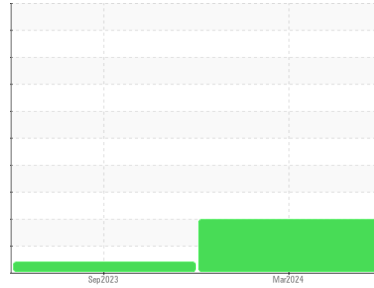


OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
433002

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (36 QTS)

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

▲ Wear

Cylinder, crank, or cam shaft wear is indicated.

● Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

● Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0113449	PCA0101729	---
Sample Date	Client Info	25 Mar 2024	05 Sep 2023	---
Machine Age	hrs	1162	59	---
Oil Age	hrs	1162	59	---
Oil Changed	Client Info	Changed	Not Changd	---
Sample Status		ABNORMAL	ATTENTION	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	NEG	NEG	---

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>50	▲ 69	41	---
Chromium	ppm	ASTM D5185m	>4	▲ 7	2	---
Nickel	ppm	ASTM D5185m	>2	<1	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>9	72	6	---
Lead	ppm	ASTM D5185m	>30	8	2	---
Copper	ppm	ASTM D5185m	>35	13	12	---
Tin	ppm	ASTM D5185m	>4	2	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
Cadmium	ppm	ASTM D5185m		0	0	---

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	50	14	42	---
Barium	ppm	ASTM D5185m	5	0	0	---
Molybdenum	ppm	ASTM D5185m	50	55	56	---
Manganese	ppm	ASTM D5185m	0	5	4	---
Magnesium	ppm	ASTM D5185m	560	794	855	---
Calcium	ppm	ASTM D5185m	1510	1362	1365	---
Phosphorus	ppm	ASTM D5185m	780	760	783	---
Zinc	ppm	ASTM D5185m	870	909	955	---
Sulfur	ppm	ASTM D5185m	2040	2830	3021	---

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>+100	73	90	---
Sodium	ppm	ASTM D5185m		6	12	---
Potassium	ppm	ASTM D5185m	>20	226	44	---

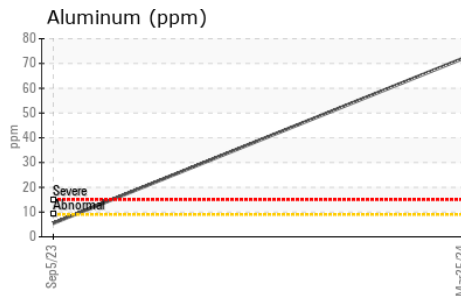
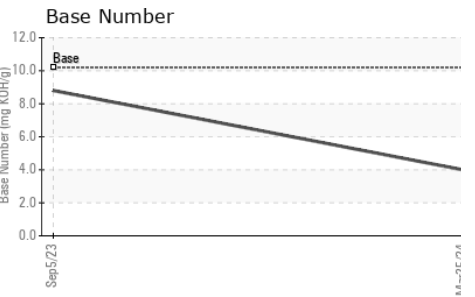
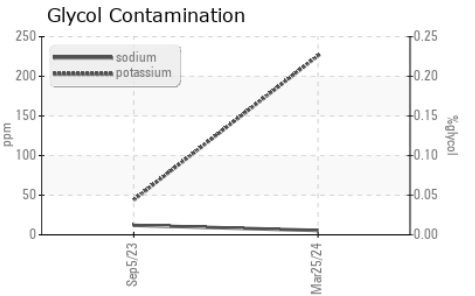
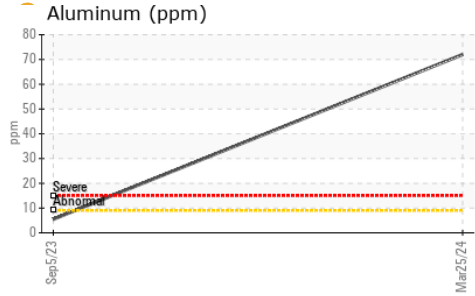
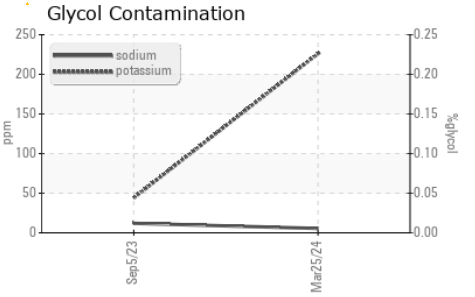
INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	11.7	6.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.2	19.2	---

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.9	15.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	4.0	8.8	---

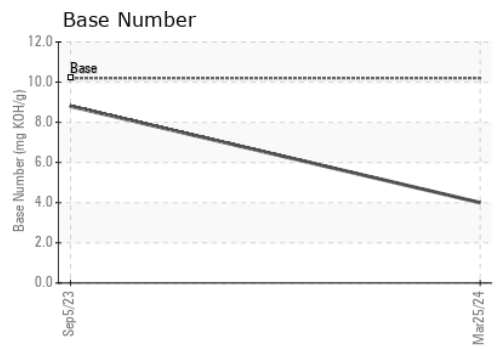
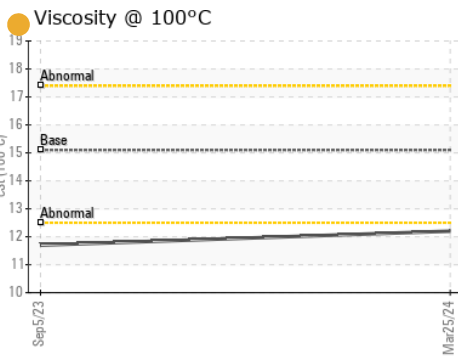
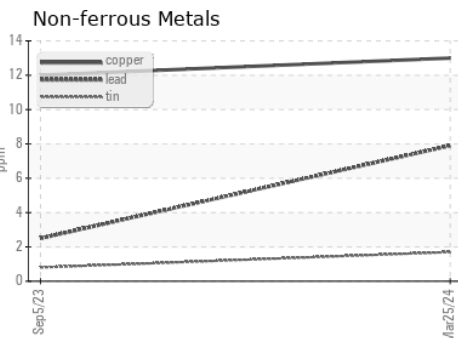
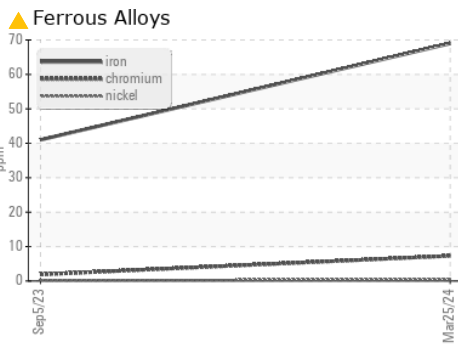
OIL ANALYSIS REPORT



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	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	● 12.2	● 11.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0113449 **Received** : 26 Mar 2024
Lab Number : 06129224 **Tested** : 27 Mar 2024
Unique Number : 10943375 **Diagnosed** : 28 Mar 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 002 - Vance-Granville
 241 Vanco Mill Rd
 Henderson, NC
 US 27537
 Contact: Cameron King
 cameron.king@gflenv.com
 T: (252)438-5333
 F: (252)431-1635

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)