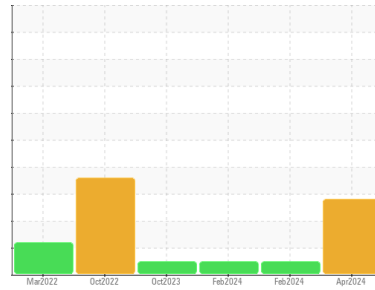




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
486M
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

Ring and cylinder wear is indicated.

Contamination

There is a moderate amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. 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		GFL0104473	GFL0104340	GFL0104341
Sample Date	Client Info		11 Apr 2024	29 Feb 2024	19 Feb 2024
Machine Age	hrs	Client Info	16784	16572	16550
Oil Age	hrs	Client Info	600	600	13941
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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 >90	▲ 83	17	17
Chromium	ppm	ASTM D5185m >20	▲ 28	14	5
Nickel	ppm	ASTM D5185m >2	1	0	<1
Titanium	ppm	ASTM D5185m >2	<1	0	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	9	2	2
Lead	ppm	ASTM D5185m >40	0	0	<1
Copper	ppm	ASTM D5185m >330	6	0	2
Tin	ppm	ASTM D5185m >15	<1	0	1
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 1	40	70	61
Barium	ppm	ASTM D5185m 1	2	2	0
Molybdenum	ppm	ASTM D5185m 60	42	38	38
Manganese	ppm	ASTM D5185m 1	2	0	<1
Magnesium	ppm	ASTM D5185m 1010	583	551	482
Calcium	ppm	ASTM D5185m 1070	1533	1645	1528
Phosphorus	ppm	ASTM D5185m 1150	984	957	861
Zinc	ppm	ASTM D5185m 1270	1147	1149	1061
Sulfur	ppm	ASTM D5185m 2060	3211	2671	2664

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	14	13	12
Sodium	ppm	ASTM D5185m	21	9	5
Potassium	ppm	ASTM D5185m >20	4	5	4
Fuel	%	ASTM D3524 >3.0	▲ 5.7	<1.0	<1.0

INFRA-RED

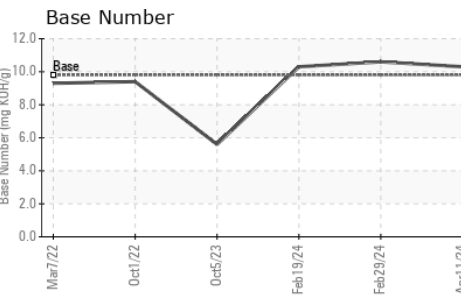
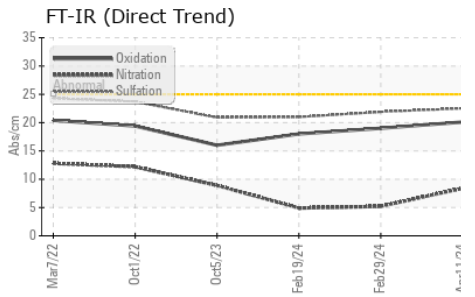
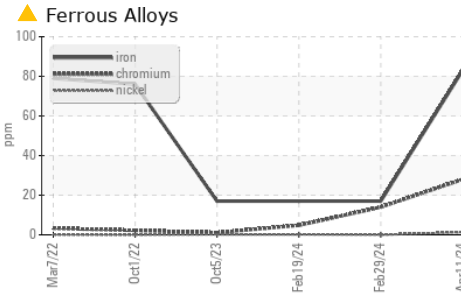
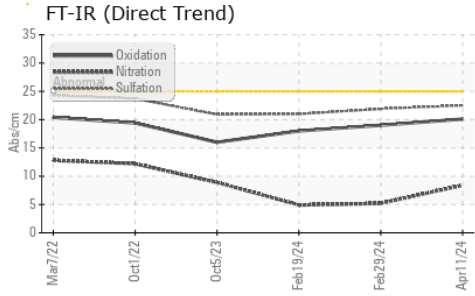
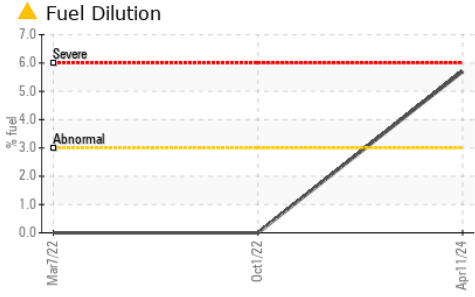
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	0.7	0.2	0.1
Nitration	Abs/cm	*ASTM D7624 >20	8.4	5.2	4.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.5	21.9	21.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.1	19.0	18.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	10.3	10.6	10.3



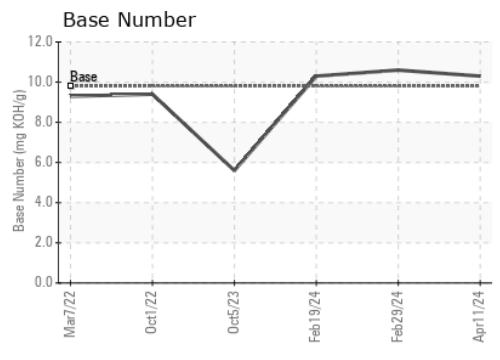
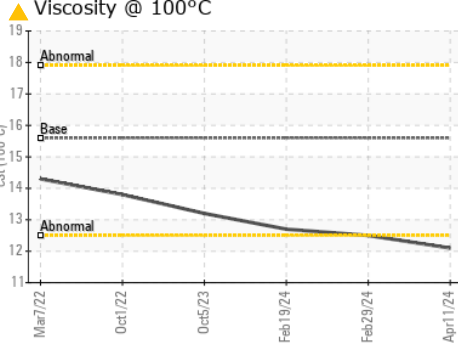
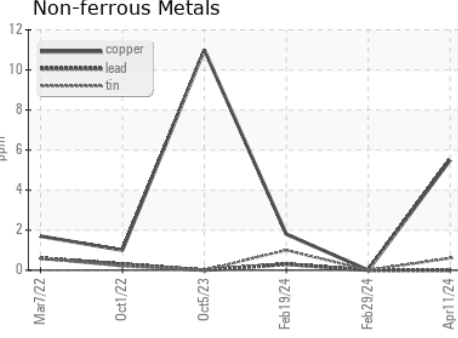
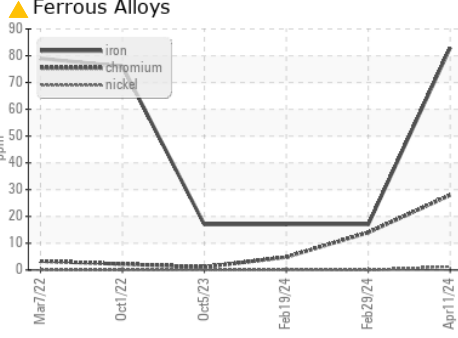
OIL ANALYSIS REPORT



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	15.6 ▲ 12.1	12.5	12.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104473 **Received** : 16 Apr 2024
Lab Number : 06150090 **Tested** : 22 Apr 2024
Unique Number : 10980168 **Diagnosed** : 22 Apr 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184
 Contact: Belal Dgheish
 bdgheish@gflenv.com
 T: (734)714-2340
 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)