



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
020
Machine Id
811068
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (38 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0103814	GFL0076958	GFL0091180
Sample Date		Client Info		10 Jan 2024	31 Oct 2023	23 Aug 2023
Machine Age	hrs	Client Info		6839	6303	0
Oil Age	hrs	Client Info		536	6303	600
Filter Age	hrs	Client Info		536	6303	600
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	11	12	9
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	1	2	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	5	1
Tin	ppm	ASTM D5185m	>15	0	<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

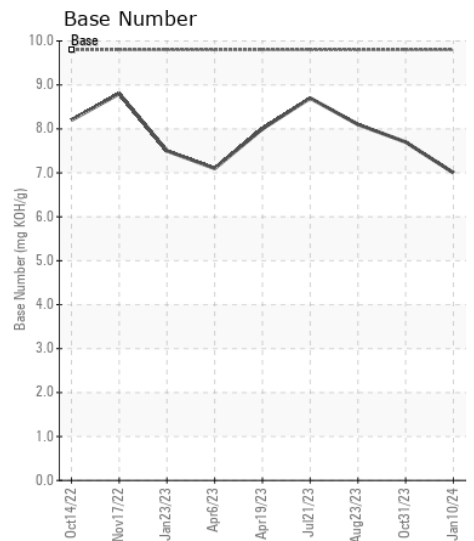
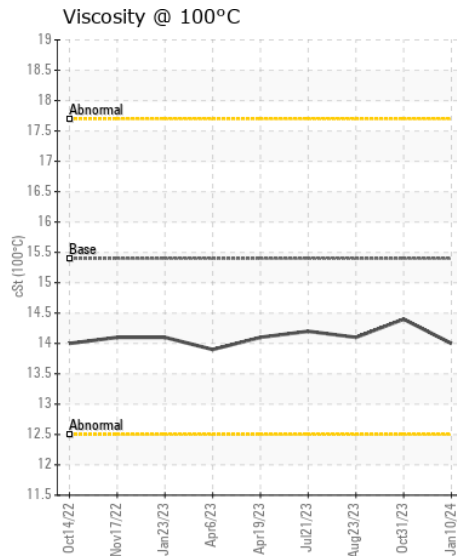
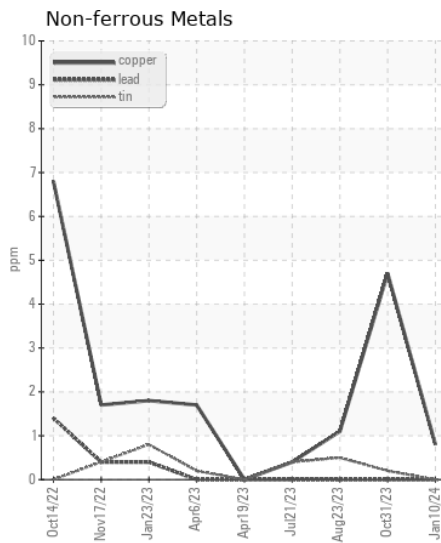
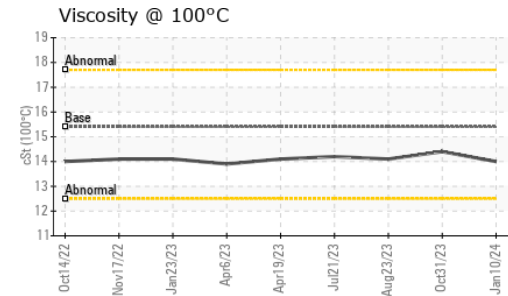
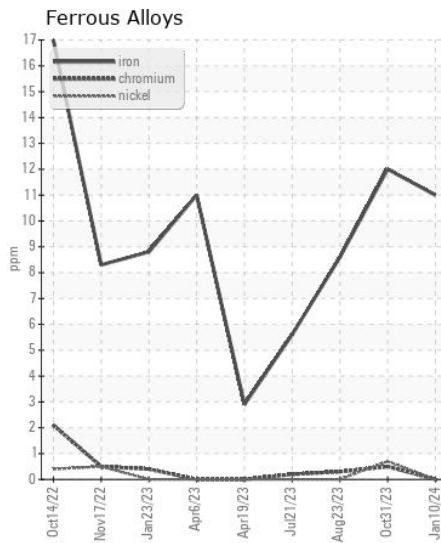
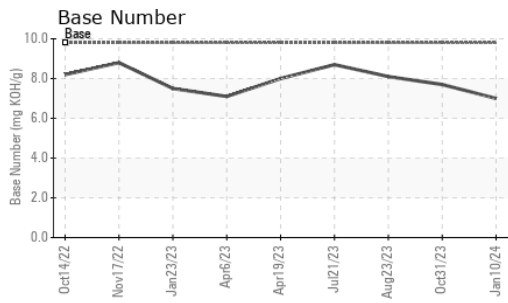
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	4	4
Potassium	ppm	ASTM D5185m	>20	2	6	0
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	1.6	0.7
Nitration	Abs/cm	*ASTM D7624	>20	8.5	8.5	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.2	21.4	19.8
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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	2	2
Boron	ppm	ASTM D5185m	0	2	1	4
Barium	ppm	ASTM D5185m	0	0	4	0
Molybdenum	ppm	ASTM D5185m	60	59	58	64
Manganese	ppm	ASTM D5185m	0	0	0	<1
Magnesium	ppm	ASTM D5185m	1010	980	841	1030
Calcium	ppm	ASTM D5185m	1070	1154	1021	1195
Phosphorus	ppm	ASTM D5185m	1150	1011	787	1088
Zinc	ppm	ASTM D5185m	1270	1307	1131	1364
Sulfur	ppm	ASTM D5185m	2060	2981	2627	3668
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	15.3	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.0	7.7	8.1
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	14.4	14.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103814 **Received** : 12 Jan 2024
Lab Number : 06058996 **Diagnosed** : 12 Jan 2024
Unique Number : 10830378 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 020 - Alamance
 703 East Gilbreath St
 Graham, NC
 US 27253
 Contact: JEREMY SHORES
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Certificate L2367
 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)