



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
4599
Component
Front Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0107342	GFL0091730	GFL0080288
Sample Date		Client Info		18 Apr 2024	24 Aug 2023	07 Jun 2023
Machine Age	kms	Client Info		516239	492957	483512
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				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	20	5	4
Chromium	ppm	ASTM D5185(m)	>20	<1	0	0
Nickel	ppm	ASTM D5185(m)	>5	2	<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)	>20	3	1	<1
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	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

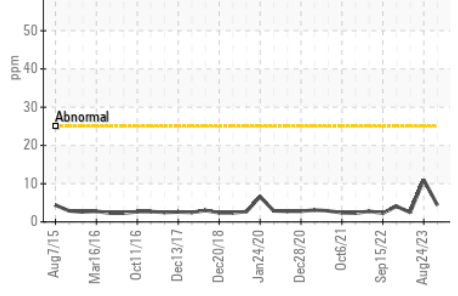
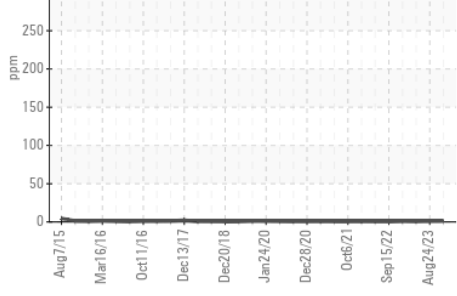
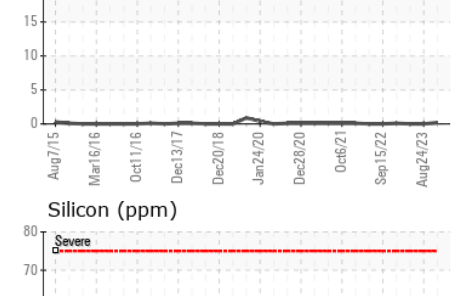
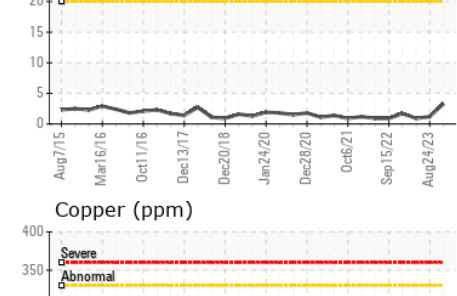
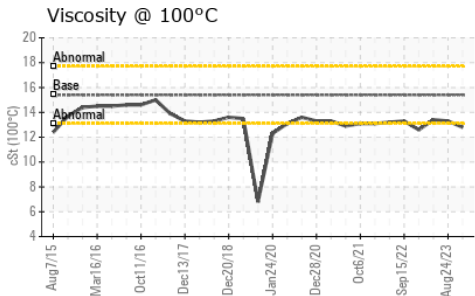
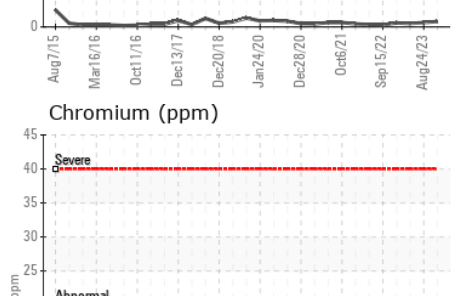
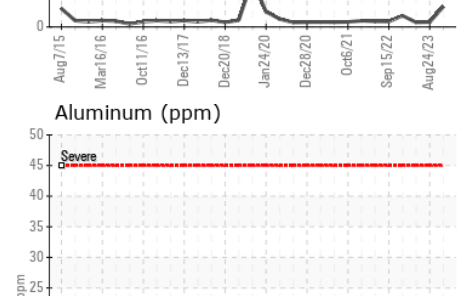
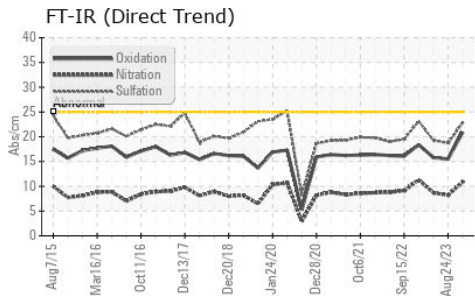
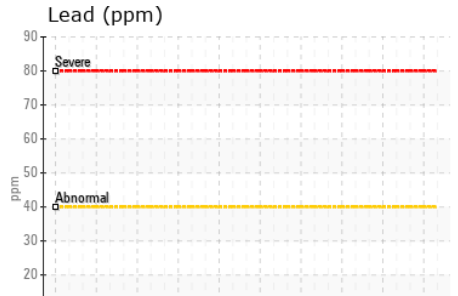
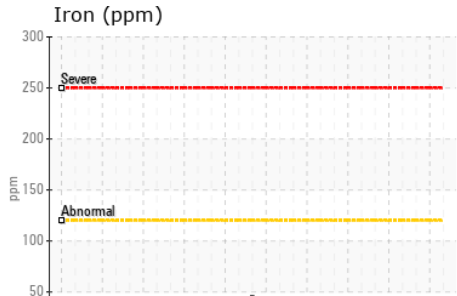
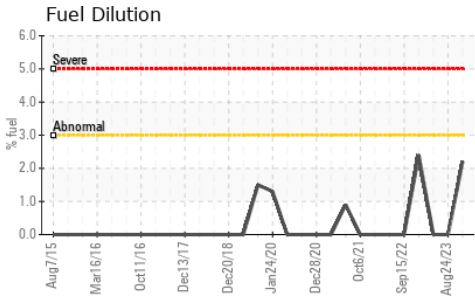
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	11	2
Potassium	ppm	ASTM D5185(m)	>20	4	2	5
Fuel	%	ASTM D7593*	>3.0	2.2	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.4	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	10.8	8.2	8.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.8	18.7	19.3
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		9	28	62
Boron	ppm	ASTM D5185(m)	0	3	4	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	58	59	59
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	928	926	964
Calcium	ppm	ASTM D5185(m)	1070	1020	1004	1000
Phosphorus	ppm	ASTM D5185(m)	1150	946	1018	1050
Zinc	ppm	ASTM D5185(m)	1270	1145	1151	1159
Sulfur	ppm	ASTM D5185(m)	2060	2262	2492	2501
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.9	15.5	15.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	12.8	13.3	13.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0107342 **Received** : 19 Apr 2024
Lab Number : 02630069 **Tested** : 22 Apr 2024
Unique Number : 5763201 **Diagnosed** : 22 Apr 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

GFL Environmental - 252 - GTA Hauling
 3668 Weston Road
 North York, ON
 CA M9L 1W2
 Contact: Amanda Cipollone
 acipollone@gflenv.com

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.