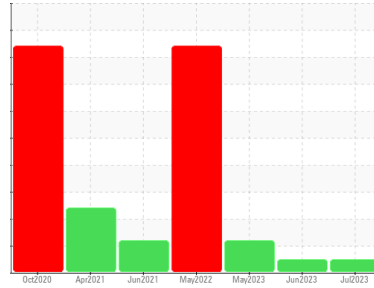




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
523003-703

Component
Diesel Engine

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

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	history 1	history 2
Sample Number	Client Info		GFL0086597	GFL0074372	GFL0074403
Sample Date	Client Info		04 Jul 2023	05 Jun 2023	04 May 2023
Machine Age	hrs	Client Info	19732	20805	19691
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Changed	Not Changd	Not Changd
Sample Status			NORMAL	NORMAL	ATTENTION

CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >120	9	10	8
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >5	0	0	<1
Titanium	ppm	ASTM D5185m >2	0	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	<1	1	1
Lead	ppm	ASTM D5185m >40	0	0	0
Copper	ppm	ASTM D5185m >330	8	7	8
Tin	ppm	ASTM D5185m >15	0	<1	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 0	4	3	6
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	73	67	66
Manganese	ppm	ASTM D5185m 0	0	<1	<1
Magnesium	ppm	ASTM D5185m 1010	938	945	923
Calcium	ppm	ASTM D5185m 1070	1097	1098	1033
Phosphorus	ppm	ASTM D5185m 1150	1009	998	1014
Zinc	ppm	ASTM D5185m 1270	1197	1222	1228
Sulfur	ppm	ASTM D5185m 2060	3579	3710	3733

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	4	7	4
Sodium	ppm	ASTM D5185m	40	25	20
Potassium	ppm	ASTM D5185m >20	115	68	▲ 63
Glycol	%	*ASTM D2982	0.0	0.0	NEG

INFRA-RED

	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844 >4	0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	7.4	6.9	6.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.8	18.6	16.3

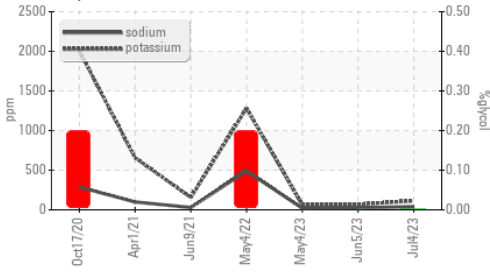
FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.9	14.7	13.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.5	9.2	8.4

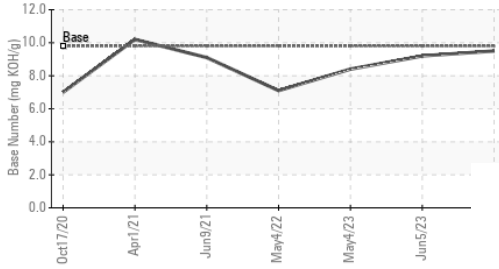


OIL ANALYSIS REPORT

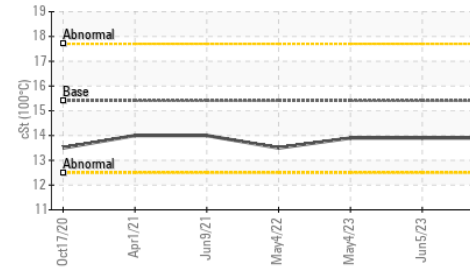
Glycol Contamination



Base Number



Viscosity @ 100°C

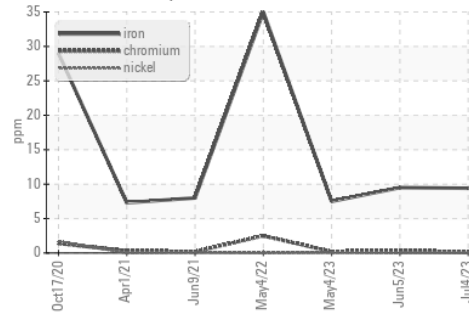


VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

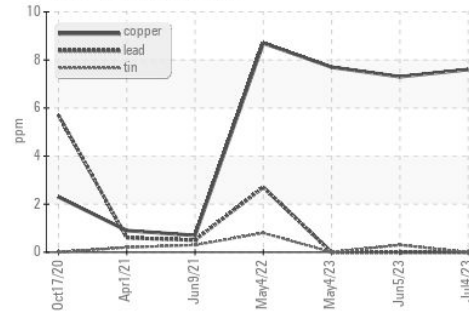
FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.9

GRAPHS

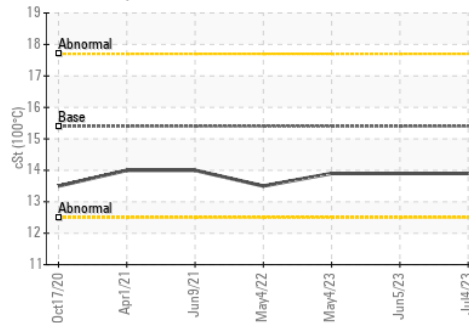
Ferrous Alloys



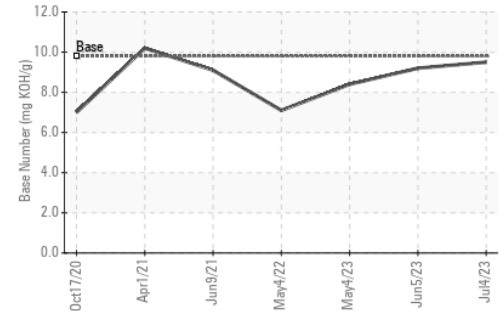
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0086597 **Received** : 07 Jul 2023
Lab Number : 05891936 **Diagnosed** : 09 Jul 2023
Unique Number : 10547746 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 654 - Richmond Hauling
 11800 Lewis Road
 Chester, VA
 US 23831
 Contact: Steven Palmore
 spalmore@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)

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F: