



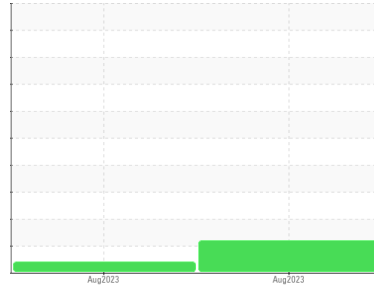
OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Machine Id
801071
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0084361	GFL0084353	---
Sample Date	Client Info	23 Aug 2023	20 Aug 2023	---
Machine Age	hrs	312958	13930	---
Oil Age	hrs	0	348	---
Oil Changed	Client Info	Changed	Not Changd	---
Sample Status		ABNORMAL	ABNORMAL	---

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	---

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >80	5	10	---
Chromium	ppm	ASTM D5185(m) >5	0	<1	---
Nickel	ppm	ASTM D5185(m) >2	0	0	---
Titanium	ppm	ASTM D5185(m)	0	0	---
Silver	ppm	ASTM D5185(m) >3	0	<1	---
Aluminum	ppm	ASTM D5185(m) >30	<1	1	---
Lead	ppm	ASTM D5185(m) >30	0	0	---
Copper	ppm	ASTM D5185(m) >150	<1	<1	---
Tin	ppm	ASTM D5185(m) >5	0	0	---
Antimony	ppm	ASTM D5185(m)	0	0	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	0	---

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 0	4	3	---
Barium	ppm	ASTM D5185(m) 0	0	0	---
Molybdenum	ppm	ASTM D5185(m) 60	54	58	---
Manganese	ppm	ASTM D5185(m) 0	0	<1	---
Magnesium	ppm	ASTM D5185(m) 1010	921	971	---
Calcium	ppm	ASTM D5185(m) 1070	1003	1036	---
Phosphorus	ppm	ASTM D5185(m) 1150	1018	1058	---
Zinc	ppm	ASTM D5185(m) 1270	1108	1166	---
Sulfur	ppm	ASTM D5185(m) 2060	2483	2562	---
Lithium	ppm	ASTM D5185(m)	<1	<1	---

CONTAMINANTS

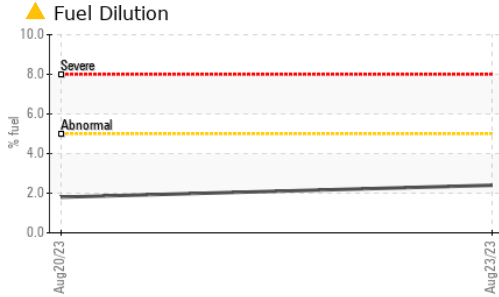
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	4	5	---
Sodium	ppm	ASTM D5185(m)	2	2	---
Potassium	ppm	ASTM D5185(m) >20	<1	0	---
Fuel	%	ASTM D7593* >5	▲ 2.4	1.8	---

INFRA-RED

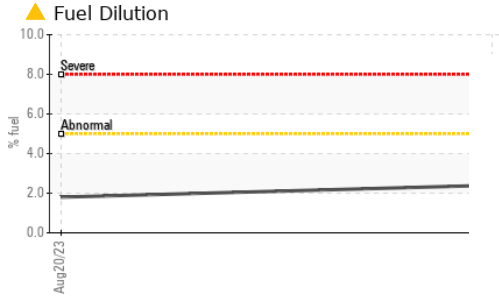
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >3	0	0.2	---
Nitration	Abs/cm	ASTM D7624* >20	6.0	6.2	---
Sulfation	Abs/.1mm	ASTM D7415* >30	20.0	20.5	---



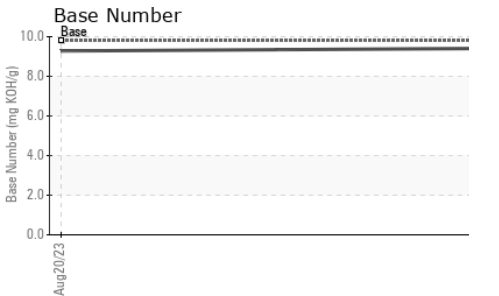
OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.0	15.6	---
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	9.41	9.28	---

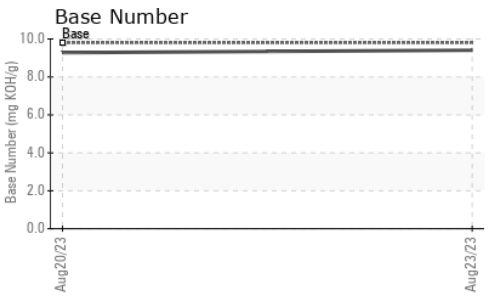
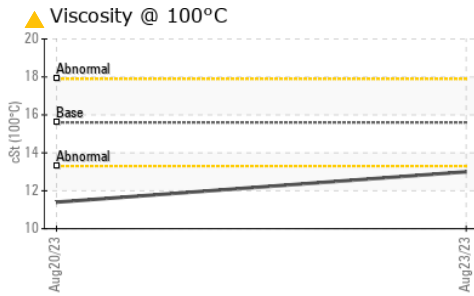
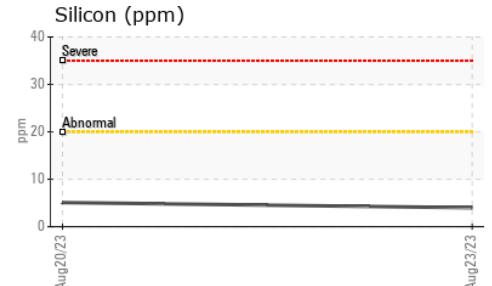
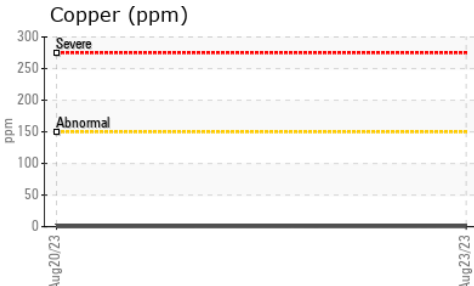
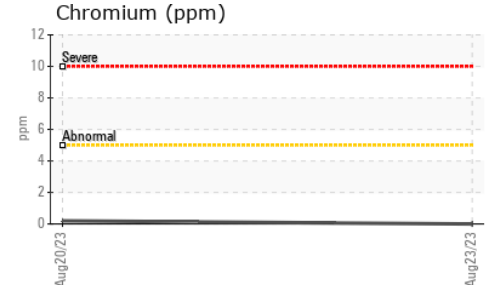
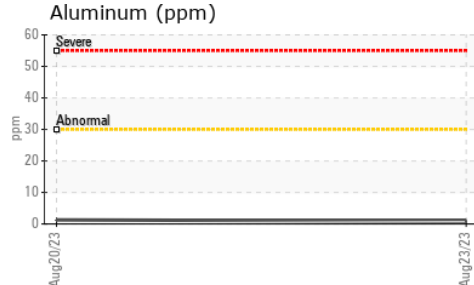
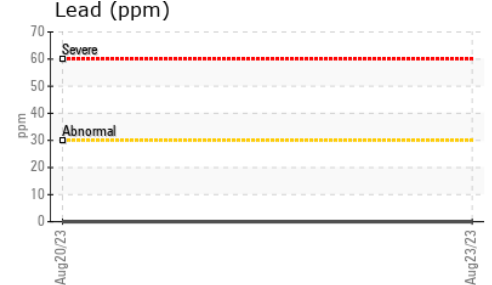
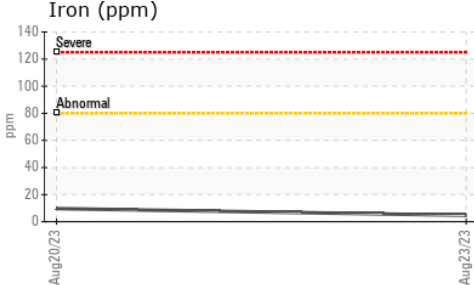


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---
Free Water	scalar	Visual*		NEG	NEG	---



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	▲ 13.0	▲ 11.4	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0084361 **Received** : 08 Sep 2023 220 Carmek Blvd
Lab Number : 02581107 **Diagnosed** : 11 Sep 2023 Rocky View County, AB
Unique Number : 5642172 **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.
 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.

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