



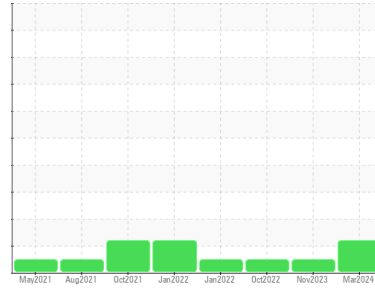
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Area
(BA85871)
Machine Id
4565M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (5 GAL)



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

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 acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0115022	GFL0089126	GFL0057342
Sample Date	Client Info		05 Mar 2024	25 Nov 2023	20 Oct 2022
Machine Age	hrs	Client Info	19724	19393	17563
Oil Age	hrs	Client Info	421	17563	15591
Oil Changed	Client Info		Changed	Not Changd	Changed
Sample Status			ATTENTION	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 >75	15	2	6
Chromium	ppm	ASTM D5185m >5	0	<1	2
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >15	2	1	0
Lead	ppm	ASTM D5185m >25	0	0	<1
Copper	ppm	ASTM D5185m >100	0	<1	<1
Tin	ppm	ASTM D5185m >4	0	<1	<1
Antimony	ppm	ASTM D5185m	---	---	---
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 0	<1	4	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	60	58	61
Manganese	ppm	ASTM D5185m 0	0	<1	<1
Magnesium	ppm	ASTM D5185m 1010	822	907	930
Calcium	ppm	ASTM D5185m 1070	930	995	1033
Phosphorus	ppm	ASTM D5185m 1150	834	1005	1004
Zinc	ppm	ASTM D5185m 1270	1043	1223	1261
Sulfur	ppm	ASTM D5185m 2060	2589	3024	3461

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	9	10	5
Sodium	ppm	ASTM D5185m	148	68	19
Potassium	ppm	ASTM D5185m >20	<1	10	0
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

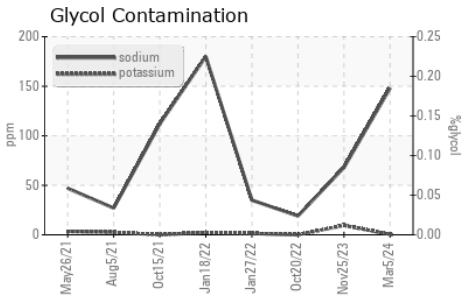
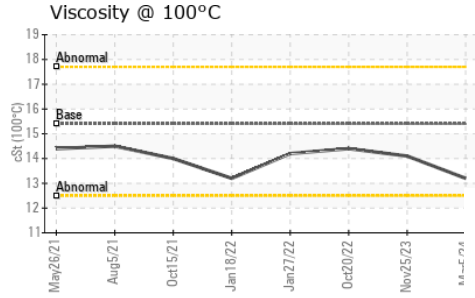
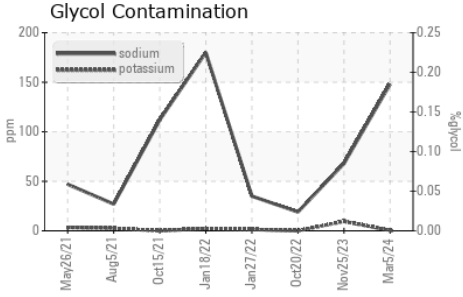
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	0.6	0.2	0.2
Nitration	Abs/cm	*ASTM D7624 >20	9.5	5.8	7.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.5	18.1	20.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.4	13.8	15.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.7	9.1	9.9



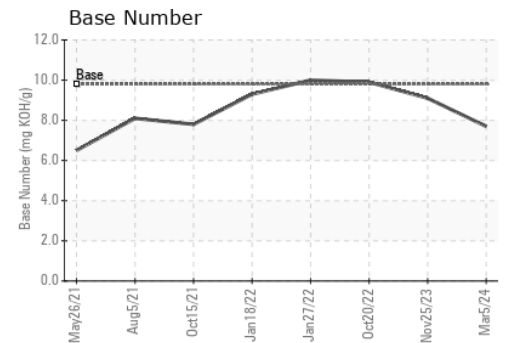
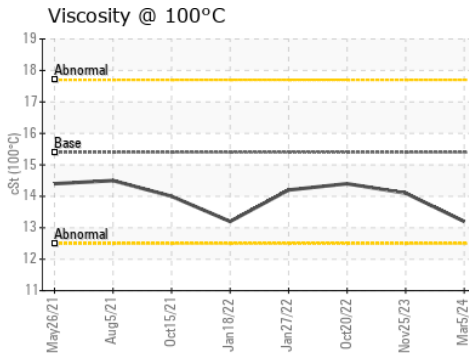
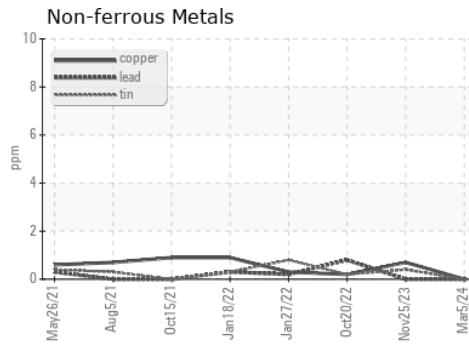
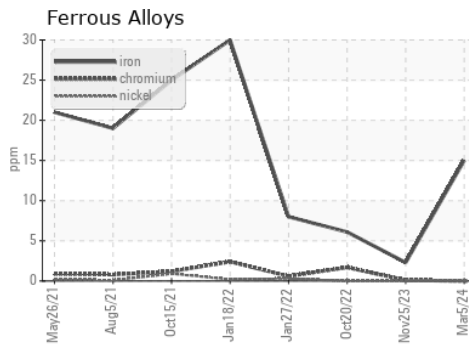
OIL ANALYSIS REPORT



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	>0.2	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	14.1	14.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0115022 Received : 11 Mar 2024
 Lab Number : 06113853 Tested : 13 Mar 2024
 Unique Number : 10922686 Diagnosed : 13 Mar 2024 - Jonathan Hester
 Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 405 - Arbor Hills
 7400 Napier Rd
 NORTHVILLE, MI
 US 48168
 Contact: Anthony Hopkins
 ahopkins@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)