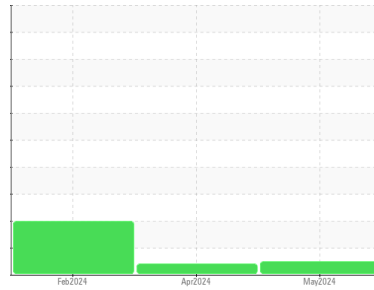




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
814021
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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			GFL0078302	GFL0078312	GFL0078298
Sample Date	Client Info			20 May 2024	16 Apr 2024	12 Feb 2024
Machine Age	hrs	Client Info		801	608	151
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			Changed	Changed	Not Changed
Sample Status				NORMAL	ATTENTION	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	0.4	
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	11	43	21
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>5	3	12	3
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	2	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	7	5
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	57	199	11
Tin	ppm	ASTM D5185m	>15	2	4	3
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	<1	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	10	160	425
Barium	ppm	ASTM D5185m	0	0	2	0
Molybdenum	ppm	ASTM D5185m	60	70	123	125
Manganese	ppm	ASTM D5185m	0	1	6	5
Magnesium	ppm	ASTM D5185m	1010	938	687	656
Calcium	ppm	ASTM D5185m	1070	1141	1398	1379
Phosphorus	ppm	ASTM D5185m	1150	954	667	686
Zinc	ppm	ASTM D5185m	1270	1235	837	779
Sulfur	ppm	ASTM D5185m	2060	3217	2271	2676

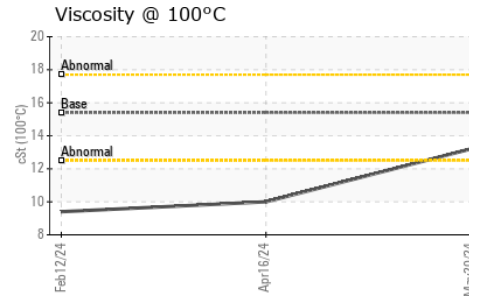
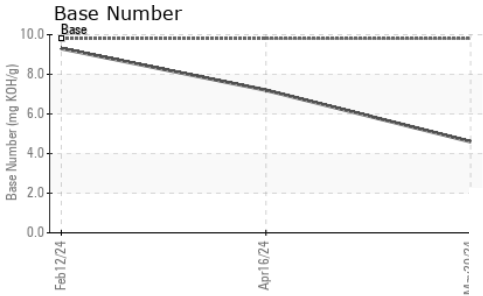
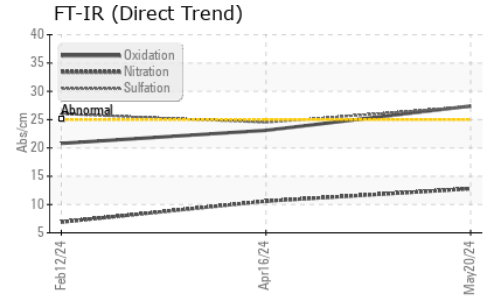
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	10	68	▲ 88
Sodium	ppm	ASTM D5185m		2	4	0
Potassium	ppm	ASTM D5185m	>20	3	7	7

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.7	0.5	0.1
Nitration	Abs/cm	*ASTM D7624	>20	12.8	10.6	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.3	24.5	26.0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	27.4	23.1	20.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	4.6	7.2	9.3



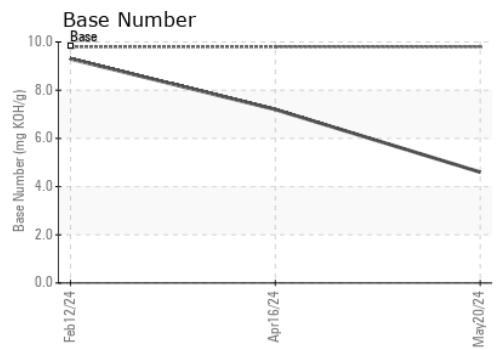
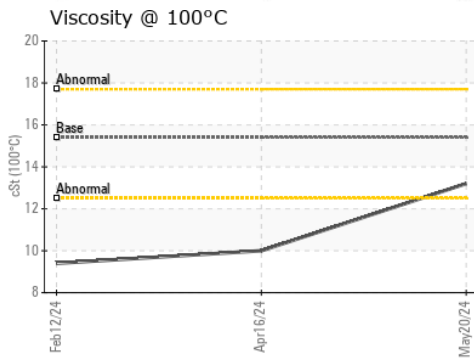
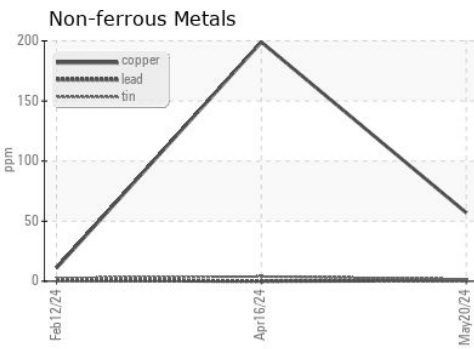
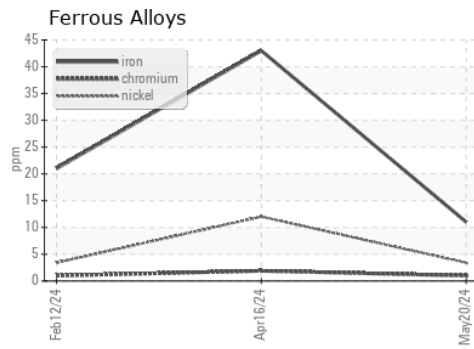
OIL ANALYSIS REPORT



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	15.4	13.2	10.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0078302 **Received** : 23 May 2024
Lab Number : 06190008 **Tested** : 25 May 2024
Unique Number : 11046760 **Diagnosed** : 29 May 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 844 - Princeton Hauling
 10129 Highway 62 West
 Princeton, KY
 US 42445
 Contact: ROBERT THIBAUT
 robert.thibault@gflenv.com
 T: (931)237-6045
 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)