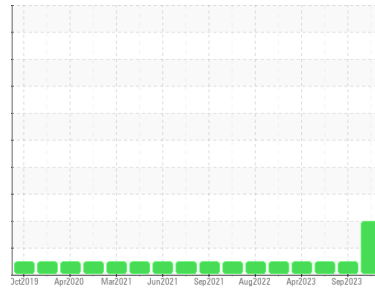




OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Area
(YA144044)

Machine Id
3803C

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)

DIAGNOSIS

Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. We recommend an early resample to monitor this condition.

Wear

The lead level is abnormal. All other 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		GFL0115944	GFL0074446	GFL0080594
Sample Date	Client Info		18 Jun 2024	05 Sep 2023	20 Jul 2023
Machine Age	hrs	Client Info	47607	47607	47607
Oil Age	hrs	Client Info	0	47607	47607
Oil Changed	Client Info		Not Chngd	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 >165	44	16	12
Chromium	ppm	ASTM D5185m >5	2	2	1
Nickel	ppm	ASTM D5185m >4	<1	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	<1	0	<1
Aluminum	ppm	ASTM D5185m >20	6	2	2
Lead	ppm	ASTM D5185m >150	▲ 156	12	7
Copper	ppm	ASTM D5185m >90	37	2	1
Tin	ppm	ASTM D5185m >5	2	<1	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	17	6	8
Barium	ppm	ASTM D5185m 0	0	2	0
Molybdenum	ppm	ASTM D5185m 60	58	58	59
Manganese	ppm	ASTM D5185m 0	2	<1	<1
Magnesium	ppm	ASTM D5185m 1010	757	757	717
Calcium	ppm	ASTM D5185m 1070	1716	1525	1729
Phosphorus	ppm	ASTM D5185m 1150	970	873	891
Zinc	ppm	ASTM D5185m 1270	1204	1078	1153
Sulfur	ppm	ASTM D5185m 2060	2878	3063	3330

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	10	8	7
Sodium	ppm	ASTM D5185m	9	7	6
Potassium	ppm	ASTM D5185m >20	3	9	<1

INFRA-RED

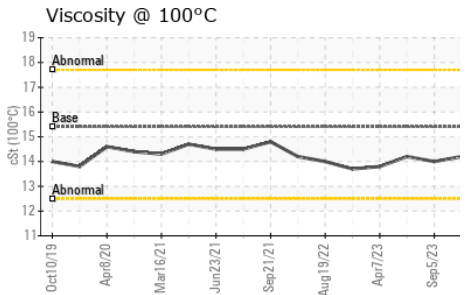
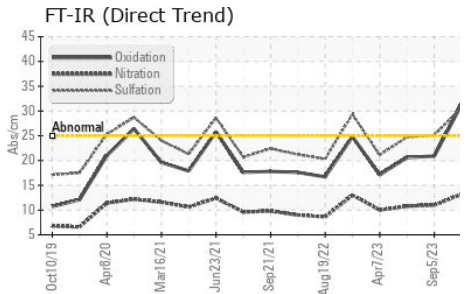
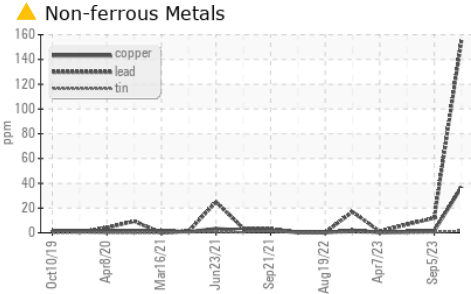
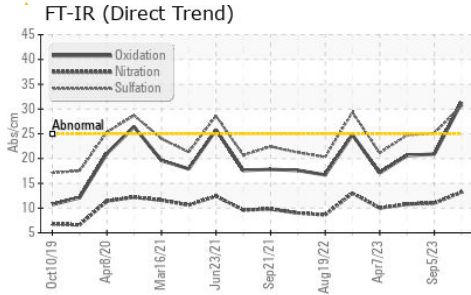
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	0.1	0	0
Nitration	Abs/cm	*ASTM D7624 >20	13.2	11.0	10.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	30.6	25.1	24.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	31.3	20.9	20.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	▲ 2.6	4.6	4.4



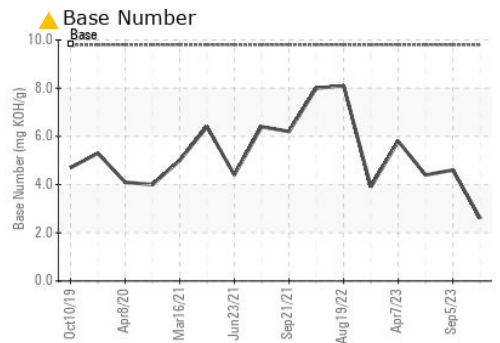
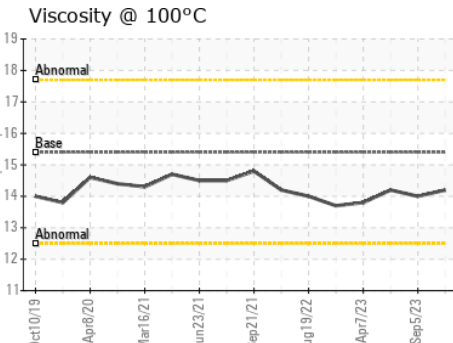
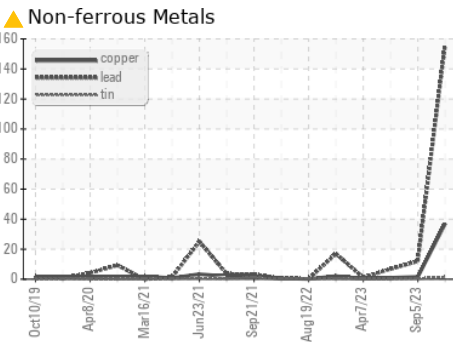
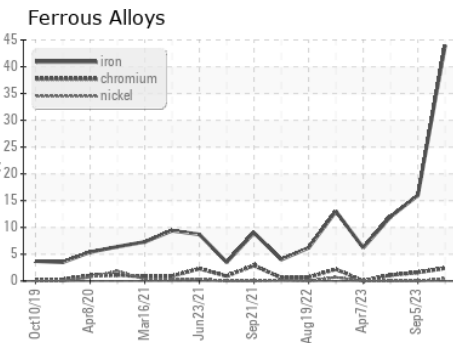
OIL ANALYSIS REPORT



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	14.2	14.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0115944
 Lab Number : 06214466
 Unique Number : 11087330
 Test Package : FLEET

Received : 19 Jun 2024
 Tested : 20 Jun 2024
 Diagnosed : 21 Jun 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

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)