



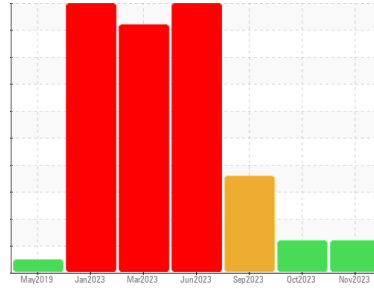
PROBLEM SUMMARY

Machine Id
921047-260381

Component
Diesel Engine

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

Sample Rating Trend

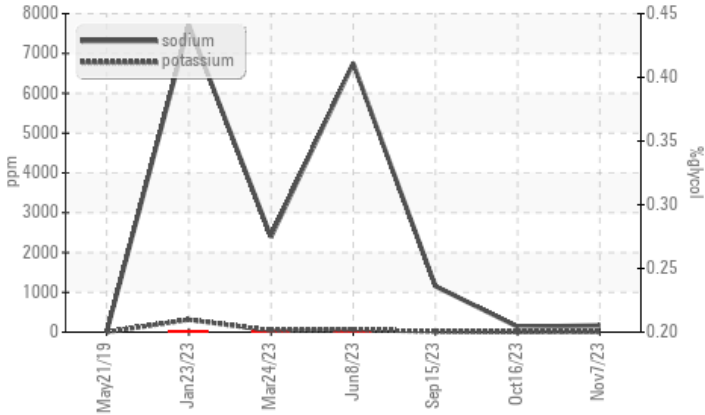


GLYCOL



COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status	ATTENTION	ATTENTION	ABNORMAL		
Sodium	ppm	ASTM D5185m	▲ 168	▲ 136	▲ 1154

Customer Id: GFL837
Sample No.: GFL0098578
Lab Number: 06011271
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

16 Oct 2023 Diag: Jonathan Hester

GLYCOL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is negative. 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



15 Sep 2023 Diag: Jonathan Hester

DIRT



We advise that you check for the source of the coolant leak. Check for low coolant level. 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. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. 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.

view report



08 Jun 2023 Diag: Jonathan Hester

GLYCOL



We advise that you check for the source of the coolant leak. Check for low coolant level. 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. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

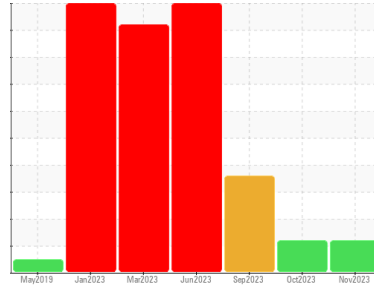
view report





OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
921047-260381

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. 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	GFL0098578	GFL0093689	GFL0087718
Sample Date	Client Info	07 Nov 2023	16 Oct 2023	15 Sep 2023
Machine Age	hrs	6600	6492	6320
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Not Changed	Not Changed	Changed
Sample Status		ATTENTION	ATTENTION	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	13	7	27
Chromium	ppm ASTM D5185m >20	<1	<1	2
Nickel	ppm ASTM D5185m >4	0	<1	0
Titanium	ppm ASTM D5185m	<1	<1	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	5	2	▲ 8
Lead	ppm ASTM D5185m >40	0	<1	<1
Copper	ppm ASTM D5185m >330	2	2	10
Tin	ppm ASTM D5185m >15	0	0	<1
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	<1	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	6	6	41
Barium	ppm ASTM D5185m 0	<1	3	0
Molybdenum	ppm ASTM D5185m 60	77	66	93
Manganese	ppm ASTM D5185m 0	0	0	<1
Magnesium	ppm ASTM D5185m 1010	1115	903	951
Calcium	ppm ASTM D5185m 1070	1199	1057	1201
Phosphorus	ppm ASTM D5185m 1150	1172	965	980
Zinc	ppm ASTM D5185m 1270	1420	1208	1274
Sulfur	ppm ASTM D5185m 2060	4343	3192	3714

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	9	7	▲ 27
Sodium	ppm ASTM D5185m	▲ 168	▲ 136	▲ 1154
Potassium	ppm ASTM D5185m >20	8	4	15
Glycol	% *ASTM D2982	NEG	NEG	NEG

INFRA-RED

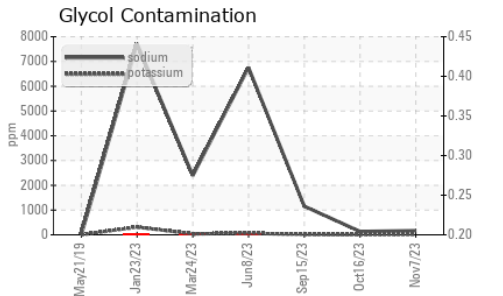
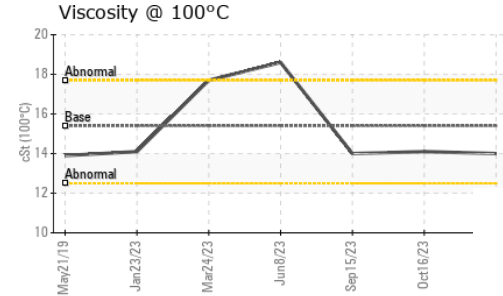
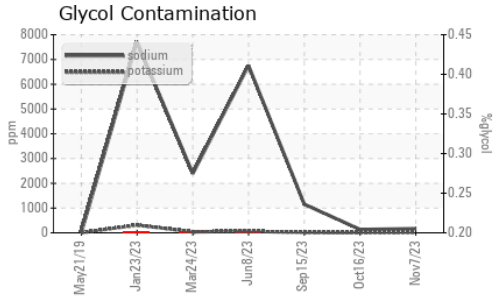
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.4	0.2	0.5
Nitration	Abs/cm *ASTM D7624 >20	6.3	5.6	10.0
Sulfation	Abs/.1mm *ASTM D7415 >30	19.1	18.3	20.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.0	13.6	15.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.8	9.1	9.8



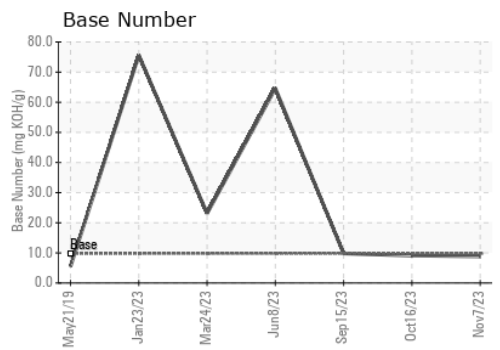
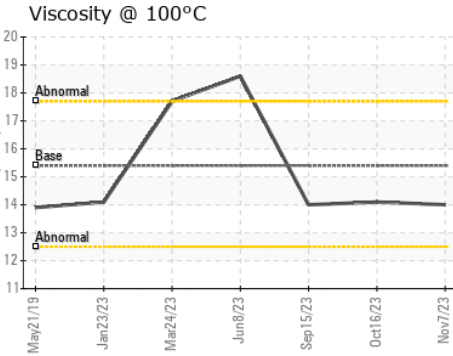
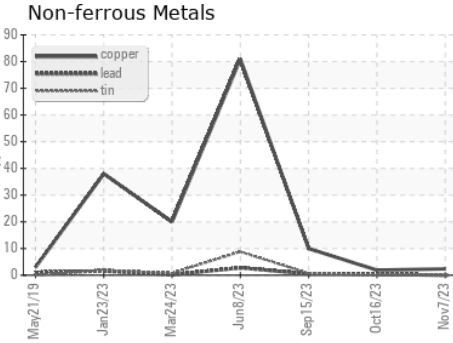
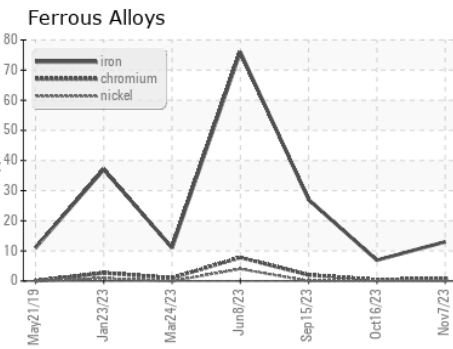
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	LIGHT	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	14.0	14.1	14.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098578 **Received** : 17 Nov 2023
Lab Number : 06011271 **Diagnosed** : 21 Nov 2023
Unique Number : 10750415 **Diagnostician** : Sean Felton
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 837 - Harrison TS
 22820 S State Route 291
 Harrisonville, MO
 US 64701
 Contact: BRYAN SWANSON
 bryanswanson@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)