

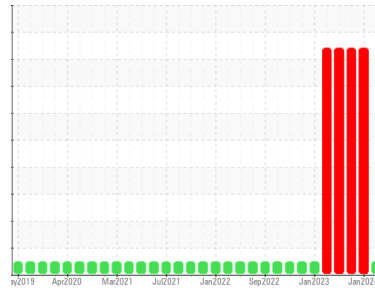


OIL ANALYSIS REPORT



Area
(YA130540)
Machine Id
2842
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (10 GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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		GFL0111027	GFL0098514	GFL0098494
Sample Date	Client Info		05 Apr 2024	24 Jan 2024	28 Dec 2023
Machine Age	mls	Client Info	17446	16987	16795
Oil Age	mls	Client Info	459	192	1080
Oil Changed	Client Info		Not Chngd	Changed	Changed
Sample Status			NORMAL	SEVERE	SEVERE

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 >80	10	8	10
Chromium	ppm	ASTM D5185m >5	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	<1	<1
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >30	2	4	3
Lead	ppm	ASTM D5185m >30	0	0	0
Copper	ppm	ASTM D5185m >150	2	3	2
Tin	ppm	ASTM D5185m >5	<1	<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	3	2	2
Barium	ppm	ASTM D5185m 0	0	<1	0
Molybdenum	ppm	ASTM D5185m 60	60	62	63
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	911	934	959
Calcium	ppm	ASTM D5185m 1070	1070	1064	1056
Phosphorus	ppm	ASTM D5185m 1150	1027	1041	1055
Zinc	ppm	ASTM D5185m 1270	1219	1258	1292
Sulfur	ppm	ASTM D5185m 2060	3354	2855	3081

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	4	4	4
Sodium	ppm	ASTM D5185m	12	▲ 36	▲ 36
Potassium	ppm	ASTM D5185m >20	93	▲ 240	▲ 236
Glycol	%	*ASTM D2982	0.0	▲ 0.10	▲ 0.10

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.4	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	7.2	7.9	7.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.0	19.7	19.4

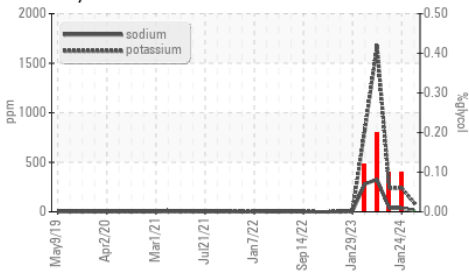
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.4	14.9	14.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.3	8.1	8.5

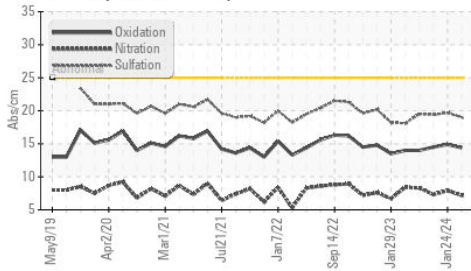


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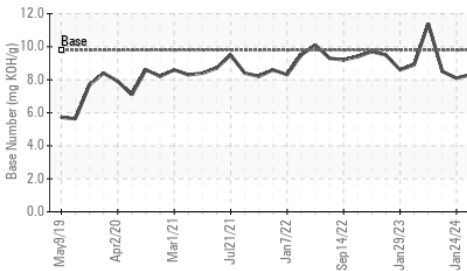
Glycol Contamination



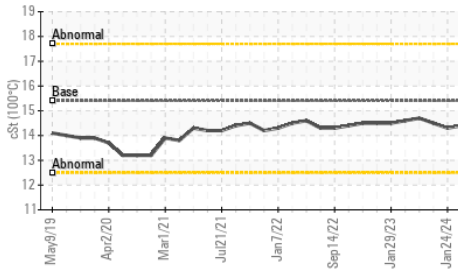
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

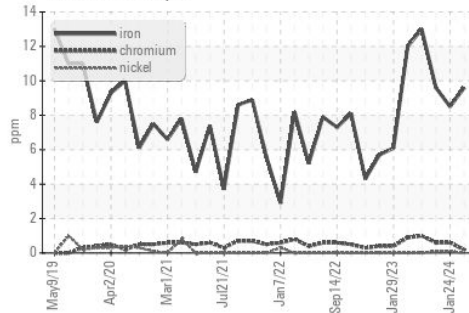


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

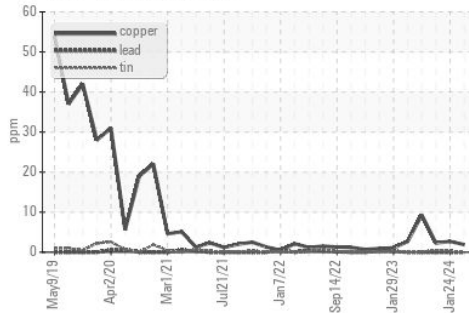
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	14.3

GRAPHS

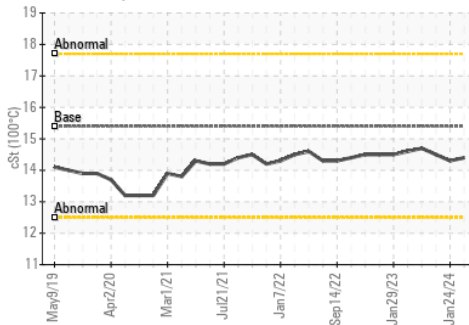
Ferrous Alloys



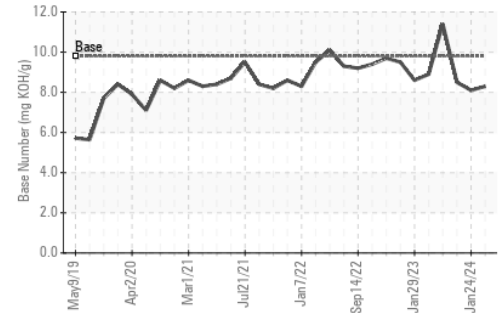
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0111027
 Lab Number : 06141086
 Unique Number : 10965894
 Test Package : FLEET

GFL Environmental - 006 - Wilmington
 3618 US Highway 421 N
 Wilmington, NC
 US 28401
 Contact: Eric Wood
 eric.wood@gflenv.com
 T: (717)723-1956
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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)