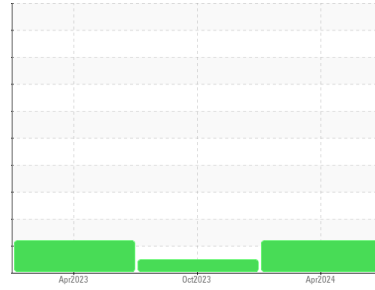




OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id

732012

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	GFL0106748	GFL0084653	GFL0078008	
Sample Date	Client Info	10 Apr 2024	16 Oct 2023	18 Apr 2023	
Machine Age	hrs	Client Info	4407	0	35867
Oil Age	hrs	Client Info	4407	0	0
Oil Changed	Client Info	Changed	Changed	Not Changed	
Sample Status		ABNORMAL	NORMAL	ABNORMAL	

CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>50	24	8	29
Chromium	ppm	ASTM D5185m	>4	1	<1	2
Nickel	ppm	ASTM D5185m	>2	<1	0	1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	4	2	3
Lead	ppm	ASTM D5185m	>30	11	4	11
Copper	ppm	ASTM D5185m	>35	0	1	4
Tin	ppm	ASTM D5185m	>4	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	12	33	6
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	66	52	65
Manganese	ppm	ASTM D5185m	0	1	<1	2
Magnesium	ppm	ASTM D5185m	1010	689	592	666
Calcium	ppm	ASTM D5185m	1070	1944	1736	1881
Phosphorus	ppm	ASTM D5185m	1150	884	816	839
Zinc	ppm	ASTM D5185m	1270	1108	1006	1133
Sulfur	ppm	ASTM D5185m	2060	2874	2492	2794

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>+100	7	4	8
Sodium	ppm	ASTM D5185m		13	5	12
Potassium	ppm	ASTM D5185m	>20	0	3	2

INFRA-RED

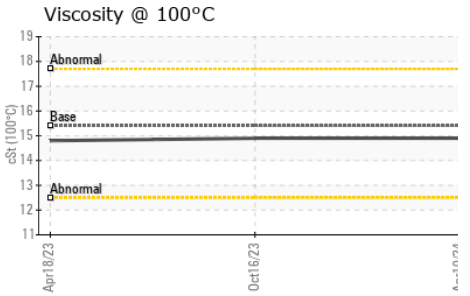
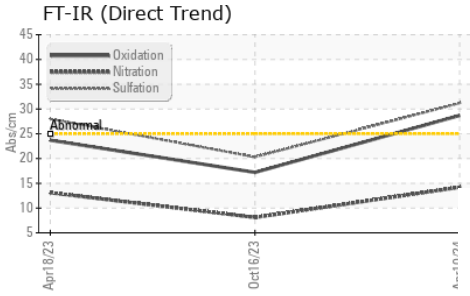
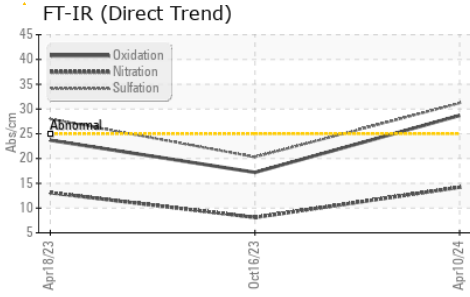
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	14.2	8.1	13.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	31.2	20.3	28.0

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	28.7	17.2	23.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	3.0	7.3	2.9



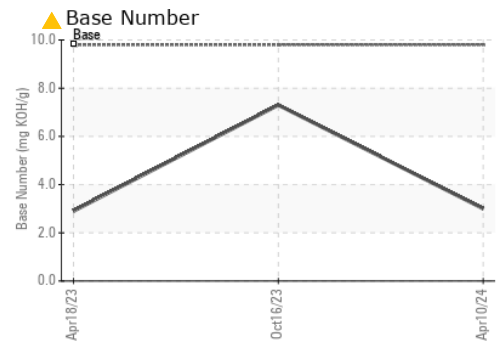
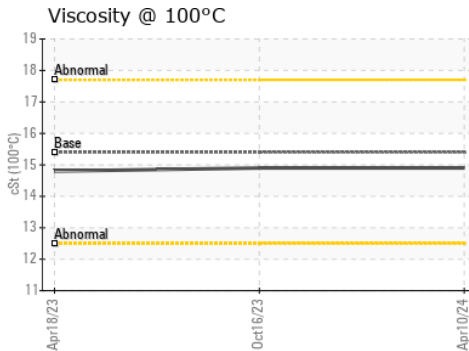
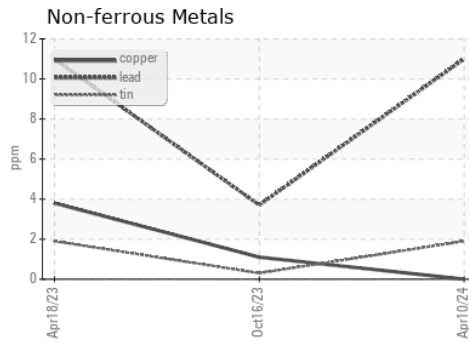
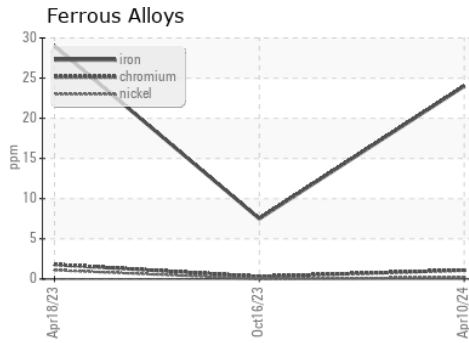
OIL ANALYSIS REPORT



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	14.9	14.9	14.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0106748 **Received** : 17 Apr 2024
Lab Number : 06151499 **Tested** : 18 Apr 2024
Unique Number : 10981577 **Diagnosed** : 19 Apr 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 856 - Houston South
 8515 Highway 6 South
 Houston, TX 77083
 Contact: Jose Gonzalez
 jgonzalez2@gflenv.com

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)