



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
822022-119
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0121995	GFL0122069	GFL0111874
Sample Date		Client Info		01 Jul 2024	30 May 2024	18 Apr 2024
Machine Age	hrs	Client Info		13166	13100	12960
Oil Age	hrs	Client Info		66	7190	7218
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	19	41	33
Chromium	ppm	ASTM D5185m	>4	<1	2	1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>25	14	5	4
Lead	ppm	ASTM D5185m	>45	0	<1	<1
Copper	ppm	ASTM D5185m	>85	2	2	2
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

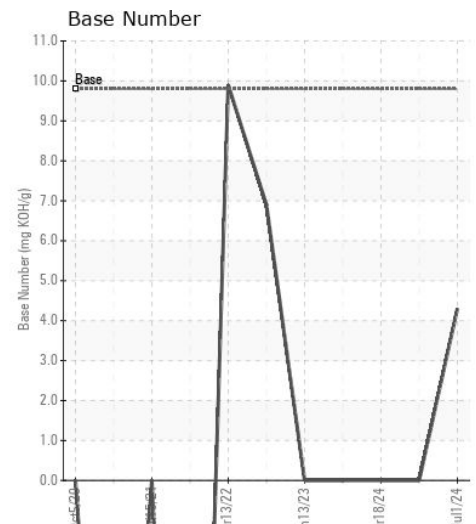
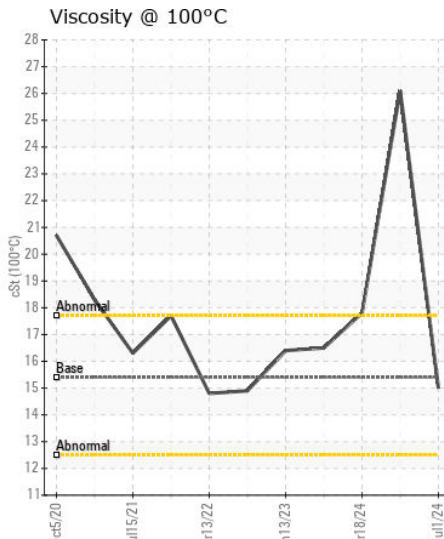
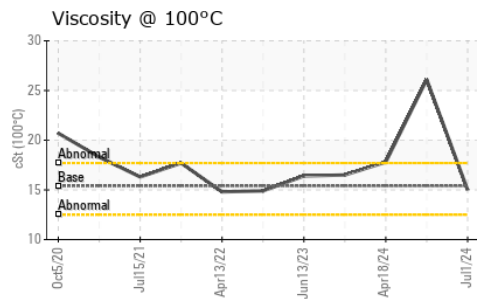
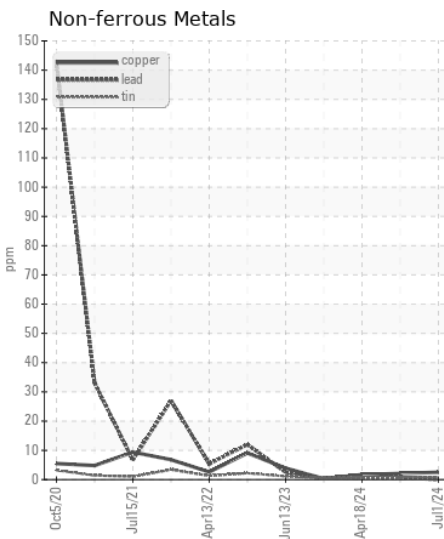
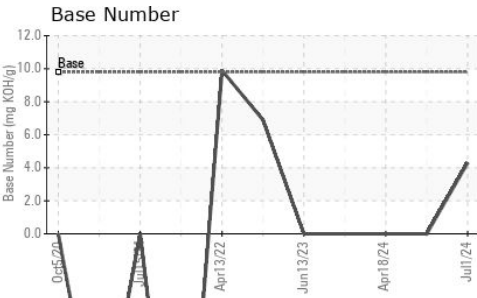
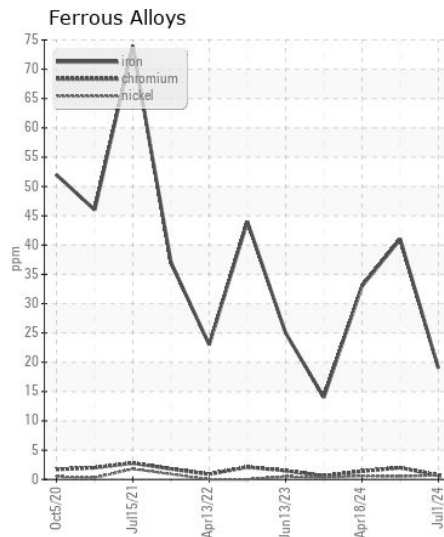
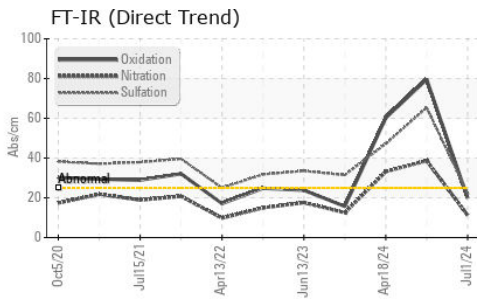
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	9	▲ 49	▲ 48
Potassium	ppm	ASTM D5185m	>20	18	11	11
Fuel		WC Method	>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	▲ 8.7	▲ 7.6
Nitration	Abs/cm	*ASTM D7624	>20	11.3	38.6	33.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	65.4	47.2
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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		7	5	4
Boron	ppm	ASTM D5185m	0	8	7	8
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	52	58	61
Manganese	ppm	ASTM D5185m	0	2	<1	<1
Magnesium	ppm	ASTM D5185m	1010	636	877	884
Calcium	ppm	ASTM D5185m	1070	1638	1050	1099
Phosphorus	ppm	ASTM D5185m	1150	756	1011	1050
Zinc	ppm	ASTM D5185m	1270	1008	1205	1196
Sulfur	ppm	ASTM D5185m	2060	2783	3128	3211
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.9	79.6	60.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	4.3	▲ 0.0	▲ 0.0
Visc @ 100°C	cSt	ASTM D445	15.4	15.0	▲ 26.1	▲ 17.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0121995
Lab Number : 06228267
Unique Number : 11111760
Test Package : FLEET

Received : 05 Jul 2024
Tested : 05 Jul 2024
Diagnosed : 08 Jul 2024 - Don Baldrige

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@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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F: