



Area
(41421UA)
Machine Id
820047
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. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0122086	GFL0108278	GFL0108309
Sample Date		Client Info		13 Jun 2024	19 Feb 2024	24 Jan 2024
Machine Age	mls	Client Info		114146	114110	111465
Oil Age	mls	Client Info		111501	2645	111465
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	74	17	14
Chromium	ppm	ASTM D5185m	>20	2	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	15	6	5
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	115	3	4
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

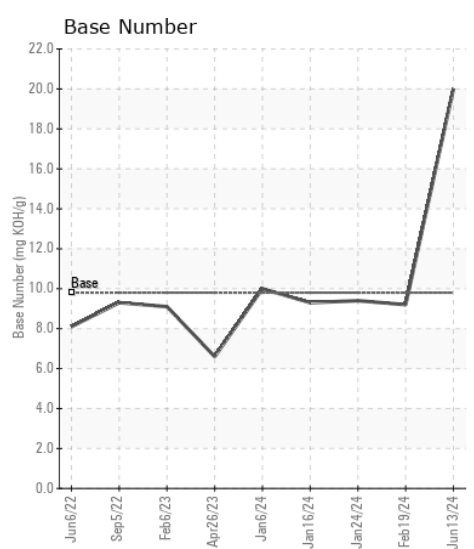
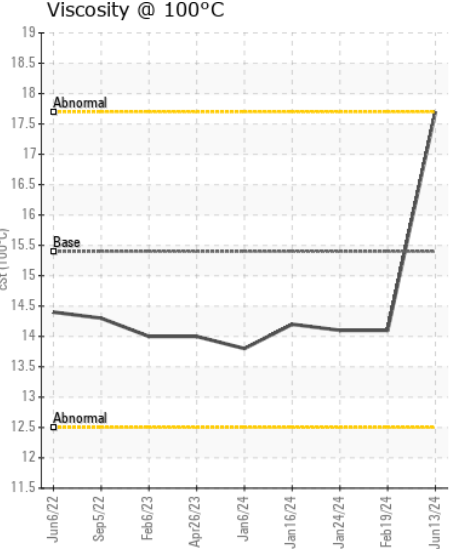
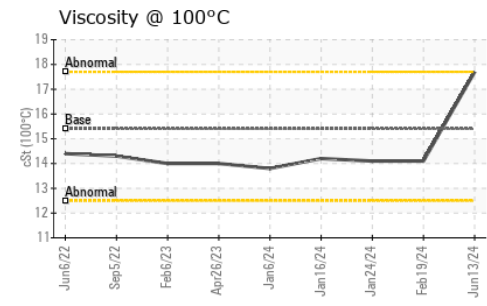
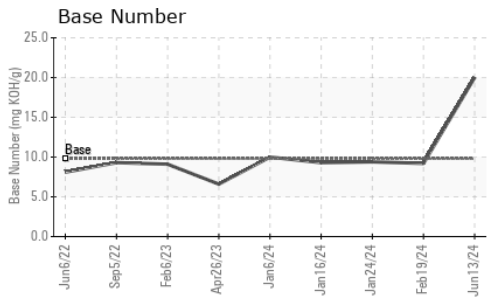
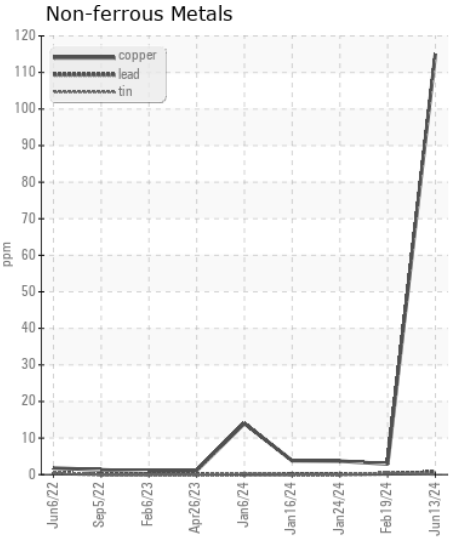
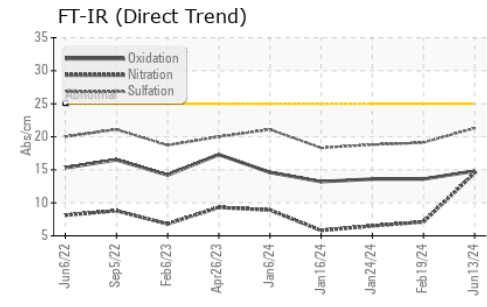
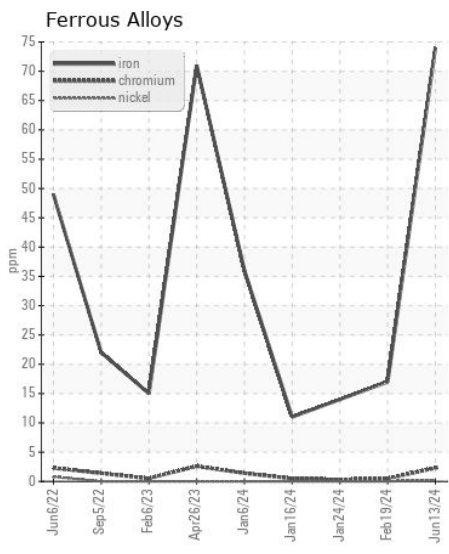
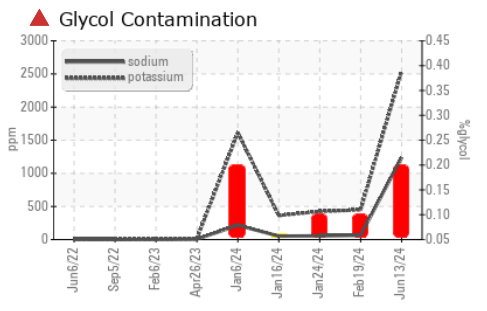
Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	15	8	7
Potassium	ppm	ASTM D5185m	>20	▲ 2539	▲ 449	▲ 424
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.20	▲ 0.10	▲ 0.10
Soot %	%	*ASTM D7844	>3	0.7	0.6	0.3
Nitration	Abs/cm	*ASTM D7624	>20	14.5	7.1	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	19.1	18.8
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		▲ 1239	● 65	● 56
Boron	ppm	ASTM D5185m	0	8	9	4
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	276	108	105
Manganese	ppm	ASTM D5185m	0	2	<1	<1
Magnesium	ppm	ASTM D5185m	1010	818	972	1000
Calcium	ppm	ASTM D5185m	1070	1011	1120	1151
Phosphorus	ppm	ASTM D5185m	1150	936	1062	1088
Zinc	ppm	ASTM D5185m	1270	1222	1312	1316
Sulfur	ppm	ASTM D5185m	2060	3417	3277	3391
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	13.6	13.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	20.0	9.2	9.4
Visc @ 100°C	cSt	ASTM D445	15.4	17.7	14.1	14.1



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122086
Lab Number : 06211027
Unique Number : 11083891
Test Package : FLEET
Received : 14 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 20 Jun 2024 - Jonathan Hester

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