



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
422011-407
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

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		GFL0108321	GFL0098209	GFL0083899
Sample Date		Client Info		17 Jan 2024	30 Dec 2023	02 Oct 2023
Machine Age	hrs	Client Info		16869	16836	16627
Oil Age	hrs	Client Info		14000	14176	16627
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	N/A	N/A
Filter Changed		Client Info		Not Chngd	N/A	N/A
Sample Status				NORMAL	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	4	29	27
Chromium	ppm	ASTM D5185m	>20	0	1	1
Nickel	ppm	ASTM D5185m	>5	<1	4	4
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	4	3
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	4	3
Tin	ppm	ASTM D5185m	>15	0	<1	1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

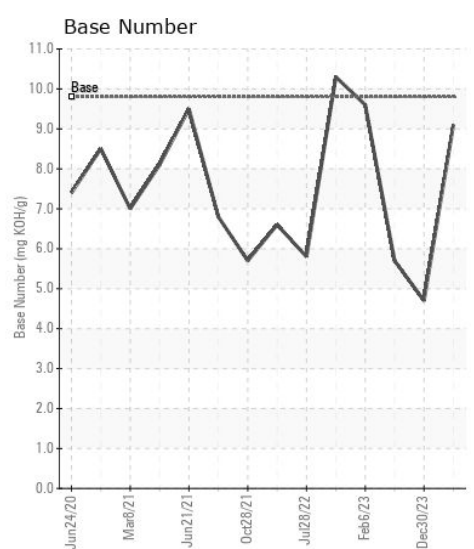
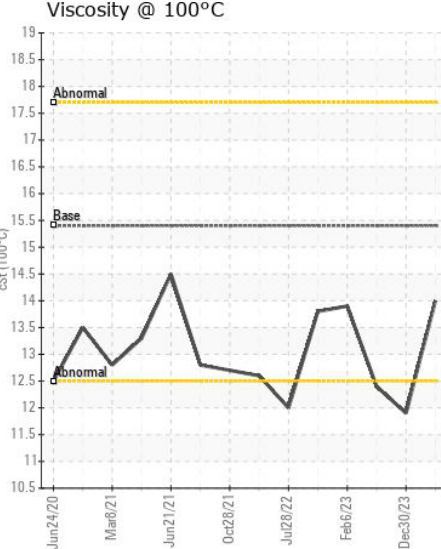
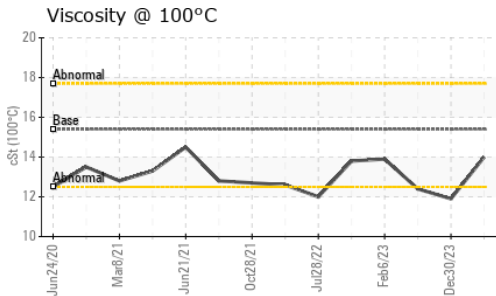
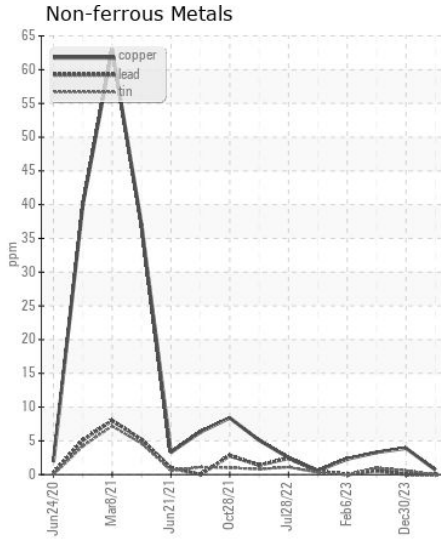
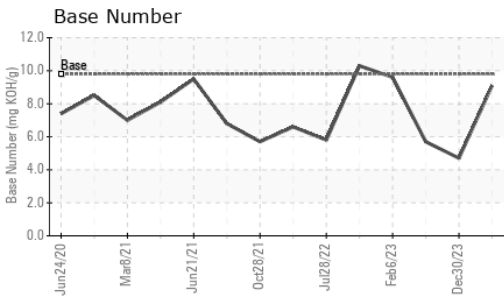
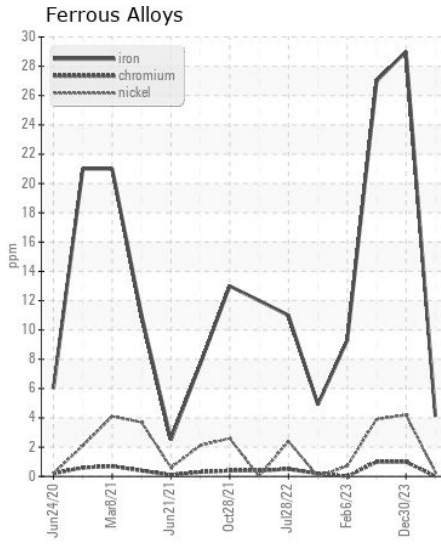
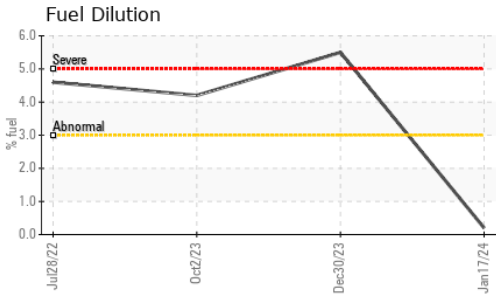
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	6	7
Potassium	ppm	ASTM D5185m	>20	<1	0	3
Fuel	%	ASTM D3524	>3.0	0.2	5.5	4.2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.1	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	5.0	10.1	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.4	22.2	21.1
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		<1	4	4
Boron	ppm	ASTM D5185m	0	9	2	3
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	58	57	59
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1010	816	886
Calcium	ppm	ASTM D5185m	1070	1108	1006	1073
Phosphorus	ppm	ASTM D5185m	1150	1090	851	927
Zinc	ppm	ASTM D5185m	1270	1330	1085	1159
Sulfur	ppm	ASTM D5185m	2060	3477	2437	2744
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.8	17.8	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.1	4.7	5.7
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	11.9	12.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0108321 **Received** : 19 Jan 2024
Lab Number : 06065395 **Diagnosed** : 23 Jan 2024
Unique Number : 10836777 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

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

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)