



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
923001
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0113231	GFL0078511	GFL0071319
Sample Date		Client Info		02 May 2024	12 Jun 2023	20 Jan 2023
Machine Age	hrs	Client Info		0	0	9078
Oil Age	hrs	Client Info		10134	238525	152
Filter Age	hrs	Client Info		0	0	152
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	4	12	5
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	▲ 21	▲ 11
Titanium	ppm	ASTM D5185(m)	>2	0	<1	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<1	6	3
Lead	ppm	ASTM D5185(m)	>40	0	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<1	1	<1
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

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

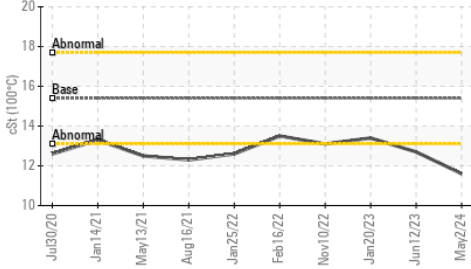
Silicon	ppm	ASTM D5185(m)	>25	1	4	2
Potassium	ppm	ASTM D5185(m)	>20	4	<1	0
Fuel	%	ASTM D7593*	>3.0	0.6	2.6	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0	0.2	0
Nitration	Abs/cm	ASTM D7624*	>20	7.3	9.0	6.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.8	19.9	19.0
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

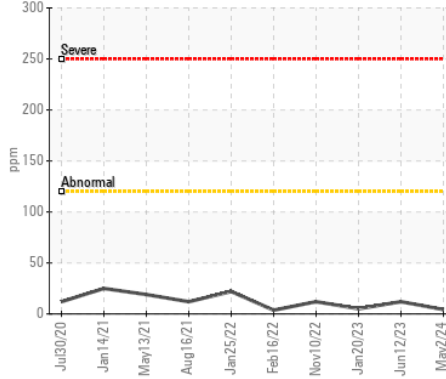
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	4	2
Boron	ppm	ASTM D5185(m)	0	139	3	5
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	7	57	55
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	73	926	905
Calcium	ppm	ASTM D5185(m)	1070	2059	1093	1071
Phosphorus	ppm	ASTM D5185(m)	1150	899	1039	1047
Zinc	ppm	ASTM D5185(m)	1270	1053	1170	1145
Sulfur	ppm	ASTM D5185(m)	2060	2740	2495	2619
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.2	15.8	14.2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.6	12.7	13.4

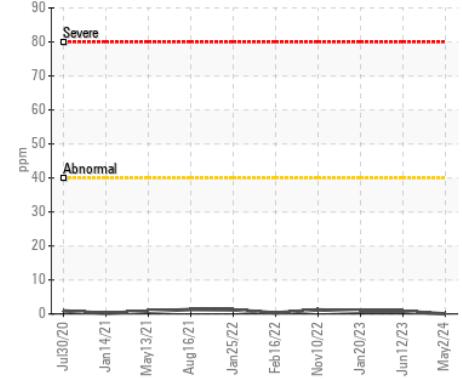
▲ Viscosity @ 100°C



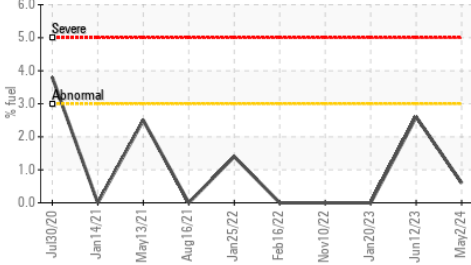
Iron (ppm)



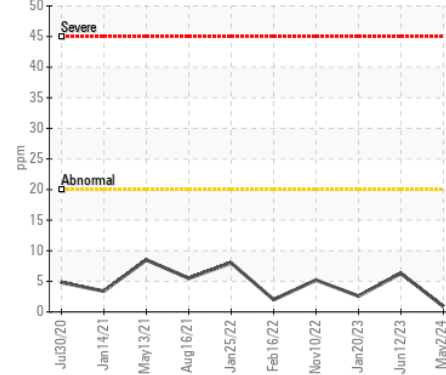
Lead (ppm)



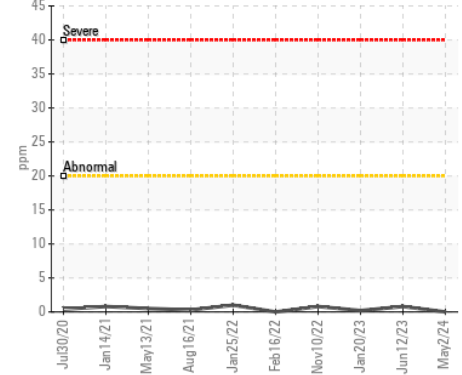
Fuel Dilution



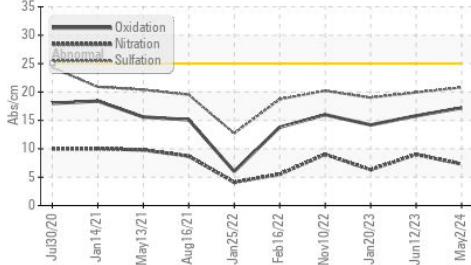
Aluminum (ppm)



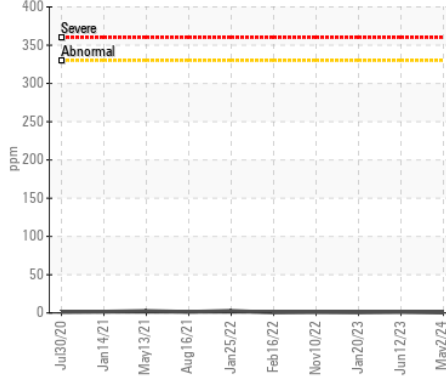
Chromium (ppm)



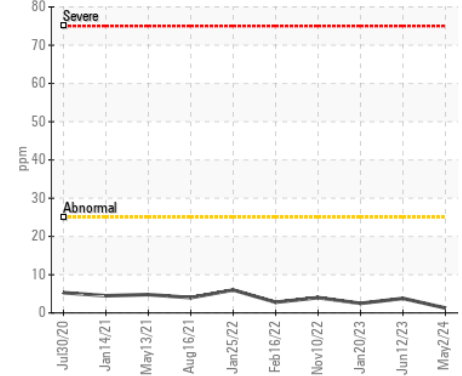
FT-IR (Direct Trend)



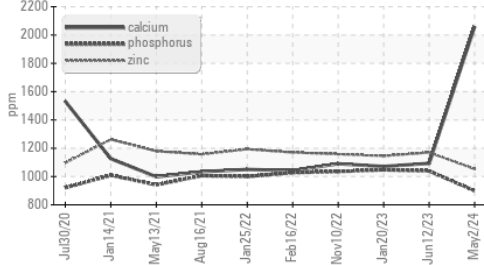
Copper (ppm)



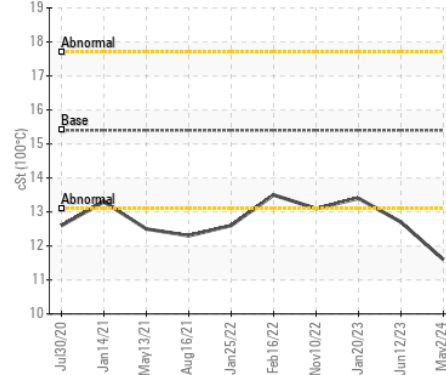
Silicon (ppm)



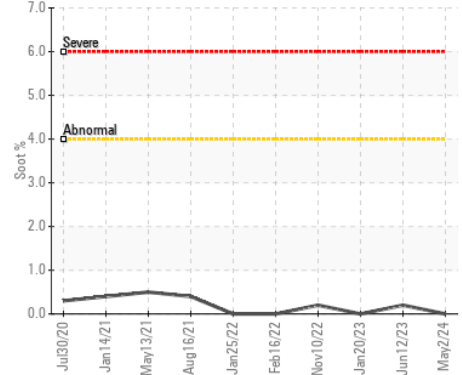
Additives



▲ Viscosity @ 100°C



Soot %



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

Sample No. : GFL0113231

Lab Number : 02633408

Unique Number : 5774561

Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

Received : 06 May 2024

Tested : 07 May 2024

Diagnosed : 07 May 2024 - Kevin Marson

GFL Environmental - 246 - Windsor

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.