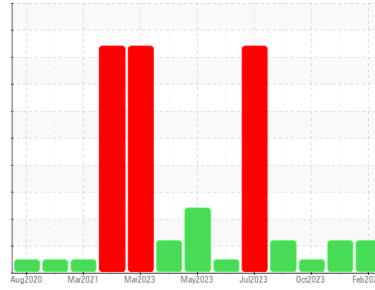




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
523004-704

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels remain 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	GFL0112722	GFL0045472	GFL0091766
Sample Date	Client Info	23 Feb 2024	11 Dec 2023	19 Oct 2023
Machine Age	hrs	22336	22798	22010
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Not Chngd	Changed	Not Chngd
Sample Status		ATTENTION	ATTENTION	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 >120	8	8	1
Chromium	ppm ASTM D5185m >20	0	<1	<1
Nickel	ppm ASTM D5185m >5	2	2	<1
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	3	2	2
Lead	ppm ASTM D5185m >40	3	<1	<1
Copper	ppm ASTM D5185m >330	<1	1	<1
Tin	ppm ASTM D5185m >15	0	<1	<1
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	<1	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	1	2	3
Barium	ppm ASTM D5185m 0	0	12	10
Molybdenum	ppm ASTM D5185m 60	68	72	69
Manganese	ppm ASTM D5185m 0	<1	<1	0
Magnesium	ppm ASTM D5185m 1010	1139	978	913
Calcium	ppm ASTM D5185m 1070	1174	1051	1055
Phosphorus	ppm ASTM D5185m 1150	1154	1051	917
Zinc	ppm ASTM D5185m 1270	1382	1264	1230
Sulfur	ppm ASTM D5185m 2060	3663	3370	3608

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	5	4
Sodium	ppm ASTM D5185m	21	26	19
Potassium	ppm ASTM D5185m >20	74	78	58
Glycol	% *ASTM D2982	NEG	NEG	NEG

INFRA-RED

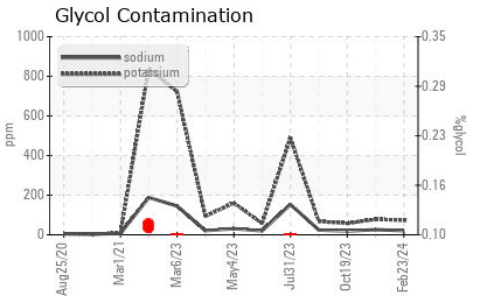
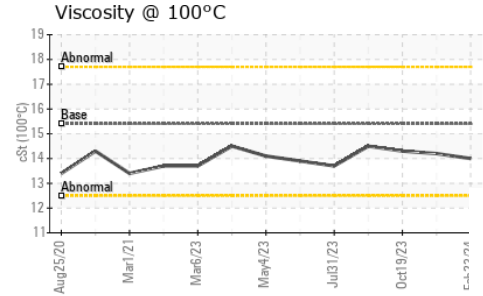
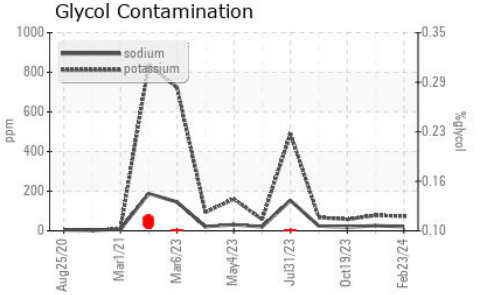
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.2	0.2	0.1
Nitration	Abs/cm *ASTM D7624 >20	6.6	5.8	5.2
Sulfation	Abs/.1mm *ASTM D7415 >30	17.9	17.8	17.7

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.4	13.9	13.8
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.9	8.3	9.3



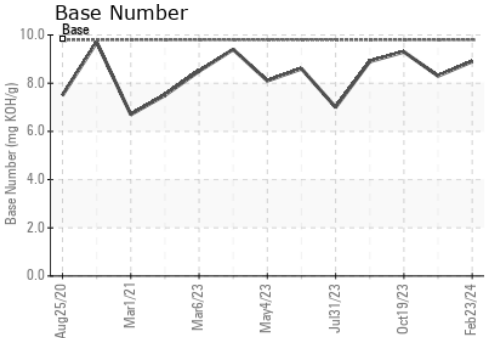
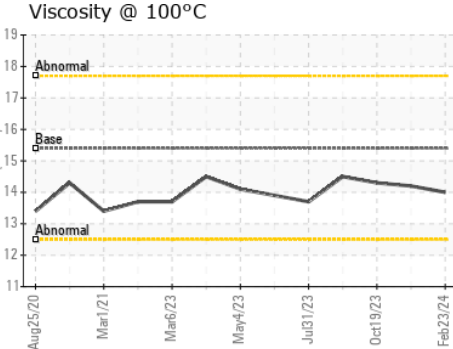
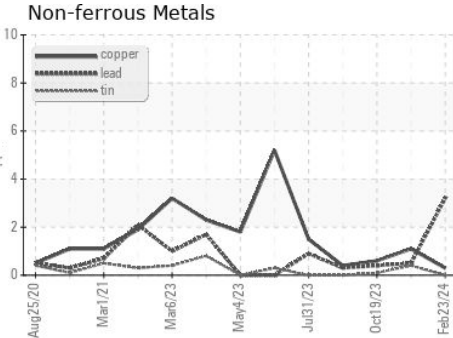
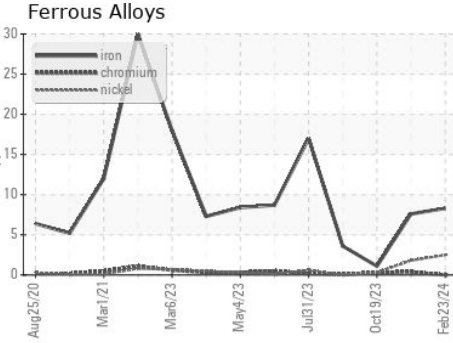
OIL ANALYSIS REPORT



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	14.0	14.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0112722
Lab Number : 06109286
Unique Number : 10912783
Test Package : FLEET (Additional Tests: Glycol)

Received : 05 Mar 2024
Tested : 08 Mar 2024
Diagnosed : 08 Mar 2024 - Jonathan Hester

GFL Environmental - 654 - Richmond Hauling
 11800 Lewis Road
 Chester, VA
 US 23831
 Contact: Jimmy Mayes
 jmayes@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: