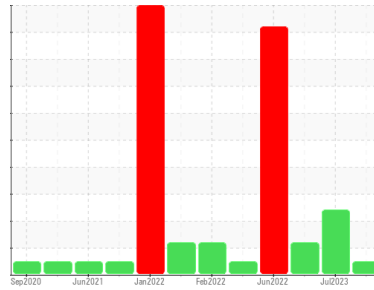




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(15497TB)
 Machine Id
825037-153
 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	history1	history2
Sample Number	Client Info		GFL0120830	GFL0077819	GFL0065091
Sample Date	Client Info		09 Jul 2024	17 Jul 2023	18 Jan 2023
Machine Age	mls	Client Info	169211	162447	153956
Oil Age	mls	Client Info	0	0	0
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	ABNORMAL	ATTENTION

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	>165	7	22	16
Chromium	ppm	ASTM D5185m	>5	<1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	4
Lead	ppm	ASTM D5185m	>150	0	1	<1
Copper	ppm	ASTM D5185m	>90	5	43	32
Tin	ppm	ASTM D5185m	>5	<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	0	4	8
Barium	ppm	ASTM D5185m	0	0	0	4
Molybdenum	ppm	ASTM D5185m	60	61	78	67
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	961	1013	862
Calcium	ppm	ASTM D5185m	1070	1099	1225	1022
Phosphorus	ppm	ASTM D5185m	1150	1124	1050	910
Zinc	ppm	ASTM D5185m	1270	1304	1290	1201
Sulfur	ppm	ASTM D5185m	2060	3755	3408	3243

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>35	4	5	7
Sodium	ppm	ASTM D5185m		4	▲ 21	15
Potassium	ppm	ASTM D5185m	>20	9	▲ 139	● 97

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>7.5	0.2	0.5	0.9
Nitration	Abs/cm	*ASTM D7624	>20	7.1	9.6	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	20.9	25.4

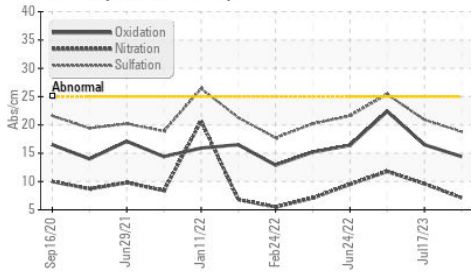
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4	16.5	22.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.7	7.8	6.1

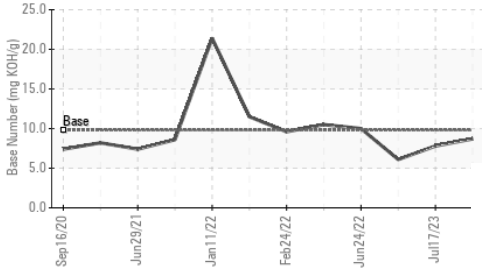


OIL ANALYSIS REPORT

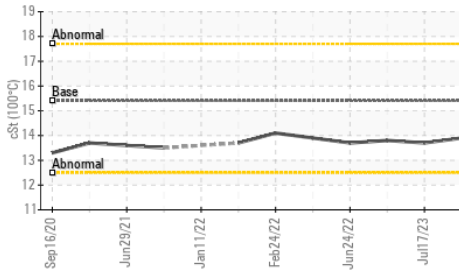
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

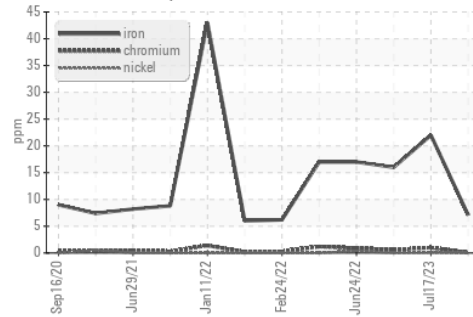


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

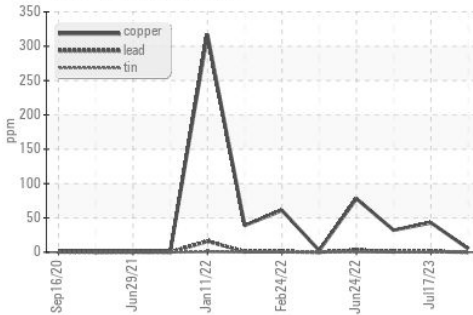
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.7

GRAPHS

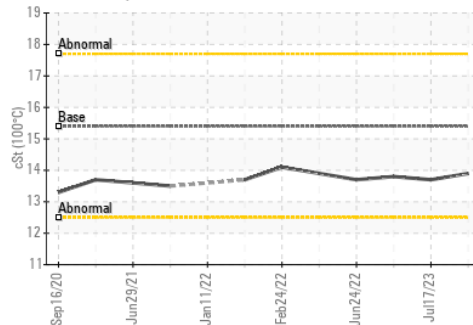
Ferrous Alloys



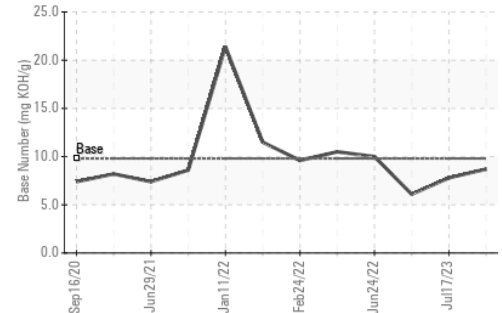
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0120830
Lab Number : 06237323
Unique Number : 11126157
Test Package : FLEET

Received : 15 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 17 Jul 2024 - Wes Davis

GFL Environmental - 650 - West Point Hauling
 7825 Parham Landing Road
 West Point, VA
 US 23181
 Contact: Jason Smith
 jasonsmith@gflenv.com
 T: (804)843-9288
 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)