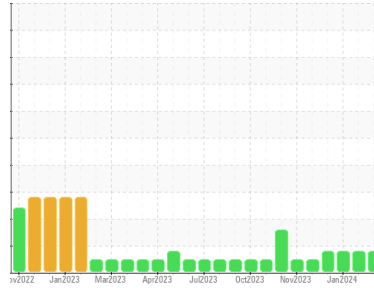




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
413028
 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. (Customer Sample Comment: resample)

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	GFL0100449	GFL0100445	GFL0111001
Sample Date	Client Info	01 Feb 2024	29 Jan 2024	19 Jan 2024
Machine Age	hrs	3068	3011	2943
Oil Age	hrs	457	400	287
Oil Changed	Client Info	N/A	N/A	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	13	14	7
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >5	7	8	8
Titanium	ppm ASTM D5185m >2	<1	0	0
Silver	ppm ASTM D5185m >2	0	0	<1
Aluminum	ppm ASTM D5185m >20	3	4	4
Lead	ppm ASTM D5185m >40	0	1	<1
Copper	ppm ASTM D5185m >330	6	6	5
Tin	ppm ASTM D5185m >15	<1	<1	<1
Vanadium	ppm ASTM D5185m	0	<1	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	1	2	3
Barium	ppm ASTM D5185m 0	0	0	<1
Molybdenum	ppm ASTM D5185m 60	60	63	61
Manganese	ppm ASTM D5185m 0	0	1	<1
Magnesium	ppm ASTM D5185m 1010	820	949	893
Calcium	ppm ASTM D5185m 1070	929	1048	990
Phosphorus	ppm ASTM D5185m 1150	866	1015	1002
Zinc	ppm ASTM D5185m 1270	1075	1253	1169
Sulfur	ppm ASTM D5185m 2060	2556	3028	2772

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	9	6
Sodium	ppm ASTM D5185m	<1	3	0
Potassium	ppm ASTM D5185m >20	8	9	4

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.3	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	7.6	7.4	6.9
Sulfation	Abs/.1mm *ASTM D7415 >30	18.6	18.6	18.2

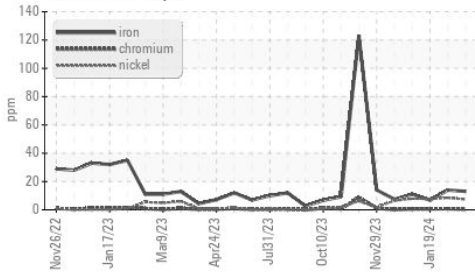
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.7	14.6	14.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.5	7.6	8.1

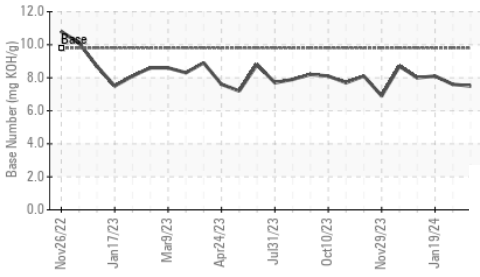


OIL ANALYSIS REPORT

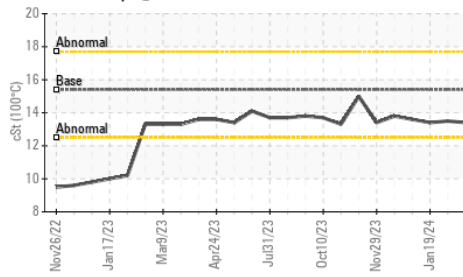
▲ Ferrous Alloys



Base Number



Viscosity @ 100°C

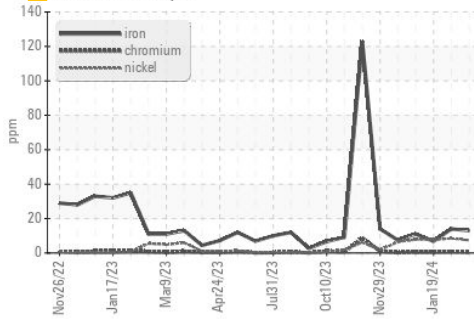


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

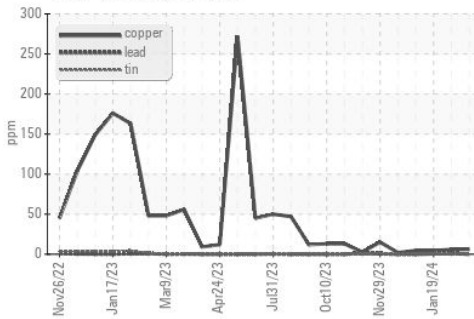
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.5

GRAPHS

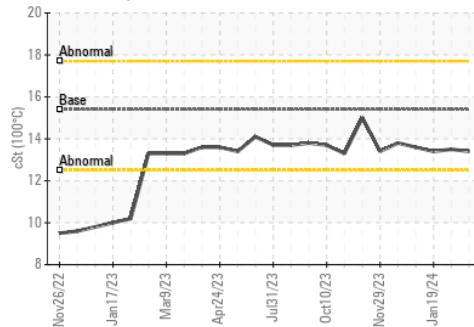
▲ Ferrous Alloys



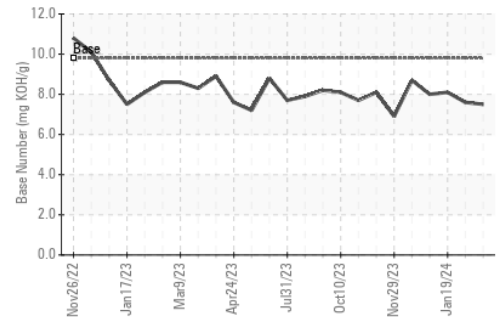
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0100449
Lab Number : 06086886
Unique Number : 10874331
Test Package : FLEET

GFL Environmental - 868 - Childersburg Fines Hauling (Alpine)
 13737 Plant Rd
 Childersburg, AL
 US 35044
 Contact: JONATHAN WILLIAMS
 jonathan.williams@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: