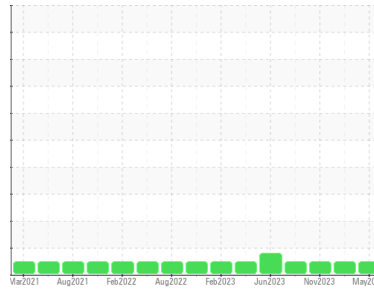




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
929022-1276

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Sampled oil)

Wear

All component wear rates are normal.

Contamination

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			GFL0120934	GFL0103046	GFL0090485
Sample Date	Client Info			30 May 2024	11 Jan 2024	21 Nov 2023
Machine Age	hrs	Client Info		11029	11029	11029
Oil Age	hrs	Client Info		500	600	200
Oil Changed	Client Info			Not Changed	Changed	Not Changed
Sample Status				NORMAL	NORMAL	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
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	5	15	38
Chromium	ppm	ASTM D5185m	>20	0	<1	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	<1	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	<1	0
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	4	4
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	57	63	55
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	904	934	851
Calcium	ppm	ASTM D5185m	1070	1057	1109	1013
Phosphorus	ppm	ASTM D5185m	1150	1027	997	1021
Zinc	ppm	ASTM D5185m	1270	1197	1226	1173
Sulfur	ppm	ASTM D5185m	2060	3475	2870	2794

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	0	3	4
Sodium	ppm	ASTM D5185m		6	4	5
Potassium	ppm	ASTM D5185m	>20	<1	1	4

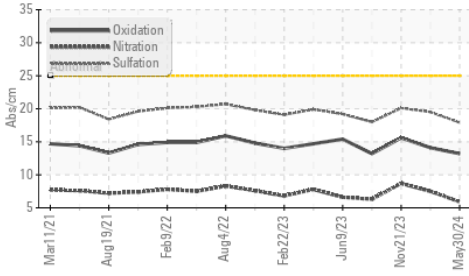
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.3	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	5.9	7.5	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.9	19.5	20.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.2	14.1	15.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.4	8.0	7.8

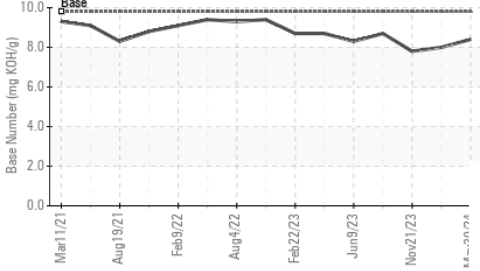


OIL ANALYSIS REPORT

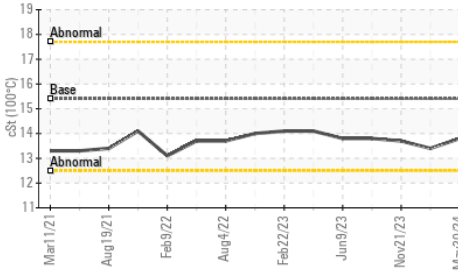
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

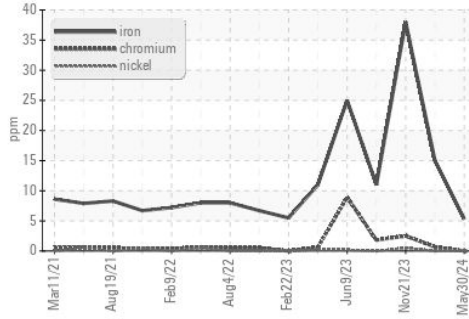


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

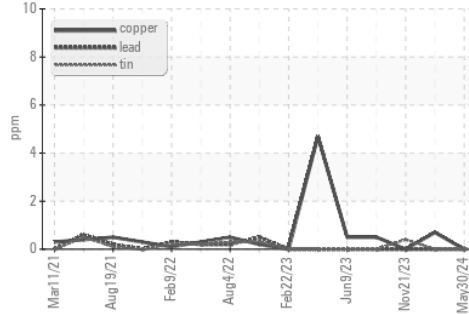
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.4

GRAPHS

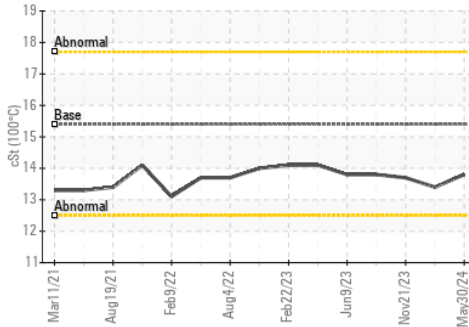
Ferrous Alloys



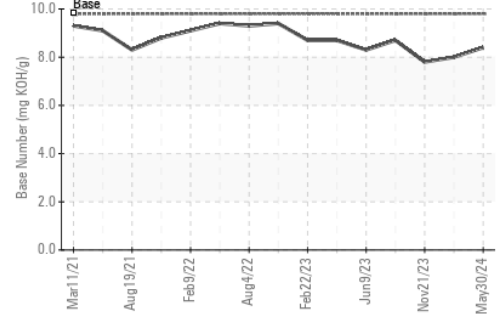
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0120934
 Lab Number : 06198884
 Unique Number : 11061007
 Test Package : FLEET

Received : 04 Jun 2024
 Tested : 05 Jun 2024
 Diagnosed : 06 Jun 2024 - Don Baldrige

GFL Environmental - 622 - Traverse City Hauling
 160 Hughes Dr
 Traverse City, MI
 US 49686
 Contact: GARY BREWER

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)

T:
F: