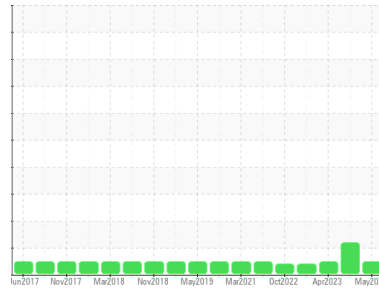




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
4486
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. 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		GFL0117271	GFL0084310	GFL0077570
Sample Date	Client Info		02 May 2024	01 Aug 2023	19 Apr 2023
Machine Age	hrs	Client Info	601	37937	37465
Oil Age	hrs	Client Info	601	474	209
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	ATTENTION	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<1.0	<1.0	0.5
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	0.0	0.0

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	5	33	22
Chromium	ppm	ASTM D5185(m)	>20	0	1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<1	2	2
Lead	ppm	ASTM D5185(m)	>40	0	1	<1
Copper	ppm	ASTM D5185(m)	>330	<1	2	2
Tin	ppm	ASTM D5185(m)	>15	0	<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)	1	79	2	3
Barium	ppm	ASTM D5185(m)	1	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	10	80	57
Manganese	ppm	ASTM D5185(m)	1	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	768	888	894
Calcium	ppm	ASTM D5185(m)	1070	1281	1015	1055
Phosphorus	ppm	ASTM D5185(m)	1150	720	991	1039
Zinc	ppm	ASTM D5185(m)	1270	810	1105	1127
Sulfur	ppm	ASTM D5185(m)	2060	2495	2480	2578
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	2	8	5
Sodium	ppm	ASTM D5185(m)		38	578	48
Potassium	ppm	ASTM D5185(m)	>20	3	20	7

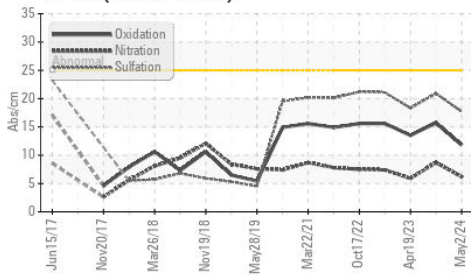
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0	0.5	0.2
Nitration	Abs/cm	ASTM D7624*	>20	6.2	8.7	5.9
Sulfation	Abs./1mm	ASTM D7415*	>30	17.7	20.9	18.3

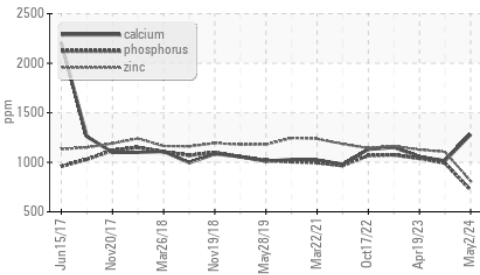


OIL ANALYSIS REPORT

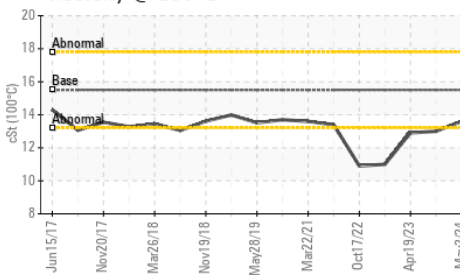
FT-IR (Direct Trend)



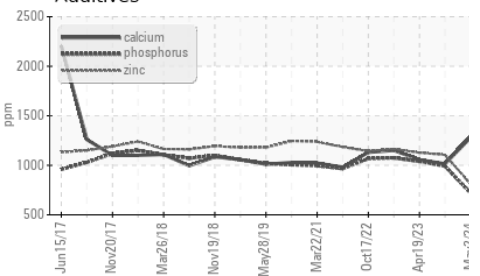
Additives



Viscosity @ 100°C



Additives



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	11.8	15.7	13.5
Base Number (BN)	mg KOH/g ASTM D2896*	9.6	8.57	10.13	9.42

VISUAL

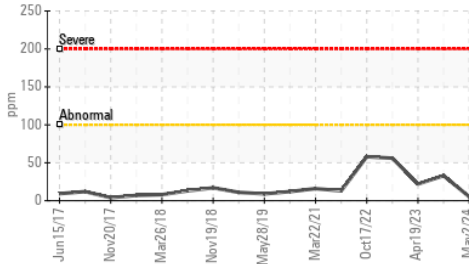
method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES

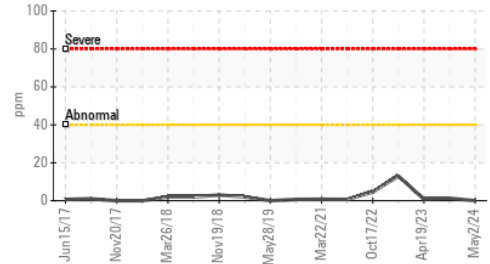
method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.5	13.6	13.0	12.9

GRAPHS

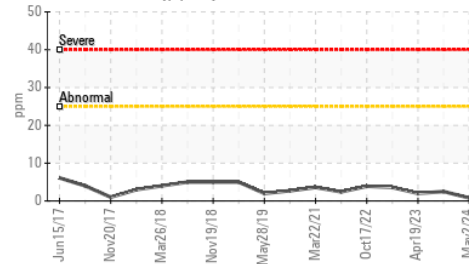
Iron (ppm)



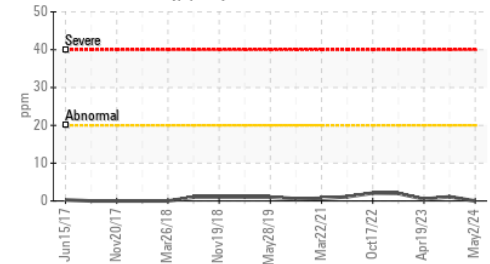
Lead (ppm)



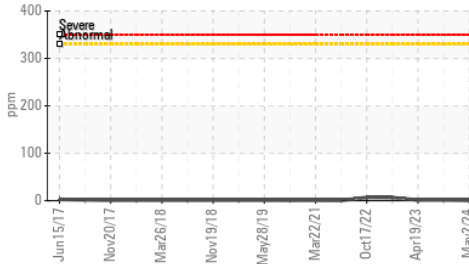
Aluminum (ppm)



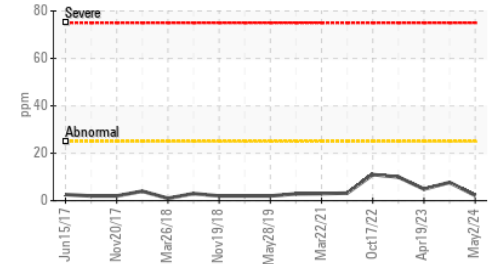
Chromium (ppm)



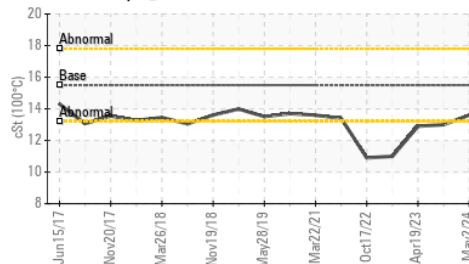
Copper (ppm)



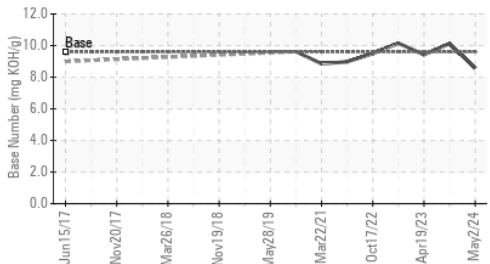
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0117271
Lab Number : 02633822
Unique Number : 5774975
Test Package : MOB 2

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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