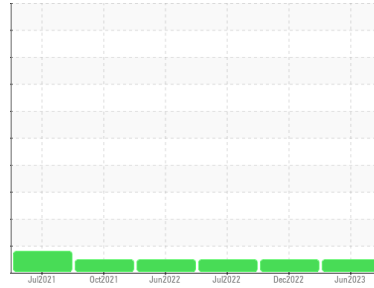




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
819014

Component
Diesel Engine

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

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	history 1	history 2	
Sample Number	Client Info	GFL0077040	GFL0054670	GFL0054660	
Sample Date	Client Info	23 Jun 2023	20 Dec 2022	09 Jul 2022	
Machine Age	hrs	Client Info	5214	4178	0
Oil Age	hrs	Client Info	0	600	0
Oil Changed	Client Info	Changed	Changed	Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >3.0	<1.0	<1.0	<1.0

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185(m) >90	36	50	17
Chromium	ppm ASTM D5185(m) >20	1	2	<1
Nickel	ppm ASTM D5185(m) >2	0	<1	0
Titanium	ppm ASTM D5185(m) >2	0	<1	0
Silver	ppm ASTM D5185(m) >2	<1	0	0
Aluminum	ppm ASTM D5185(m) >20	5	4	2
Lead	ppm ASTM D5185(m) >40	0	0	<1
Copper	ppm ASTM D5185(m) >330	3	4	2
Tin	ppm ASTM D5185(m) >15	<1	<1	<1
Antimony	ppm ASTM D5185(m)	0	0	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	2	3	4
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	60	58	57
Manganese	ppm ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	950	931	938
Calcium	ppm ASTM D5185(m) 1070	1040	1059	1064
Phosphorus	ppm ASTM D5185(m) 1150	999	1018	961
Zinc	ppm ASTM D5185(m) 1270	1180	1173	1187
Sulfur	ppm ASTM D5185(m) 2060	2162	2211	2560
Lithium	ppm ASTM D5185(m)	1	<1	<1

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185(m) >25	13	6	4
Sodium	ppm ASTM D5185(m)	11	10	5
Potassium	ppm ASTM D5185(m) >20	5	<1	<1
Glycol	% ASTM D7922*	0.0	NEG	NEG

INFRA-RED

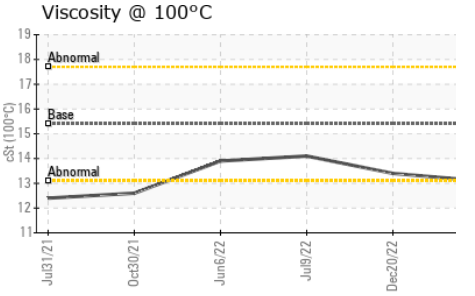
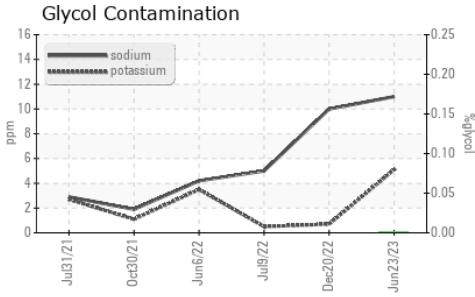
method	limit/base	current	history 1	history 2
Soot %	% ASTM D7844* >6	0.9	0.9	0.2
Nitration	Abs/cm ASTM D7624* >20	11.6	10.6	8.2
Sulfation	Abs/.1mm ASTM D7415* >30	25.4	23.6	21.1

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm ASTM D7414* >25	24.3	22.2	17.7



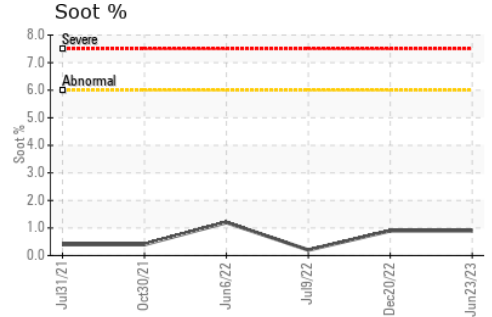
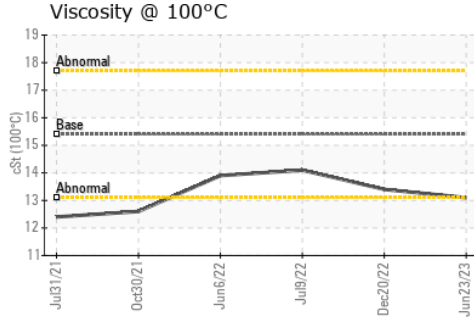
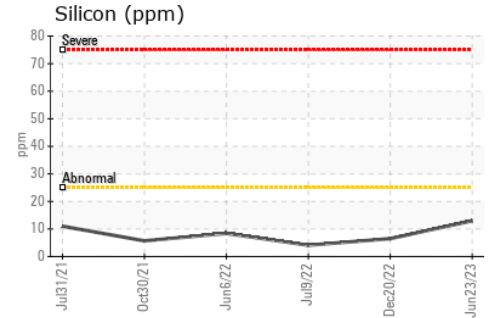
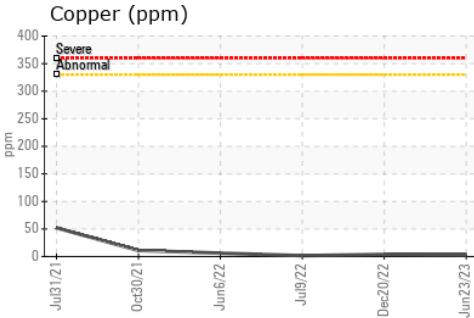
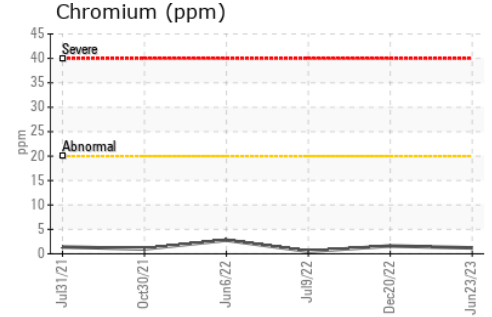
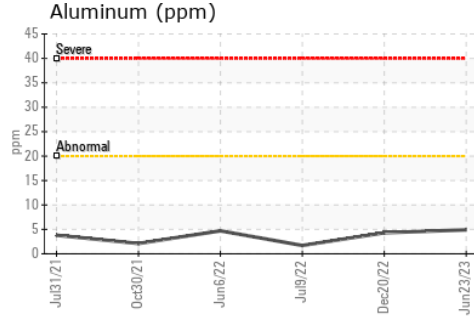
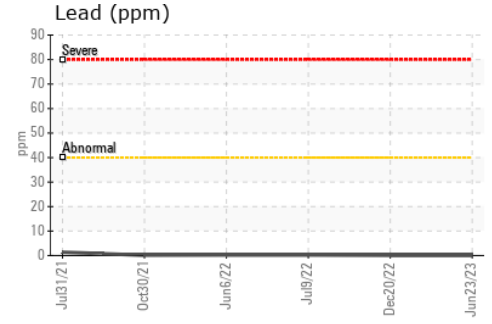
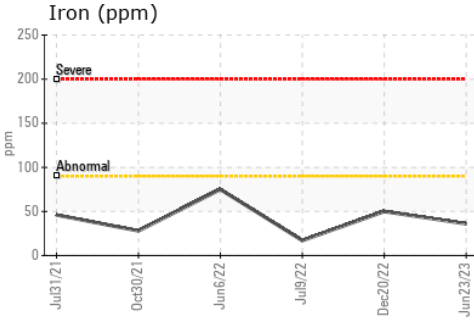
OIL ANALYSIS REPORT



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	13.1	13.4

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 575 - Squamish Hauling
Sample No. : GFL0077040 **Received** : 06 Jul 2023
Lab Number : 02568156 **Diagnosed** : 06 Jul 2023
Unique Number : 5605202 **Diagnostician** : Wes Davis
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: (604)892-5238