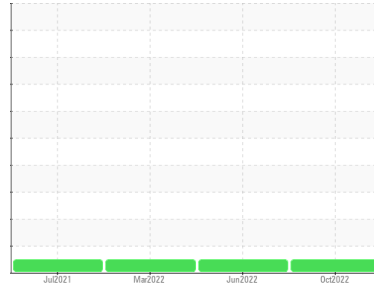




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id

0556

Component

Diesel Engine

Fluid

PETRO CANADA DURON HP 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0060234	GFL0052620	GFL0044502
Sample Date	Client Info		18 Oct 2022	22 Jun 2022	09 Mar 2022
Machine Age	kms	Client Info	185641	181038	176528
Oil Age	kms	Client Info	4603	4510	5345
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)	>100	11	14	14
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	<1	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	1	2	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	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		<1	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	4	3
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	56	58	56
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	908	943	976
Calcium	ppm	ASTM D5185(m)	1070	1034	1040	1004
Phosphorus	ppm	ASTM D5185(m)	1150	1039	1013	1043
Zinc	ppm	ASTM D5185(m)	1270	1126	1182	1179
Sulfur	ppm	ASTM D5185(m)	2060	2562	2677	2541
Lithium	ppm	ASTM D5185(m)		<1	<1	0

CONTAMINANTS

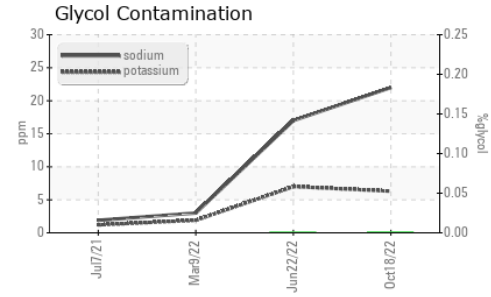
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	6	6	6
Sodium	ppm	ASTM D5185(m)		22	17	3
Potassium	ppm	ASTM D5185(m)	>20	6	7	2
Glycol	%	ASTM D7922*		0.0	0.0	NEG

INFRA-RED

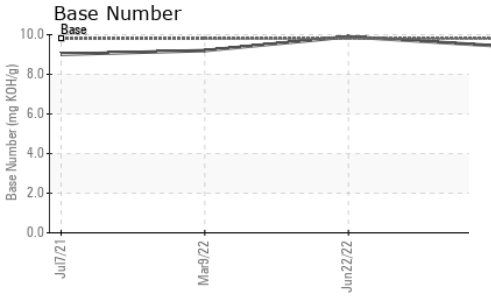
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.1	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	6.7	7.6	7.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.6	22.0	20.3



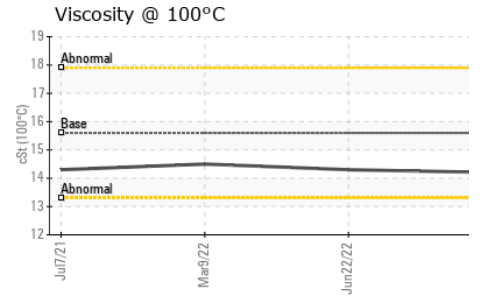
OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.6	14.5	15.5
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	9.45	9.90	9.20

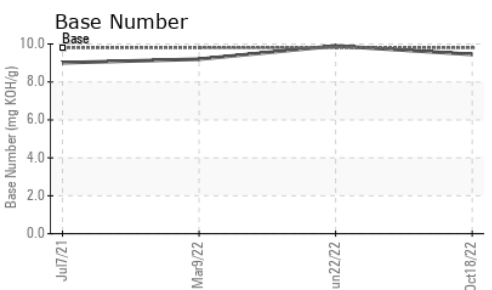
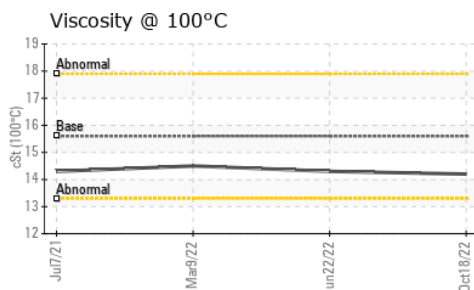
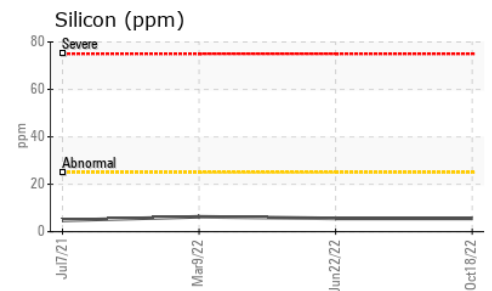
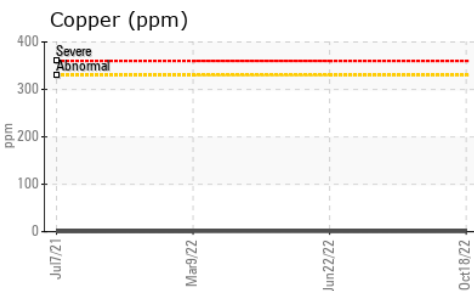
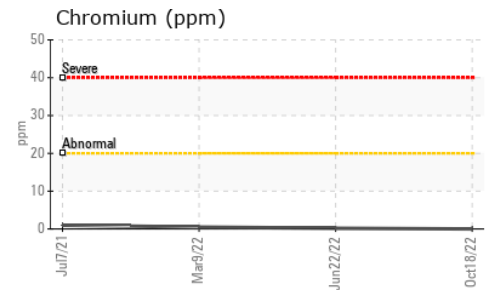
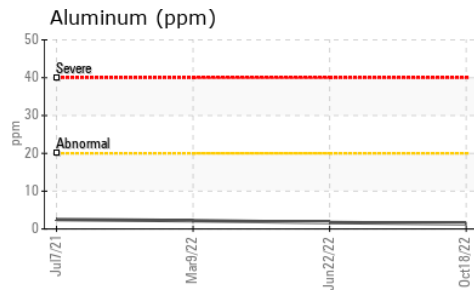
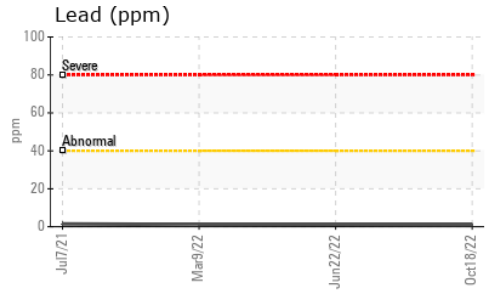
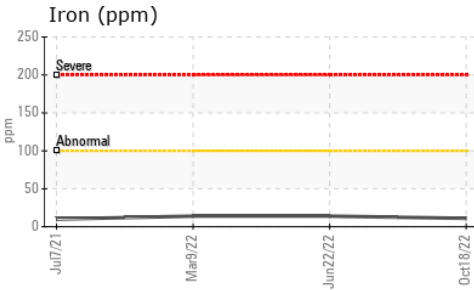


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	14.2	14.3	14.5

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0060234 **Received** : 25 Oct 2022 220 Carmek Blvd
Lab Number : **02518302** **Diagnosed** : 26 Oct 2022 Rocky View County, AB
Unique Number : 5475282 **Diagnostician** : Kevin Marson CA T1X 1X1
Test Package : MOB 2 (Additional Tests: Glycol) Contact: GFL Calgary
 To discuss this sample report, contact Customer Service at 1-800-268-2131. calgarymaintenance@gflenv.com
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T:
 Validity of results and interpretation are based on the sample and information as supplied. F: (403)369-6163