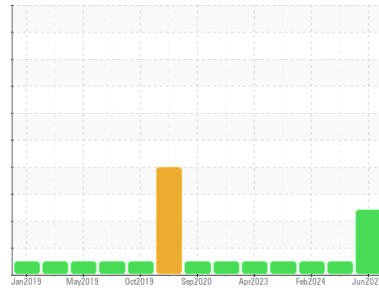




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
949003-205303

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for possible coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition. (Customer Sample Comment: Oil sample)

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	GFL0125190	GFL0114400	GFL0104013	
Sample Date	Client Info	28 Jun 2024	13 Mar 2024	22 Feb 2024	
Machine Age	mls	Client Info	300958	148822	19597
Oil Age	mls	Client Info	0	0	19597
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd	
Sample Status		ABNORMAL	NORMAL	NORMAL	

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	47	22	17
Chromium	ppm	ASTM D5185m	>4	2	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>9	5	3	2
Lead	ppm	ASTM D5185m	>30	<1	1	1
Copper	ppm	ASTM D5185m	>35	23	10	9
Tin	ppm	ASTM D5185m	>4	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	50	3	35	38
Barium	ppm	ASTM D5185m	5	0	8	8
Molybdenum	ppm	ASTM D5185m	50	64	50	47
Manganese	ppm	ASTM D5185m	0	1	3	3
Magnesium	ppm	ASTM D5185m	560	569	774	934
Calcium	ppm	ASTM D5185m	1510	1667	1373	1269
Phosphorus	ppm	ASTM D5185m	780	729	734	858
Zinc	ppm	ASTM D5185m	870	960	982	1041
Sulfur	ppm	ASTM D5185m	2040	3099	2729	3275

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>+100	5	62	58
Sodium	ppm	ASTM D5185m		▲ 66	3	4
Potassium	ppm	ASTM D5185m	>20	▲ 82	6	4

INFRA-RED

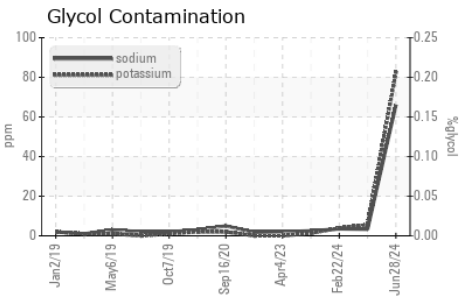
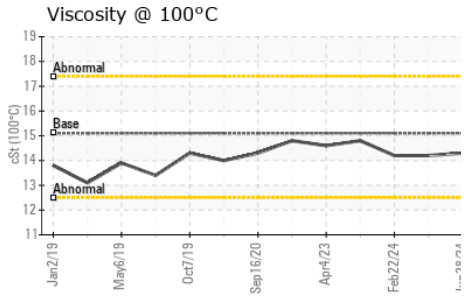
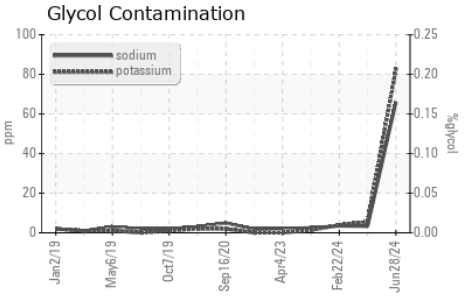
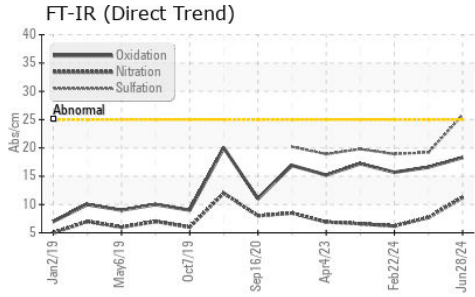
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.2	7.7	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.8	19.2	18.9

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	16.6	15.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	3.8	8.9	9.9



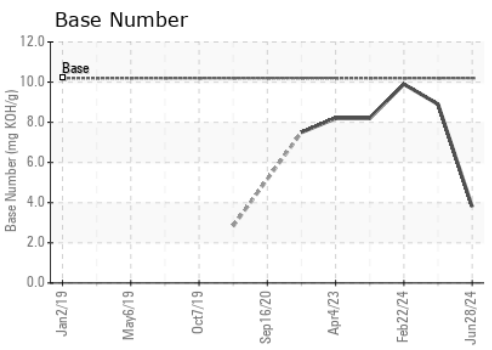
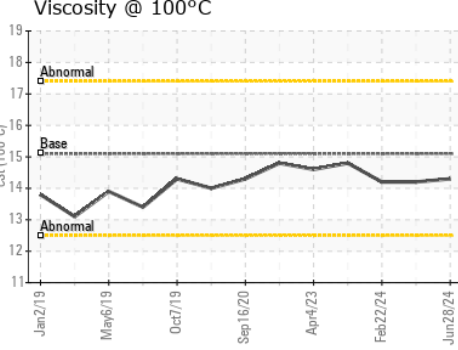
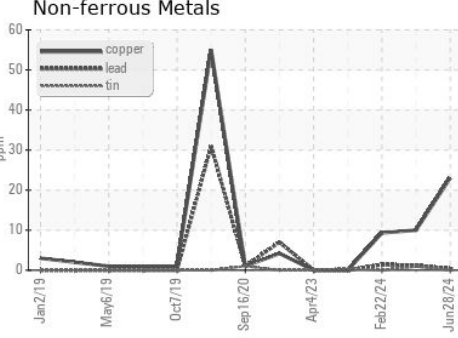
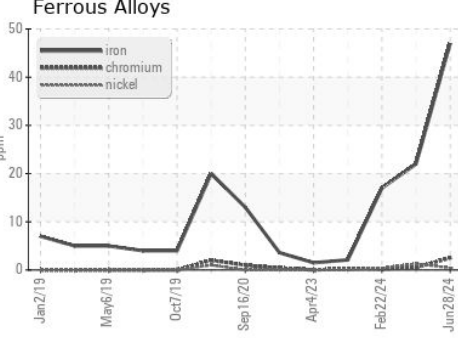
OIL ANALYSIS REPORT



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	15.1	14.3	14.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125190 **Received** : 05 Jul 2024
Lab Number : 06229594 **Tested** : 09 Jul 2024
Unique Number : 11113087 **Diagnosed** : 09 Jul 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050
 Contact: Saul Castillo
 saul.castillo@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)