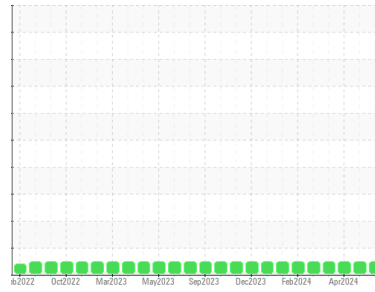




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

912077

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (40 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

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			GFL0098930	GFL0098901	GFL0098893
Sample Date	Client Info			23 May 2024	07 May 2024	11 Apr 2024
Machine Age	hrs	Client Info		6552	6421	6258
Oil Age	hrs	Client Info		6552	6421	5940
Oil Changed		Client Info		N/A	N/A	N/A
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	21	17	15
Chromium	ppm	ASTM D5185m	>20	<1	0	1
Nickel	ppm	ASTM D5185m	>4	4	2	4
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	<1	2
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	<1	0	2
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	55	58	56
Manganese	ppm	ASTM D5185m	0	<1	0	1
Magnesium	ppm	ASTM D5185m	1010	892	921	838
Calcium	ppm	ASTM D5185m	1070	1015	1116	1053
Phosphorus	ppm	ASTM D5185m	1150	930	978	1004
Zinc	ppm	ASTM D5185m	1270	1201	1207	1121
Sulfur	ppm	ASTM D5185m	2060	3059	2972	3105

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	4	5
Sodium	ppm	ASTM D5185m		2	1	<1
Potassium	ppm	ASTM D5185m	>20	4	0	2

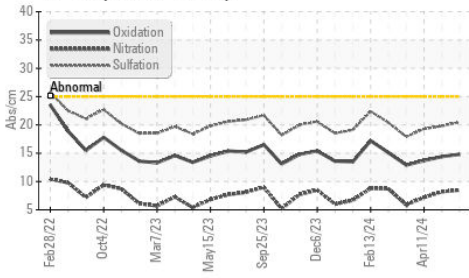
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	1.2	1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	8.5	8.2	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	19.8	19.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	14.4	13.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.4	7.3	7.8

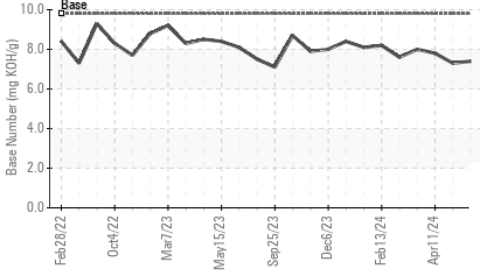


OIL ANALYSIS REPORT

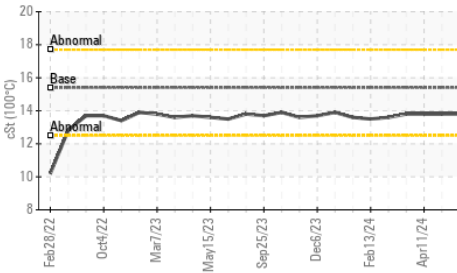
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

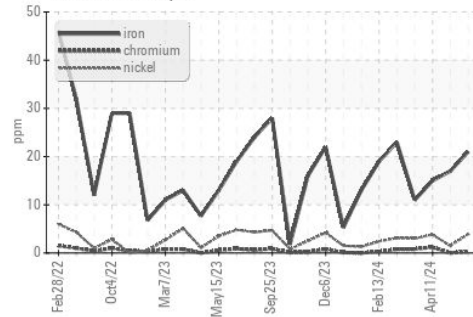


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

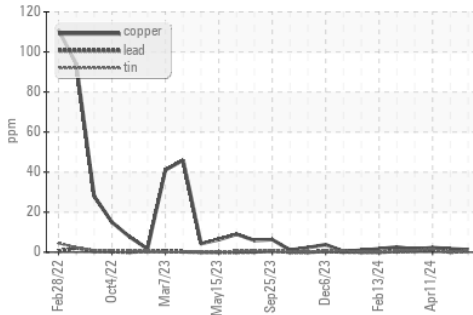
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.8

GRAPHS

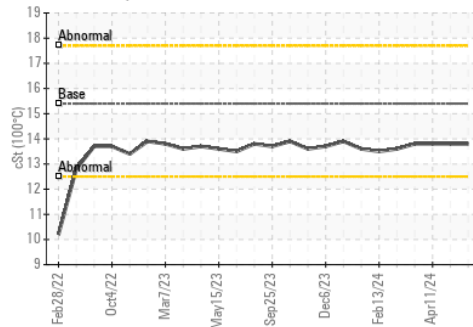
Ferrous Alloys



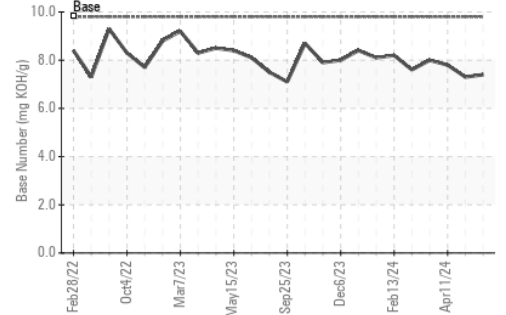
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0098930
 Lab Number : 06202239
 Unique Number : 11069700
 Test Package : FLEET

Received : 06 Jun 2024
 Tested : 13 Jun 2024
 Diagnosed : 13 Jun 2024 - Wes Davis

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)