



WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ATTENTION



Area
GFL207
Machine Id
800021
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0118542	GFL0028557	GFL0102708
Sample Date		Client Info		27 May 2024	18 Mar 2024	04 Jan 2024
Machine Age	hrs	Client Info		18980	18574	17985
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	N/A
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>75	35	34	29
Chromium	ppm	ASTM D5185(m)	>5	1	1	1
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>15	1	<1	2
Lead	ppm	ASTM D5185(m)	>25	0	0	0
Copper	ppm	ASTM D5185(m)	>100	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	VLITE	---	---

CONTAMINATION

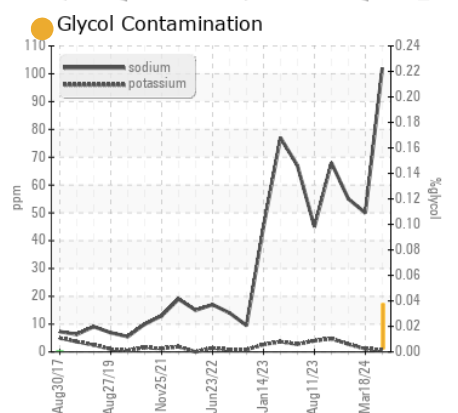
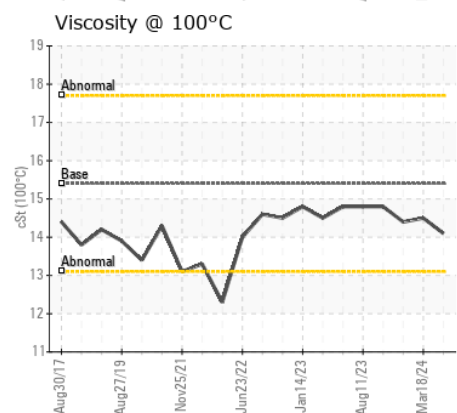
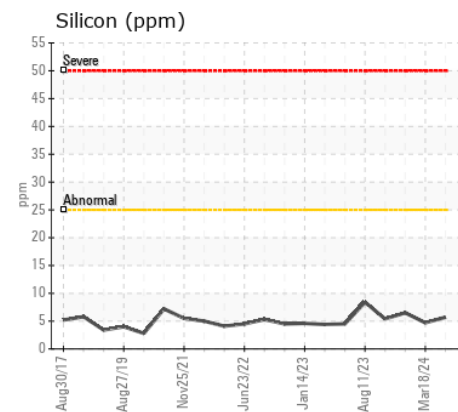
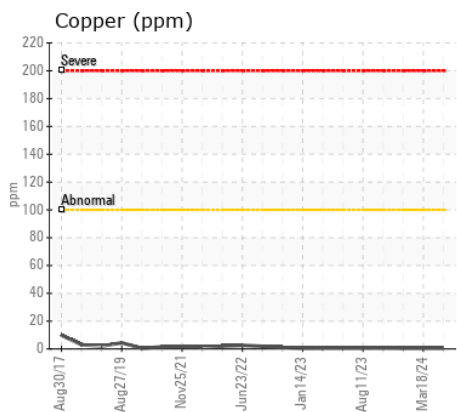
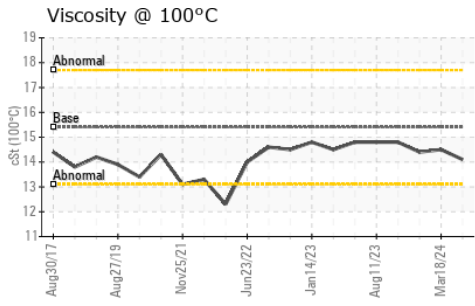
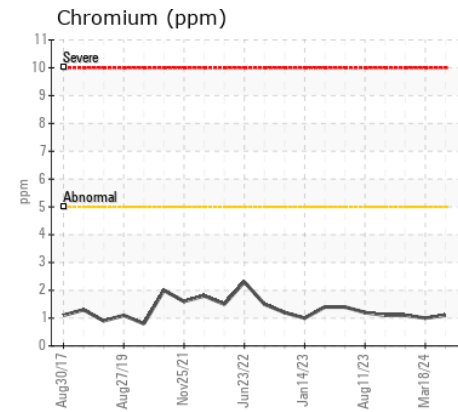
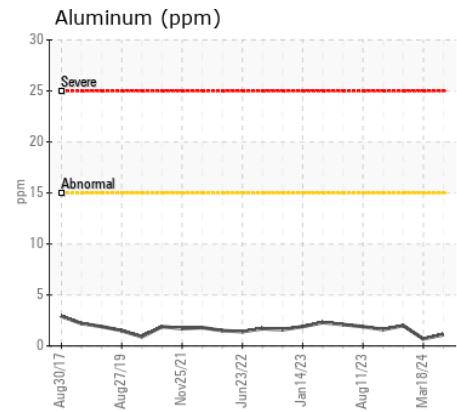
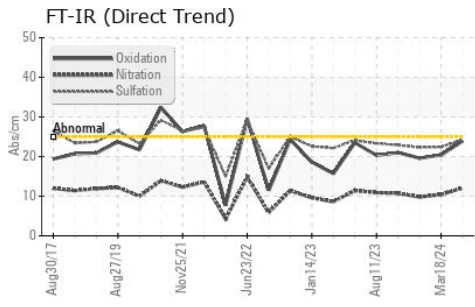
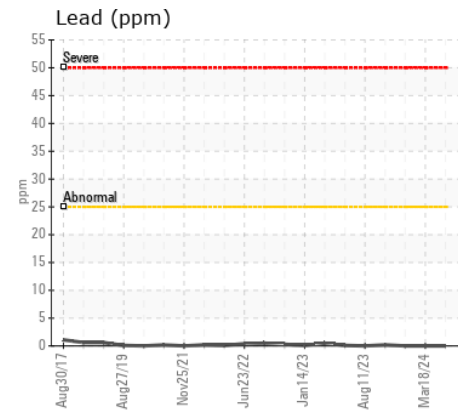
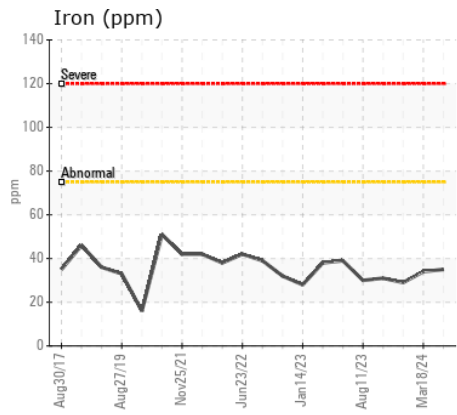
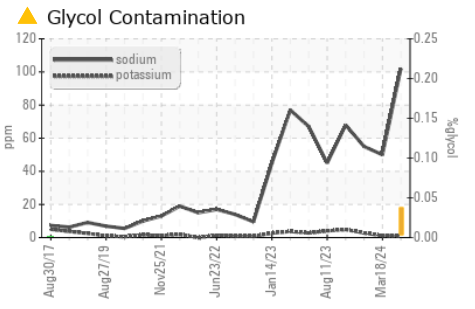
Test for glycol is positive. There is a light concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185(m)	>25	6	5	6
Potassium	ppm	ASTM D5185(m)	>20	<1	1	3
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		▲ 0.038	NEG	NEG
Soot %	%	ASTM D7844*	>6	0.6	0.6	0.6
Nitration	Abs/cm	ASTM D7624*	>20	12.1	10.4	9.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.3	22.4	22.3
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		● 102	50	55
Boron	ppm	ASTM D5185(m)	0	1	1	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	71	67	62
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm	ASTM D5185(m)	1010	945	1005	994
Calcium	ppm	ASTM D5185(m)	1070	1007	1088	1083
Phosphorus	ppm	ASTM D5185(m)	1150	980	1001	1032
Zinc	ppm	ASTM D5185(m)	1270	1151	1233	1222
Sulfur	ppm	ASTM D5185(m)	2060	2241	2361	2613
Oxidation	Abs/.1mm	ASTM D7414*	>25	23.9	20.4	19.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.1	14.5	14.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0118542 **Received** : 29 May 2024
Lab Number : 02638363 **Tested** : 29 May 2024
Unique Number : 5787525 **Diagnosed** : 29 May 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol, Visual)

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