



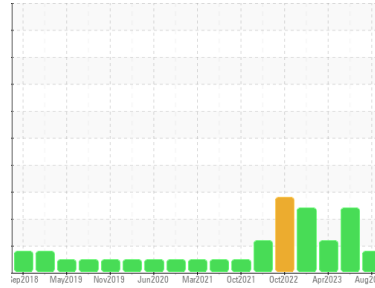
OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Machine Id
201069
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (20 GAL)



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	GFL0084326	GFL0082981	GFL0077832
Sample Date	Client Info	14 Aug 2023	02 Aug 2023	11 Apr 2023
Machine Age	hrs	6998	15614	15018
Oil Age	hrs	264	0	0
Oil Changed	Client Info	Changed	N/A	Changed
Sample Status		MARGINAL	SEVERE	ABNORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >75	21	41	10
Chromium	ppm	ASTM D5185(m) >5	<1	2	<1
Nickel	ppm	ASTM D5185(m) >4	<1	<1	<1
Titanium	ppm	ASTM D5185(m) >2	0	<1	<1
Silver	ppm	ASTM D5185(m) >2	0	0	0
Aluminum	ppm	ASTM D5185(m) >15	5	2	1
Lead	ppm	ASTM D5185(m) >25	0	<1	0
Copper	ppm	ASTM D5185(m) >100	<1	1	<1
Tin	ppm	ASTM D5185(m) >4	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	2	3	8
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	56	55	56
Manganese	ppm	ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	944	890	895
Calcium	ppm	ASTM D5185(m) 1070	1007	944	1033
Phosphorus	ppm	ASTM D5185(m) 1150	1021	953	1022
Zinc	ppm	ASTM D5185(m) 1270	1151	1080	1118
Sulfur	ppm	ASTM D5185(m) 2060	2457	2168	2528
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

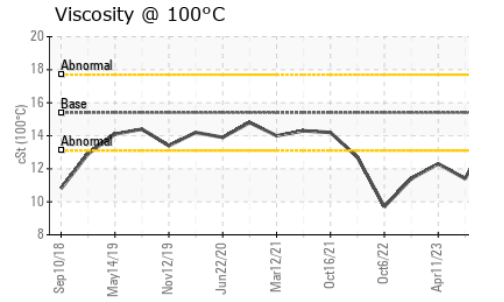
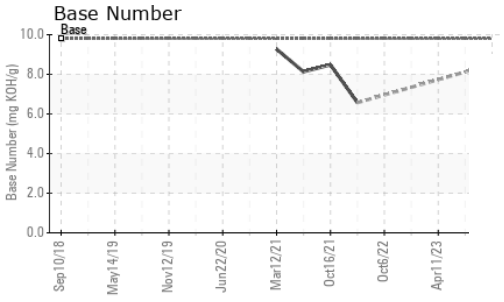
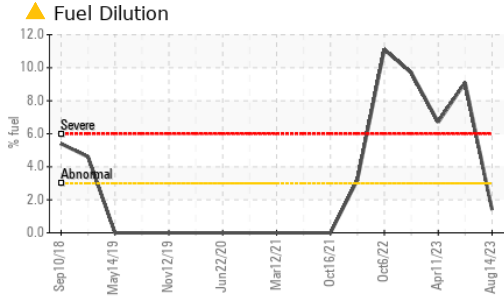
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >25	4	5	3
Sodium	ppm	ASTM D5185(m)	2	8	4
Potassium	ppm	ASTM D5185(m) >20	2	3	1
Fuel	%	ASTM D7593* >3.0	▲ 1.4	◆ 9.1	▲ 6.7

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >6	0.6	0.5	0
Nitration	Abs/cm	ASTM D7624* >20	7.7	11.8	8.1
Sulfation	Abs./1mm	ASTM D7415* >30	21.0	26.2	21.9



OIL ANALYSIS REPORT

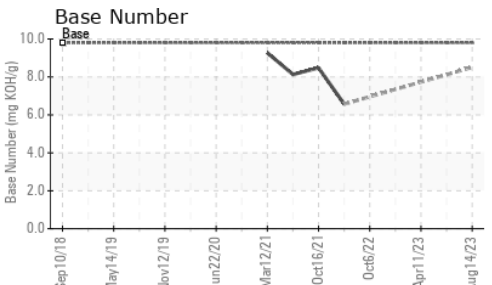
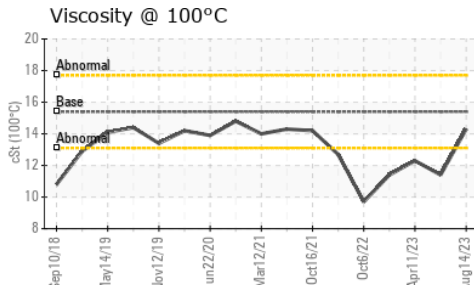
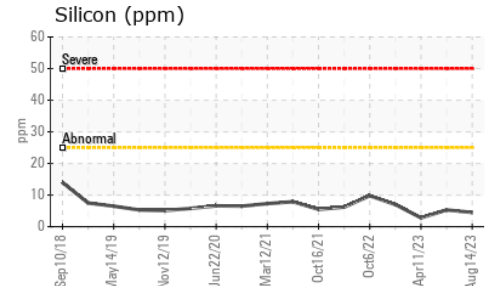
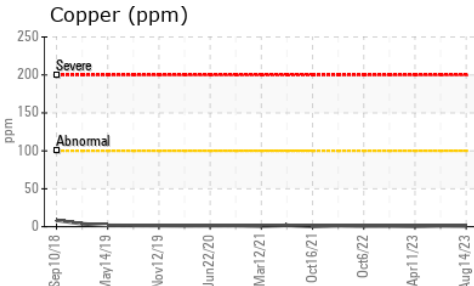
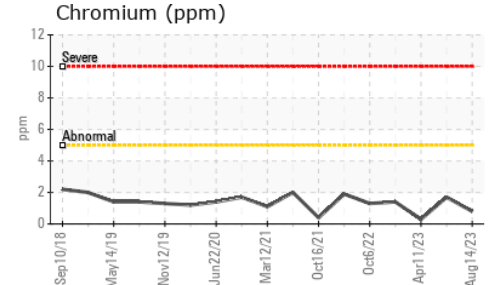
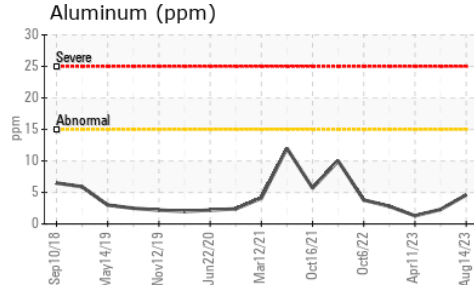
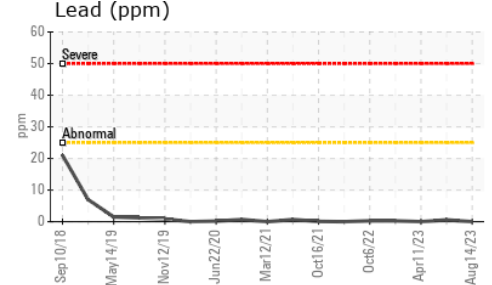
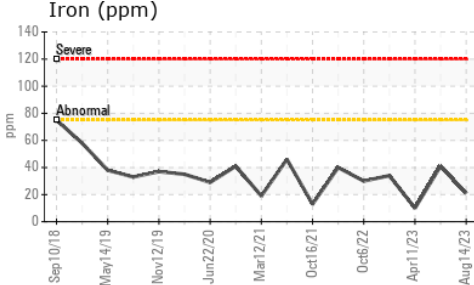


FLUID DEGRADATION						
method	limit/base	current	history1	history2		
Oxidation	Abs./1mm ASTM D7414*	>25	15.3	28.0	16.3	
Base Number (BN)	mg KOH/g ASTM D2896*	9.8	8.51	---	---	

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	14.3	▲ 11.4	▲ 12.3	

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0084326 **Received** : 22 Aug 2023
Lab Number : 02577353 **Diagnosed** : 23 Aug 2023
Unique Number : 5630413 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: PercentFuel)

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