



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
913070
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (36 QTS)

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		GFL0108917	GFL0109971	GFL0104318
Sample Date		Client Info		27 Feb 2024	18 Jan 2024	27 Dec 2023
Machine Age	hrs	Client Info		4058	2345	2343
Oil Age	hrs	Client Info		600	629	2343
Filter Age	hrs	Client Info		600	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Exhaust valve wear is indicated.

Iron	ppm	ASTM D5185m	>120	34	6	20
Chromium	ppm	ASTM D5185m	>20	2	<1	<1
Nickel	ppm	ASTM D5185m	>5	▲ 10	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	1	5
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	7	<1	1
Tin	ppm	ASTM D5185m	>15	2	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

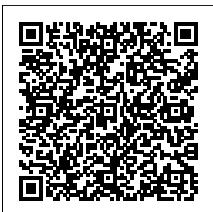
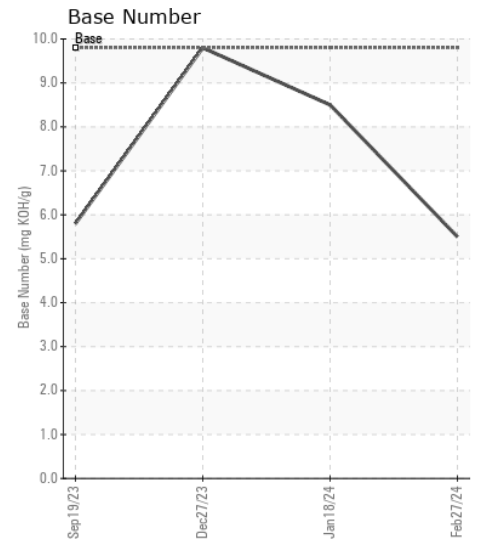
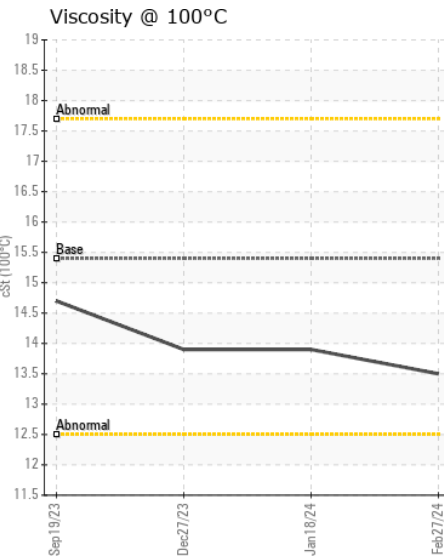
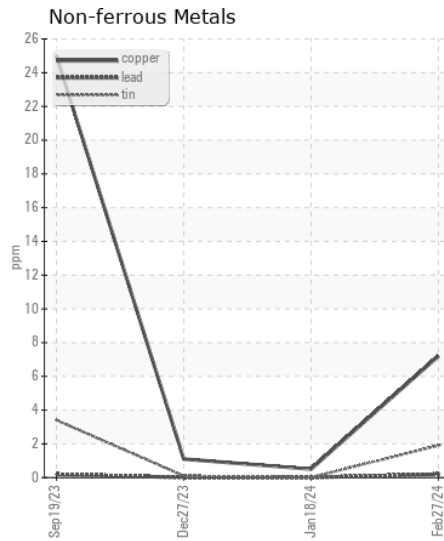
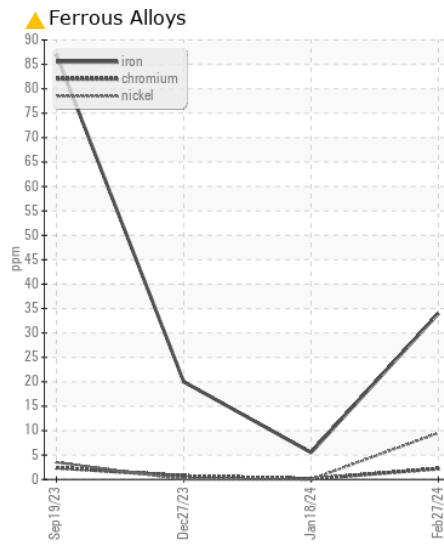
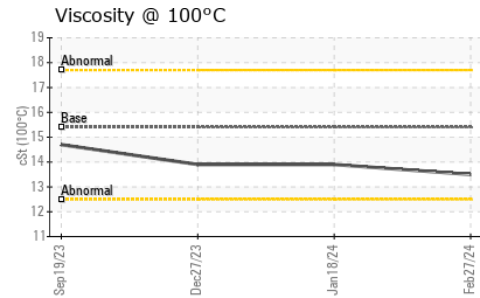
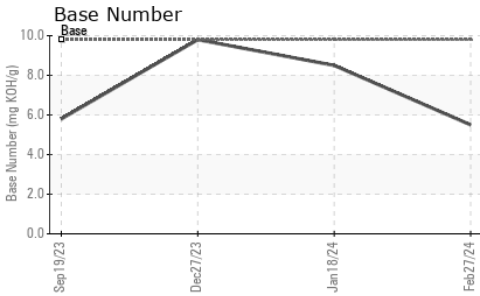
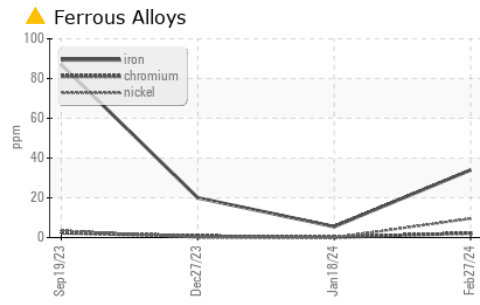
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	4	10
Potassium	ppm	ASTM D5185m	>20	2	2	1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.9	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.7	5.8	5.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	18.2	17.5
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		8	3	5
Boron	ppm	ASTM D5185m	0	3	1	5
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	94	57	59
Manganese	ppm	ASTM D5185m	0	2	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1470	973	942
Calcium	ppm	ASTM D5185m	1070	1628	961	1089
Phosphorus	ppm	ASTM D5185m	1150	1509	1055	1053
Zinc	ppm	ASTM D5185m	1270	1931	1255	1258
Sulfur	ppm	ASTM D5185m	2060	4239	3120	3227
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	14.2	13.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.5	8.5	9.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.9	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0108917
Lab Number : 06105716
Unique Number : 10903946
Test Package : FLEET

Received : 01 Mar 2024
Tested : 02 Mar 2024
Diagnosed : 04 Mar 2024 - Sean Felton

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184

Contact: Belal Dgheish
 bdgheish@gflenv.com

T: (734)714-2340

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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