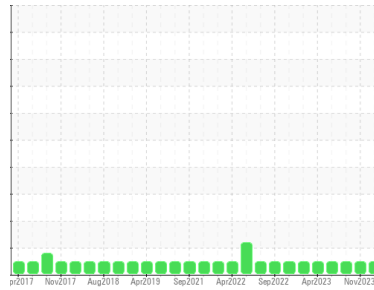




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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	GFL0099622	GFL0091587	GFL0084336
Sample Date	Client Info	25 Jan 2024	03 Nov 2023	30 Aug 2023
Machine Age	hrs	20798	50291	19804
Oil Age	hrs	563	0	545
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2	
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) >120	10	8	12
Chromium	ppm	ASTM D5185(m) >20	0	0	<1
Nickel	ppm	ASTM D5185(m) >5	<1	<1	0
Titanium	ppm	ASTM D5185(m) >2	0	0	0
Silver	ppm	ASTM D5185(m) >2	0	<1	0
Aluminum	ppm	ASTM D5185(m) >20	2	1	1
Lead	ppm	ASTM D5185(m) >40	<1	<1	2
Copper	ppm	ASTM D5185(m) >330	2	<1	<1
Tin	ppm	ASTM D5185(m) >15	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	0	0	<1
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	3	2
Barium	ppm	ASTM D5185(m) 1	0	<1	0
Molybdenum	ppm	ASTM D5185(m) 60	57	56	57
Manganese	ppm	ASTM D5185(m) 1	0	0	<1
Magnesium	ppm	ASTM D5185(m) 1010	903	900	940
Calcium	ppm	ASTM D5185(m) 1070	1044	1020	1021
Phosphorus	ppm	ASTM D5185(m) 1150	950	928	984
Zinc	ppm	ASTM D5185(m) 1270	1164	1110	1161
Sulfur	ppm	ASTM D5185(m) 2060	2501	2317	2341
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

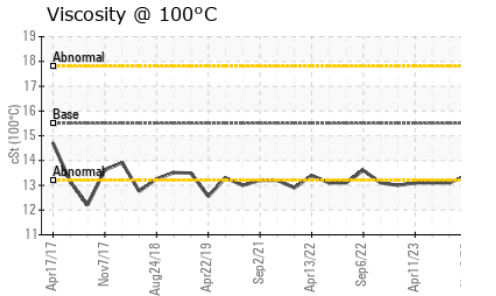
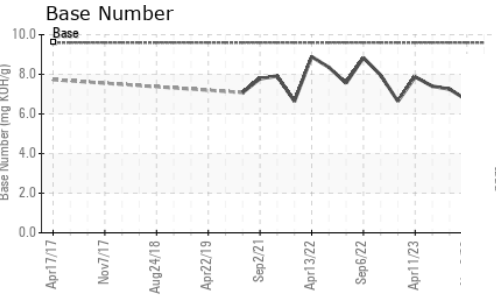
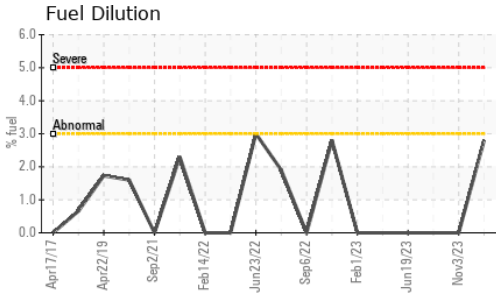
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >25	4	7	6
Sodium	ppm	ASTM D5185(m)	4	2	5
Potassium	ppm	ASTM D5185(m) >20	<1	0	<1
Fuel	%	ASTM D7593* >3.0	2.8	<1.0	<1.0

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >4	0.5	0.5	0.7
Nitration	Abs/cm	ASTM D7624* >20	8.1	7.7	8.0
Sulfation	Abs.1mm	ASTM D7415* >30	20.5	21.0	21.7



OIL ANALYSIS REPORT

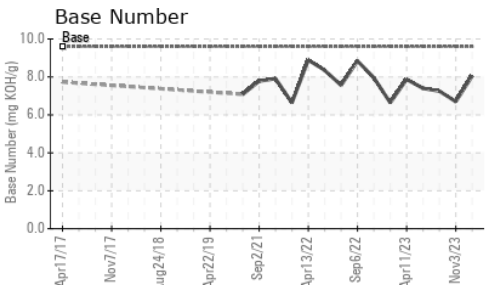
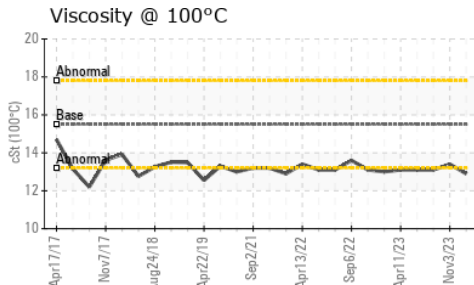
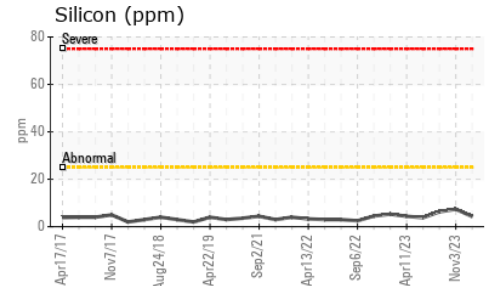
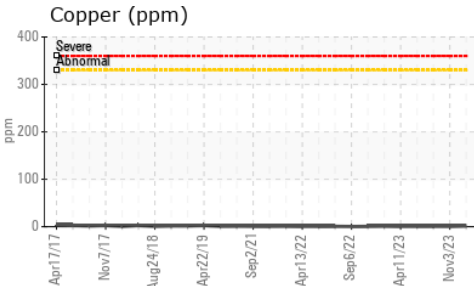
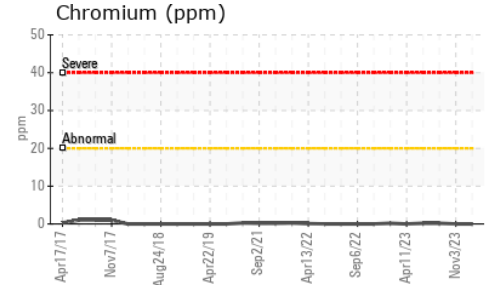
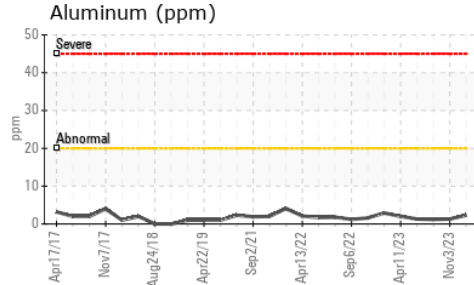
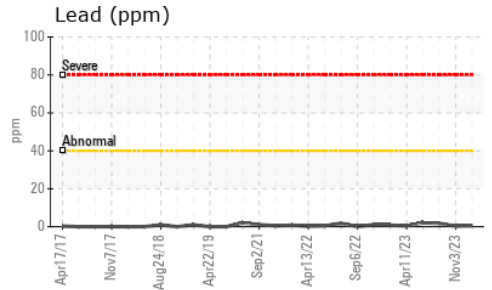
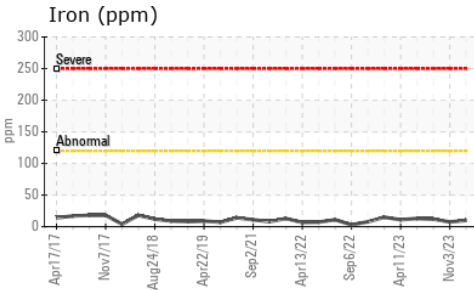


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	16.1	16.7	18.1
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	8.05	6.70	7.25

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	12.9	13.4	13.1

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0099622 **Received** : 31 Jan 2024 220 Carmek Blvd
Lab Number : **02612325** **Diagnosed** : 01 Feb 2024 Rocky View County, AB
Unique Number : 5721420 **Diagnostician** : Wes Davis CA T1X 1X1
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel) Contact: GFL Calgary calgarymaintenance@gflenv.com
 To discuss this sample report, contact Customer Service at 1-800-268-2131. T:
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: (403)369-6163
 Validity of results and interpretation are based on the sample and information as supplied.