



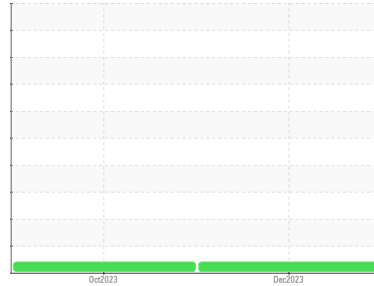
OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Area
{UNASSIGNED}
 Machine Id
914024
 Component
1 Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (9 GAL)



DIAGNOSIS

▲ Recommendation

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

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination 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		GFL0097741	GFL0087277	---
Sample Date	Client Info		08 Dec 2023	02 Oct 2023	---
Machine Age	hrs	Client Info	1203	660	---
Oil Age	hrs	Client Info	543	660	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			ATTENTION	ATTENTION	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	50	51	---
Chromium	ppm	ASTM D5185m >20	1	1	---
Nickel	ppm	ASTM D5185m >5	3	4	---
Titanium	ppm	ASTM D5185m >2	0	<1	---
Silver	ppm	ASTM D5185m >2	<1	<1	---
Aluminum	ppm	ASTM D5185m >20	3	5	---
Lead	ppm	ASTM D5185m >40	0	0	---
Copper	ppm	ASTM D5185m >330	126	328	---
Tin	ppm	ASTM D5185m >15	3	3	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	63	204	---
Barium	ppm	ASTM D5185m 0	0	0	---
Molybdenum	ppm	ASTM D5185m 60	90	122	---
Manganese	ppm	ASTM D5185m 0	4	5	---
Magnesium	ppm	ASTM D5185m 1010	771	669	---
Calcium	ppm	ASTM D5185m 1070	1241	1425	---
Phosphorus	ppm	ASTM D5185m 1150	725	681	---
Zinc	ppm	ASTM D5185m 1270	964	855	---
Sulfur	ppm	ASTM D5185m 2060	1962	2539	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	38	69	---
Sodium	ppm	ASTM D5185m	3	2	---
Potassium	ppm	ASTM D5185m >20	5	10	---
Fuel	%	ASTM D3524 >3.0	<1.0	0.4	---

INFRA-RED

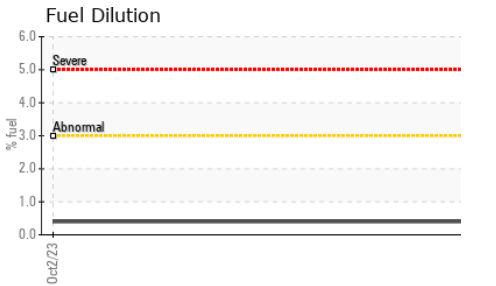
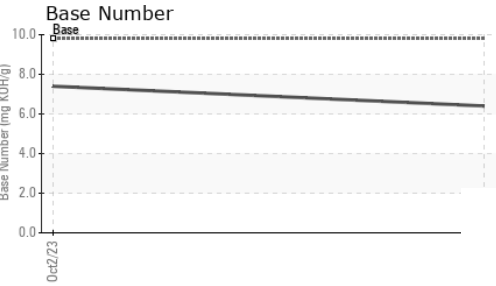
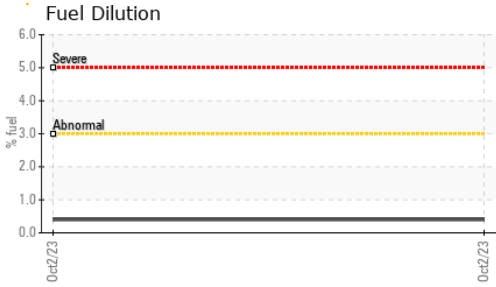
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.8	0.6	---
Nitration	Abs/cm	*ASTM D7624 >20	9.9	9.6	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.4	23.4	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	21.7	21.8	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	6.4	7.4	---



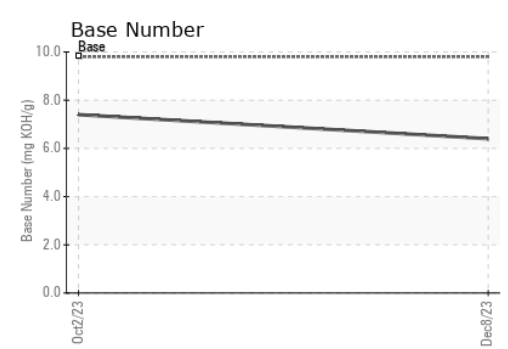
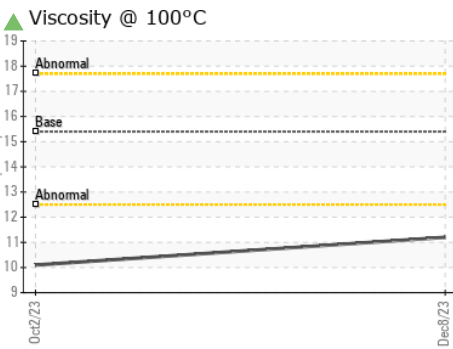
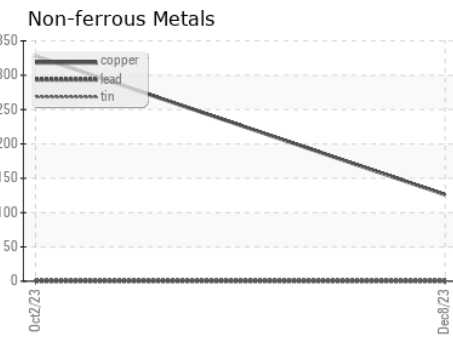
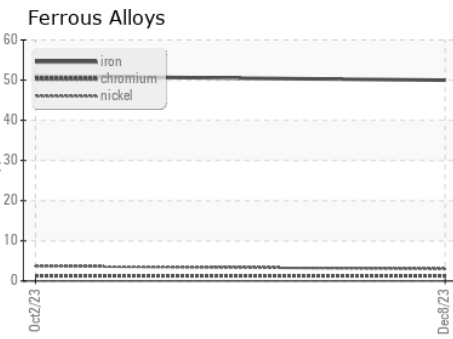
OIL ANALYSIS REPORT



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 ▲ 11.2	▲ 10.1	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0097741 **Received** : 18 Dec 2023
Lab Number : 06037521 **Diagnosed** : 20 Dec 2023
Unique Number : 10792750 **Diagnostician** : Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution)

GFL Environmental - 405 - Arbor Hills
 7400 Napier Rd
 NORTHVILLE, MI
 US 48168
 Contact: Anthony Hopkins
 ahopkins@gflenv.com
 T:
 F:

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)