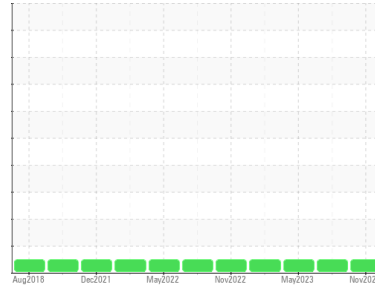




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
801021

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 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	GFL0091602	GFL0084346	GFL0077629
Sample Date	Client Info	07 Nov 2023	29 Aug 2023	30 May 2023
Machine Age	hrs	15307	14827	174550
Oil Age	hrs	5816	580	0
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
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >100	7	7	6
Chromium	ppm ASTM D5185(m) >20	0	<1	0
Nickel	ppm ASTM D5185(m) >4	<1	0	<1
Titanium	ppm ASTM D5185(m)	0	0	<1
Silver	ppm ASTM D5185(m) >3	<1	<1	0
Aluminum	ppm ASTM D5185(m) >20	1	1	2
Lead	ppm ASTM D5185(m) >40	0	0	0
Copper	ppm ASTM D5185(m) >330	<1	<1	1
Tin	ppm ASTM D5185(m) >15	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) 0	3	2	2
Barium	ppm ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm ASTM D5185(m) 60	55	55	56
Manganese	ppm ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm ASTM D5185(m) 1010	909	916	897
Calcium	ppm ASTM D5185(m) 1070	1027	987	1016
Phosphorus	ppm ASTM D5185(m) 1150	962	1000	1034
Zinc	ppm ASTM D5185(m) 1270	1138	1140	1091
Sulfur	ppm ASTM D5185(m) 2060	2459	2427	2524
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

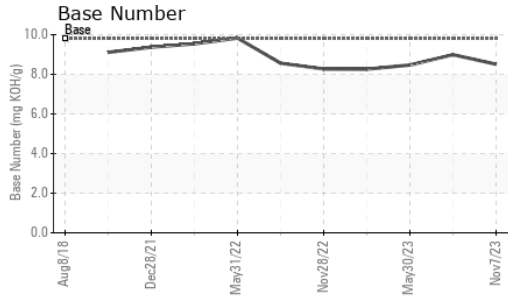
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	3	5	4
Sodium	ppm ASTM D5185(m)	4	5	4
Potassium	ppm ASTM D5185(m) >20	0	0	0

INFRA-RED

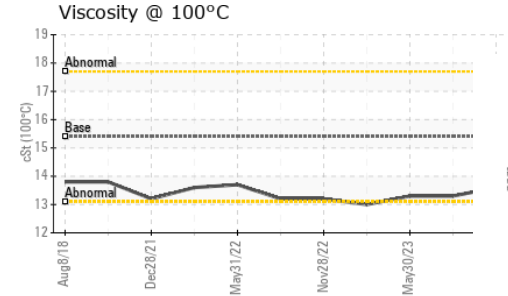
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.3	0.3	0.2
Nitration	Abs/cm ASTM D7624* >20	7.9	8.6	7.4
Sulfation	Abs/.1mm ASTM D7415* >30	19.8	21.4	19.3



OIL ANALYSIS REPORT



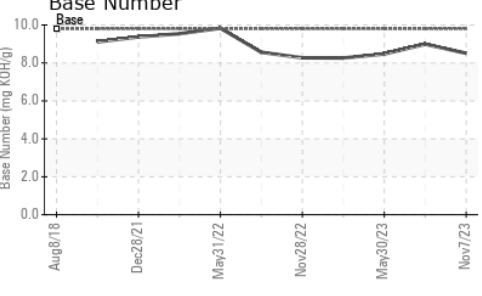
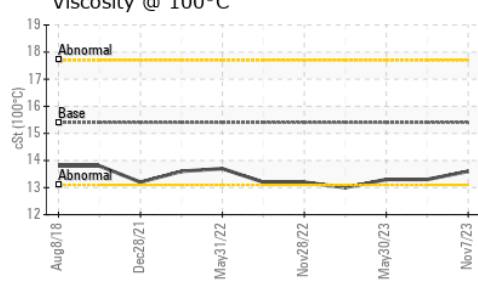
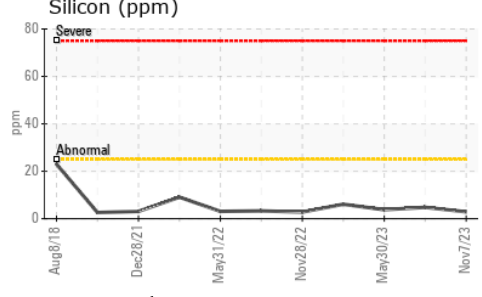
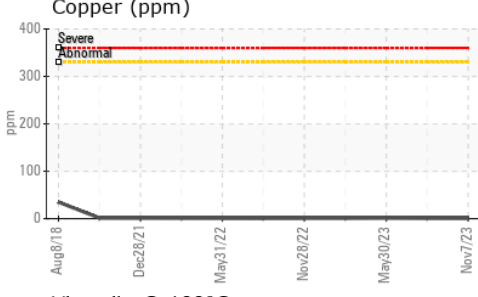
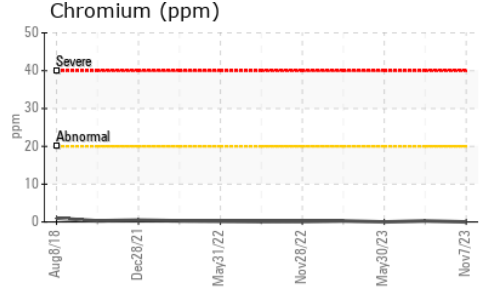
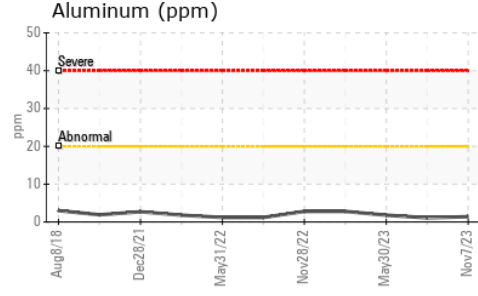
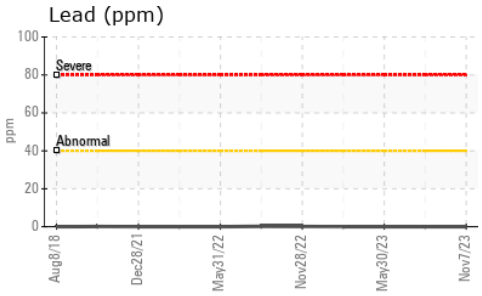
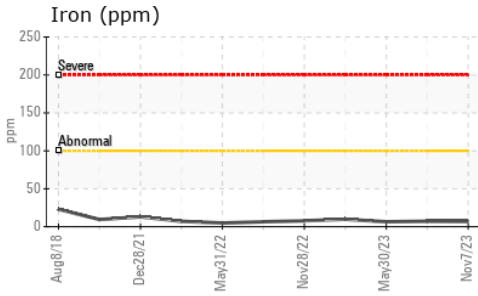
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.0	18.0	16.0
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	8.51	8.99	8.47



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)	15.4	13.6	13.3	13.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0091602 **Received** : 15 Nov 2023 220 Carmek Blvd
Lab Number : **02596485** **Diagnosed** : 16 Nov 2023 Rocky View County, AB
Unique Number : 5681565 **Diagnostician** : Wes Davis CA T1X 1X1
Test Package : MOB 2 Contact: GFL Calgary calgarymaintenance@gflenv.com

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.

T:
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