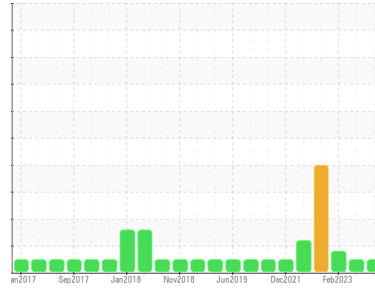




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

9951

Component

Diesel Engine

Fluid

PETRO CANADA DURON XL SYN BLEND 15W40 (37 LTR)

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	GFL0084298	GFL0077589	GFL0063747	
Sample Date	Client Info	20 Jul 2023	03 Jul 2023	01 Feb 2023	
Machine Age	kms	Client Info	489343	486366	24847
Oil Age	kms	Client Info	0	0	1205
Oil Changed	Client Info	N/A	Changed	Changed	
Sample Status		NORMAL	NORMAL	MARGINAL	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	▲ 2.1
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >120	4	21	13
Chromium	ppm	ASTM D5185(m) >20	0	<1	<1
Nickel	ppm	ASTM D5185(m) >5	0	<1	<1
Titanium	ppm	ASTM D5185(m) >2	0	0	<1
Silver	ppm	ASTM D5185(m) >2	0	0	0
Aluminum	ppm	ASTM D5185(m) >20	1	4	2
Lead	ppm	ASTM D5185(m) >40	<1	<1	<1
Copper	ppm	ASTM D5185(m) >330	<1	3	1
Tin	ppm	ASTM D5185(m) >15	0	<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	14
Barium	ppm	ASTM D5185(m) 1	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	55	56	46
Manganese	ppm	ASTM D5185(m) 1	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	928	909	754
Calcium	ppm	ASTM D5185(m) 1070	990	1044	1313
Phosphorus	ppm	ASTM D5185(m) 1150	1025	1024	1065
Zinc	ppm	ASTM D5185(m) 1270	1136	1146	1150
Sulfur	ppm	ASTM D5185(m) 2060	2547	2467	2734
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

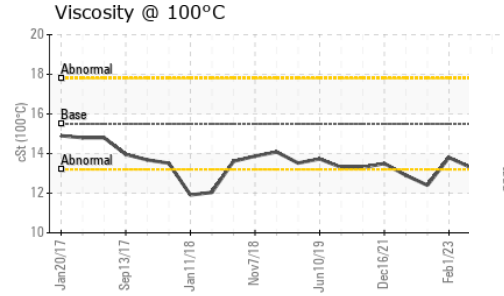
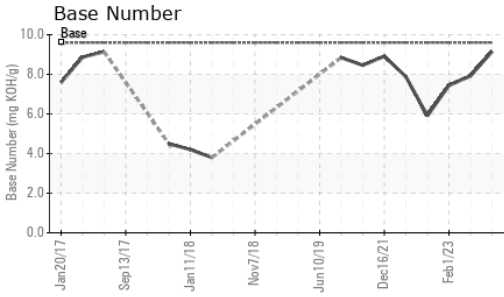
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >25	5	11	16
Sodium	ppm	ASTM D5185(m)	3	6	4
Potassium	ppm	ASTM D5185(m) >20	0	<1	2

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >4	0.2	1.1	0.1
Nitration	Abs/cm	ASTM D7624* >20	5.9	9.6	7.4
Sulfation	Abs/1mm	ASTM D7415* >30	19.4	21.4	20.6



OIL ANALYSIS REPORT

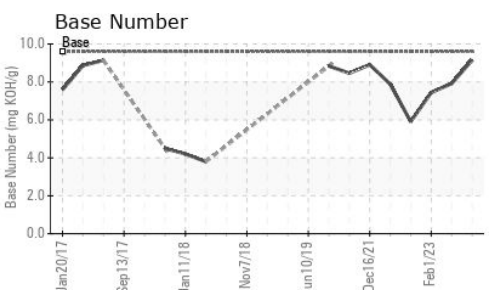
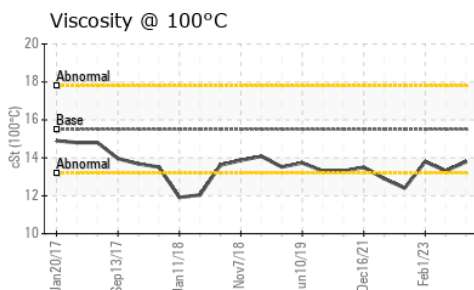
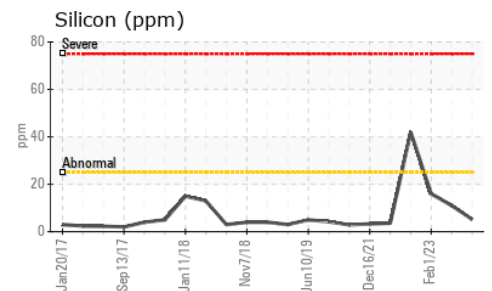
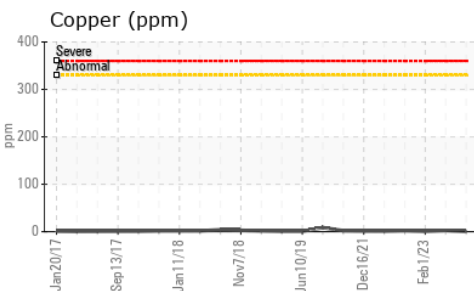
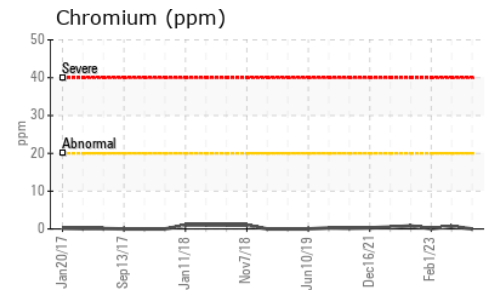
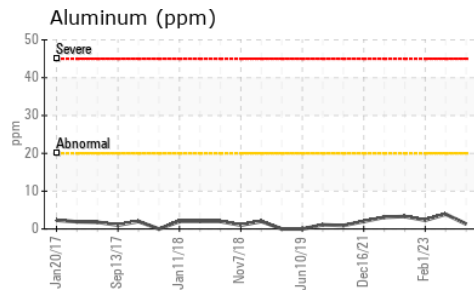
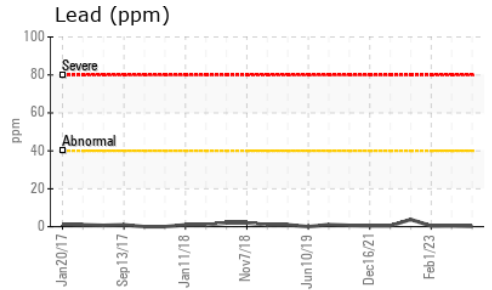
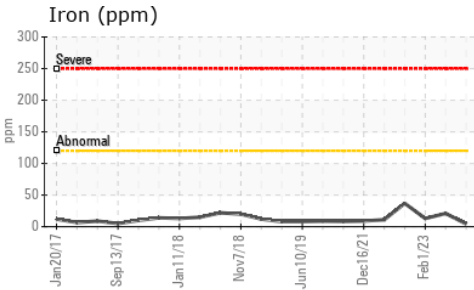


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	14.6	16.7	15.3
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	9.15	7.92	7.44

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	13.8	13.3	13.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0084298 **Received** : 02 Aug 2023 220 Carmek Blvd
Lab Number : 02573606 **Diagnosed** : 03 Aug 2023 Rocky View County, AB
Unique Number : 5618657 **Diagnostician** : Wes Davis CA T1X 1X1
Test Package : MOB 2

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.

Contact: GFL Calgary
 calgarymaintenance@gflenv.com
 T: (403)369-6163