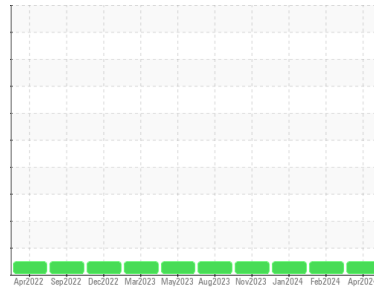




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

421051

Component

Diesel Engine

Fluid

PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)

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		GFL0117266	GFL0112408	GFL0099545
Sample Date	Client Info		18 Apr 2024	13 Feb 2024	02 Jan 2024
Machine Age	hrs	Client Info	5444	4933	4608
Oil Age	hrs	Client Info	0	308	500
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
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)	>80	8	6	6
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>30	4	4	3
Lead	ppm	ASTM D5185(m)	>30	0	0	0
Copper	ppm	ASTM D5185(m)	>150	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>5	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)	1	4	3	2
Barium	ppm	ASTM D5185(m)	1	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	58	58	57
Manganese	ppm	ASTM D5185(m)	1	0	0	0
Magnesium	ppm	ASTM D5185(m)	1010	946	937	927
Calcium	ppm	ASTM D5185(m)	1070	1045	1056	1066
Phosphorus	ppm	ASTM D5185(m)	1150	990	1035	1015
Zinc	ppm	ASTM D5185(m)	1270	1164	1163	1167
Sulfur	ppm	ASTM D5185(m)	2060	2515	2739	2720
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	2	3	2
Sodium	ppm	ASTM D5185(m)		1	1	1
Potassium	ppm	ASTM D5185(m)	>20	3	4	2

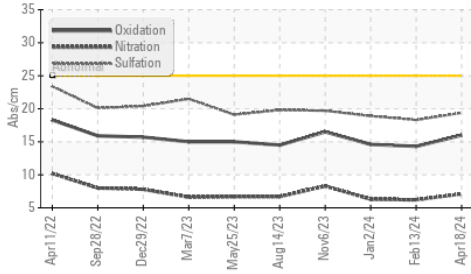
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.2	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	7.1	6.2	6.3
Sulfation	Abs./1mm	ASTM D7415*	>30	19.4	18.3	18.9

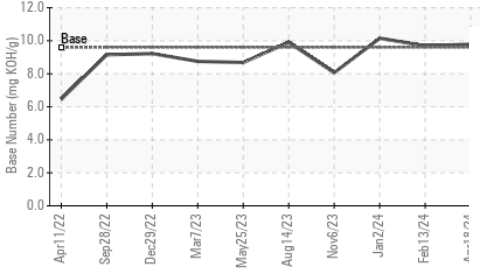


OIL ANALYSIS REPORT

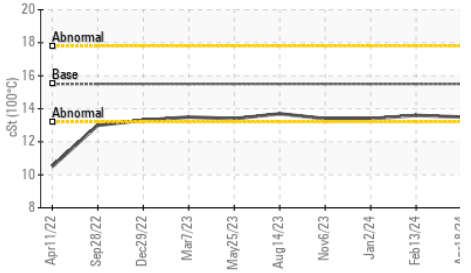
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	16.0	14.3	14.6
Base Number (BN)	mg KOH/g ASTM D2896*	9.6	9.79	9.69	10.15

VISUAL

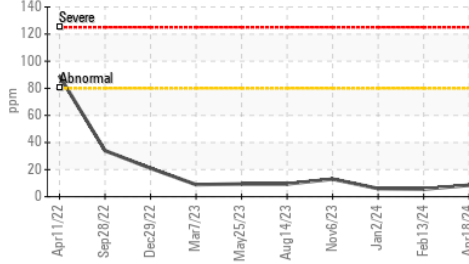
method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES

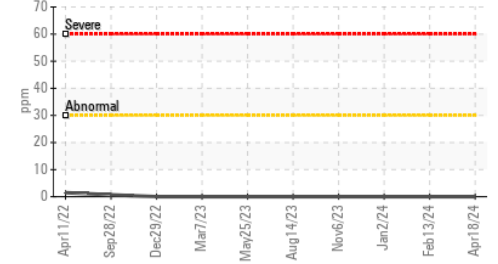
method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.5	13.5	13.6	13.4

GRAPHS

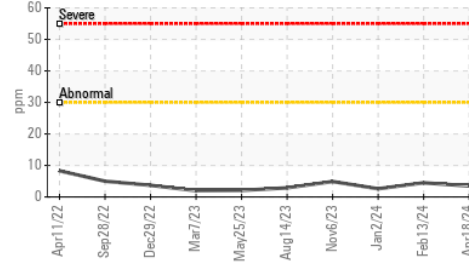
Iron (ppm)



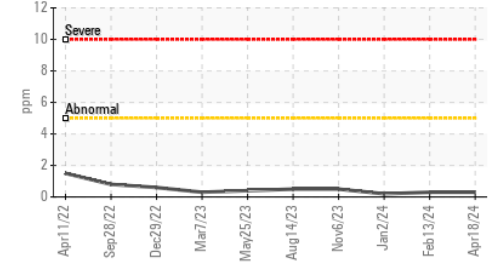
Lead (ppm)



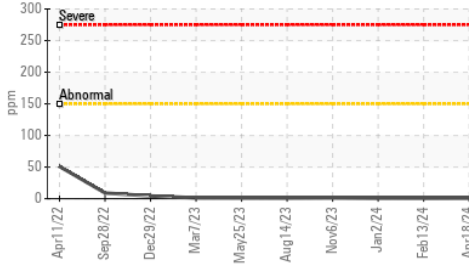
Aluminum (ppm)



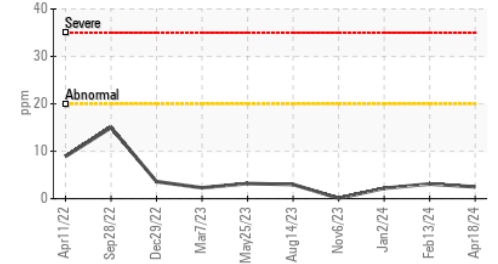
Chromium (ppm)



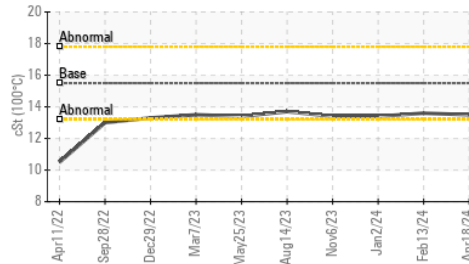
Copper (ppm)



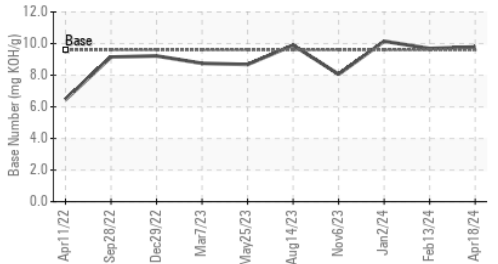
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 550 - Rocky View County**
Sample No. : GFL0117266 **Received** : 23 Apr 2024 220 Carmek Blvd
Lab Number : 02630894 **Tested** : 23 Apr 2024 Rocky View County, AB
Unique Number : 5772047 **Diagnosed** : 23 Apr 2024 - Kevin Marson CA T1X 1X1
Test Package : MOB 2 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.

F: (403)369-6163