



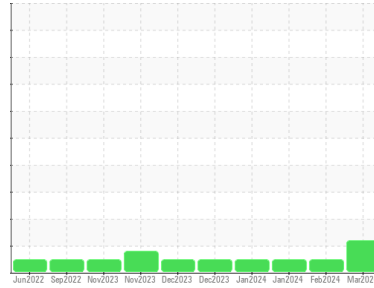
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id
4663M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

▲ 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		GFL0104437	GFL0110025	GFL0110028
Sample Date	Client Info		15 Mar 2024	01 Feb 2024	31 Jan 2024
Machine Age	mls	Client Info	101148	14616	14616
Oil Age	mls	Client Info	0	600	600
Oil Changed	Client Info		Not Chngd	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >90	10	21	47
Chromium	ppm	ASTM D5185m >20	<1	1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	3	17	5
Lead	ppm	ASTM D5185m >40	1	0	0
Copper	ppm	ASTM D5185m >330	1	1	2
Tin	ppm	ASTM D5185m >15	<1	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	6	4	1
Barium	ppm	ASTM D5185m 0	0	5	5
Molybdenum	ppm	ASTM D5185m 60	62	63	64
Manganese	ppm	ASTM D5185m 0	<1	0	0
Magnesium	ppm	ASTM D5185m 1010	912	959	975
Calcium	ppm	ASTM D5185m 1070	1071	1021	1039
Phosphorus	ppm	ASTM D5185m 1150	974	920	904
Zinc	ppm	ASTM D5185m 1270	1225	1222	1254
Sulfur	ppm	ASTM D5185m 2060	3037	2908	2576

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	10	6	8
Sodium	ppm	ASTM D5185m	▲ 106	39	<1
Potassium	ppm	ASTM D5185m >20	3	29	12
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

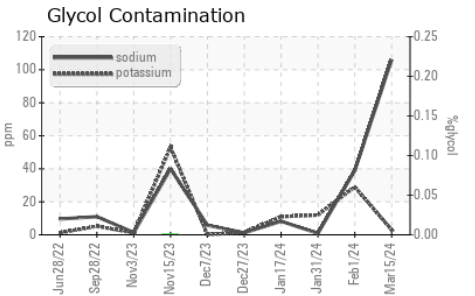
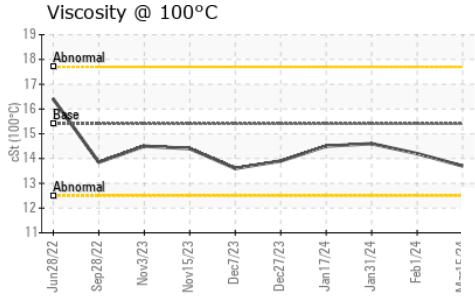
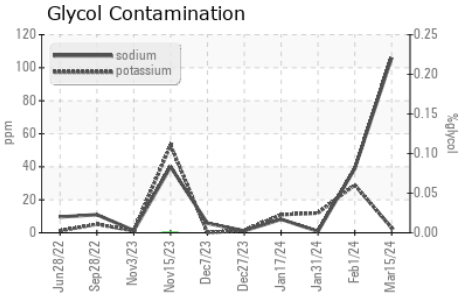
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	0.3	0.3	0.7
Nitration	Abs/cm	*ASTM D7624 >20	7.6	7.1	13.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.3	18.9	25.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.2	14.5	26.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.4	8.8	5.6



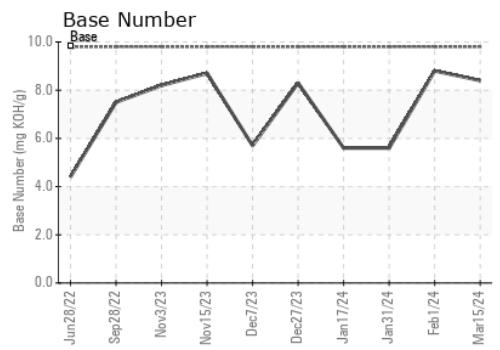
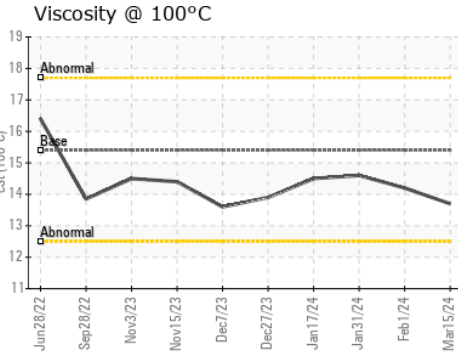
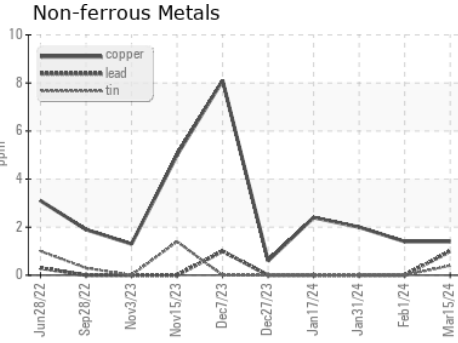
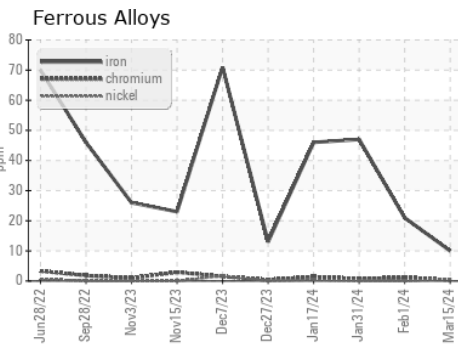
OIL ANALYSIS REPORT



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	13.7	14.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104437
Lab Number : 06122121
Unique Number : 10936272
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184

Received : 19 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 21 Mar 2024 - Jonathan Hester

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)