



Machine Id
921063-205336
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter 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		GFL0125260	GFL0114404	GFL0103954
Sample Date		Client Info		05 Jun 2024	25 Mar 2024	20 Dec 2023
Machine Age	mls	Client Info		176807	166603	9835
Oil Age	mls	Client Info		0	0	9835
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	10	5
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	9	3	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	5	0	0
Tin	ppm	ASTM D5185m	>15	<1	<1	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

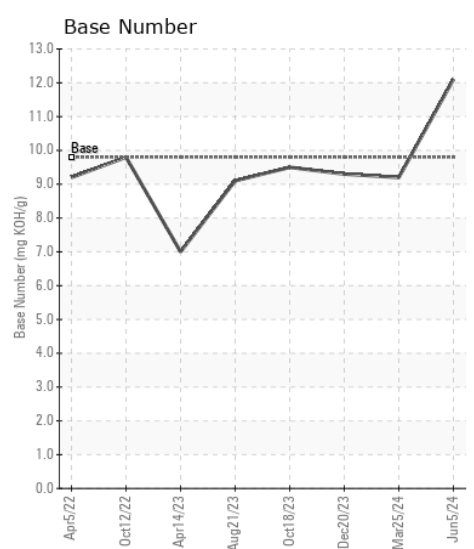
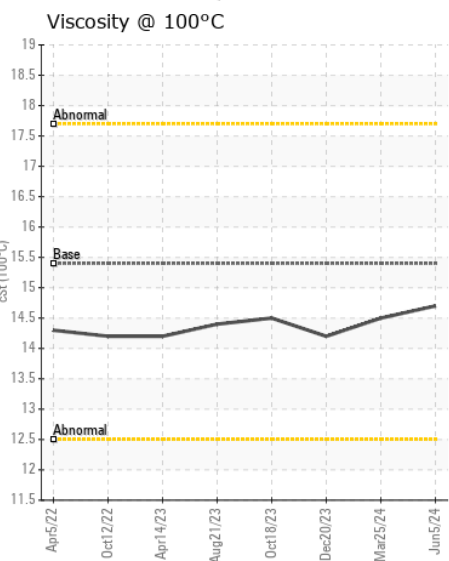
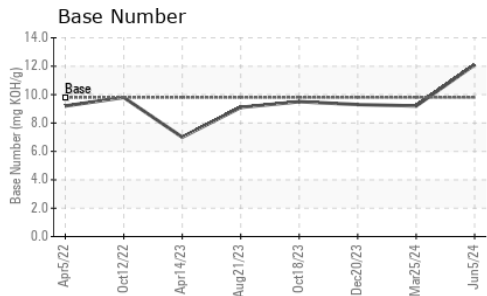
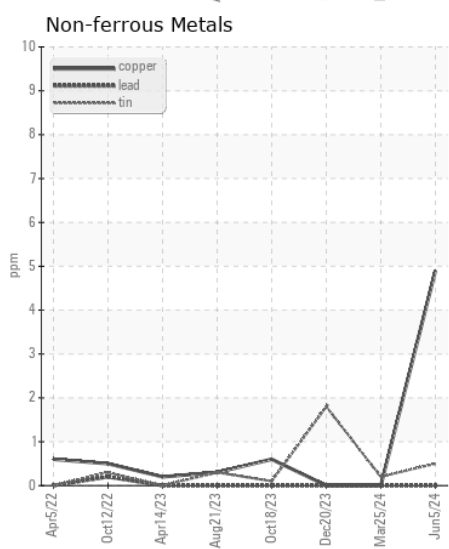
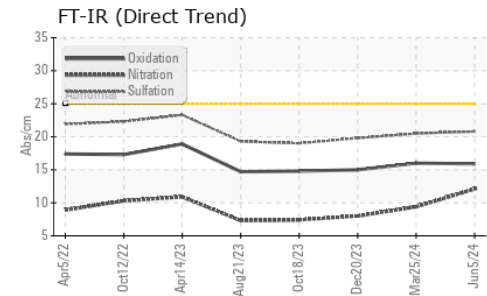
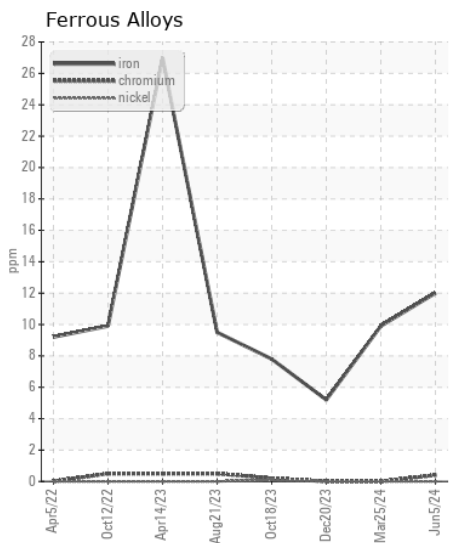
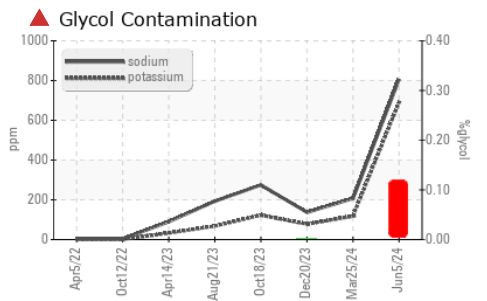
Sodium and/or potassium levels are high. Test for glycol is positive.

Silicon	ppm	ASTM D5185m	>25	6	3	2
Potassium	ppm	ASTM D5185m	>20	▲ 690	▲ 118	78
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.12	NEG	0.0
Soot %	%	*ASTM D7844	>3	0.6	0.7	0.7
Nitration	Abs/cm	*ASTM D7624	>20	12.1	9.4	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	20.5	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.

Sodium	ppm	ASTM D5185m		▲ 806	▲ 207	137
Boron	ppm	ASTM D5185m	0	6	10	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	149	68	63
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	977	864	904
Calcium	ppm	ASTM D5185m	1070	1083	1133	1024
Phosphorus	ppm	ASTM D5185m	1150	1109	1059	1017
Zinc	ppm	ASTM D5185m	1270	1320	1235	1303
Sulfur	ppm	ASTM D5185m	2060	3714	3464	2986
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	16.0	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	12.1	9.2	9.3
Visc @ 100°C	cSt	ASTM D445	15.4	14.7	14.5	14.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125260 **Received** : 21 Jun 2024
Lab Number : 06217585 **Tested** : 25 Jun 2024
Unique Number : 11090449 **Diagnosed** : 25 Jun 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050
 Contact: Saul Castillo
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 T:
 F:

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)