



Machine Id
828018-1064

Component
Diesel Engine

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

RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0113584	GFL0103866	GFL0097361
Sample Date		Client Info		23 Feb 2024	29 Dec 2023	10 Oct 2023
Machine Age	hrs	Client Info		11790	11571	13826
Oil Age	hrs	Client Info		559	340	9294
Filter Age	hrs	Client Info		559	340	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				SEVERE	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	51	13	60
Chromium	ppm	ASTM D5185m	>20	2	<1	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	2	7
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	3	<1	5
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

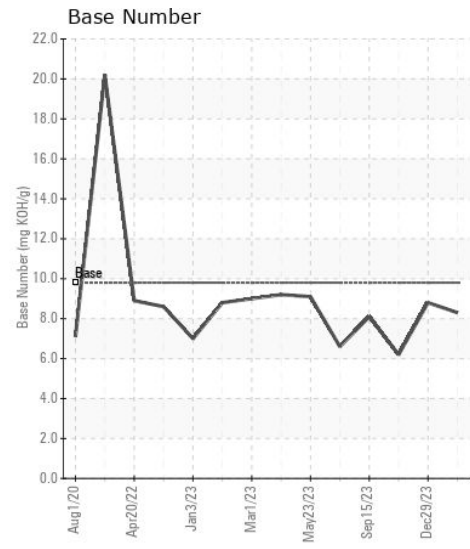
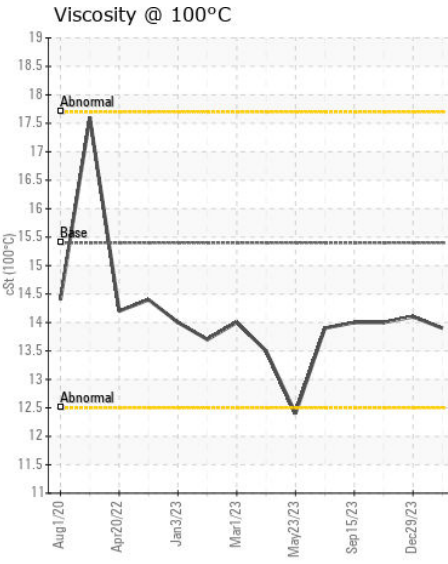
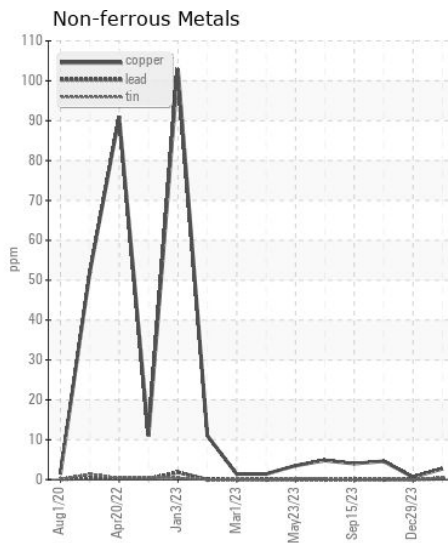
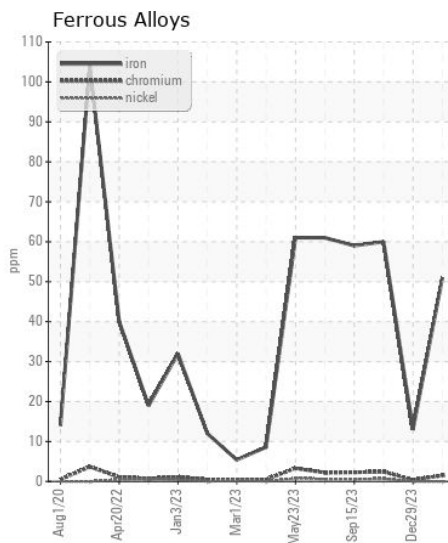
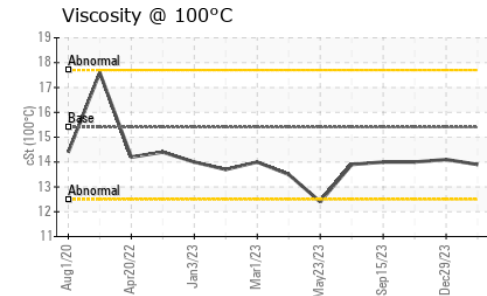
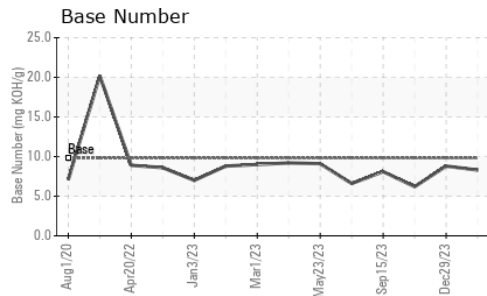
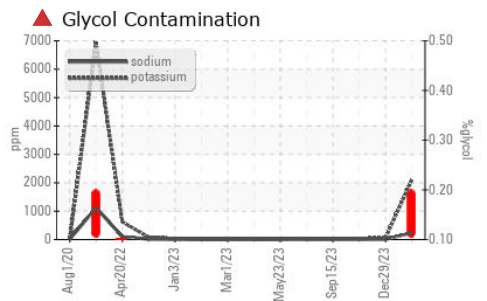
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	14	6	14
Potassium	ppm	ASTM D5185m	>20	2110	64	29
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.20	NEG	NEG
Soot %	%	*ASTM D7844	>3	1	0.3	1.2
Nitration	Abs/cm	*ASTM D7624	>20	13.9	6.7	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	18.6	22.3
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		239	8	8
Boron	ppm	ASTM D5185m	0	12	7	3
Barium	ppm	ASTM D5185m	0	0	0	12
Molybdenum	ppm	ASTM D5185m	60	257	63	63
Manganese	ppm	ASTM D5185m	0	<1	<1	1
Magnesium	ppm	ASTM D5185m	1010	885	925	975
Calcium	ppm	ASTM D5185m	1070	1039	1056	1062
Phosphorus	ppm	ASTM D5185m	1150	941	1033	991
Zinc	ppm	ASTM D5185m	1270	1264	1256	1262
Sulfur	ppm	ASTM D5185m	2060	2926	3075	2776
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	14.4	18.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.3	8.8	6.2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	14.1	14.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0113584 **Received** : 29 Feb 2024
Lab Number : 06105089 **Tested** : 01 Mar 2024
Unique Number : 10903319 **Diagnosed** : 01 Mar 2024 - Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 654S - Midlothian
 12230 Deergrove Road
 Midlothian, VA
 US 23112
 Contact: Corbin Umphlet
 cumphlet@gflenv.com
 T:
 F:

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)