

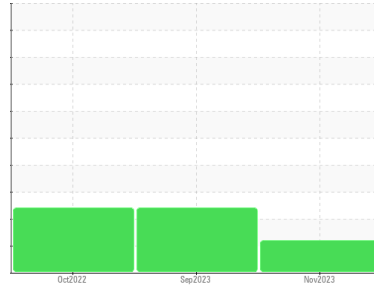


PROBLEM SUMMARY



Machine Id
4581M
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend

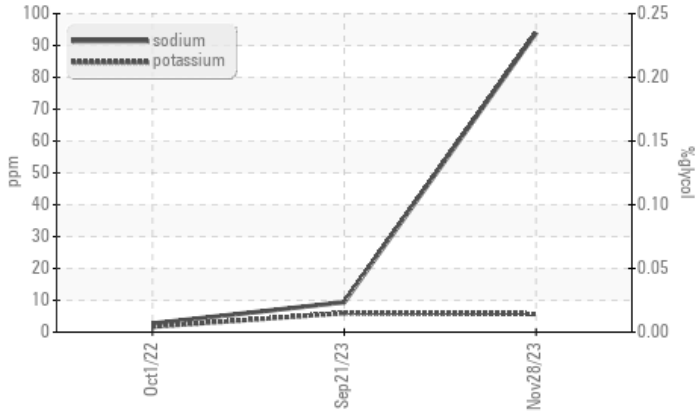


GLYCOL



COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status	ATTENTION	ABNORMAL	SEVERE
Sodium ppm ASTM D5185m	▲ 94	9	3

Customer Id: GFL405
 Sample No.: GFL0097732
 Lab Number: 06025987
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

21 Sep 2023 Diag: Don Baldrige

DIRT



We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

[view report](#)



01 Oct 2022 Diag: Jonathan Hester

FUEL



We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

[view report](#)





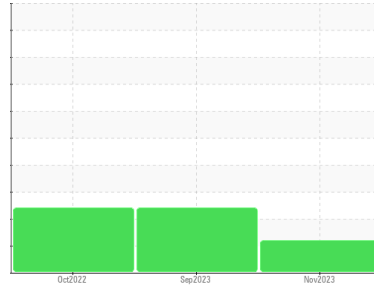
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id
4581M
 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

Sodium and/or potassium levels are high. Test for glycol is negative.

▲ 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	GFL0097732	GFL0084952	GFL0059176
Sample Date	Client Info	28 Nov 2023	21 Sep 2023	01 Oct 2022
Machine Age	hrs	23175	22656	21286
Oil Age	hrs	519	1370	21286
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ATTENTION	ABNORMAL	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	0.7	23.4
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >90	50	42	5
Chromium	ppm ASTM D5185m >20	4	2	1
Nickel	ppm ASTM D5185m >2	1	0	0
Titanium	ppm ASTM D5185m >2	<1	<1	0
Silver	ppm ASTM D5185m >2	0	1	0
Aluminum	ppm ASTM D5185m >20	3	14	<1
Lead	ppm ASTM D5185m >40	<1	<1	<1
Copper	ppm ASTM D5185m >330	13	7	<1
Tin	ppm ASTM D5185m >15	<1	<1	0
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	2	4	2
Barium	ppm ASTM D5185m 0	0	0	<1
Molybdenum	ppm ASTM D5185m 60	65	65	49
Manganese	ppm ASTM D5185m 0	2	1	0
Magnesium	ppm ASTM D5185m 1010	858	1002	726
Calcium	ppm ASTM D5185m 1070	1055	1201	872
Phosphorus	ppm ASTM D5185m 1150	896	1080	789
Zinc	ppm ASTM D5185m 1270	1196	1346	969
Sulfur	ppm ASTM D5185m 2060	2494	3477	2539

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	16	33	2
Sodium	ppm ASTM D5185m	94	9	3
Potassium	ppm ASTM D5185m >20	6	6	2
Glycol	% *ASTM D2982	NEG	NEG	NEG

INFRA-RED

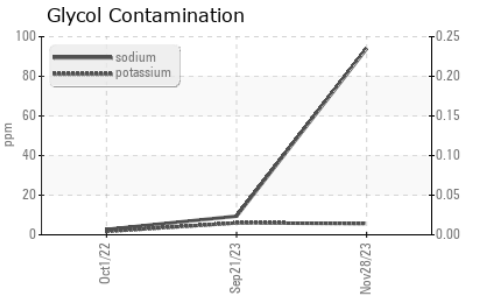
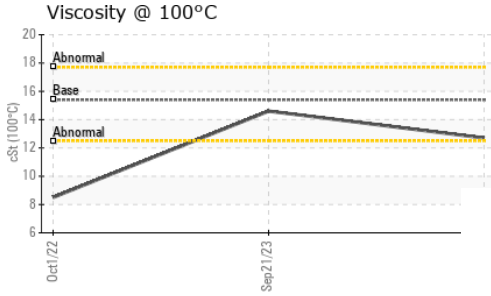
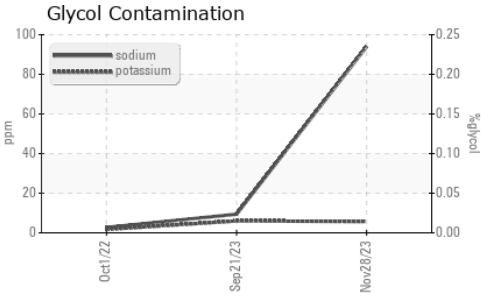
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.8	0.6	0.3
Nitration	Abs/cm *ASTM D7624 >20	11.2	10.4	13.3
Sulfation	Abs/.1mm *ASTM D7415 >30	21.3	21.5	22.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	17.8	19.5	25.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.1	7.5	7.3



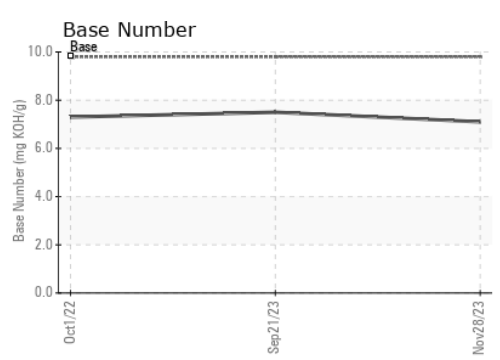
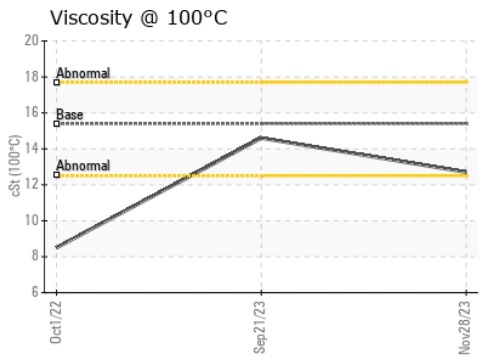
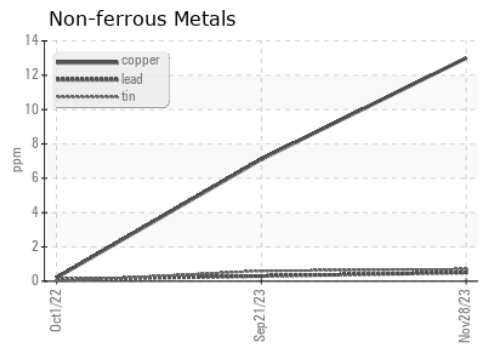
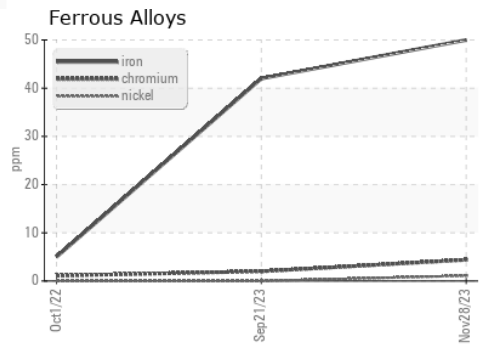
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.7	14.6 ▲ 8.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0097732 **Received** : 06 Dec 2023
Lab Number : 06025987 **Diagnosed** : 07 Dec 2023
Unique Number : 10775778 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

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

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)