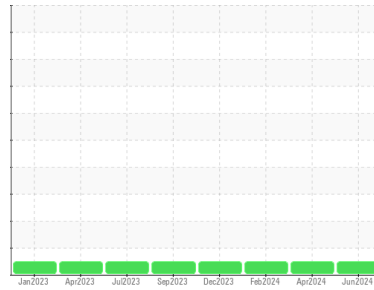




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

413058

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

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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0123542	GFL0112072	GFL0105488
Sample Date	Client Info			29 Jun 2024	26 Apr 2024	21 Feb 2024
Machine Age	mls	Client Info		107340	96973	8644
Oil Age	mls	Client Info		107340	96973	89449
Oil Changed	Client Info			Changed	Changed	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	0	6	7
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	2	3
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	1	0	<1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	4	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	44	52	55
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	10	13	2
Calcium	ppm	ASTM D5185m	1070	2527	2516	2437
Phosphorus	ppm	ASTM D5185m	1150	959	1115	1075
Zinc	ppm	ASTM D5185m	1270	1134	1287	1237
Sulfur	ppm	ASTM D5185m	2060	3227	3538	3025

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	8	7
Sodium	ppm	ASTM D5185m		2	0	2
Potassium	ppm	ASTM D5185m	>20	1	3	7

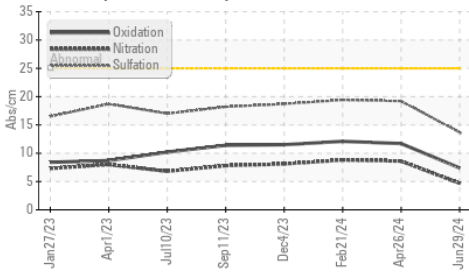
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	4.7	8.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	13.7	19.2	19.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	7.4	11.7	12.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.1	6.3	6.9

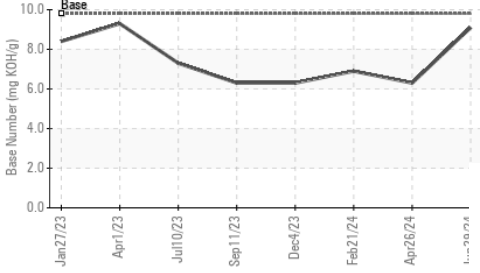


OIL ANALYSIS REPORT

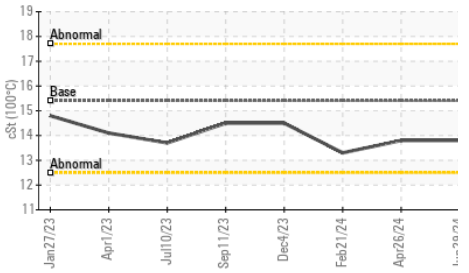
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

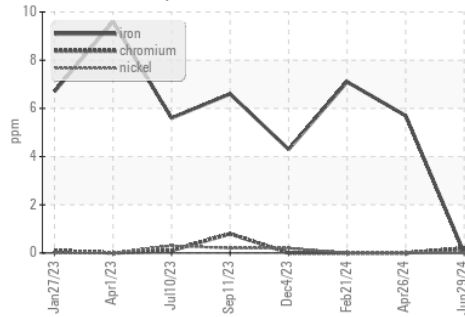


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

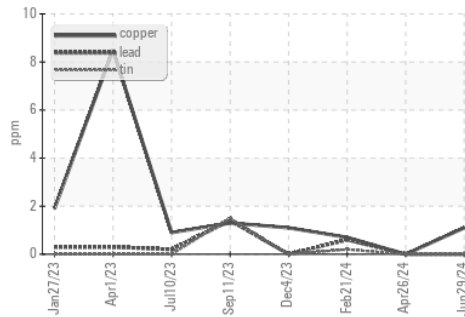
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.8	13.3

GRAPHS

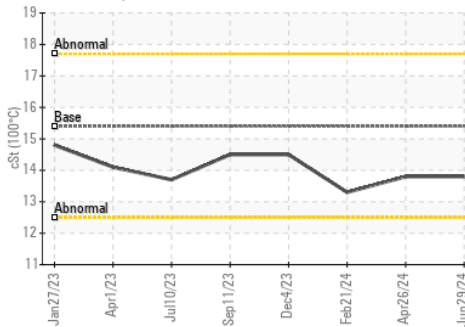
Ferrous Alloys



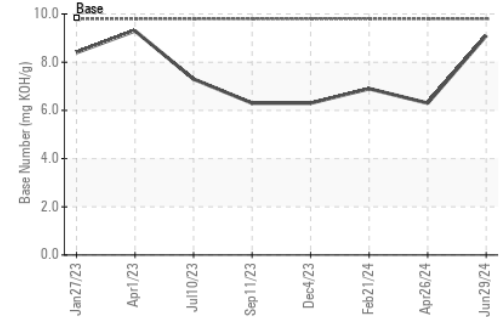
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0123542
Lab Number : 06228331
Unique Number : 11111824
Test Package : FLEET

Received : 05 Jul 2024
Tested : 08 Jul 2024
Diagnosed : 08 Jul 2024 - Don Baldrige

GFL Environmental - 983 - Sugar Land Hauling
 16011 West Belfort Street
 Sugar Land, TX
 US 77498

Contact: Adrian Martinez
 adrianmartinez@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)

T:
F: