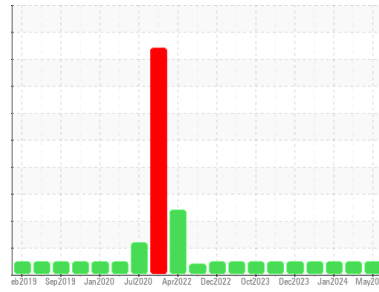




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
729049-361417

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (8 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 suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	GFL0112271	GFL0065428	GFL0065491	
Sample Date	Client Info	31 May 2024	15 Mar 2024	08 Jan 2024	
Machine Age	hrs	Client Info	14969	14844	14708
Oil Age	hrs	Client Info	600	150	150
Oil Changed	Client Info	Changed	Not Changd	Not Changd	
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	46	31	22
Chromium	ppm	ASTM D5185m >20	<1	0	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	<1	0	<1
Lead	ppm	ASTM D5185m >40	<1	0	<1
Copper	ppm	ASTM D5185m >330	<1	0	<1
Tin	ppm	ASTM D5185m >15	<1	0	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	0	<1	1
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	57	57	56
Manganese	ppm	ASTM D5185m 0	<1	0	<1
Magnesium	ppm	ASTM D5185m 1010	921	970	989
Calcium	ppm	ASTM D5185m 1070	1067	1074	1002
Phosphorus	ppm	ASTM D5185m 1150	1024	1044	1032
Zinc	ppm	ASTM D5185m 1270	1196	1202	1248
Sulfur	ppm	ASTM D5185m 2060	3368	3520	3163

CONTAMINANTS

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

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.5	1.1	0.8
Nitration	Abs/cm	*ASTM D7624 >20	8.0	7.2	6.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.0	19.8	19.3

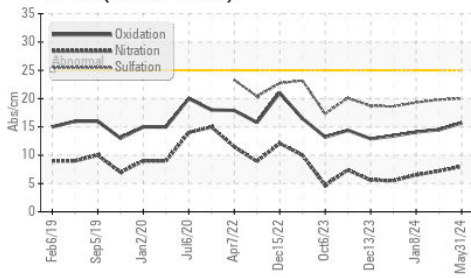
FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.7	14.5	14.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	6.7	8.3	8.3

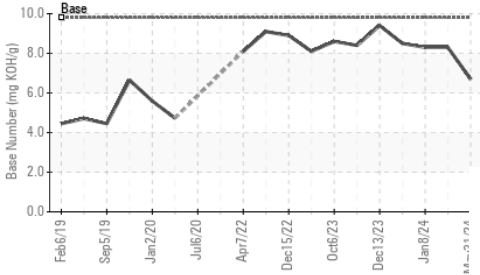


OIL ANALYSIS REPORT

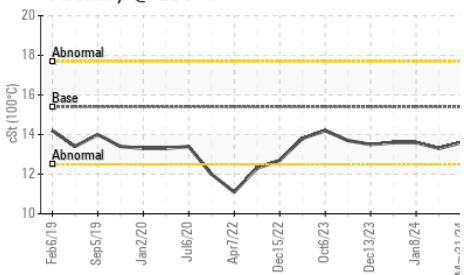
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

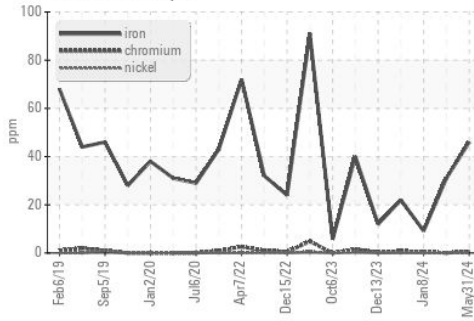


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

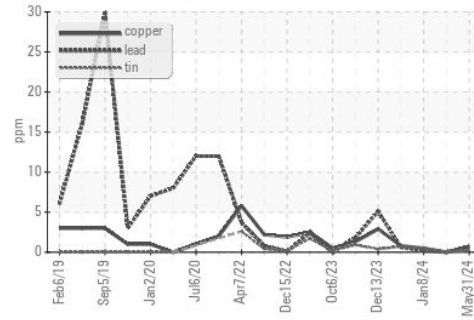
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.3

GRAPHS

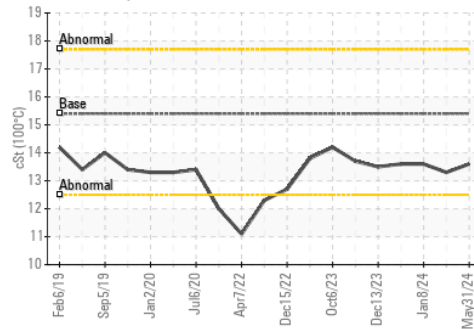
Ferrous Alloys



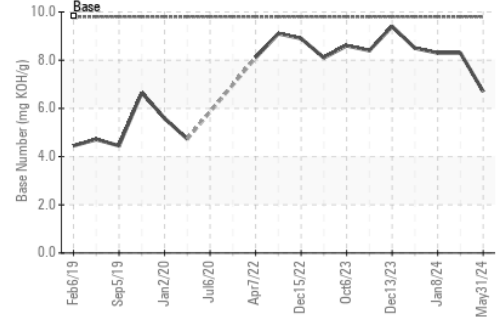
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0112271
 Lab Number : 06198907
 Unique Number : 11061030
 Test Package : FLEET

GFL Environmental - 829 - Wilco Hauling
 5054 Highway HH
 Hartville, MO
 US 65667

Contact: James Jones
 james.jones@gflenv.com
 T: (417)349-5006

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)

F: