTM D7624	>20	5.0	4.9	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.5	17.5	22.8
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

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.

Sodium	ppm	ASTM D5185m		3	2	4
Boron	ppm	ASTM D5185m	0	17	12	14
Barium	ppm	ASTM D5185m	0	0	0	2
Molybdenum	ppm	ASTM D5185m	60	52	46	62
Manganese	ppm	ASTM D5185m	0	<1	0	1
Magnesium	ppm	ASTM D5185m	1010	805	807	874
Calcium	ppm	ASTM D5185m	1070	912	925	1107
Phosphorus	ppm	ASTM D5185m	1150	982	899	992
Zinc	ppm	ASTM D5185m	1270	1108	1053	1155
Sulfur	ppm	ASTM D5185m	2060	2833	2353	2857
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.9	12.8	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.2	8.4	8.0
Visc @ 100°C	cSt	ASTM D445	15.4	12.3	12.6	12.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110279
Lab Number : 06104990
Unique Number : 10903220
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 622 - Traverse City Hauling
 160 Hughes Dr
 Traverse City, MI
 US 49686
 Contact: GARY BREWER

Received : 29 Feb 2024
Tested : 04 Mar 2024
Diagnosed : 04 Mar 2024 - Sean Felton

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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F: