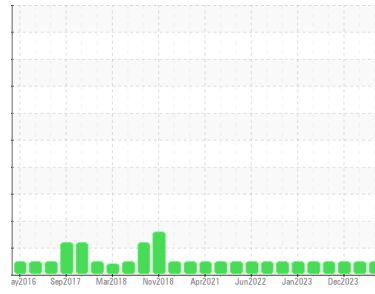




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
9143
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (38 LTR)

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		GFL0128177	GFL0112475	GFL0099542
Sample Date	Client Info		10 Jul 2024	13 Mar 2024	28 Dec 2023
Machine Age	kms	Client Info	671290	20540	645933
Oil Age	kms	Client Info	0	595	0
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	11	9	10
Chromium	ppm	ASTM D5185(m) >20	<1	<1	0
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	0	0
Aluminum	ppm	ASTM D5185(m) >20	2	3	2
Lead	ppm	ASTM D5185(m) >40	<1	<1	<1
Copper	ppm	ASTM D5185(m) >330	4	2	2
Tin	ppm	ASTM D5185(m) >15	<1	<1	<1
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	8	2	2
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	57	61	56
Manganese	ppm	ASTM D5185(m) 0	<1	0	0
Magnesium	ppm	ASTM D5185(m) 1010	891	948	906
Calcium	ppm	ASTM D5185(m) 1070	1014	1081	1071
Phosphorus	ppm	ASTM D5185(m) 1150	1029	963	939
Zinc	ppm	ASTM D5185(m) 1270	1128	1170	1146
Sulfur	ppm	ASTM D5185(m) 2060	2277	2338	2289
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

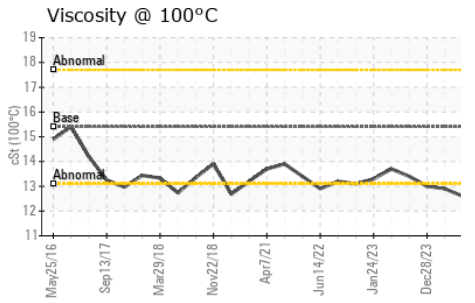
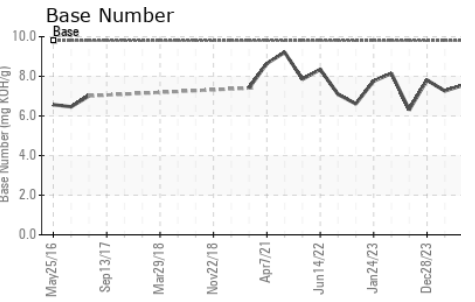
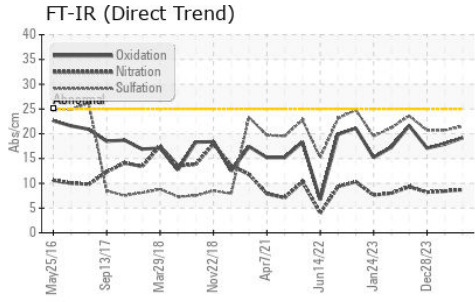
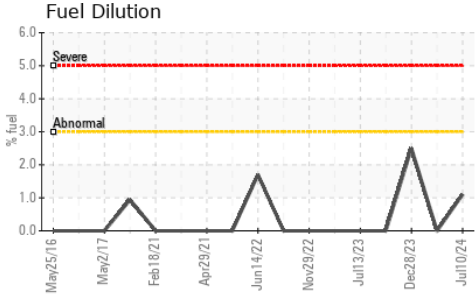
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	9	6	6
Sodium	ppm	ASTM D5185(m)	6	5	5
Potassium	ppm	ASTM D5185(m) >20	<1	1	<1
Fuel	%	ASTM D7593* >3.0	1.1	<1.0	2.5

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	0.4	0.2	0.2
Nitration	Abs/cm	ASTM D7624* >20	8.7	8.4	8.2
Sulfation	Abs./1mm	ASTM D7415* >30	21.5	20.7	20.7



OIL ANALYSIS REPORT

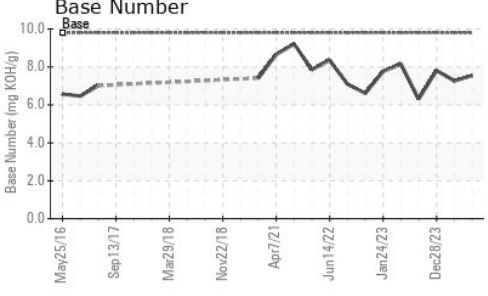
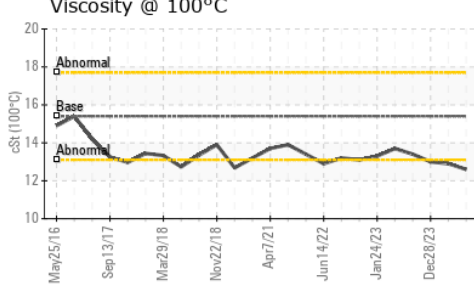
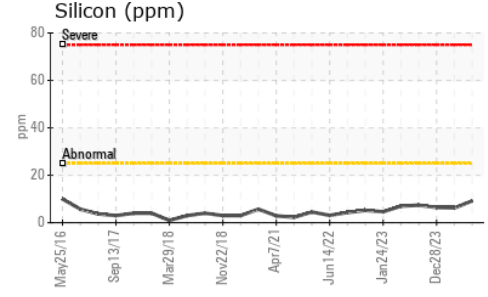
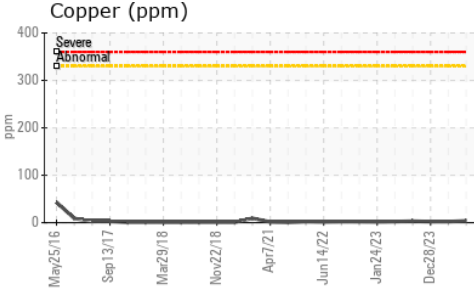
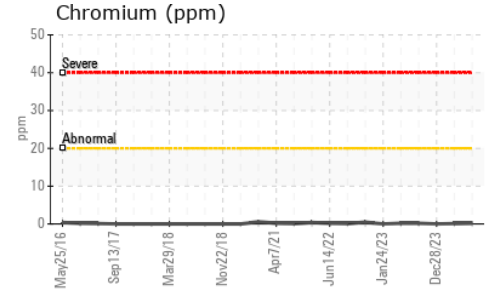
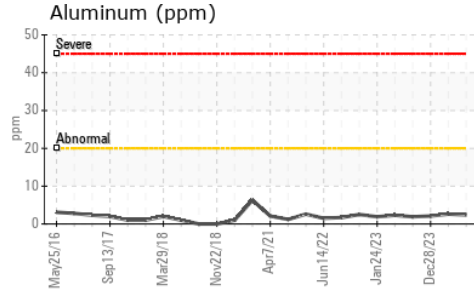
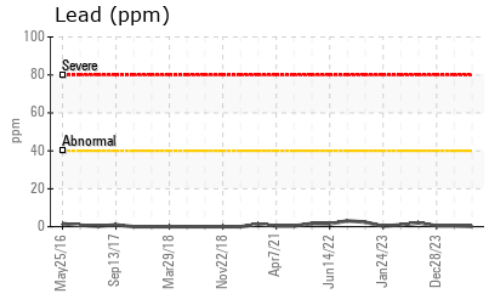
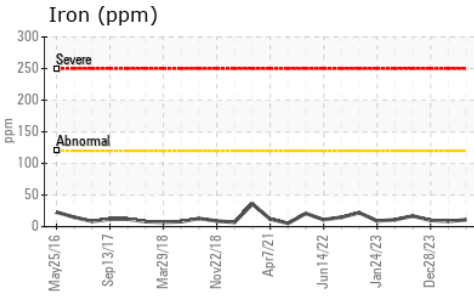


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs/1mm	ASTM D7414*	>25	19.2	17.9	17.1
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	7.55	7.26	7.81

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	12.6	12.9	13.0

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0128177
Lab Number : 02648038
Unique Number : 5813590
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 550 - Rocky View County
 220 Carmek Blvd
 Rocky View County, AB
 CA T1X 1X1
 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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