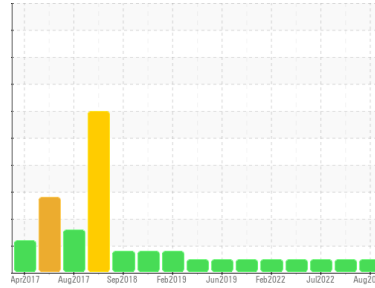




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
4531

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination 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		GFL0085804	GFL0072862	GFL0054181
Sample Date	Client Info		03 Aug 2023	24 Feb 2023	07 Jul 2022
Machine Age	hrs	Client Info	23814	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>110	20	31	42
Chromium	ppm	ASTM D5185(m)	>4	<1	1	2
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>25	4	3	4
Lead	ppm	ASTM D5185(m)	>45	<1	<1	1
Copper	ppm	ASTM D5185(m)	>85	1	3	8
Tin	ppm	ASTM D5185(m)	>4	0	<1	<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)	2	2	2	4
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	59	60	57
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	911	961	942
Calcium	ppm	ASTM D5185(m)	1050	970	1089	1075
Phosphorus	ppm	ASTM D5185(m)	995	1010	1060	940
Zinc	ppm	ASTM D5185(m)	1180	1112	1172	1204
Sulfur	ppm	ASTM D5185(m)	2600	2465	2584	2387
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>30	4	5	7
Sodium	ppm	ASTM D5185(m)		85	20	8
Potassium	ppm	ASTM D5185(m)	>20	15	2	5
Glycol	%	ASTM D7922*		0.0	NEG	NEG

INFRA-RED

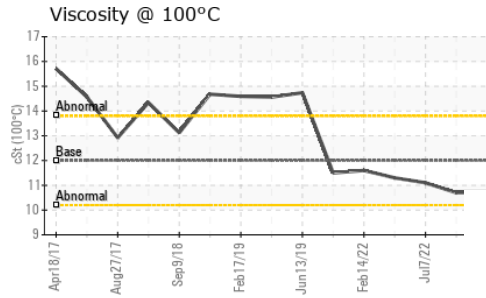
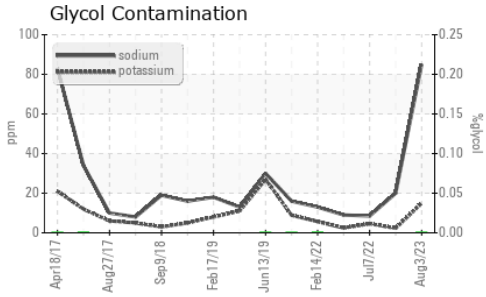
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.4	0.5	0.6
Nitration	Abs/cm	ASTM D7624*	>20	8.5	10.0	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.4	22.8	22.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.1	18.1	19.5



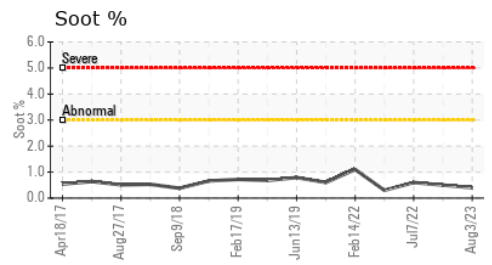
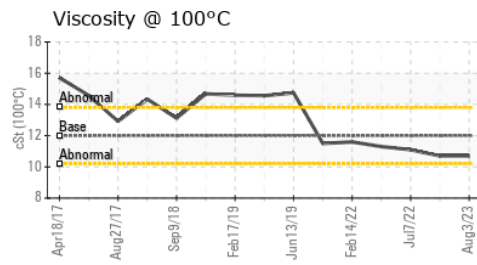
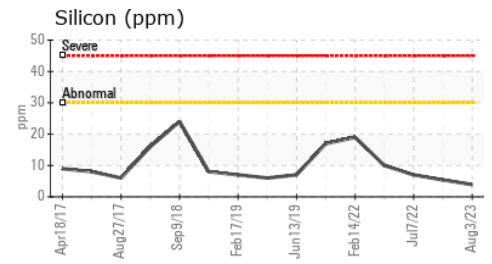
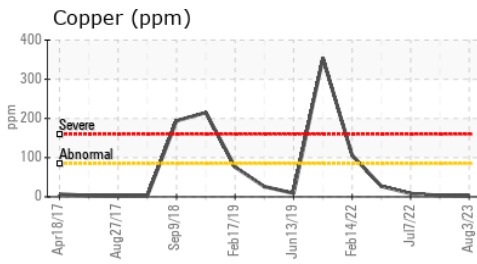
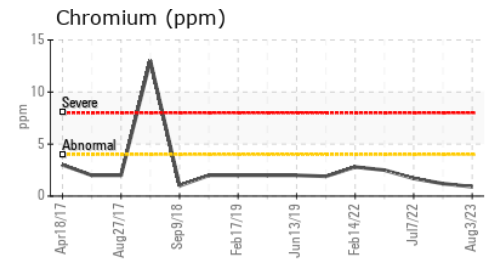
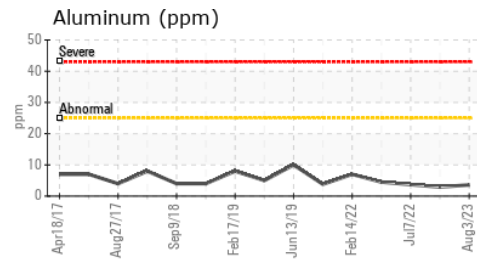
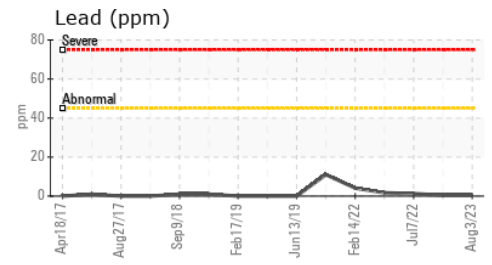
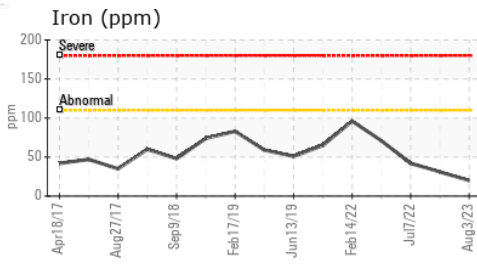
OIL ANALYSIS REPORT



PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	---	---
Precipitate	scalar	Visual*	NONE	---	---
Silt	scalar	Visual*	NONE	---	---
Debris	scalar	Visual*	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	---	---
Appearance	scalar	Visual*	NORML	---	---
Odor	scalar	Visual*	NORML	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)	12.00	10.7	10.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW
Sample No. : GFL0085804 **Received** : 21 Aug 2023
Lab Number : 02577033 **Diagnosed** : 21 Aug 2023
Unique Number : 5630093 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol, Visual)

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.

Contact: Tim Greig
 tgreig@gflenv.com

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F: