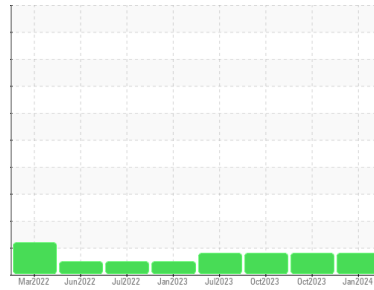




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
922013
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear

Valve wear is indicated. All other 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		GFL0104554	GFL0092611	GFL0082621
Sample Date	Client Info		03 Jan 2024	23 Oct 2023	16 Oct 2023
Machine Age	hrs	Client Info	26915	26417	26300
Oil Age	hrs	Client Info	605	743	0
Oil Changed	Client Info		Not Chngd	Not Chngd	N/A
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >120	29	8	31
Chromium	ppm	ASTM D5185m >20	1	<1	3
Nickel	ppm	ASTM D5185m >5	▲ 20	▲ 8	▲ 33
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	6	4	9
Lead	ppm	ASTM D5185m >40	1	0	<1
Copper	ppm	ASTM D5185m >330	3	<1	2
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<1	0	1
Barium	ppm	ASTM D5185m 0	8	0	0
Molybdenum	ppm	ASTM D5185m 60	63	57	63
Manganese	ppm	ASTM D5185m 0	1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	981	924	962
Calcium	ppm	ASTM D5185m 1070	1103	1004	1066
Phosphorus	ppm	ASTM D5185m 1150	959	1091	1037
Zinc	ppm	ASTM D5185m 1270	1243	1199	1232
Sulfur	ppm	ASTM D5185m 2060	2991	3798	3154

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	4	6
Sodium	ppm	ASTM D5185m	0	4	5
Potassium	ppm	ASTM D5185m >20	2	4	2

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	1.1	0.3	1.1
Nitration	Abs/cm	*ASTM D7624 >20	9.8	6.0	9.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.3	18.5	21.1

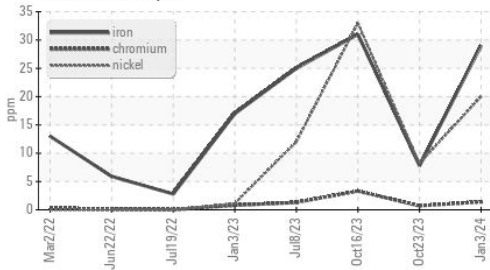
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.9	14.6	17.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.6	8.9	7.2

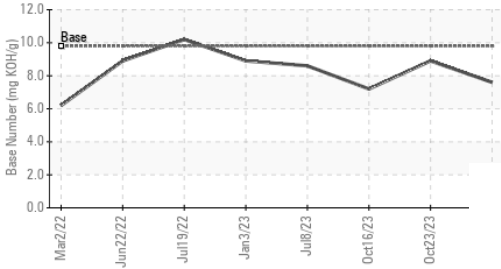


OIL ANALYSIS REPORT

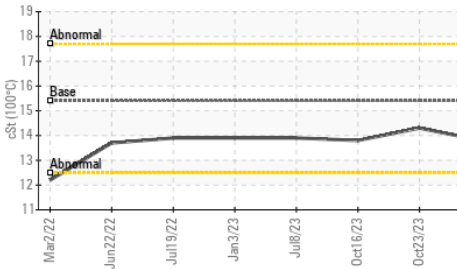
▲ Ferrous Alloys



Base Number



Viscosity @ 100°C

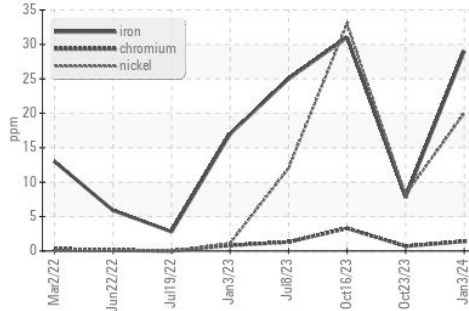


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

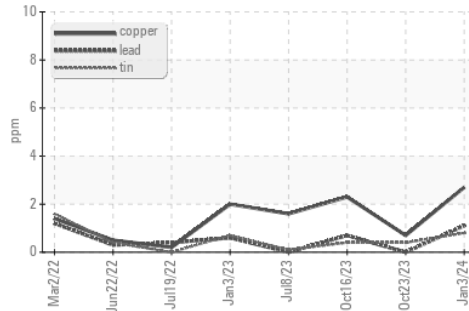
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.3

GRAPHS

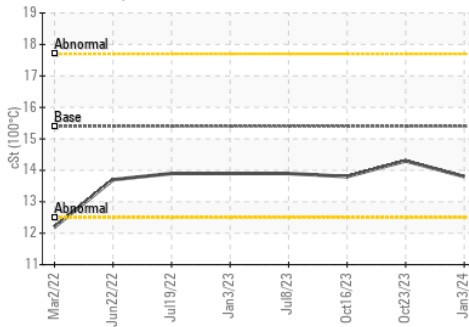
▲ Ferrous Alloys



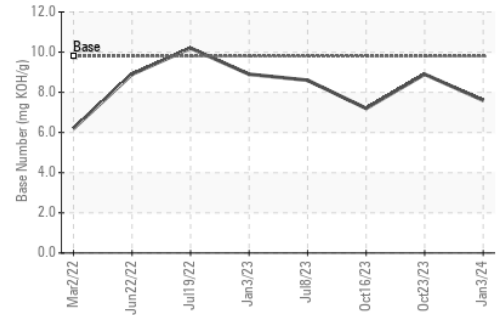
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104554 **Received** : 08 Jan 2024
Lab Number : 06053388 **Diagnosed** : 09 Jan 2024
Unique Number : 10819337 **Diagnostician** : Sean Felton
Test Package : FLEET

GFL Environmental - 947 - WB Horicon HC
 N7296 County Rd V
 Horicon, WI
 US 53032
 Contact: Tim Kieffer
 tim.kieffer@gflenv.com
 T: (608)219-0288
 F:

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)