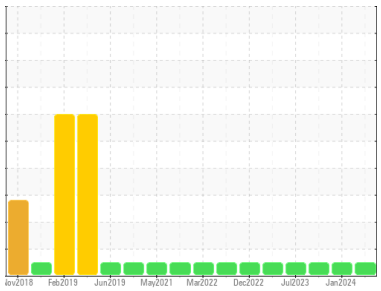
OIL ANALYSIS REPORT

Machine Id
801109
Component
Diesel Engine
Fluid
PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)

Sample Rating Trend



NORMAL

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		**GFL0117273**	GFL0099556	GFL0091599
Sample Date		Client Info		**30 Apr 2024**	18 Jan 2024	08 Nov 2023
Machine Age	hrs	Client Info		**11960**	247185	241633
Oil Age	hrs	Client Info		**588**	0	0
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	**33**	36	65
Chromium	ppm	ASTM D5185(m)	>5	**2**	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	<1
Aluminum	ppm	ASTM D5185(m)	>30	**5**	6	6
Lead	ppm	ASTM D5185(m)	>30	**0**	0	0
Copper	ppm	ASTM D5185(m)	>150	**2**	2	3
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

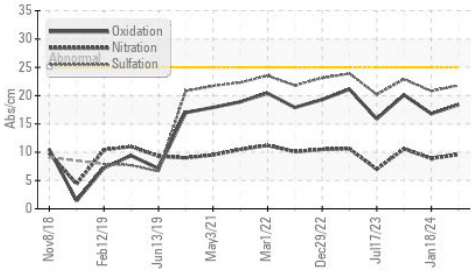
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	1	**2**	2	2
Barium	ppm	ASTM D5185(m)	1	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**61**	58	60
Manganese	ppm	ASTM D5185(m)	1	**<1**	0	0
Magnesium	ppm	ASTM D5185(m)	1010	**988**	922	964
Calcium	ppm	ASTM D5185(m)	1070	**1089**	1055	1071
Phosphorus	ppm	ASTM D5185(m)	1150	**981**	987	989
Zinc	ppm	ASTM D5185(m)	1270	**1220**	1189	1205
Sulfur	ppm	ASTM D5185(m)	2060	**2214**	2553	2328
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**6**	8	6
Sodium	ppm	ASTM D5185(m)		**9**	7	10
Potassium	ppm	ASTM D5185(m)	>20	**1**	1	<1

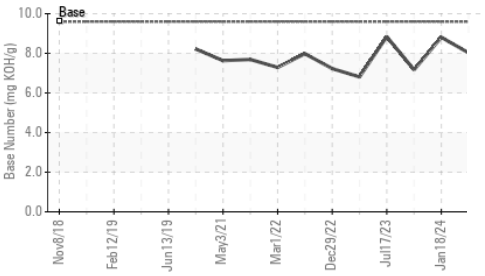
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.8**	0.6	0.8
Nitration	Abs/cm	ASTM D7624*	>20	**9.6**	8.9	10.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.8**	20.8	22.9

OIL ANALYSIS REPORT

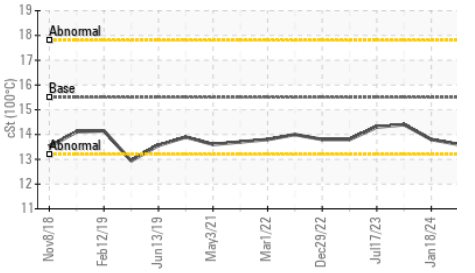
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



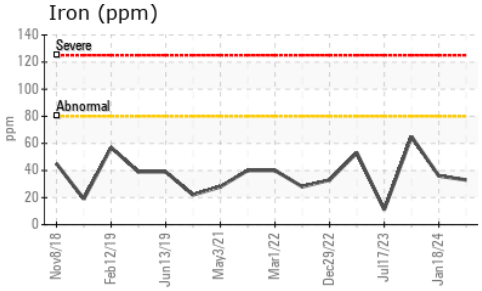
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.4**	16.8	20.1
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	**8.02**	8.81	7.17

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

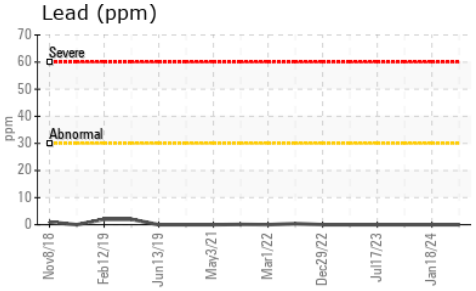
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	**13.6**	13.8	14.4

GRAPHS

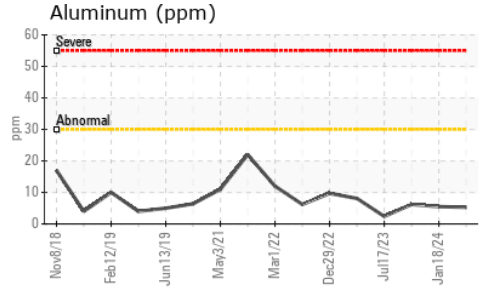
Iron (ppm)



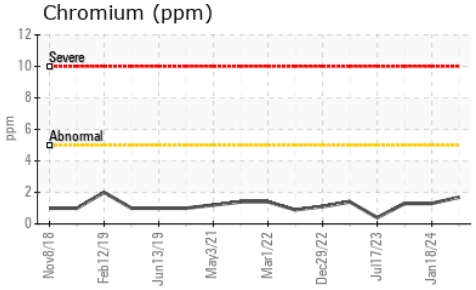
Lead (ppm)



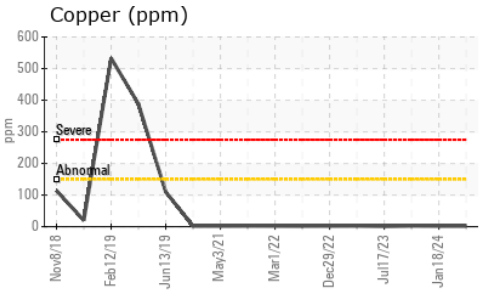
Aluminum (ppm)



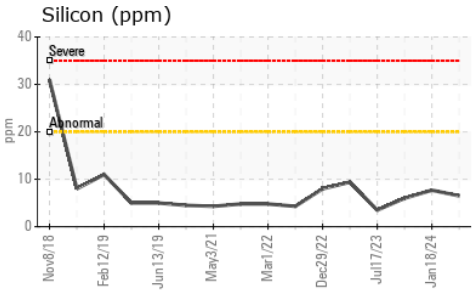
Chromium (ppm)



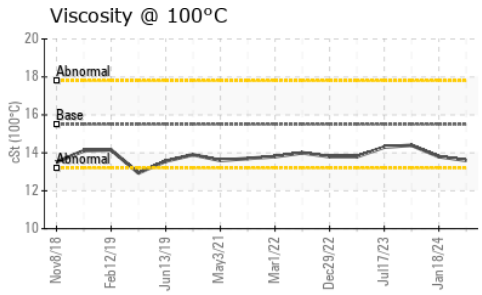
Copper (ppm)



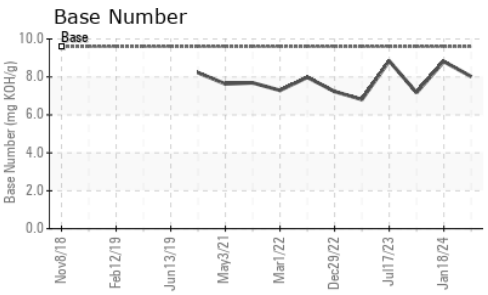
Silicon (ppm)



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0117273
Lab Number : 02633820
Unique Number : 5774973
Test Package : MOB 2

Received : 07 May 2024
Tested : 07 May 2024
Diagnosed : 07 May 2024 - Wes Davis

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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Report Id: GFL550 [WCAMIS] 02633820 (Generated: 05/07/2024 16:29:45) Rev: 1

Submitted By: GFL Calgary