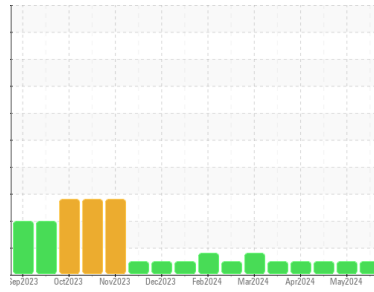




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
414062
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (12 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		GFL0125851	GFL0118702	GFL0118649
Sample Date	Client Info		19 Jun 2024	29 May 2024	14 May 2024
Machine Age	hrs	Client Info	1994	1852	1766
Oil Age	hrs	Client Info	154	1200	150
Oil Changed	Client Info		Not Chngd	Changed	Not Chngd
Sample Status			NORMAL	NORMAL	NORMAL

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	6	6	13
Chromium	ppm	ASTM D5185m >20	<1	<1	3
Nickel	ppm	ASTM D5185m >5	<1	<1	4
Titanium	ppm	ASTM D5185m >2	<1	0	2
Silver	ppm	ASTM D5185m >2	<1	<1	3
Aluminum	ppm	ASTM D5185m >20	4	5	7
Lead	ppm	ASTM D5185m >40	<1	0	3
Copper	ppm	ASTM D5185m >330	13	75	67
Tin	ppm	ASTM D5185m >15	<1	0	3
Vanadium	ppm	ASTM D5185m	<1	0	2
Cadmium	ppm	ASTM D5185m	<1	0	2

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	2	0	2
Barium	ppm	ASTM D5185m 0	1	0	1
Molybdenum	ppm	ASTM D5185m 60	69	60	62
Manganese	ppm	ASTM D5185m 0	<1	<1	3
Magnesium	ppm	ASTM D5185m 1010	1153	987	952
Calcium	ppm	ASTM D5185m 1070	1190	1122	1096
Phosphorus	ppm	ASTM D5185m 1150	1219	1052	1015
Zinc	ppm	ASTM D5185m 1270	1403	1246	1197
Sulfur	ppm	ASTM D5185m 2060	3726	3189	3153

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	2	8
Sodium	ppm	ASTM D5185m	5	13	12
Potassium	ppm	ASTM D5185m >20	7	14	16

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.1	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	5.3	7.2	6.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.0	19.8	19.1

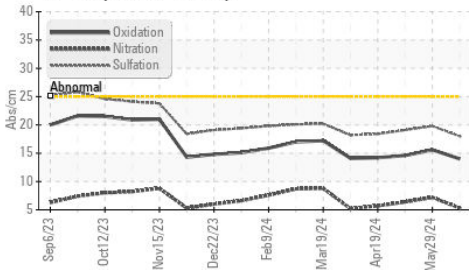
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.0	15.6	14.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.8	7.7	8.1

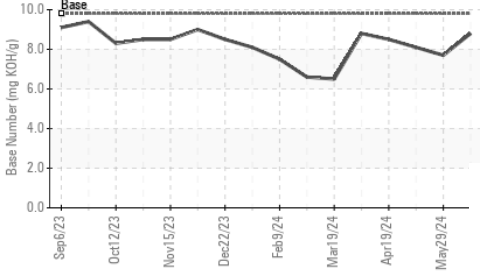


OIL ANALYSIS REPORT

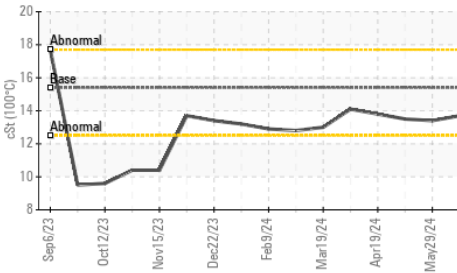
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

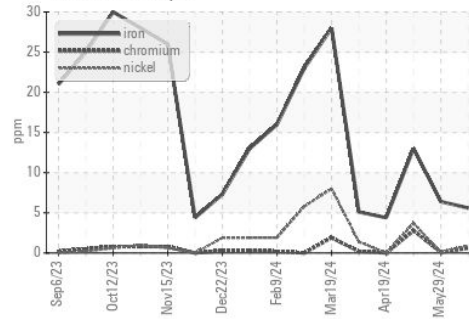


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

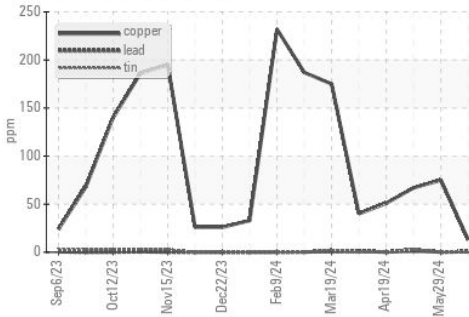
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	13.4

GRAPHS

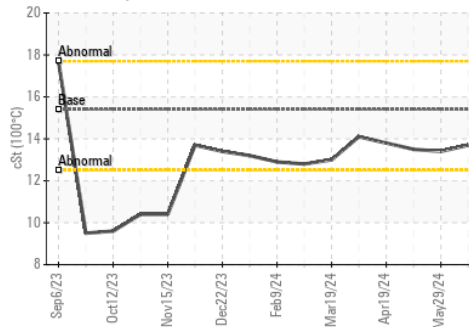
Ferrous Alloys



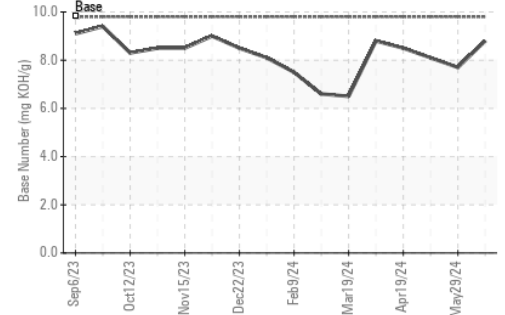
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125851
Lab Number : 06217801
Unique Number : 11095998
Test Package : FLEET

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

GFL Environmental - 166 - Phenix City
 18 Old Brickyard Rd
 Phenix City, AL
 US 36869
 Contact: EDWARD CASHMAN
 ecashman@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: