



OIL ANALYSIS REPORT

Sample Rating Trend

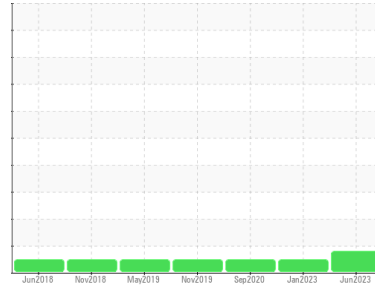
FUEL



Machine Id
201001

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (22 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

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

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0086498	GFL0068332	GFL0011361
Sample Date	Client Info	29 Jun 2023	03 Jan 2023	02 Sep 2020
Machine Age	hrs	41580	3103	41580
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Changed	Changed	N/A
Sample Status		MARGINAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >80	7	7	22
Chromium	ppm	ASTM D5185(m) >5	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >2	0	0	0
Titanium	ppm	ASTM D5185(m)	0	0	<1
Silver	ppm	ASTM D5185(m) >3	<1	0	<1
Aluminum	ppm	ASTM D5185(m) >30	2	2	2
Lead	ppm	ASTM D5185(m) >30	0	0	10
Copper	ppm	ASTM D5185(m) >150	2	2	317
Tin	ppm	ASTM D5185(m) >5	0	0	<1
Antimony	ppm	ASTM D5185(m)	0	0	<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	history1	history2	
Boron	ppm	ASTM D5185(m) 0	23	13	2
Barium	ppm	ASTM D5185(m) 0	0	0	<1
Molybdenum	ppm	ASTM D5185(m) 60	58	53	59
Manganese	ppm	ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	873	810	983
Calcium	ppm	ASTM D5185(m) 1070	1079	1263	1037
Phosphorus	ppm	ASTM D5185(m) 1150	1029	1057	1030
Zinc	ppm	ASTM D5185(m) 1270	1136	1139	1254
Sulfur	ppm	ASTM D5185(m) 2060	2572	2707	2435
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	3	3	4
Sodium	ppm	ASTM D5185(m)	4	4	5
Potassium	ppm	ASTM D5185(m) >20	3	2	3
Fuel	%	ASTM D7593* >5	▲ 2.9	<1.0	<1.0

INFRA-RED

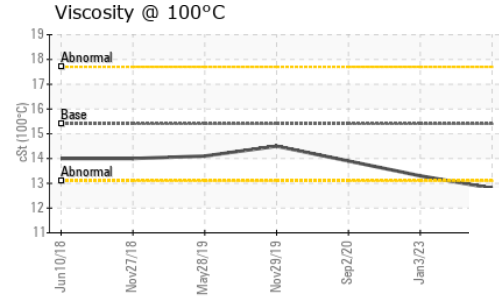
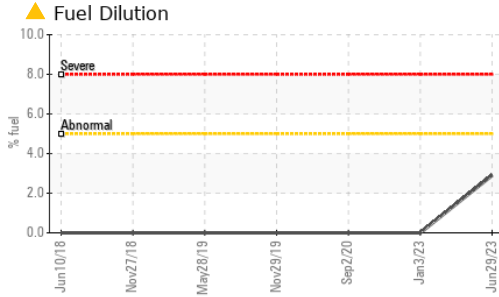
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >3	0.1	0	0.4
Nitration	Abs/cm	ASTM D7624* >20	6.9	7.3	9.7
Sulfation	Abs/.1mm	ASTM D7415* >30	17.8	19.6	20.3

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414* >25	13.4	14.3	16.9



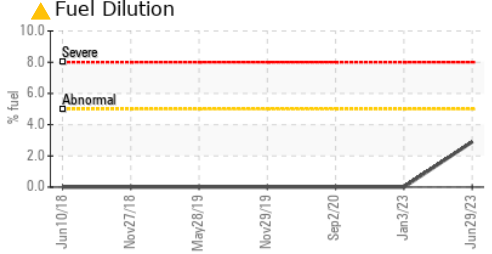
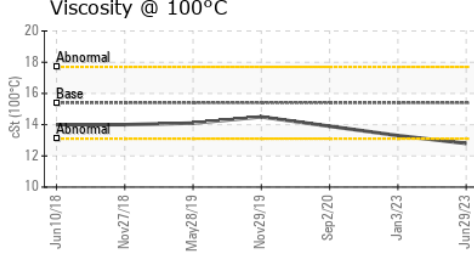
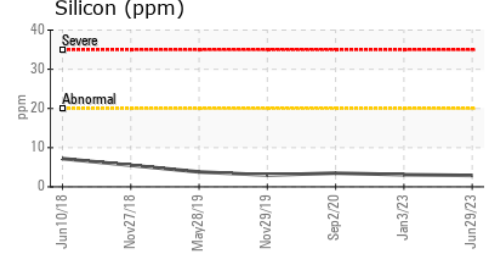
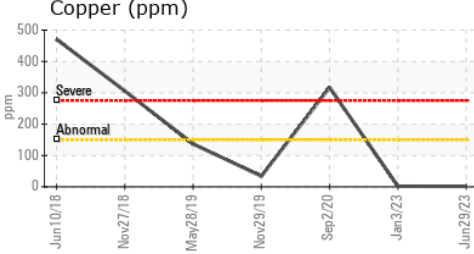
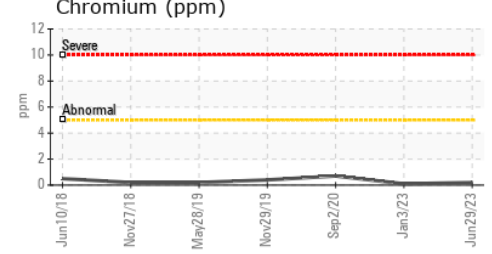
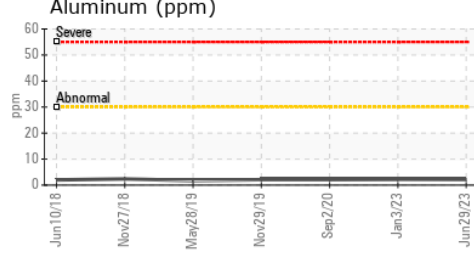
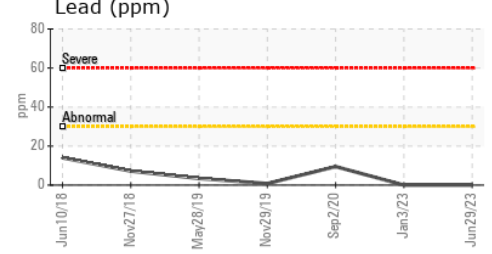
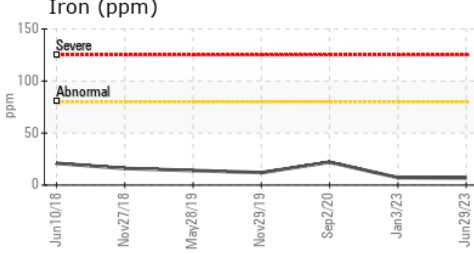
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
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	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	12.8	13.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0086498
Lab Number : 02569665
Unique Number : 5606711
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, Visual)

GFL Environmental - 217 - Aurora
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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.