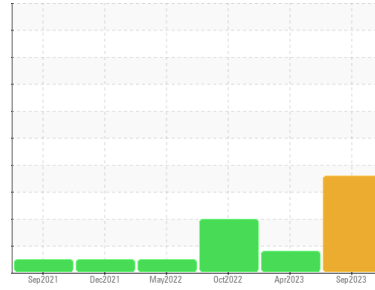




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
5564

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for faulty combustion and a possible overheat condition. We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

A small degree of oil oxidation was indicated. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0089022	GFL0077831	GFL0054851
Sample Date	Client Info	21 Sep 2023	17 Apr 2023	18 Oct 2022
Machine Age	hrs	21909	21688	21302
Oil Age	hrs	0	21688	0
Oil Changed	Client Info	N/A	Changed	N/A
Sample Status		SEVERE	MARGINAL	SEVERE

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) >90	35	19	19
Chromium	ppm	ASTM D5185(m) >20	<1	1	<1
Nickel	ppm	ASTM D5185(m) >2	<1	<1	0
Titanium	ppm	ASTM D5185(m) >2	0	<1	<1
Silver	ppm	ASTM D5185(m) >2	<1	0	0
Aluminum	ppm	ASTM D5185(m) >20	2	2	2
Lead	ppm	ASTM D5185(m) >40	<1	4	6
Copper	ppm	ASTM D5185(m) >330	1	<1	1
Tin	ppm	ASTM D5185(m) >15	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	2	4	3
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	55	60	56
Manganese	ppm	ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	877	961	917
Calcium	ppm	ASTM D5185(m) 1070	997	1097	1026
Phosphorus	ppm	ASTM D5185(m) 1150	897	1063	1006
Zinc	ppm	ASTM D5185(m) 1270	1084	1182	1118
Sulfur	ppm	ASTM D5185(m) 2060	2181	2546	2407
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >25	7	7	9
Sodium	ppm	ASTM D5185(m)	9	16	9
Potassium	ppm	ASTM D5185(m) >20	4	<1	<1
Fuel	%	ASTM D7593* >3.0	7.3	3.7	6.1

INFRA-RED

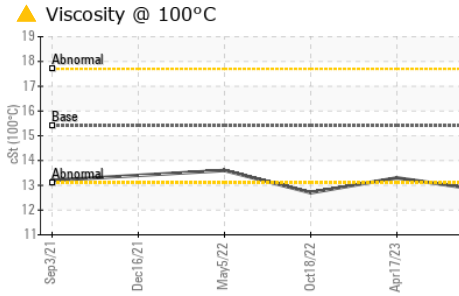
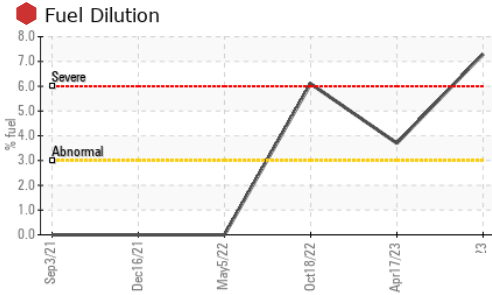
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >6	0.7	0.9	1.2
Nitration	Abs/cm	ASTM D7624* >20	12.5	7.8	8.6
Sulfation	Abs/.1mm	ASTM D7415* >30	27.8	21.3	23.2

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414* >25	31.8	16.0	18.3



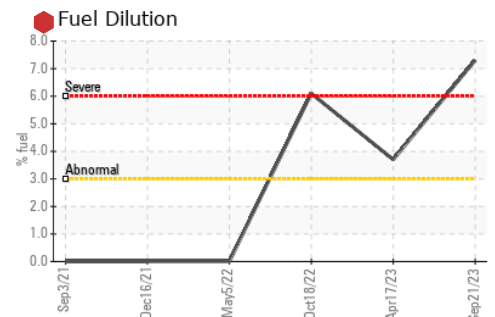
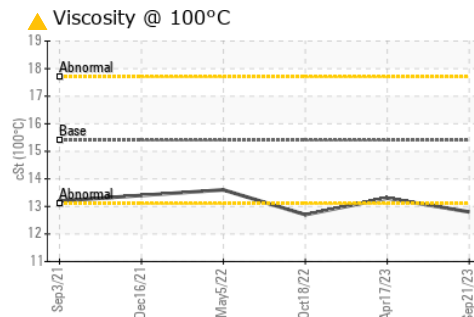
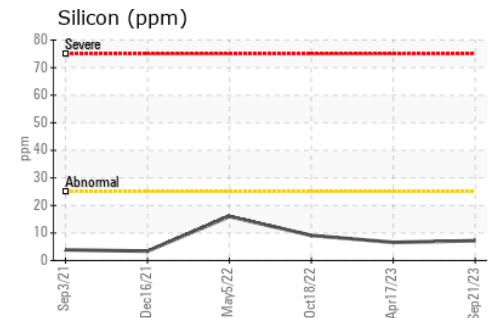
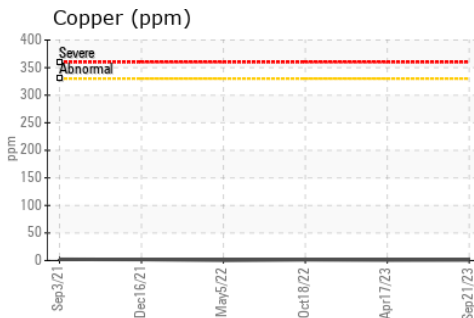
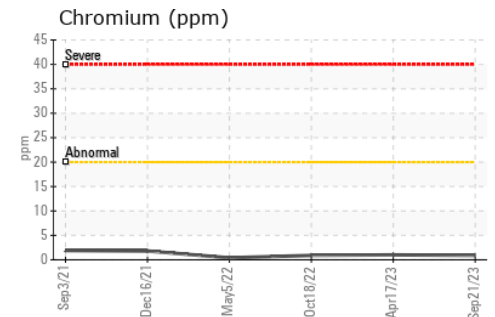
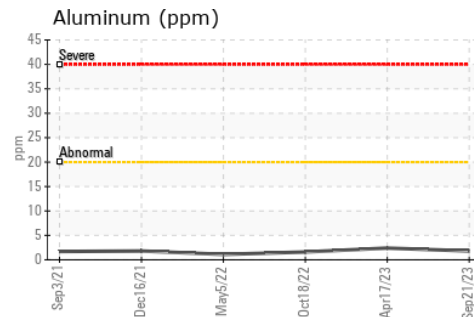
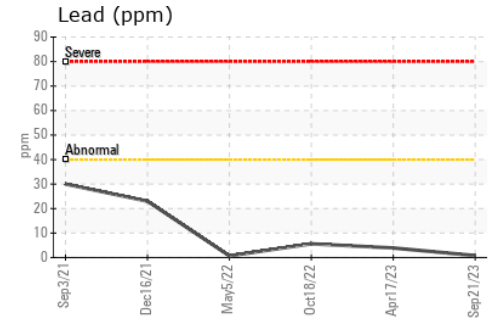
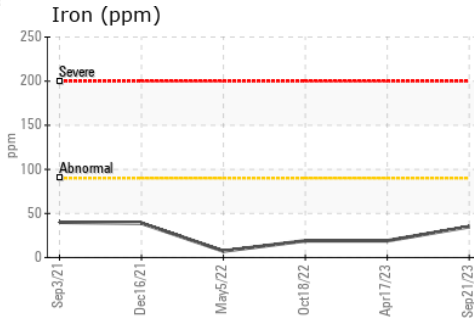
OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 12.8	13.3	12.7

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 207 - Pickering SW
Sample No. : GFL0089022 **Received** : 25 Sep 2023 1034 TOY AVENUE, PICKERING YARD
Lab Number : 02584863 **Diagnosed** : 26 Sep 2023 PICKERING, ON
Unique Number : 5645928 **Diagnostician** : Bill Quesnel CA L1W 3P1
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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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