



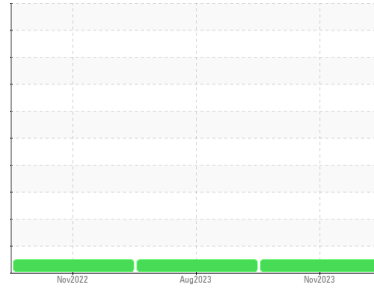
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
OR870
 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	history1	history2
Sample Number	Client Info		GFL0076988	GFL0054636	GFL0054593
Sample Date	Client Info		18 Nov 2023	02 Aug 2023	05 Nov 2022
Machine Age	hrs	Client Info	24572	24031	22711
Oil Age	hrs	Client Info	532	768	1275
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	0.4	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	10	12	27
Chromium	ppm	ASTM D5185(m) >20	<1	<1	<1
Nickel	ppm	ASTM D5185(m) >2	0	0	0
Titanium	ppm	ASTM D5185(m) >2	0	0	<1
Silver	ppm	ASTM D5185(m) >2	<1	0	0
Aluminum	ppm	ASTM D5185(m) >25	1	<1	2
Lead	ppm	ASTM D5185(m) >40	<1	<1	<1
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	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	history1	history2
Boron	ppm	ASTM D5185(m) 0	3	3	6
Barium	ppm	ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm	ASTM D5185(m) 60	61	58	59
Manganese	ppm	ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	977	1006	969
Calcium	ppm	ASTM D5185(m) 1070	1032	1070	1101
Phosphorus	ppm	ASTM D5185(m) 1150	1008	1100	1074
Zinc	ppm	ASTM D5185(m) 1270	1199	1219	1200
Sulfur	ppm	ASTM D5185(m) 2060	2623	2680	2573
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

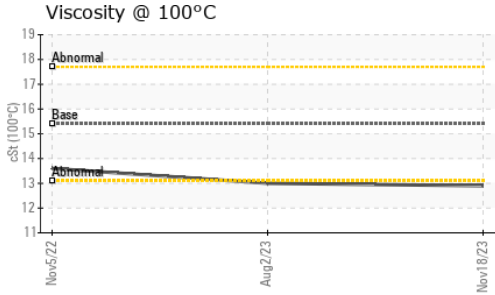
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	3	3	5
Sodium	ppm	ASTM D5185(m)	2	2	2
Potassium	ppm	ASTM D5185(m) >20	<1	<1	<1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0.8	1	1.4
Nitration	Abs/cm	ASTM D7624* >20	5.7	6.0	7.1
Sulfation	Abs./1mm	ASTM D7415* >30	18.7	19.9	21.3



OIL ANALYSIS REPORT



FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	12.9	12.8

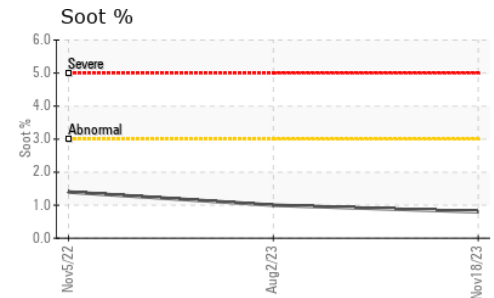
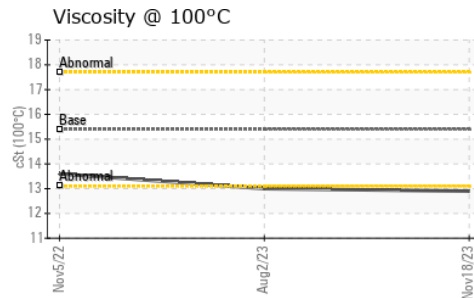
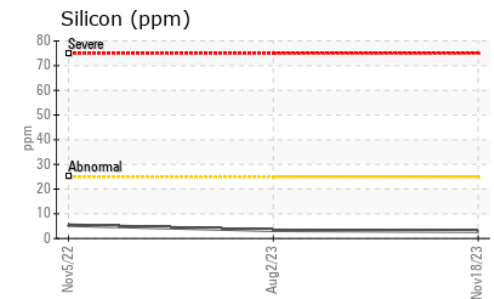
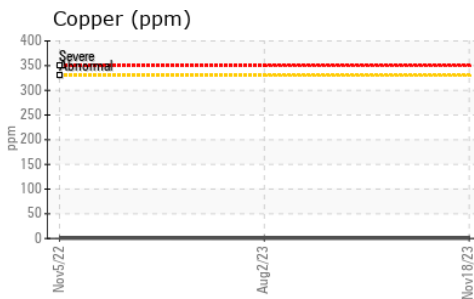
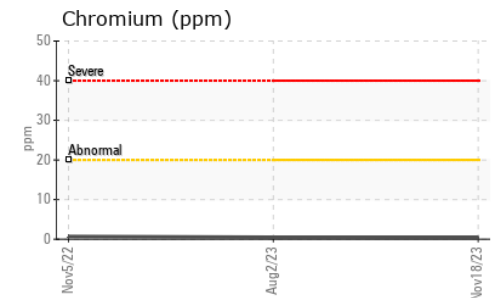
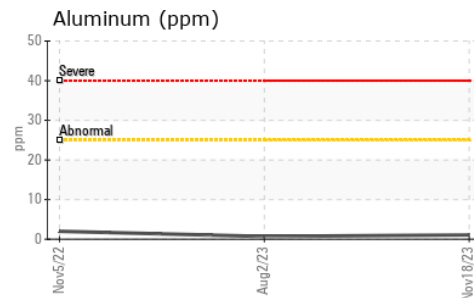
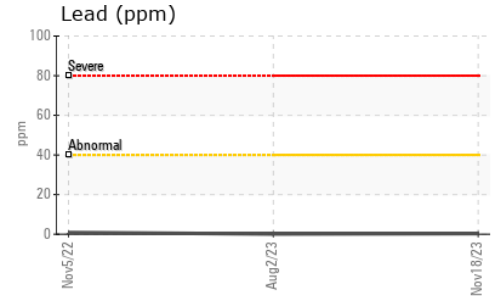
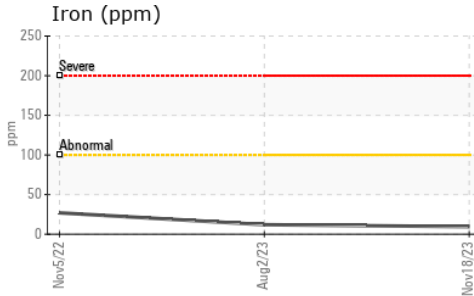
VISUAL

	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	12.9	13.0

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 575 - Squamish Hauling
Sample No. : GFL0076988 **Received** : 05 Dec 2023 38950 Queens Way,
Lab Number : 02600823 **Diagnosed** : 05 Dec 2023 Squamish, BC
Unique Number : 5685903 **Diagnostician** : Wes Davis CA V8B 0K8
Test Package : MOB 1 **Contact:** Dean Imbeau

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.

dimbeau@gflenv.com
 T: (604)892-5604
 F: (604)892-5238