

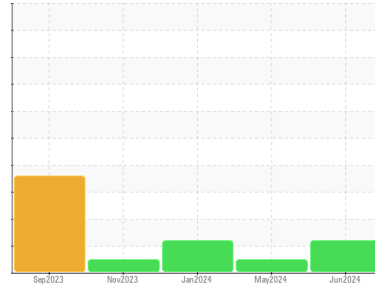


OIL ANALYSIS REPORT



Area
GFL035
 Machine Id
934047
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (42 QTS)

Sample Rating Trend



DEGRADATION



DIAGNOSIS

Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. 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 level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0116496	GFL0116486	GFL0085229
Sample Date	Client Info		05 Jun 2024	22 May 2024	11 Jan 2024
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	600	600	600
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	NORMAL	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	41	32	35
Chromium	ppm	ASTM D5185m >20	2	2	2
Nickel	ppm	ASTM D5185m >5	2	1	1
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >20	13	10	12
Lead	ppm	ASTM D5185m >40	12	9	6
Copper	ppm	ASTM D5185m >330	5	3	5
Tin	ppm	ASTM D5185m >15	2	1	2
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	6	4	4
Barium	ppm	ASTM D5185m 0	2	0	0
Molybdenum	ppm	ASTM D5185m 60	71	58	60
Manganese	ppm	ASTM D5185m 0	2	2	3
Magnesium	ppm	ASTM D5185m 1010	694	618	651
Calcium	ppm	ASTM D5185m 1070	1981	1810	1656
Phosphorus	ppm	ASTM D5185m 1150	847	823	812
Zinc	ppm	ASTM D5185m 1270	1163	1024	1016
Sulfur	ppm	ASTM D5185m 2060	2992	2859	2374

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	11	8	11
Sodium	ppm	ASTM D5185m	9	9	10
Potassium	ppm	ASTM D5185m >20	17	12	21

INFRA-RED

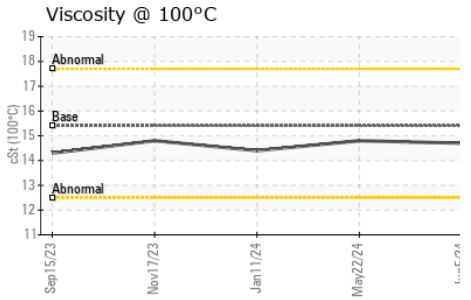
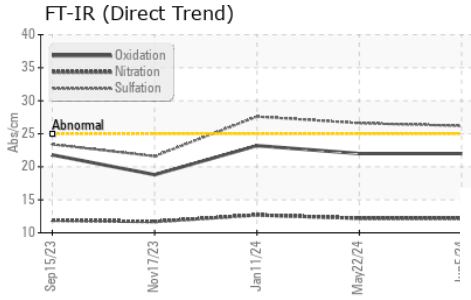
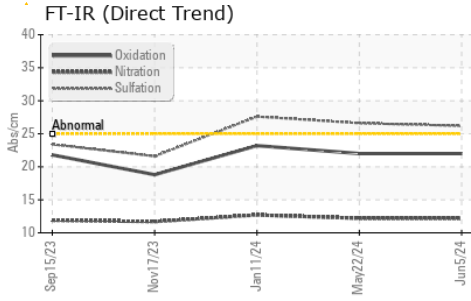
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.1	0	0
Nitration	Abs/cm	*ASTM D7624 >20	12.2	12.2	12.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	26.2	26.6	27.6

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	22.0	22.0	23.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	▲ 2.5	3.4	▲ 2.7



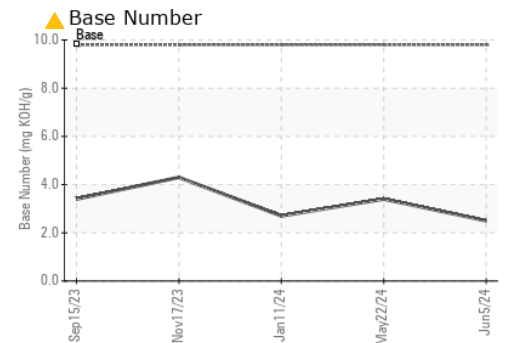
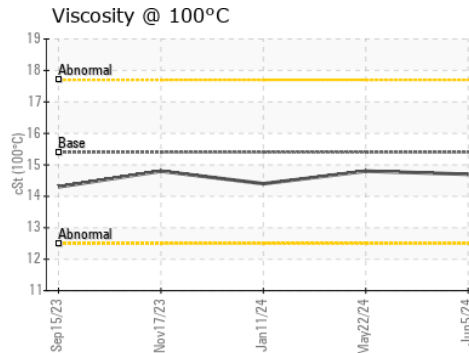
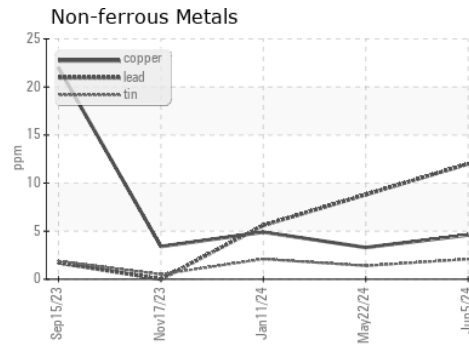
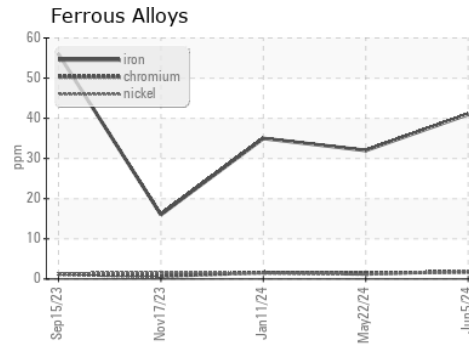
OIL ANALYSIS REPORT



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

PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.7	14.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116496
Lab Number : 06201299
Unique Number : 11063422
Test Package : FLEET

Received : 06 Jun 2024
Tested : 07 Jun 2024
Diagnosed : 09 Jun 2024 - Don Baldrige

GFL Environmental - 035 - Greensboro
 1236 Elon Place
 High Point, NC
 US 27263
 Contact: JORGE COSTA
 jorge.costa@gflenv.com
 T: (336)668-3712
 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)