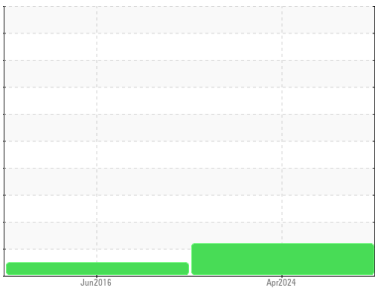
OIL ANALYSIS REPORT

Sample Rating Trend



PH

Machine Id
8264
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. 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 i-pH level is abnormally low. 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 oil is no longer serviceable.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0117299**	PC397896	---
Sample Date		Client Info		**20 Apr 2024**	10 Jun 2016	---
Machine Age	kms	Client Info		**330729**	614	---
Oil Age	kms	Client Info		**0**	0	---
Oil Changed		Client Info		**Changed**	Changed	---
Sample Status				**ABNORMAL**	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	---
Glycol		WC Method		**---**	0.0	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	**16**	37	---
Chromium	ppm	ASTM D5185(m)	>4	**<1**	<1	---
Nickel	ppm	ASTM D5185(m)	>2	**0**	1	---
Titanium	ppm	ASTM D5185(m)		**0**	3	---
Silver	ppm	ASTM D5185(m)	>3	**0**	<1	---
Aluminum	ppm	ASTM D5185(m)	>9	**2**	2	---
Lead	ppm	ASTM D5185(m)	>30	**0**	13	---
Copper	ppm	ASTM D5185(m)	>35	**<1**	351	---
Tin	ppm	ASTM D5185(m)	>4	**0**	1	---
Antimony	ppm	ASTM D5185(m)		**0**	1	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---
Beryllium	ppm	ASTM D5185(m)		**0**	0	---
Cadmium	ppm	ASTM D5185(m)		**0**	0	---

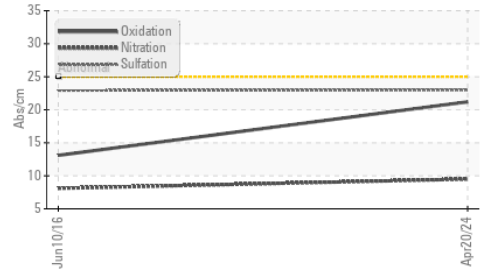
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	50	**4**	3	---
Barium	ppm	ASTM D5185(m)	5	**0**	2	---
Molybdenum	ppm	ASTM D5185(m)	50	**53**	30	---
Manganese	ppm	ASTM D5185(m)	0	**<1**	8	---
Magnesium	ppm	ASTM D5185(m)	560	**865**	117	---
Calcium	ppm	ASTM D5185(m)	1510	**954**	1334	---
Phosphorus	ppm	ASTM D5185(m)	780	**902**	756	---
Zinc	ppm	ASTM D5185(m)	870	**1064**	939	---
Sulfur	ppm	ASTM D5185(m)	2040	**2322**	4519	---
Lithium	ppm	ASTM D5185(m)		**<1**	<1	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	**4**	27	---
Sodium	ppm	ASTM D5185(m)		**5**	3	---
Potassium	ppm	ASTM D5185(m)	>20	**<1**	2	---

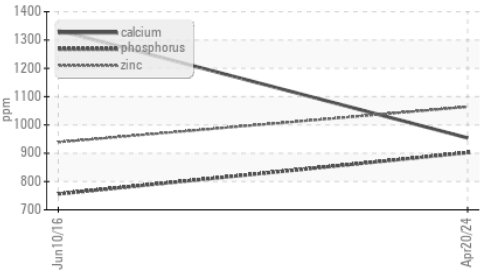
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0.8**	0	---
Nitration	Abs/cm	ASTM D7624*	>20	**9.5**	8.1	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**23.0**	22.9	---

OIL ANALYSIS REPORT

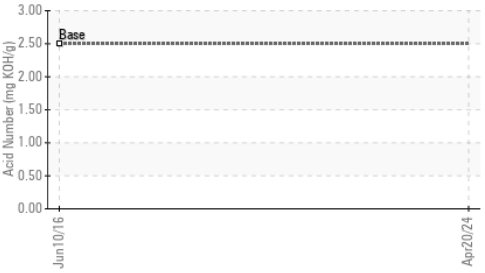
FT-IR (Direct Trend)



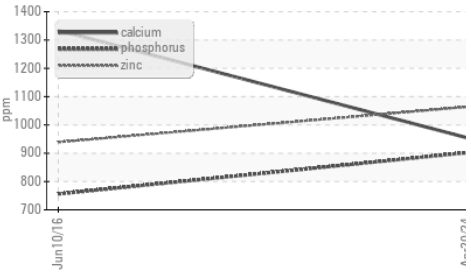
Additives



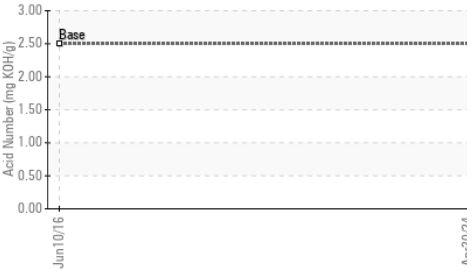
Acid Number



Additives



Acid Number



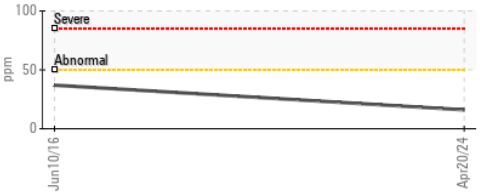
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**21.2**	13.1	---
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	**8.75**	---	---
i-pH	Scale 0-14	ASTM D7946*	<4.5	▲ **4.06**	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	---	---
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	---
Free Water	scalar	Visual*		**NEG**	NEG	---

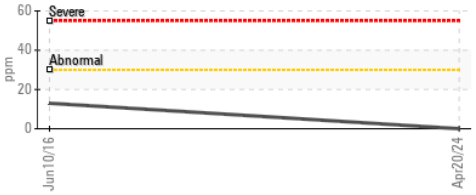
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	**13.3**	13.2	---

GRAPHS

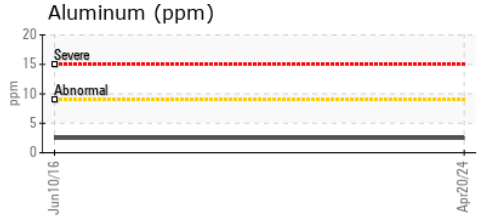
Iron (ppm)



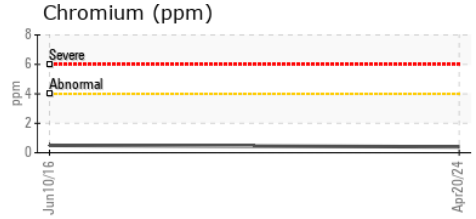
Lead (ppm)



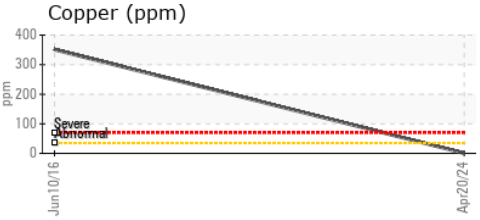
Aluminum (ppm)



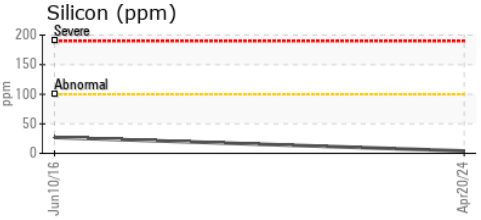
Chromium (ppm)



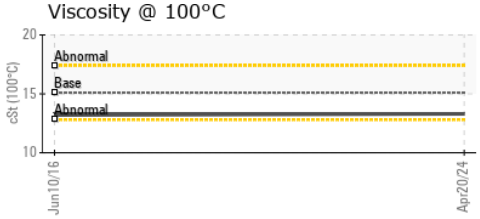
Copper (ppm)



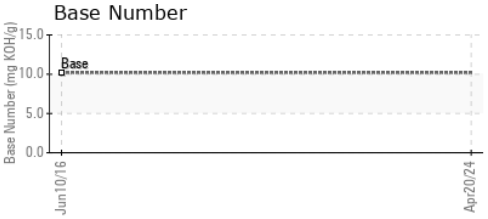
Silicon (ppm)



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0117299
Lab Number : 02632474
Unique Number : 5773627
Test Package : MOB 2 (Additional Tests: i-pH, TAN Auto, TAN Man, Visual)

Received : 01 May 2024
Tested : 02 May 2024
Diagnosed : 02 May 2024 - Kevin Marson

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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