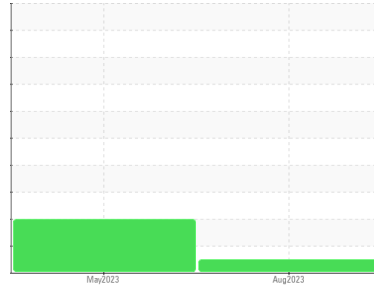




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
525094

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

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. 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		GFL0082275	GFL0082284	---
Sample Date	Client Info		25 Aug 2023	09 May 2023	---
Machine Age	hrs	Client Info	17467	736205	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	ABNORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<1.0	<1.0	---

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	37	38	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>2	<1	<1	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	45	▲ 30	---
Lead	ppm	ASTM D5185m	>40	<1	0	---
Copper	ppm	ASTM D5185m	>330	2	4	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	2	4	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	60	60	52	---
Manganese	ppm	ASTM D5185m	0	<1	<1	---
Magnesium	ppm	ASTM D5185m	1010	991	896	---
Calcium	ppm	ASTM D5185m	1070	1154	1223	---
Phosphorus	ppm	ASTM D5185m	1150	1027	931	---
Zinc	ppm	ASTM D5185m	1270	1323	1180	---
Sulfur	ppm	ASTM D5185m	2060	3058	3107	---

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	5	5	---
Sodium	ppm	ASTM D5185m		14	11	---
Potassium	ppm	ASTM D5185m	>20	81	▲ 66	---
Glycol	%	*ASTM D2982		0.0	NEG	---

INFRA-RED

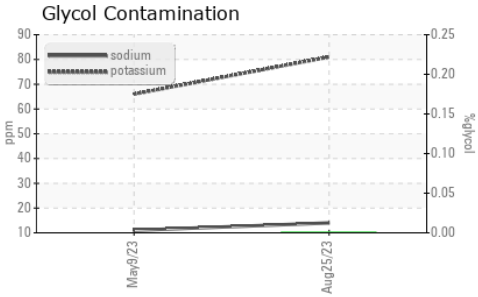
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.5	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	11.2	10.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.5	23.5	---

FLUID DEGRADATION

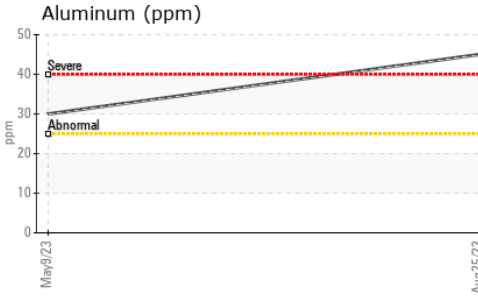
	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.6	20.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	3.9	5.3	---



OIL ANALYSIS REPORT

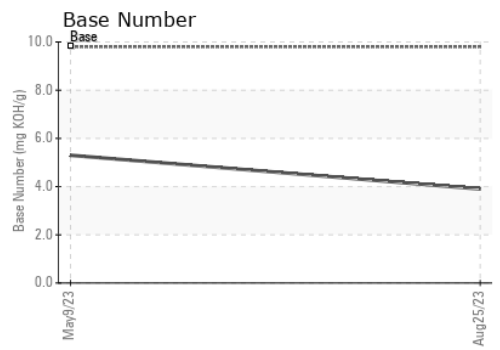
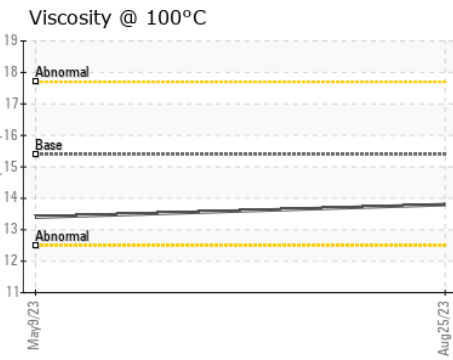
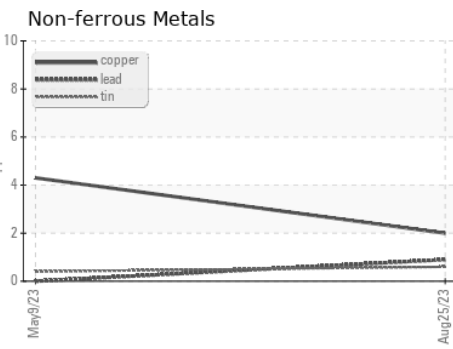
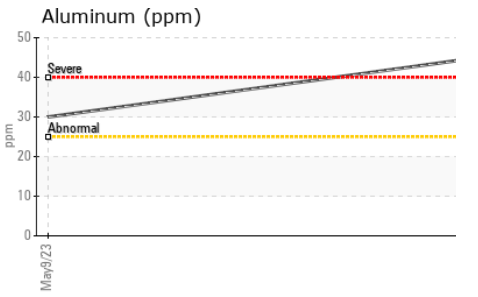
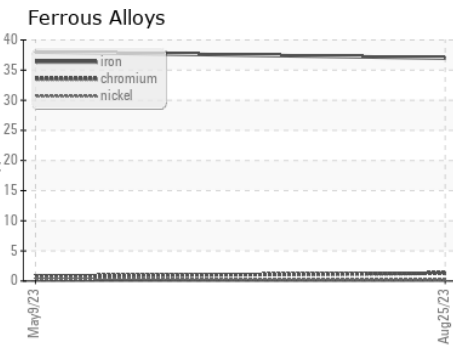
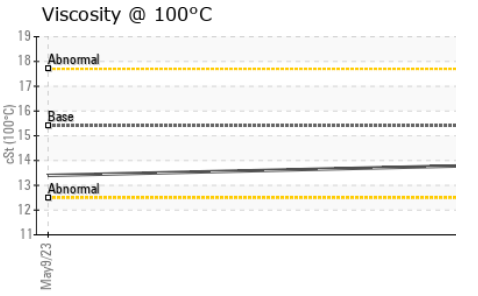


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0082275 **Received** : 30 Aug 2023
Lab Number : **05938123** **Diagnosed** : 04 Sep 2023
Unique Number : 10628735 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 963 - Peoria HC Disposal
 1113 N. Swords Ave.
 West Peoria, IL
 US 61604
 Contact: Corey Dozard
 cdozard@gflenv.com

Certificate L2367
 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)