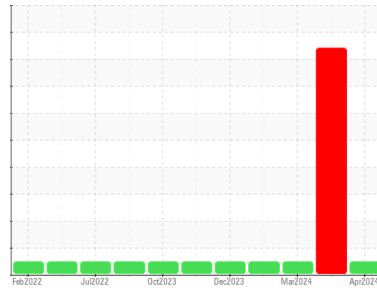




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(48009UA)
Machine Id
720052
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

No evidence of coolant present in the oil. 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		GFL0111912	GFL0111871	GFL0111841
Sample Date	Client Info		18 Apr 2024	27 Mar 2024	04 Mar 2024
Machine Age	hrs	Client Info	5870	5690	5400
Oil Age	hrs	Client Info	2480	2590	2300
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			NORMAL	SEVERE	NORMAL

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	11	19	14
Chromium	ppm	ASTM D5185m >5	<1	<1	0
Nickel	ppm	ASTM D5185m >2	<1	<1	0
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m >3	0	<1	0
Aluminum	ppm	ASTM D5185m >30	2	6	1
Lead	ppm	ASTM D5185m >30	<1	1	0
Copper	ppm	ASTM D5185m >150	1	9	0
Tin	ppm	ASTM D5185m >5	<1	<1	0
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	12	11	5
Barium	ppm	ASTM D5185m 0	0	0	1
Molybdenum	ppm	ASTM D5185m 60	63	100	58
Manganese	ppm	ASTM D5185m 0	<1	1	0
Magnesium	ppm	ASTM D5185m 1010	906	800	929
Calcium	ppm	ASTM D5185m 1070	1130	1027	1066
Phosphorus	ppm	ASTM D5185m 1150	1023	944	1000
Zinc	ppm	ASTM D5185m 1270	1212	1109	1224
Sulfur	ppm	ASTM D5185m 2060	3219	3020	2590

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	6	18	6
Sodium	ppm	ASTM D5185m	4	▲ 59	4
Potassium	ppm	ASTM D5185m >20	3	▲ 472	0
Glycol	%	*ASTM D2982	NEG	▲ 0.10	NEG

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.1	0.6
Nitration	Abs/cm	*ASTM D7624 >20	7.1	4.9	10.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.0	16.9	20.6

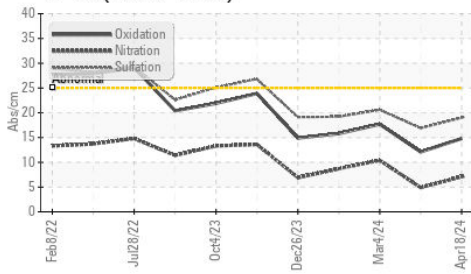
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.8	12.1	17.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.0	9.1	6.9

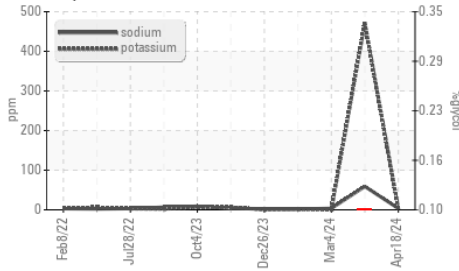


OIL ANALYSIS REPORT

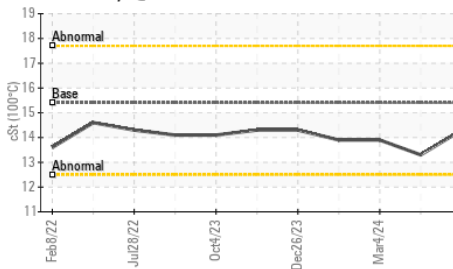
FT-IR (Direct Trend)



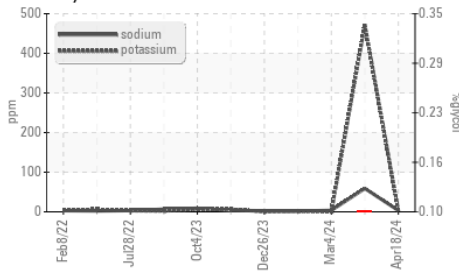
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

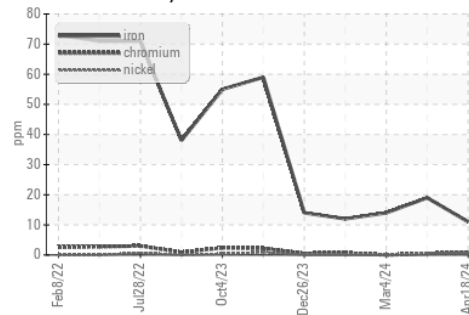


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

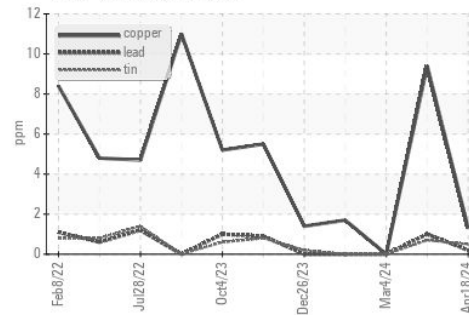
PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.3	13.3

GRAPHS

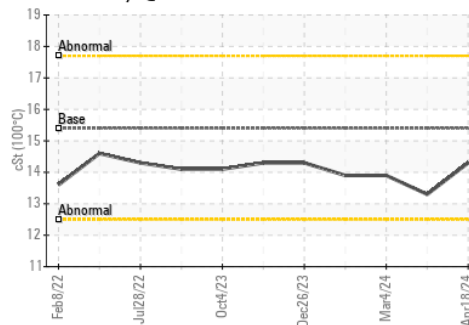
Ferrous Alloys



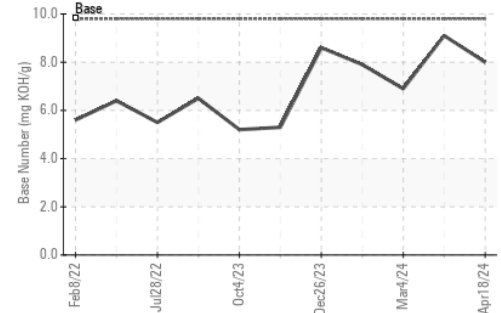
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0111912
 Lab Number : 06155107
 Unique Number : 10990530
 Test Package : FLEET

Received : 19 Apr 2024
 Tested : 24 Apr 2024
 Diagnosed : 24 Apr 2024 - Jonathan Hester

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@gflenv.com

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)