



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
225059-999147

Component
Diesel Engine

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

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0105270	GFL0105162	GFL0090257
Sample Date		Client Info		26 Feb 2024	20 Dec 2023	13 Oct 2023
Machine Age	hrs	Client Info		1858	1827	6789
Oil Age	hrs	Client Info		600	150	150
Filter Age	hrs	Client Info		600	150	150
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Piston, ring and cylinder wear is indicated.

Iron	ppm	ASTM D5185m	>100	▲ 124	1	5
Chromium	ppm	ASTM D5185m	>20	3	0	1
Nickel	ppm	ASTM D5185m	>2	2	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	▲ 27	<1	<1
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	54	<1	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

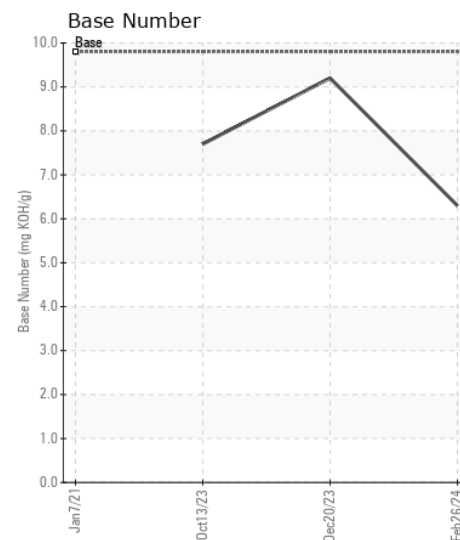
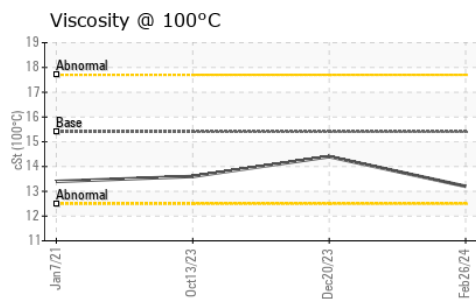
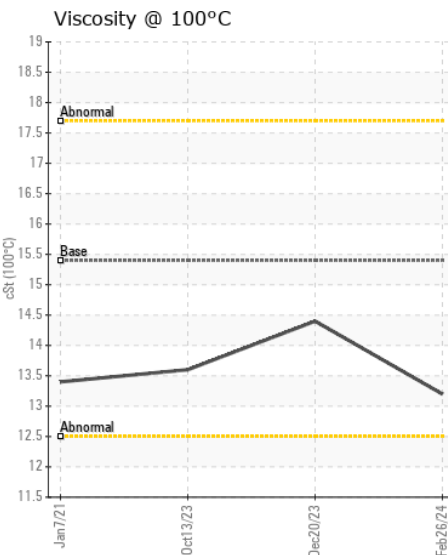
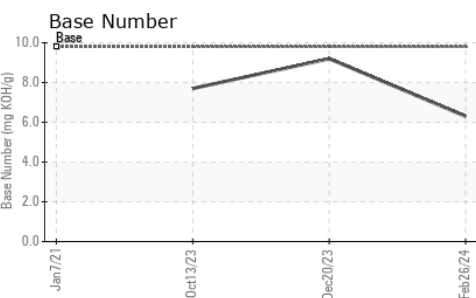
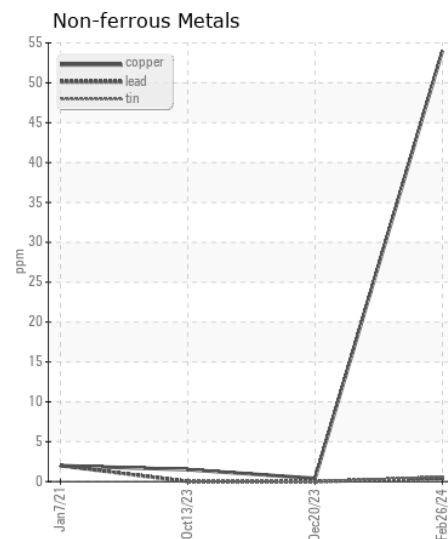
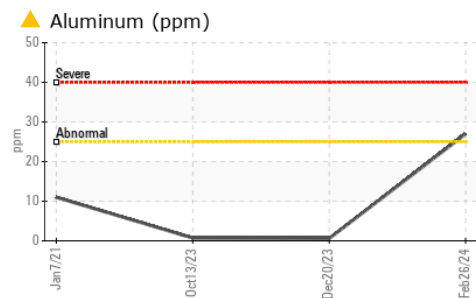
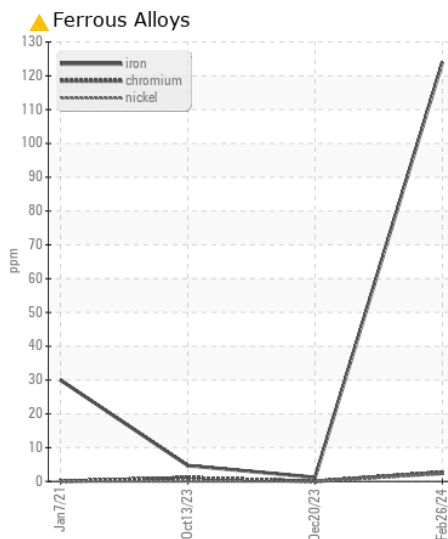
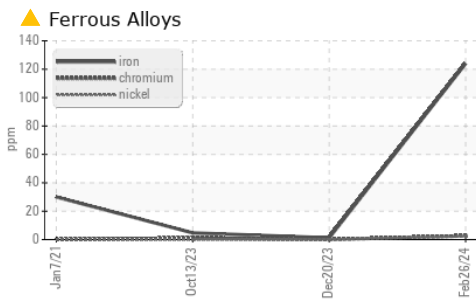
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	10	4	4
Potassium	ppm	ASTM D5185m	>20	20	0	4
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	0.9	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.0	4.7	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	17.7	17.9
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		2	1	4
Boron	ppm	ASTM D5185m	0	27	0	3
Barium	ppm	ASTM D5185m	0	1	0	0
Molybdenum	ppm	ASTM D5185m	60	22	54	53
Manganese	ppm	ASTM D5185m	0	2	0	0
Magnesium	ppm	ASTM D5185m	1010	134	925	793
Calcium	ppm	ASTM D5185m	1070	1832	980	913
Phosphorus	ppm	ASTM D5185m	1150	706	1054	892
Zinc	ppm	ASTM D5185m	1270	904	1221	1034
Sulfur	ppm	ASTM D5185m	2060	2963	3108	2617
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.5	13.1	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.3	9.2	7.7
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	14.4	13.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0105270
Lab Number : 06102736
Unique Number : 10900966
Test Package : FLEET

Received : 28 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 29 Feb 2024 - Don Baldrige

GFL Environmental - 821 - Ozarks Hauling
 33924 Olath Drive
 Lebanon, MO
 US 65536

Contact: Landen Johnson
 landen.johnson@gflenv.com

T: (417)664-0010

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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