



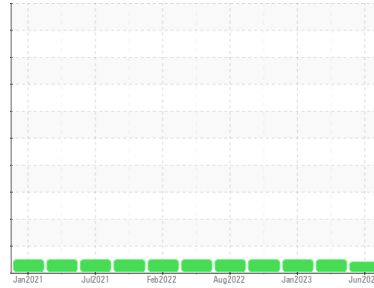
OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id
426016
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA DURON SHP 15W40, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade on your next sample.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number	Client Info		GFL0082568	GFL0071300	GFL0071327
Sample Date	Client Info		27 Jun 2023	08 Mar 2023	12 Jan 2023
Machine Age	kms	Client Info	508207	15855	15598
Oil Age	kms	Client Info	0	15598	571
Oil Changed	Client Info		N/A	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history 1	history 2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m) >120	7	4	8
Chromium	ppm	ASTM D5185(m) >20	0	0	0
Nickel	ppm	ASTM D5185(m) >5	<1	<1	<1
Titanium	ppm	ASTM D5185(m) >2	<1	<1	<1
Silver	ppm	ASTM D5185(m) >2	0	0	0
Aluminum	ppm	ASTM D5185(m) >20	1	1	2
Lead	ppm	ASTM D5185(m) >40	2	<1	1
Copper	ppm	ASTM D5185(m) >330	<1	<1	1
Tin	ppm	ASTM D5185(m) >15	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	0	<1	<1
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m) 0	25	4	4
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	44	58	59
Manganese	ppm	ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	598	927	938
Calcium	ppm	ASTM D5185(m) 1070	1543	1085	1142
Phosphorus	ppm	ASTM D5185(m) 1150	831	1088	1033
Zinc	ppm	ASTM D5185(m) 1270	947	1158	1196
Sulfur	ppm	ASTM D5185(m) 2060	2182	2581	2441
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m) >25	5	3	3
Sodium	ppm	ASTM D5185(m)	3	2	5
Potassium	ppm	ASTM D5185(m) >20	<1	0	<1
Fuel	%	ASTM D7593* >3.0	0.7	<1.0	<1.0

INFRA-RED

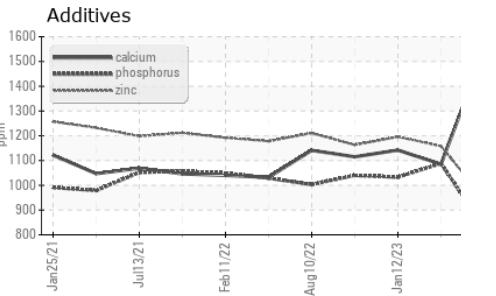
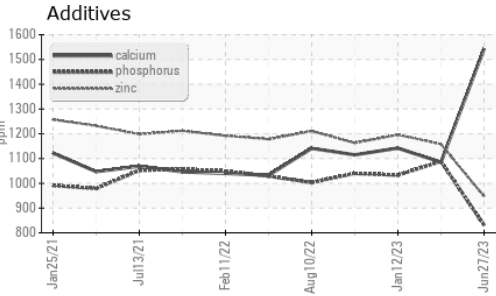
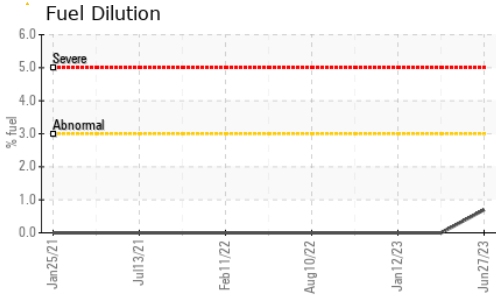
	method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844* >4	0.2	0	0.2
Nitration	Abs/cm	ASTM D7624* >20	8.4	7.0	8.6
Sulfation	Abs/.1mm	ASTM D7415* >30	22.0	20.8	20.9

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414* >25	20.2	14.8	16.5



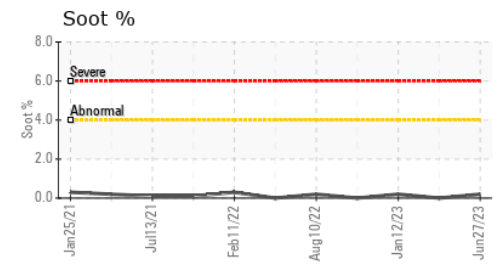
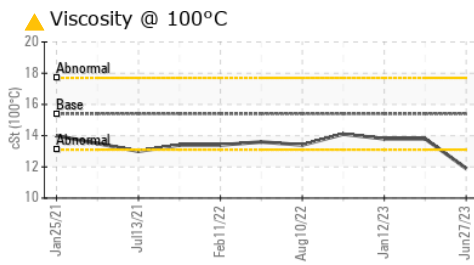
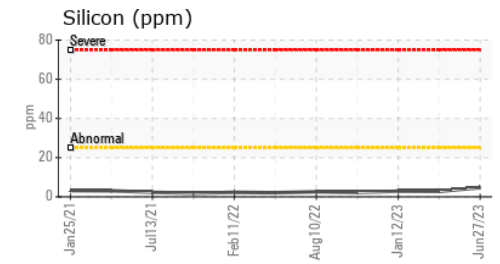
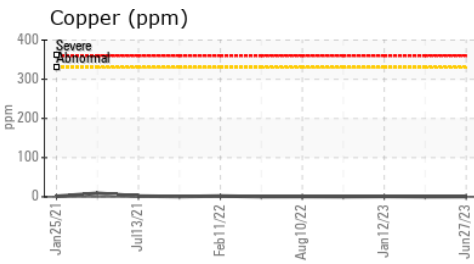
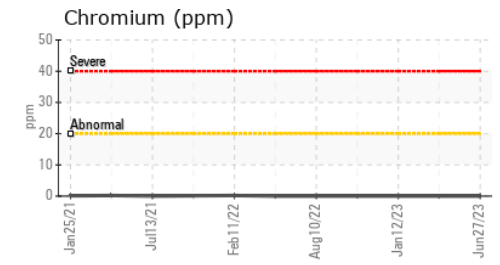
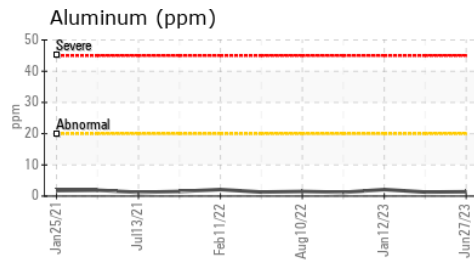
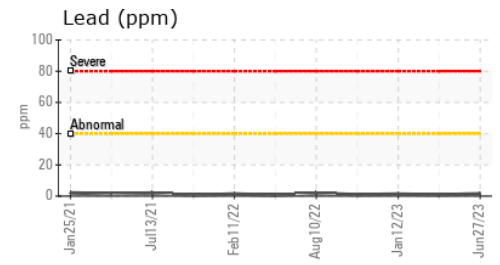
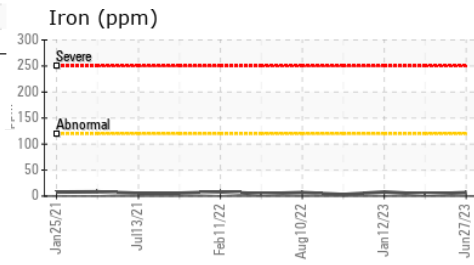
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	Visual*	NONE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
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
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4 ▲ 11.9	13.8	13.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 246 - Windsor**
Sample No. : GFL0082568 **Received** : 30 Jun 2023
Lab Number : 02567457 **Diagnosed** : 04 Jul 2023
Unique Number : 5604503 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, Visual)

2700 Deziel Dr
 Windsor, ON
 CA N8W 5H8
 Contact: Dave Varga
 dvarga@gflenv.com
 T: (519)944-8009
 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.