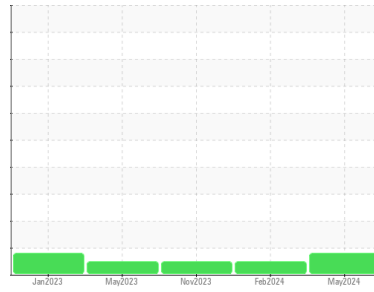




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
229042-603253

Component
Diesel 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

Cylinder, crank, or cam shaft wear is indicated.

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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0119399	GFL0110886	GFL0103003
Sample Date	Client Info			13 May 2024	14 Feb 2024	21 Nov 2023
Machine Age	hrs	Client Info		5873	2028	5611
Oil Age	hrs	Client Info		262	5611	575
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<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	>100	▲ 163	55	57
Chromium	ppm	ASTM D5185m	>20	2	1	2
Nickel	ppm	ASTM D5185m	>2	0	<1	1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	12	6	6
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	6	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	7	3	1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	67	60	65
Manganese	ppm	ASTM D5185m	0	2	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1068	1001	1000
Calcium	ppm	ASTM D5185m	1070	1164	1103	1110
Phosphorus	ppm	ASTM D5185m	1150	1199	1115	973
Zinc	ppm	ASTM D5185m	1270	1405	1323	1270
Sulfur	ppm	ASTM D5185m	2060	3678	3217	3282

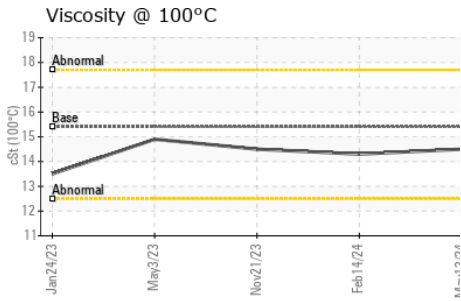
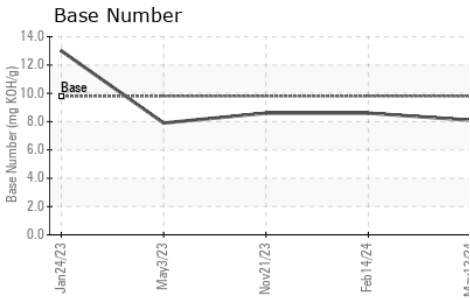
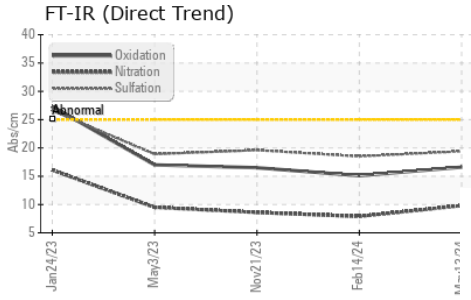
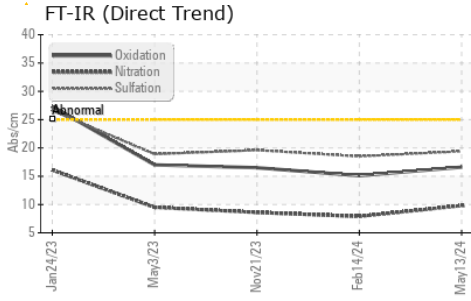
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	14	9	10
Sodium	ppm	ASTM D5185m		2	2	0
Potassium	ppm	ASTM D5185m	>20	<1	<1	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	9.8	7.9	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	18.5	19.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	15.1	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.1	8.6	8.6



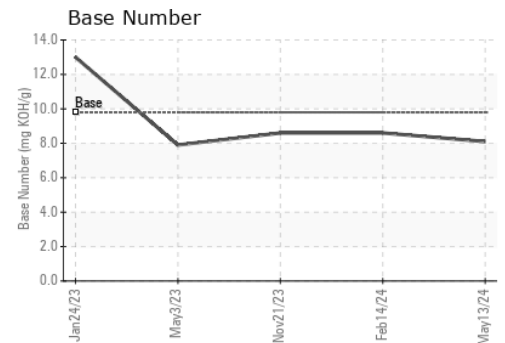
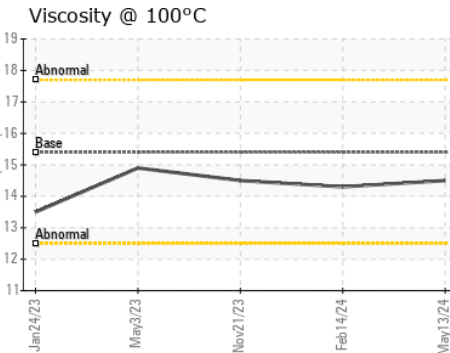
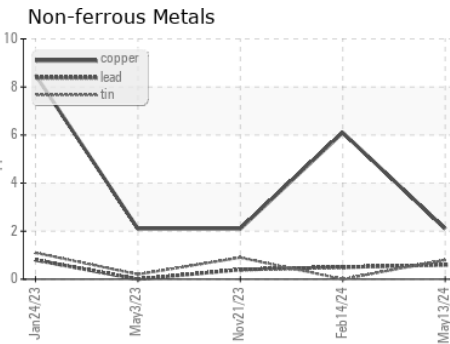
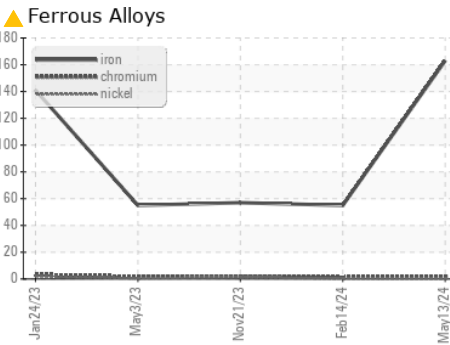
OIL ANALYSIS REPORT



PARAMETER	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

PARAMETER	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.5	14.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0119399
 Lab Number : 06187126
 Unique Number : 11043878
 Test Package : FLEET

GFL Environmental - 814 - Little Rock Hauling
 4005 Hwy 161 N.
 Little Rock, AR
 US 72117

Contact: Brad Koenig
 bkoenig@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)

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F: