



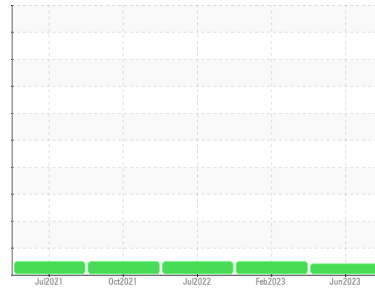
OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id
5592
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)



DIAGNOSIS

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.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. 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		GFL0085914	GFL0064061	GFL0054190
Sample Date	Client Info		24 Jun 2023	16 Feb 2023	19 Jul 2022
Machine Age	kms	Client Info	1105007	2939	0
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info		Changed	N/A	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	8	13	12
Chromium	ppm	ASTM D5185(m) >20	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >5	<1	<1	<1
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	2	2
Lead	ppm	ASTM D5185(m) >40	2	2	2
Copper	ppm	ASTM D5185(m) >330	1	2	2
Tin	ppm	ASTM D5185(m) >15	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	0	<1	0
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	1	2	1
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	59	59	58
Manganese	ppm	ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	982	972	982
Calcium	ppm	ASTM D5185(m) 1070	1051	1099	1067
Phosphorus	ppm	ASTM D5185(m) 1150	1042	1058	999
Zinc	ppm	ASTM D5185(m) 1270	1182	1186	1204
Sulfur	ppm	ASTM D5185(m) 2060	2396	2514	2521
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m) >25	6	7	7
Sodium	ppm	ASTM D5185(m)	3	3	4
Potassium	ppm	ASTM D5185(m) >20	2	0	1
Fuel	%	ASTM D7593* >3.0	1.4	<1.0	<1.0

INFRA-RED

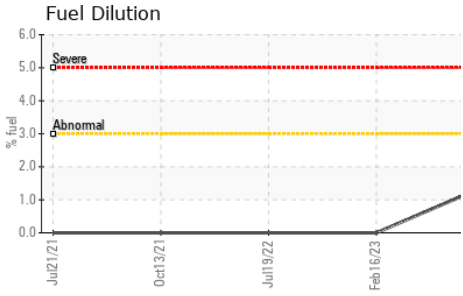
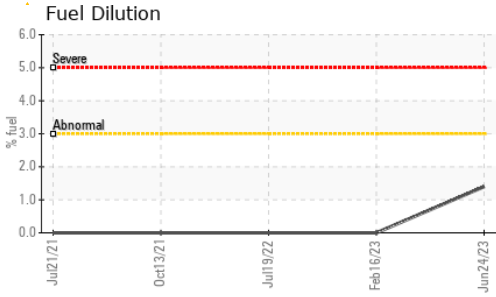
	method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844* >4	0.3	0.1	0.2
Nitration	Abs/cm	ASTM D7624* >20	8.6	9.2	8.7
Sulfation	Abs/.1mm	ASTM D7415* >30	20.4	21.4	19.4

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414* >25	17.2	17.3	16.7



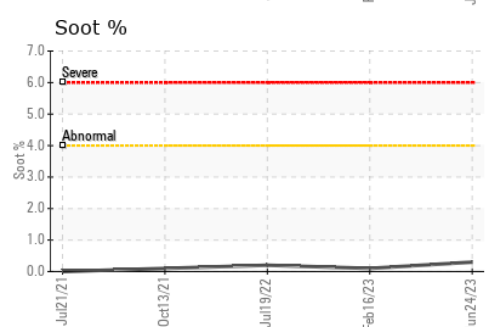
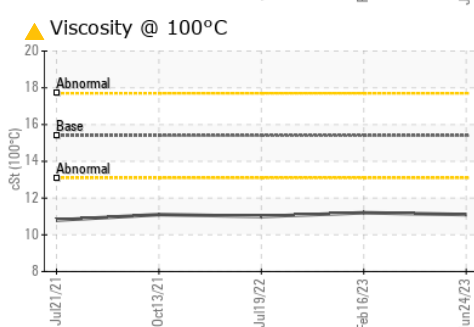
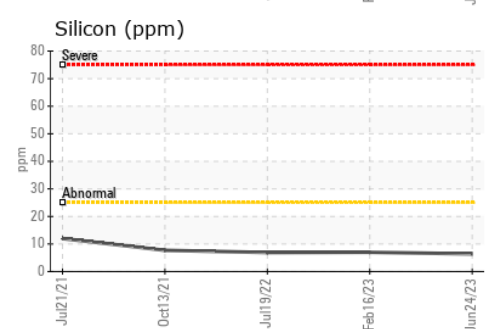
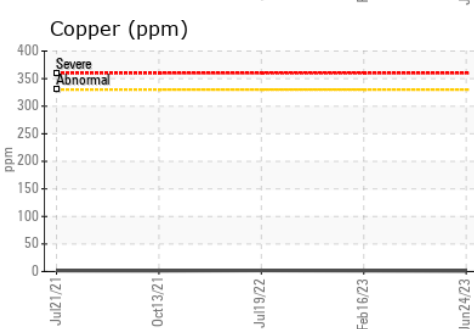
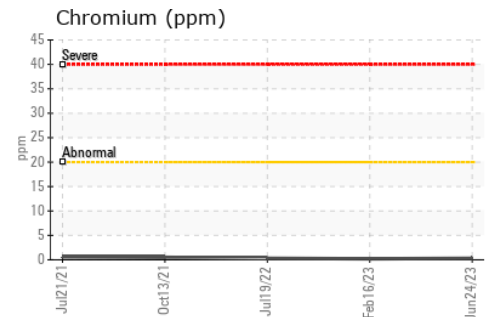
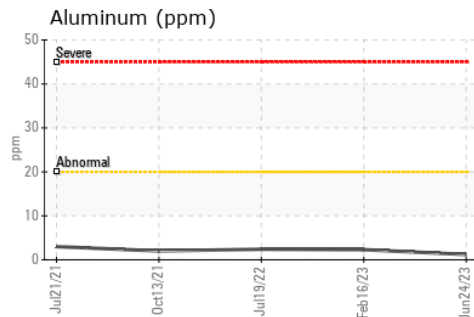
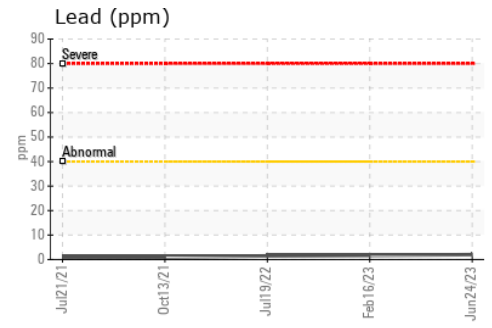
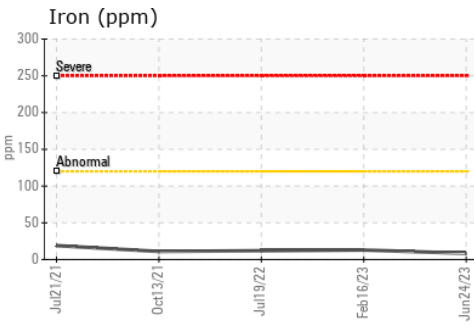
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	▲ 11.1	11.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0085914 **Received** : 04 Jul 2023
Lab Number : 02567702 **Diagnosed** : 05 Jul 2023
Unique Number : 5604748 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

8409 -15th Street NW
 Edmonton, AB
 CA T6P 0B8
 Contact: Brian Gagne
 bgagne@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.

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F: