



Machine Id
4597
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (36 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. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0107316	GFL0096333	GFL0061855
Sample Date		Client Info		24 Apr 2024	24 Oct 2023	14 Nov 2022
Machine Age	kms	Client Info		34245	811587	775033
Oil Age	kms	Client Info		600	0	0
Filter Age	kms	Client Info		600	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	SEVERE

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>100	14	30	22
Chromium	ppm	ASTM D5185(m)	>6	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>30	5	18	2
Lead	ppm	ASTM D5185(m)	>10	5	13	12
Copper	ppm	ASTM D5185(m)	>150	18	50	78
Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

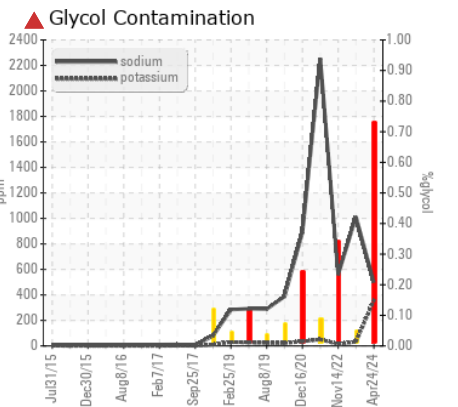
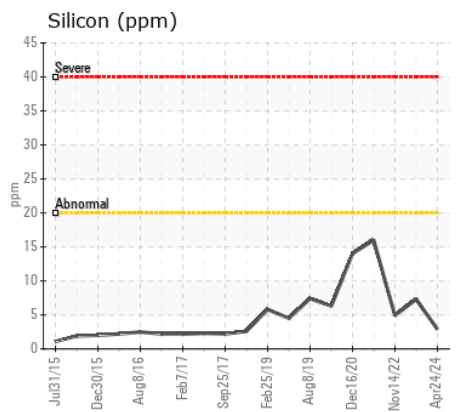
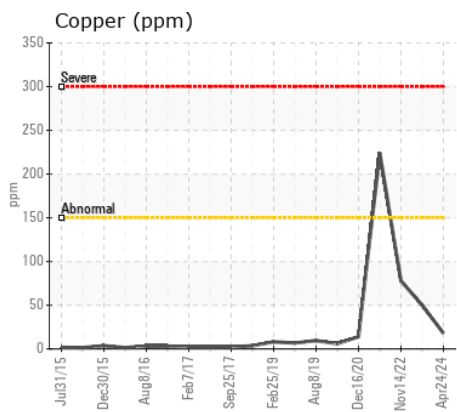
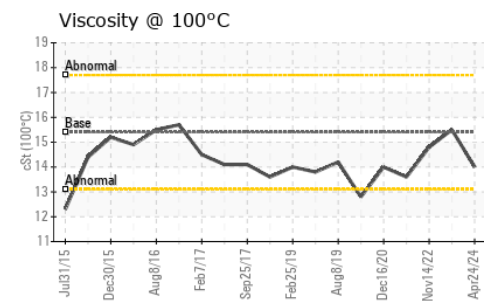
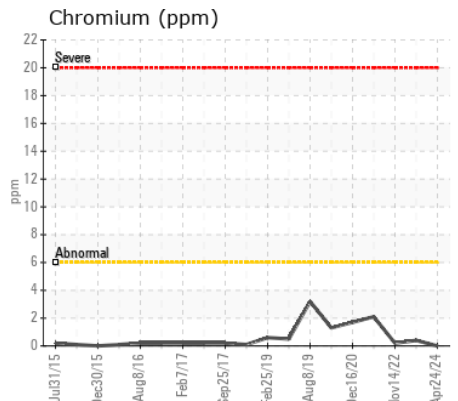
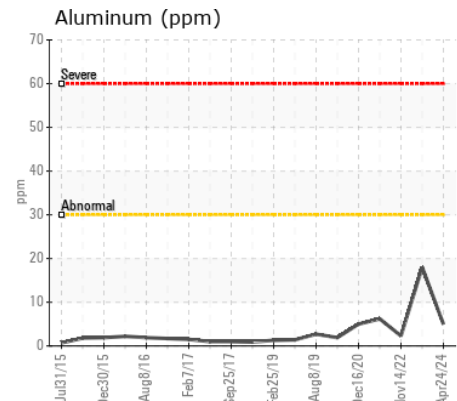
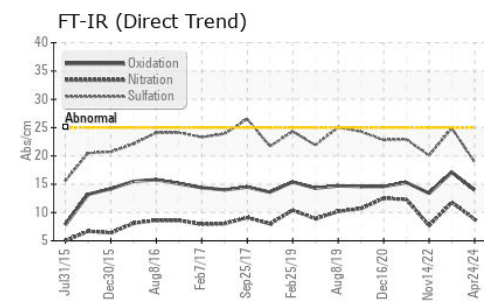
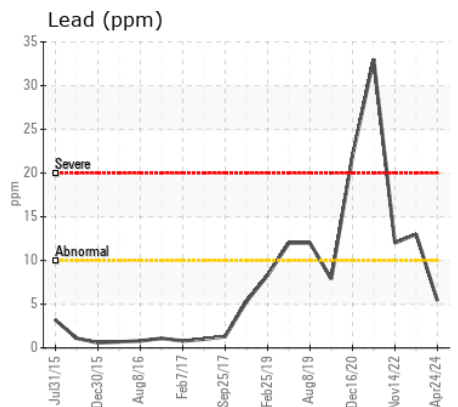
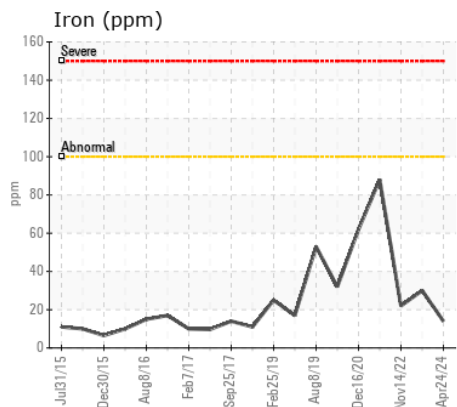
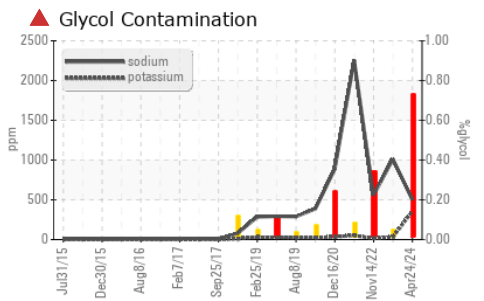
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185(m)	>20	3	7	5
Potassium	ppm	ASTM D5185(m)	>20	356	33	14
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		0.734	0.049	0.344
Soot %	%	ASTM D7844*	>3	0.6	2.4	0.4
Nitration	Abs/cm	ASTM D7624*	>20	8.8	11.8	7.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.9	24.9	20.1
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

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		499	1012	559
Boron	ppm	ASTM D5185(m)	0	10	16	8
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	154	153	52
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	681	185	816
Calcium	ppm	ASTM D5185(m)	1070	1121	1789	1025
Phosphorus	ppm	ASTM D5185(m)	1150	910	905	1023
Zinc	ppm	ASTM D5185(m)	1270	1081	1052	1058
Sulfur	ppm	ASTM D5185(m)	2060	2416	2679	2529
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.0	17.1	13.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.0	15.5	14.8



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0107316
Lab Number : 02631545
Unique Number : 5772698
Test Package : MOB 1 (Additional Tests: Visual)
Received : 26 Apr 2024
Tested : 26 Apr 2024
Diagnosed : 26 Apr 2024 - Wes Davis

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.