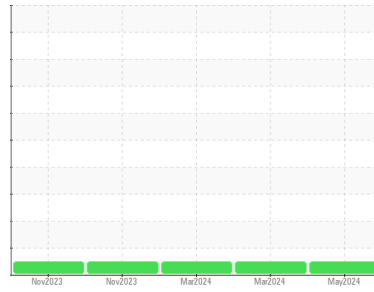




OIL ANALYSIS REPORT

Machine Id
813017
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



NORMAL



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		GFL0122378	GFL0108892	GFL0108973
Sample Date	Client Info		17 May 2024	04 Mar 2024	01 Mar 2024
Machine Age	hrs	Client Info	4807	130	4201
Oil Age	hrs	Client Info	817	600	3384
Oil Changed	Client Info		Changed	Changed	Not Changed
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	12	66	28
Chromium	ppm	ASTM D5185m >20	1	2	1
Nickel	ppm	ASTM D5185m >5	2	7	8
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	1	<1	0
Aluminum	ppm	ASTM D5185m >20	2	8	2
Lead	ppm	ASTM D5185m >40	1	0	0
Copper	ppm	ASTM D5185m >330	2	80	4
Tin	ppm	ASTM D5185m >15	2	2	<1
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	10	<1
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	60	99	64
Manganese	ppm	ASTM D5185m 0	<1	1	<1
Magnesium	ppm	ASTM D5185m 1010	967	1436	969
Calcium	ppm	ASTM D5185m 1070	1105	1720	1051
Phosphorus	ppm	ASTM D5185m 1150	1105	1394	1009
Zinc	ppm	ASTM D5185m 1270	1268	1910	1278
Sulfur	ppm	ASTM D5185m 2060	3468	3952	2572

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	15	5
Sodium	ppm	ASTM D5185m	3	9	6
Potassium	ppm	ASTM D5185m >20	3	22	2

INFRA-RED

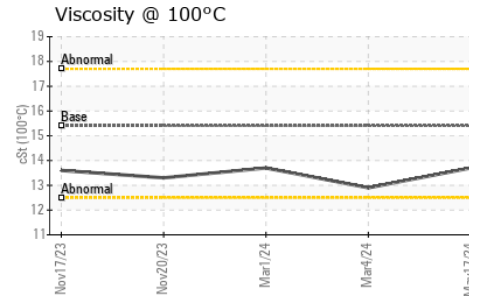
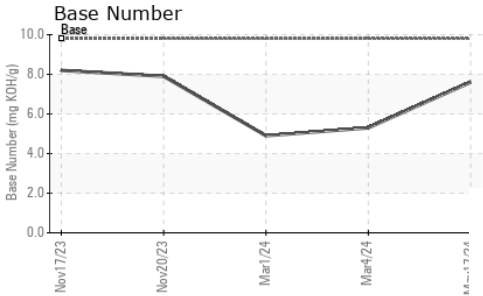
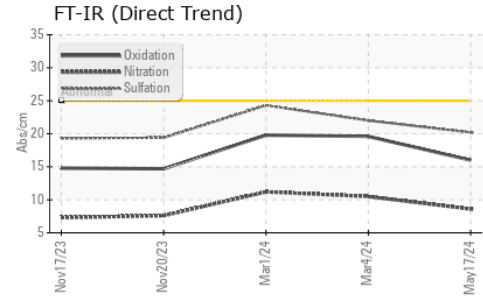
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.7	0.8	1.4
Nitration	Abs/cm	*ASTM D7624 >20	8.6	10.5	11.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.2	22.0	24.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.0	19.6	19.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.6	5.3	4.9



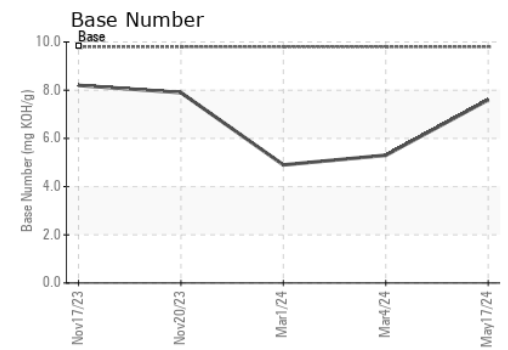
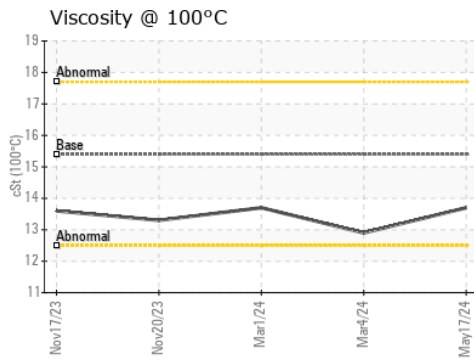
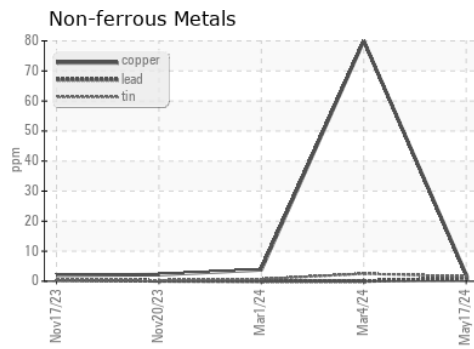
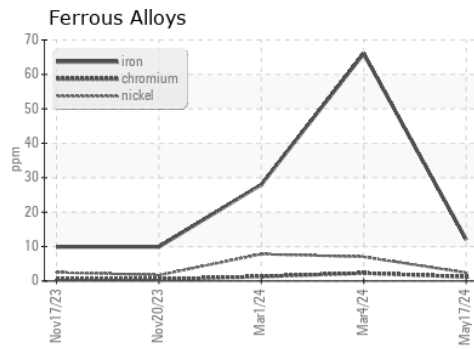
OIL ANALYSIS REPORT



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	13.7	12.9

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122378 **Received** : 22 May 2024
Lab Number : 06187374 **Tested** : 23 May 2024
Unique Number : 11044126 **Diagnosed** : 23 May 2024 - Wes Davis
Test Package : FLEET

GFL Environmental - 415 - Michigan East
 6200 Elmridge
 Sterling Heights, MI
 US 48313
 Contact: Frank Wolak
 fwolak@gflenv.com
 T: (586)825-9514
 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)