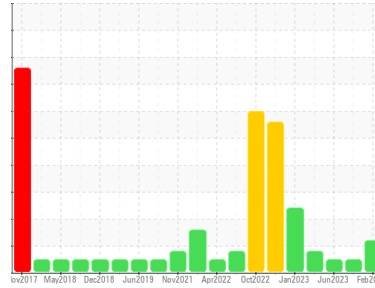




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
801074
Component
Diesel Engine
Fluid
PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service (see recommendation).

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0099612	GFL0091556	GFL0077591
Sample Date	Client Info		08 Feb 2024	03 Oct 2023	30 Jun 2023
Machine Age	hrs	Client Info	14258	13517	244955
Oil Age	hrs	Client Info	802	600	0
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			ATTENTION	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>80	67	41	31
Chromium	ppm	ASTM D5185(m)	>5	2	1	<1
Nickel	ppm	ASTM D5185(m)	>2	1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>30	7	4	3
Lead	ppm	ASTM D5185(m)	>30	<1	<1	0
Copper	ppm	ASTM D5185(m)	>150	2	2	2
Tin	ppm	ASTM D5185(m)	>5	0	0	0
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)	1	2	2	3
Barium	ppm	ASTM D5185(m)	1	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	63	63	60
Manganese	ppm	ASTM D5185(m)	1	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	909	932	938
Calcium	ppm	ASTM D5185(m)	1070	1039	1024	1043
Phosphorus	ppm	ASTM D5185(m)	1150	926	909	991
Zinc	ppm	ASTM D5185(m)	1270	1140	1172	1159
Sulfur	ppm	ASTM D5185(m)	2060	2377	2302	2336
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	15	11	9
Sodium	ppm	ASTM D5185(m)		▲ 163	101	50
Potassium	ppm	ASTM D5185(m)	>20	3	1	3
Glycol	%	ASTM D7922*		0.0	0.0	NEG

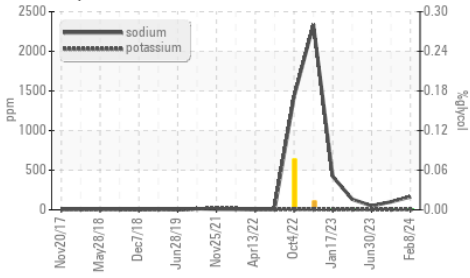
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.9	0.7	0.6
Nitration	Abs/cm	ASTM D7624*	>20	12.0	11.1	9.9
Sulfation	Abs./1mm	ASTM D7415*	>30	24.3	23.9	22.1

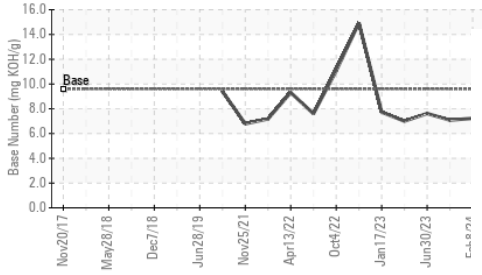


OIL ANALYSIS REPORT

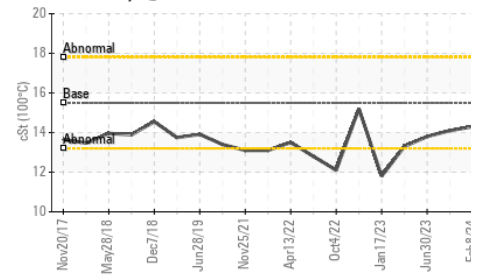
Glycol Contamination



Base Number



Viscosity @ 100°C



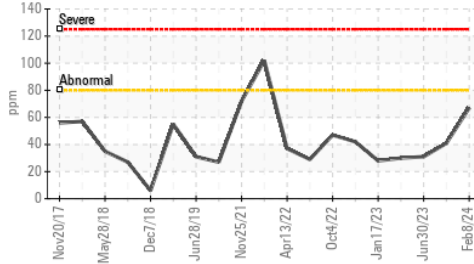
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	21.2	21.8	19.2
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	7.23	7.08	7.62

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

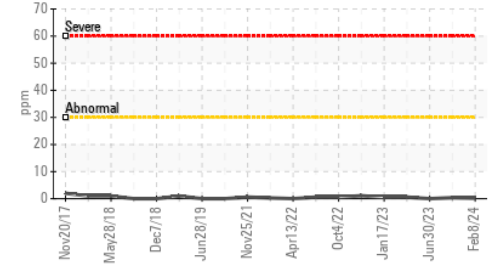
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	14.3	14.1	13.8

GRAPHS

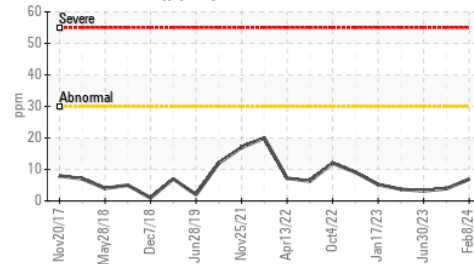
Iron (ppm)



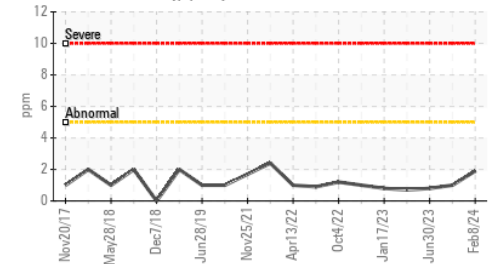
Lead (ppm)



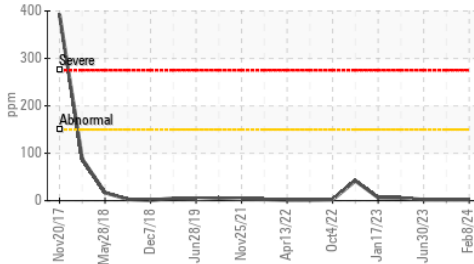
Aluminum (ppm)



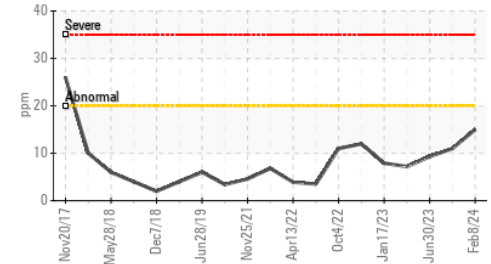
Chromium (ppm)



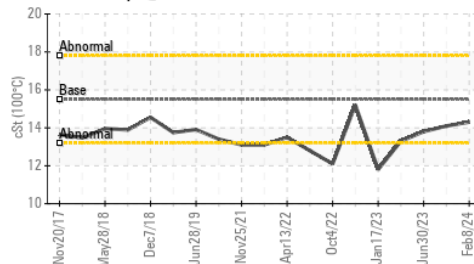
Copper (ppm)



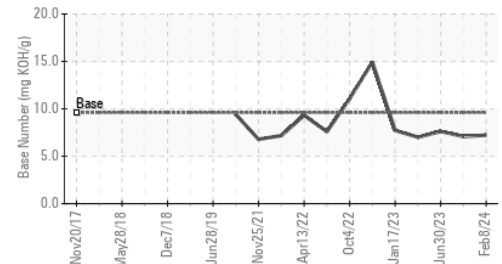
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0099612
Lab Number : 02616967
Unique Number : 5734077
Test Package : MOB 2 (Additional Tests: Glycol)

Received : 21 Feb 2024
Tested : 22 Feb 2024
Diagnosed : 22 Feb 2024 - Kevin Marson

GFL Environmental - 550 - Rocky View County
 220 Carmek Blvd
 Rocky View County, AB
 CA T1X 1X1
 Contact: GFL Calgary
 calgarymaintenance@gflenv.com
 T: (403)369-6163

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.