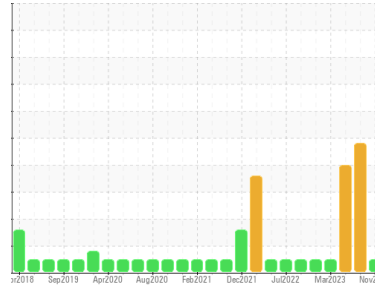




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
GFL035
 Machine Id
3792
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (38 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Test for glycol is negative. 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	GFL0102292	GFL0071614	GFL0071556
Sample Date	Client Info	17 Nov 2023	30 Aug 2023	29 Jun 2023
Machine Age	hrs	Client Info	7176	7176
Oil Age	hrs	Client Info	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	ABNORMAL	ABNORMAL

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 >165	5	22	18
Chromium	ppm	ASTM D5185m >5	<1	<1	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	1	2	2
Lead	ppm	ASTM D5185m >150	<1	4	5
Copper	ppm	ASTM D5185m >90	<1	<1	1
Tin	ppm	ASTM D5185m >5	0	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	4	4	3
Barium	ppm	ASTM D5185m 0	0	0	2
Molybdenum	ppm	ASTM D5185m 60	62	66	74
Manganese	ppm	ASTM D5185m 0	0	<1	<1
Magnesium	ppm	ASTM D5185m 1010	920	944	952
Calcium	ppm	ASTM D5185m 1070	1087	1146	1208
Phosphorus	ppm	ASTM D5185m 1150	991	1059	1119
Zinc	ppm	ASTM D5185m 1270	1209	1261	1287
Sulfur	ppm	ASTM D5185m 2060	3297	3015	3456

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >35	6	19	▲ 37
Sodium	ppm	ASTM D5185m	2	▲ 53	▲ 48
Potassium	ppm	ASTM D5185m >20	9	▲ 347	▲ 390
Glycol	%	*ASTM D2982	0.0	▲ 0.06	NEG

INFRA-RED

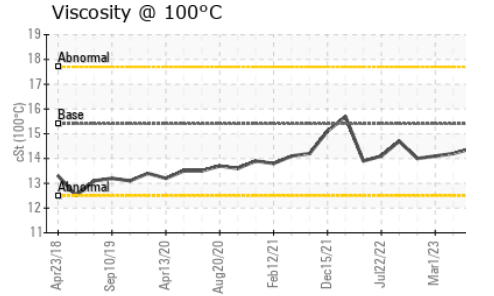
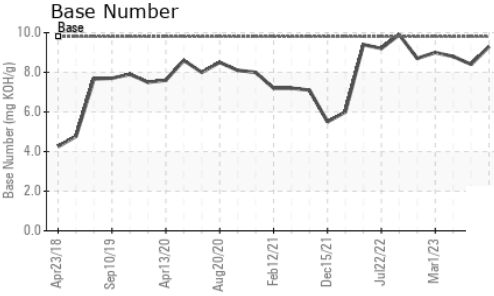
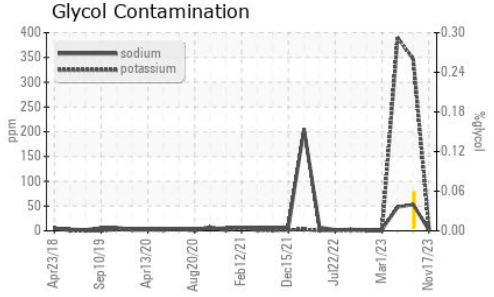
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >7.5	0.2	0.9	0.9
Nitration	Abs/cm	*ASTM D7624 >20	5.5	12.1	11.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.6	25.5	25.8

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.2	21.7	22.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.3	8.4	8.8



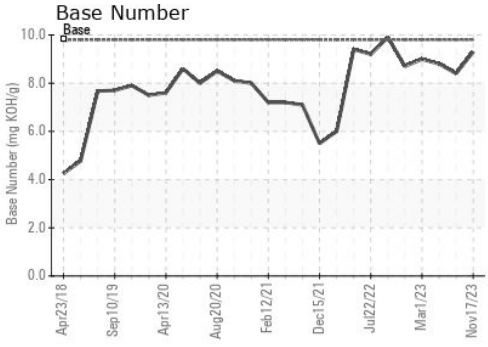
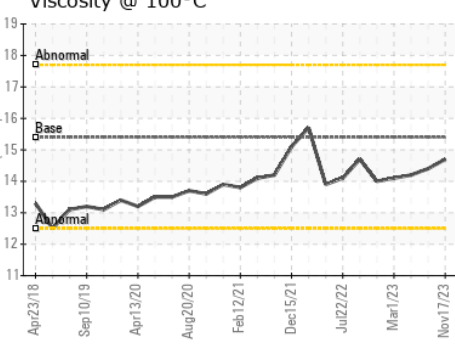
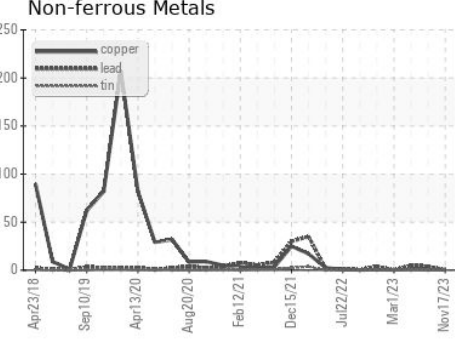
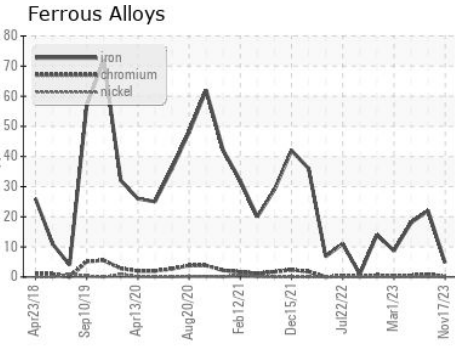
OIL ANALYSIS REPORT



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	14.7	14.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102292 **Received** : 20 Nov 2023
Lab Number : 06012180 **Diagnosed** : 21 Nov 2023
Unique Number : 10751324 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 035 - Greensboro
 1236 Elon Place
 High Point, NC
 US 27263
 Contact: JORGE COSTA
 jorge.costa@gflenv.com
 T: (336)668-3712
 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)