

Machine Id
7802
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0126615	GFL0116352	GFL0089068
Sample Date		Client Info		20 Jun 2024	05 Apr 2024	20 Jul 2023
Machine Age	kms	Client Info		70614	67209	56260
Oil Age	kms	Client Info		0	0	0
Filter Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>110	11	3	13
Chromium	ppm	ASTM D5185(m)	>4	<1	0	1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>25	1	<1	1
Lead	ppm	ASTM D5185(m)	>45	<1	0	2
Copper	ppm	ASTM D5185(m)	>85	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

Light concentration of carbon/soot present in the oil. Tests indicate that there is no fuel present in the oil.

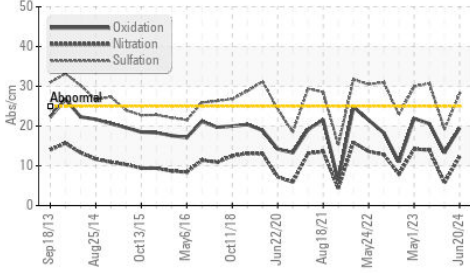
Silicon	ppm	ASTM D5185(m)	>30	2	1	3
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
Fuel	%	ASTM D7593*	>5	0.0	<1.0	0.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	▲ 3.3	0.5	▲ 4
Nitration	Abs/cm	ASTM D7624*	>20	12.3	5.7	14.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	28.1	19.2	30.8
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

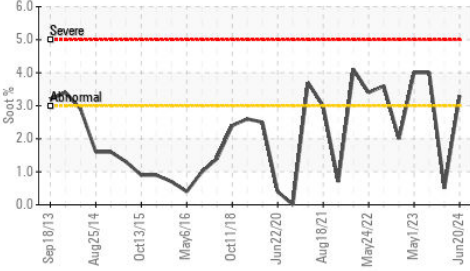
The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		8	3	12
Boron	ppm	ASTM D5185(m)	0	2	2	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	60	58	60
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	943	943	985
Calcium	ppm	ASTM D5185(m)	1070	1017	1002	1037
Phosphorus	ppm	ASTM D5185(m)	1150	980	984	1048
Zinc	ppm	ASTM D5185(m)	1270	1177	1160	1207
Sulfur	ppm	ASTM D5185(m)	2060	2458	2557	2442
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.5	13.3	20.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	15.8	14.7	16.3

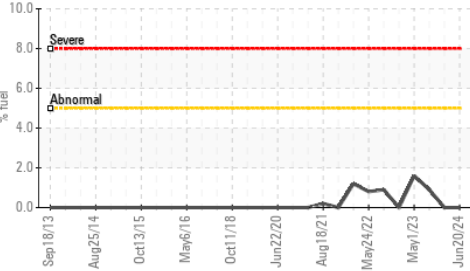
▲ FT-IR (Direct Trend)



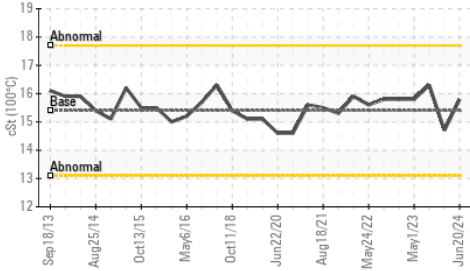
▲ Soot %



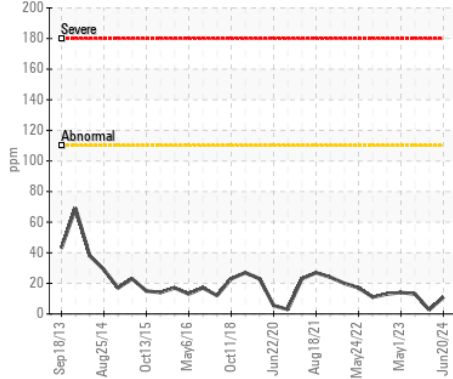
Fuel Dilution



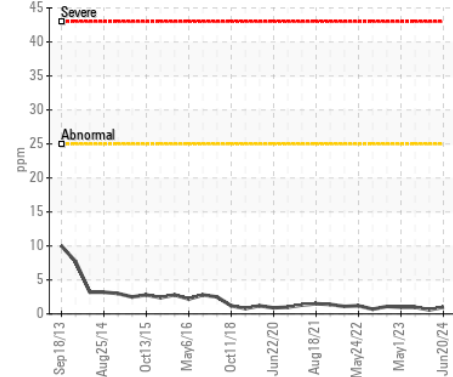
Viscosity @ 100°C



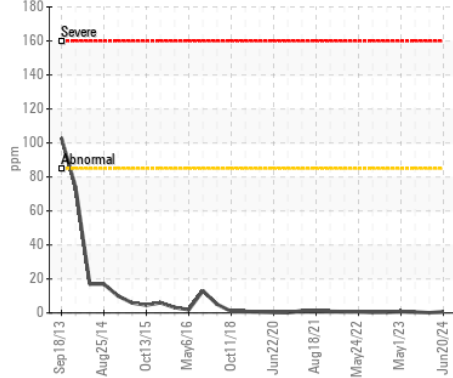
Iron (ppm)



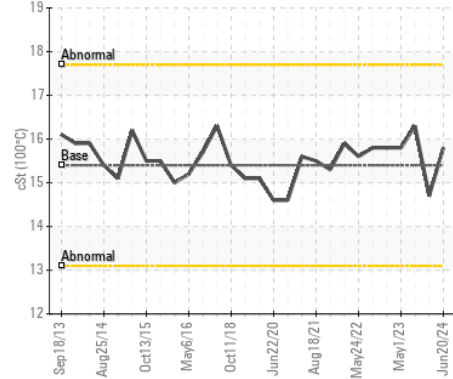
Aluminum (ppm)



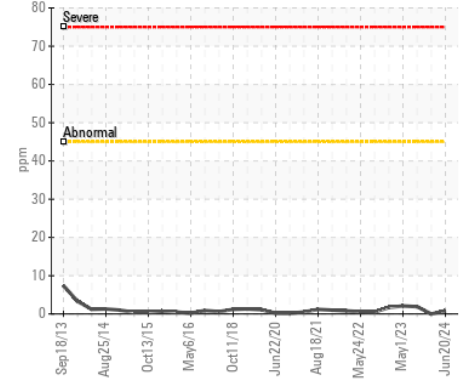
Copper (ppm)



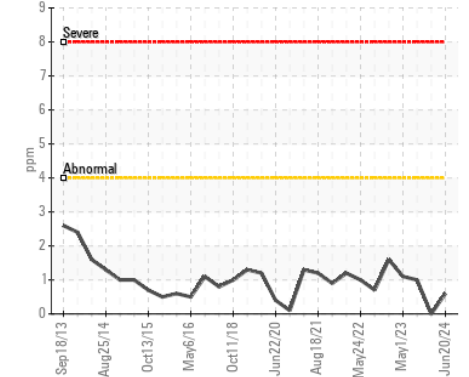
Viscosity @ 100°C



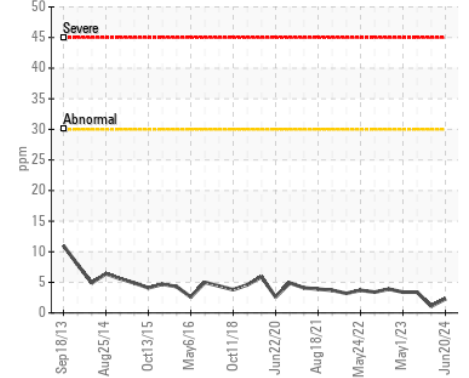
Lead (ppm)



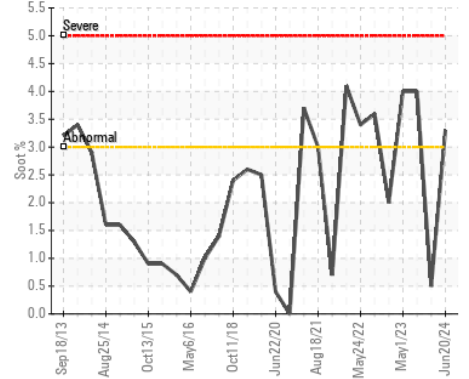
Chromium (ppm)



Silicon (ppm)



▲ Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0126615 **Received** : 24 Jun 2024
Lab Number : 02643632 **Tested** : 25 Jun 2024
Unique Number : 5801171 **Diagnosed** : 25 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 225 - COT(D2)
 20 Brydon Drive
 Etobicoke, ON
 CA M9W 5R6
 Contact: Rick Philip
 rphilip@gflenv.com
 T: (416)745-8080
 F:

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.