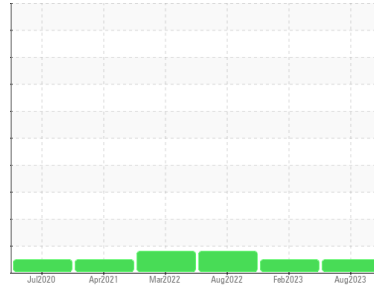




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
525003
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The water content is negligible. There is no indication of any contamination in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0090866	GFL0071324	GFL0057678
Sample Date	Client Info		02 Aug 2023	09 Feb 2023	22 Aug 2022
Machine Age	hrs	Client Info	18155	17717	17259
Oil Age	hrs	Client Info	0	458	434
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >120	16	15	30
Chromium	ppm	ASTM D5185(m) >20	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >5	4	2	<1
Titanium	ppm	ASTM D5185(m) >2	<1	<1	<1
Silver	ppm	ASTM D5185(m) >2	0	0	0
Aluminum	ppm	ASTM D5185(m) >20	10	8	▲ 36
Lead	ppm	ASTM D5185(m) >40	<1	<1	2
Copper	ppm	ASTM D5185(m) >330	4	3	4
Tin	ppm	ASTM D5185(m) >15	0	<1	<1
Antimony	ppm	ASTM D5185(m)	0	<1	<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	34	4	5
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	59	58	58
Manganese	ppm	ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	494	943	942
Calcium	ppm	ASTM D5185(m) 1070	1734	1128	1103
Phosphorus	ppm	ASTM D5185(m) 1150	1095	1084	973
Zinc	ppm	ASTM D5185(m) 1270	1237	1200	1174
Sulfur	ppm	ASTM D5185(m) 2060	2830	2696	2468
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	5	10	5
Sodium	ppm	ASTM D5185(m)	4	6	66
Potassium	ppm	ASTM D5185(m) >20	9	8	75
Glycol	%	ASTM D7922*	0.0	0.0	0.0

INFRA-RED

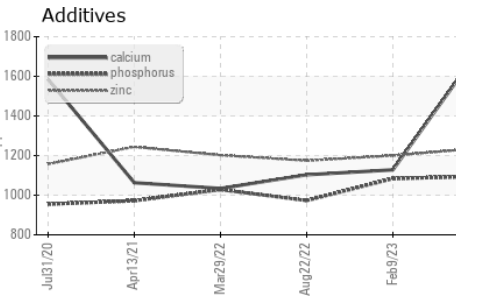
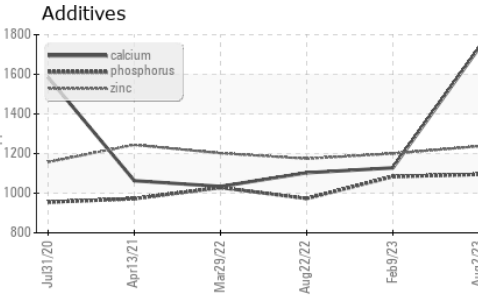
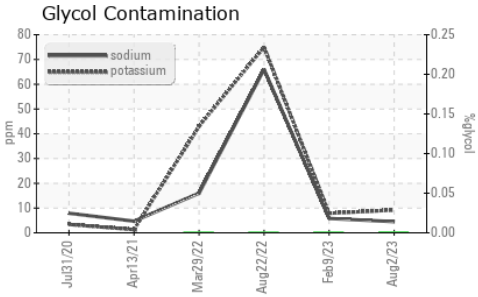
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	0.4	0	0.2
Nitration	Abs/cm	ASTM D7624* >20	8.9	4.2	9.6
Sulfation	Abs/.1mm	ASTM D7415* >30	21.2	15.8	21.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	16.7	7.6	16.8



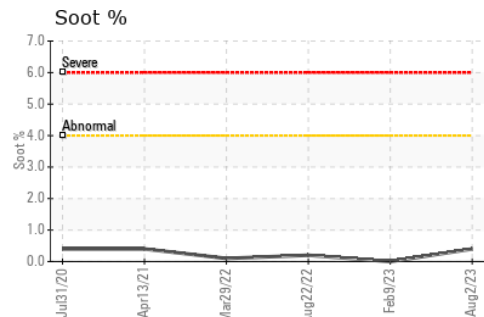
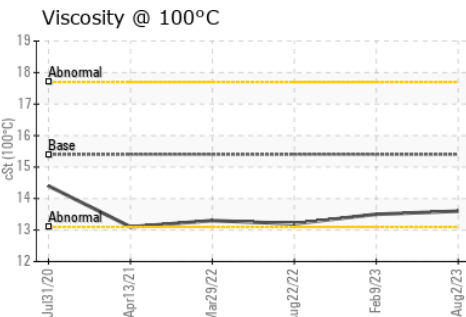
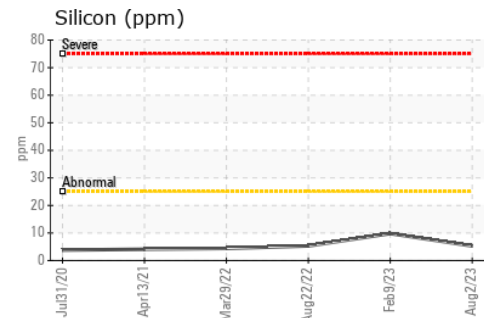
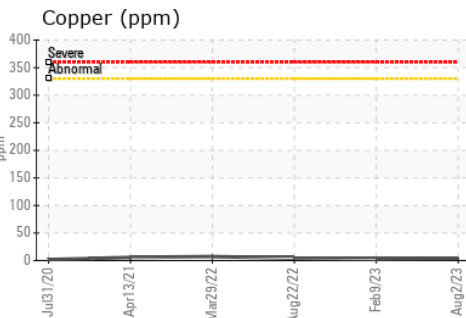
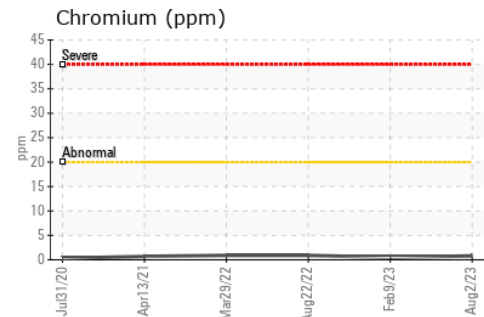
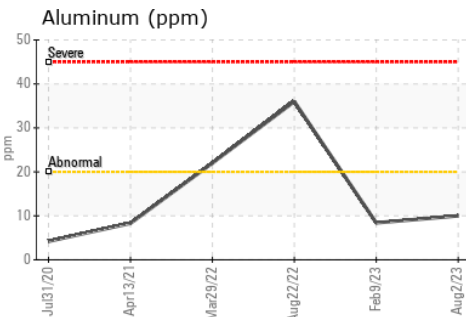
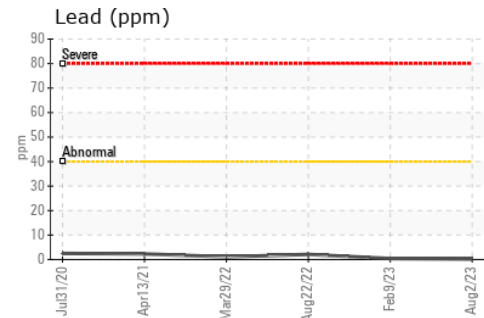
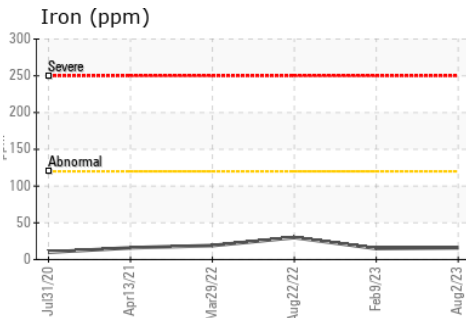
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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	13.6	13.5

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 246 - Windsor**
Sample No. : GFL0090866 **Received** : 08 Aug 2023
Lab Number : 02574414 **Diagnosed** : 08 Aug 2023
Unique Number : 5619465 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol)
 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: