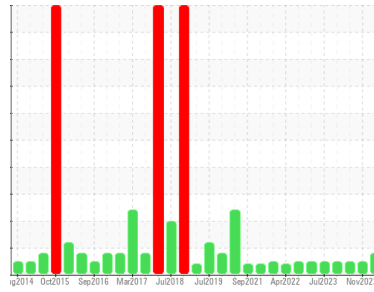




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
(YA119648)

Machine Id
10445

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

Cylinder, crank, or cam shaft 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		GFL0090018	GFL0089973	GFL0080570
Sample Date	Client Info		04 Apr 2024	07 Nov 2023	05 Sep 2023
Machine Age	hrs	Client Info	54587	54587	54587
Oil Age	hrs	Client Info	0	54587	54587
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	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 >75	▲ 98	14	8
Chromium	ppm	ASTM D5185m >5	5	<1	<1
Nickel	ppm	ASTM D5185m >4	1	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >15	11	1	<1
Lead	ppm	ASTM D5185m >25	6	<1	<1
Copper	ppm	ASTM D5185m >100	5	<1	0
Tin	ppm	ASTM D5185m >4	3	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	4	3	4
Barium	ppm	ASTM D5185m 0	0	0	2
Molybdenum	ppm	ASTM D5185m 60	84	59	54
Manganese	ppm	ASTM D5185m 0	2	<1	<1
Magnesium	ppm	ASTM D5185m 1010	1278	1010	941
Calcium	ppm	ASTM D5185m 1070	1457	1105	1078
Phosphorus	ppm	ASTM D5185m 1150	1382	1062	1008
Zinc	ppm	ASTM D5185m 1270	1707	1333	1205
Sulfur	ppm	ASTM D5185m 2060	4211	3184	3485

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	12	4	2
Sodium	ppm	ASTM D5185m	9	3	2
Potassium	ppm	ASTM D5185m >20	40	2	6

INFRA-RED

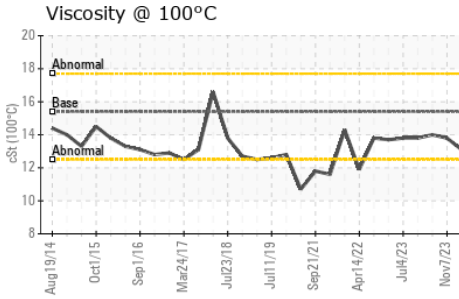
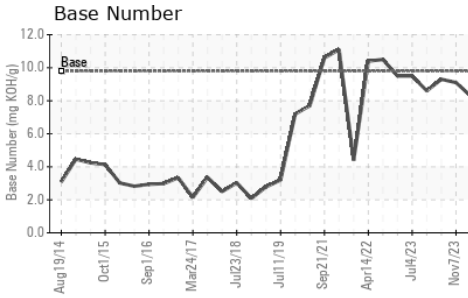
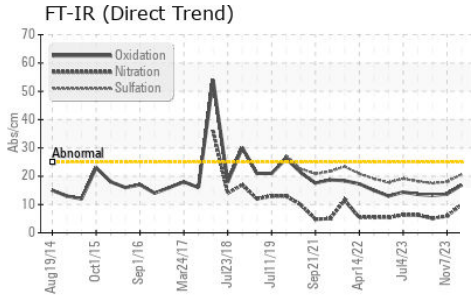
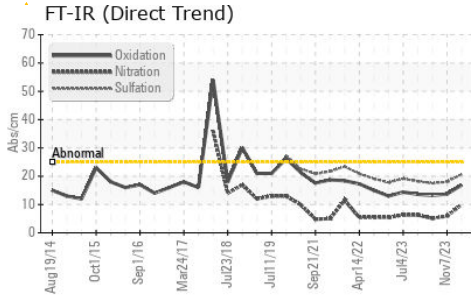
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	0.9	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	10.0	5.9	5.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.7	18.0	17.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.9	13.7	13.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.3	9.1	9.3



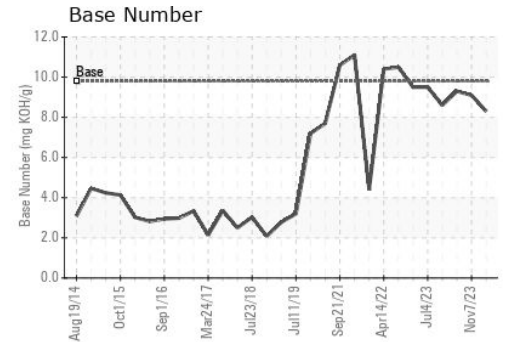
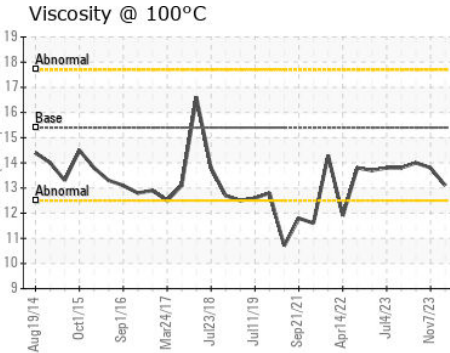
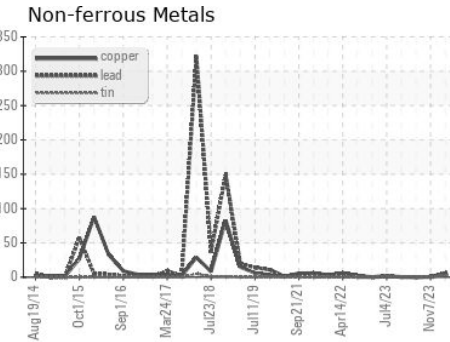
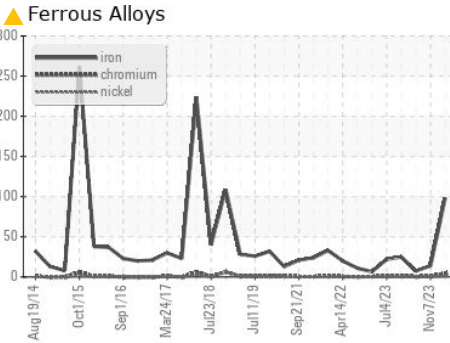
OIL ANALYSIS REPORT



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	13.1	13.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0090018
 Lab Number : 06139476
 Unique Number : 10964284
 Test Package : FLEET

Received : 05 Apr 2024
 Tested : 05 Apr 2024
 Diagnosed : 06 Apr 2024 - Don Baldrige

GFL Environmental - 018 - Fayetteville
 4621 Marracco Drive
 Hope Mills, NC
 US 28348
 Contact: Robert Carter
 robert.carter@gflenv.com
 T: (910)596-1170
 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)