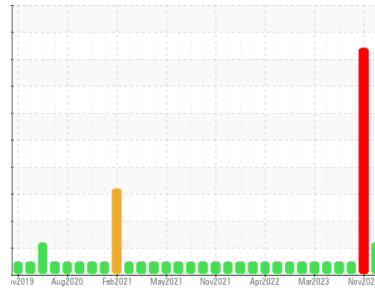




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
10978

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (5 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 remain elevated. 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	GFL0088504	GFL0098101	GFL0088572
Sample Date	Client Info	04 Jan 2024	01 Nov 2023	17 Jul 2023
Machine Age	hrs	1432	1432	1432
Oil Age	hrs	300	530	140
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ATTENTION	SEVERE	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<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 >75	8	32	9
Chromium	ppm ASTM D5185m >5	<1	1	<1
Nickel	ppm ASTM D5185m >4	0	<1	<1
Titanium	ppm ASTM D5185m >2	0	0	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >15	2	5	2
Lead	ppm ASTM D5185m >25	0	0	0
Copper	ppm ASTM D5185m >100	2	19	<1
Tin	ppm ASTM D5185m >4	<1	0	<1
Vanadium	ppm ASTM D5185m	0	0	<1
Cadmium	ppm ASTM D5185m	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	3	17	6
Barium	ppm ASTM D5185m 0	0	<1	1
Molybdenum	ppm ASTM D5185m 60	58	86	60
Manganese	ppm ASTM D5185m 0	<1	2	<1
Magnesium	ppm ASTM D5185m 1010	910	877	997
Calcium	ppm ASTM D5185m 1070	1028	1277	1229
Phosphorus	ppm ASTM D5185m 1150	1003	931	1064
Zinc	ppm ASTM D5185m 1270	1223	1251	1364
Sulfur	ppm ASTM D5185m 2060	2921	3465	3860

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	19	5
Sodium	ppm ASTM D5185m	35	▲ 739	13
Potassium	ppm ASTM D5185m >20	▲ 57	▲ 1101	10
Glycol	% *ASTM D2982	NEG	◆ 0.12	NEG

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.5	0.9	0.6
Nitration	Abs/cm *ASTM D7624 >20	7.0	11.7	6.8
Sulfation	Abs/.1mm *ASTM D7415 >30	19.2	22.2	19.1

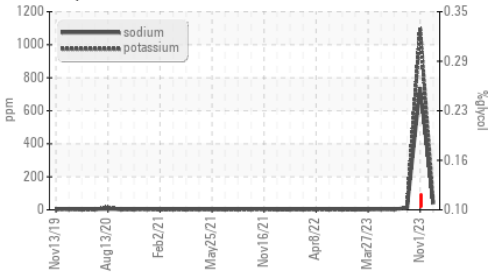
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.3	16.2	14.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.8	9.5	8.9

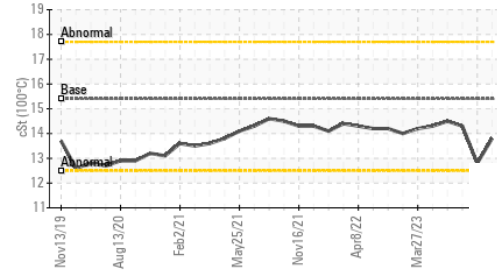


OIL ANALYSIS REPORT

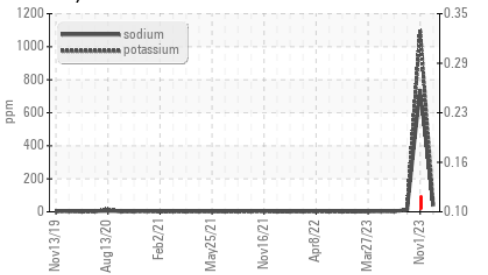
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

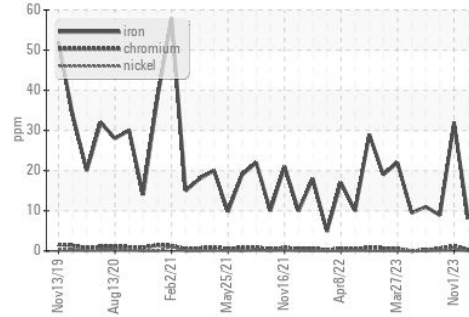


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

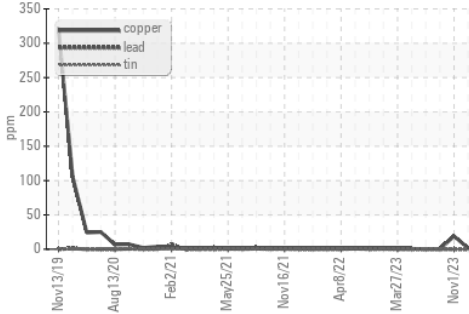
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	12.8	14.3

GRAPHS

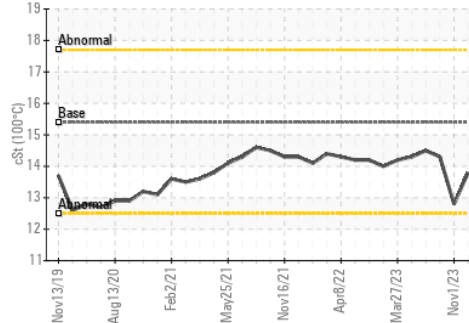
Ferrous Alloys



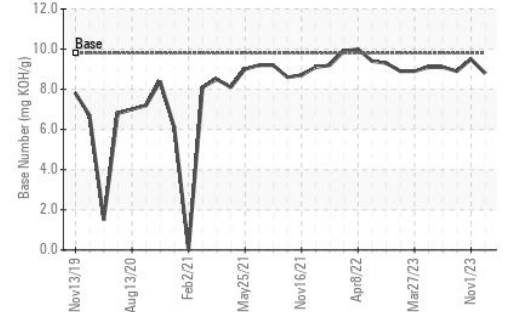
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0088504
 Lab Number : 06051400
 Unique Number : 10817349
 Test Package : FLEET

Recieved : 04 Jan 2024
 Diagnosed : 08 Jan 2024
 Diagnostician : Jonathan Hester

GFL Environmental - 017 - Durham
 148 Stone Park Court
 Durham, NC
 US 27703
 Contact: Shane Parks
 shane.parks@gflenv.com
 T: (919)596-1363
 F: (919)598-1852

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)