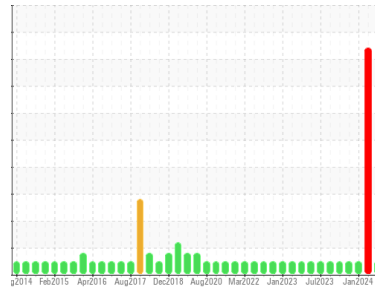




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
11102
 Component
Diesel Engine
 Fluid

PETRO CANADA DURON SHP 15W40 (30 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		GFL0098887	GFL0098862	GFL0098963
Sample Date	Client Info		16 Apr 2024	06 Mar 2024	22 Jan 2024
Machine Age	hrs	Client Info	12440	12345	12199
Oil Age	hrs	Client Info	62002	62002	62002
Oil Changed	Client Info		Changed	N/A	N/A
Sample Status			NORMAL	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 >130	25	39	18
Chromium	ppm	ASTM D5185m >10	2	<1	0
Nickel	ppm	ASTM D5185m >4	1	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	<1	0	0
Aluminum	ppm	ASTM D5185m >20	3	6	2
Lead	ppm	ASTM D5185m >20	1	0	0
Copper	ppm	ASTM D5185m >125	4	<1	2
Tin	ppm	ASTM D5185m >4	1	0	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<1	1	3
Barium	ppm	ASTM D5185m 0	<1	0	0
Molybdenum	ppm	ASTM D5185m 60	58	96	56
Manganese	ppm	ASTM D5185m 0	1	0	0
Magnesium	ppm	ASTM D5185m 1010	888	938	984
Calcium	ppm	ASTM D5185m 1070	1053	1278	1098
Phosphorus	ppm	ASTM D5185m 1150	956	1156	1066
Zinc	ppm	ASTM D5185m 1270	1197	1292	1281
Sulfur	ppm	ASTM D5185m 2060	3157	3406	3213

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	10	2
Sodium	ppm	ASTM D5185m	<1	▲ 562	<1
Potassium	ppm	ASTM D5185m >20	4	▲ 553	2
Glycol	%	*ASTM D2982	NEG	▲ 0.12	NEG

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	0.7	0.5	0.5
Nitration	Abs/cm	*ASTM D7624 >20	9.9	10.3	7.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.4	20.3	18.7

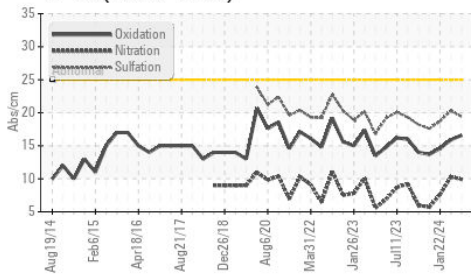
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.6	15.9	14.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.3	9.5	8.4

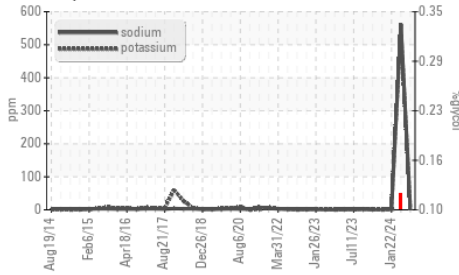


OIL ANALYSIS REPORT

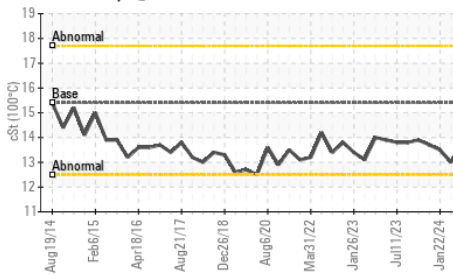
FT-IR (Direct Trend)



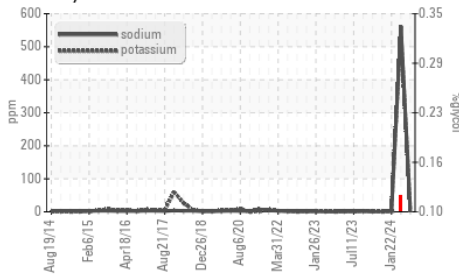
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

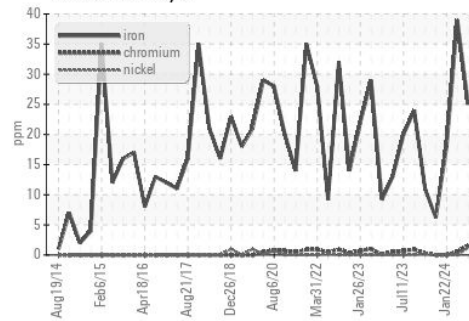


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

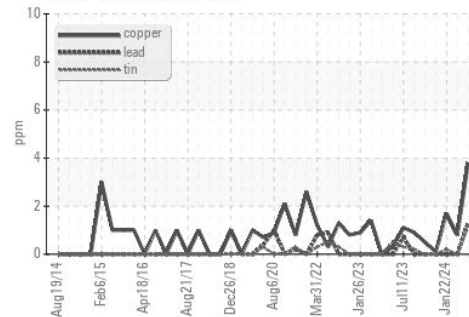
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.0

GRAPHS

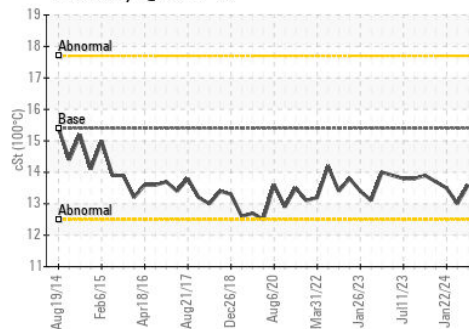
Ferrous Alloys



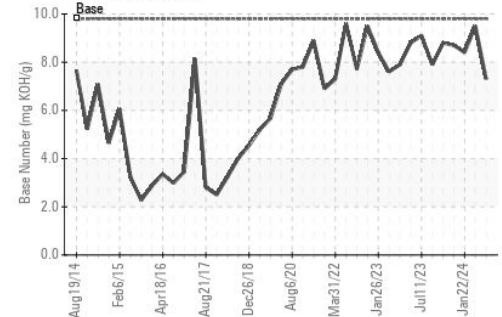
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0098887
 Lab Number : 06160202
 Unique Number : 10995625
 Test Package : FLEET

Received : 25 Apr 2024
 Tested : 30 Apr 2024
 Diagnosed : 30 Apr 2024 - Jonathan Hester

GFL Environmental - 084 - Clarksville
 699 Jack Miller Boulevard
 Clarksville, TN
 US 37042

Contact: ROBERT THIBAUT
 robert.thibault@gflenv.com

T: (931)552-7276
 F: (931)572-9674

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)