



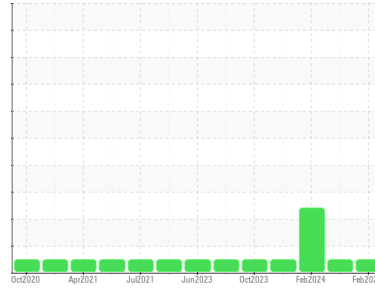
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
(36778HA)
Machine Id
825017-139
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)



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	GFL0111831	GFL0108292	GFL0108276
Sample Date	Client Info	29 Feb 2024	12 Feb 2024	05 Feb 2024
Machine Age	hrs	22770	22612	22612
Oil Age	hrs	22770	0	16310
Oil Changed	Client Info	Not Chngd	Not Chngd	Changed
Sample Status		NORMAL	NORMAL	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	0.6	▲ 6.2
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	6	4	7
Chromium	ppm ASTM D5185m >20	0	<1	<1
Nickel	ppm ASTM D5185m >5	4	3	1
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	4	2	9
Lead	ppm ASTM D5185m >40	0	0	0
Copper	ppm ASTM D5185m >330	0	<1	0
Tin	ppm ASTM D5185m >15	0	0	<1
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	16	20	15
Barium	ppm ASTM D5185m 0	0	12	0
Molybdenum	ppm ASTM D5185m 60	50	53	54
Manganese	ppm ASTM D5185m 0	<1	0	<1
Magnesium	ppm ASTM D5185m 1010	839	842	821
Calcium	ppm ASTM D5185m 1070	1031	1119	950
Phosphorus	ppm ASTM D5185m 1150	924	1045	921
Zinc	ppm ASTM D5185m 1270	1094	1120	1134
Sulfur	ppm ASTM D5185m 2060	2642	3678	2750

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	4	8
Sodium	ppm ASTM D5185m	<1	0	<1
Potassium	ppm ASTM D5185m >20	0	2	1

INFRA-RED

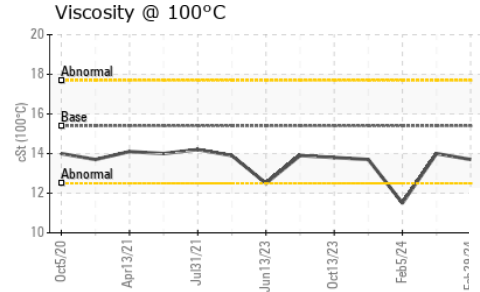
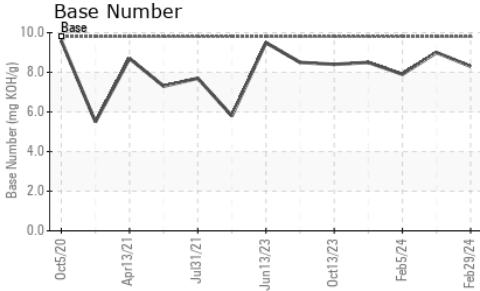
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.1	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	6.3	4.9	6.1
Sulfation	Abs/.1mm *ASTM D7415 >30	18.3	17.4	17.7

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.9	12.8	13.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.3	9.0	7.9



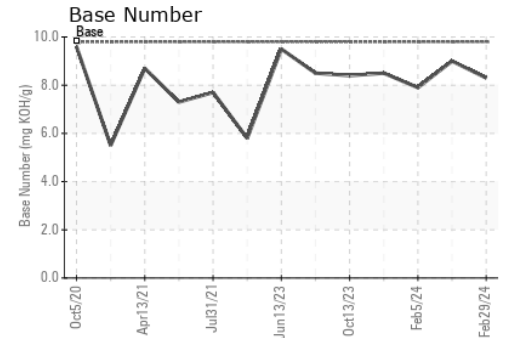
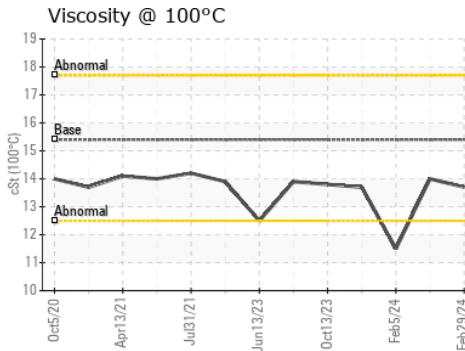
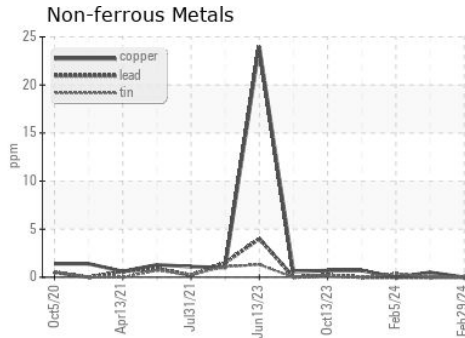
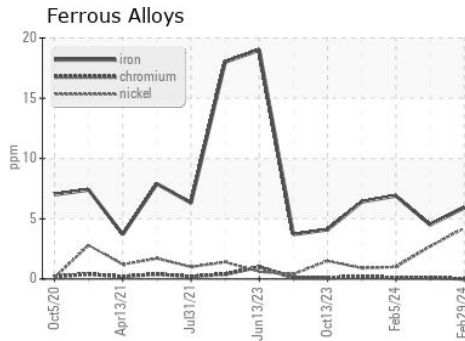
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.7	14.0 ▲ 11.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0111831
 Lab Number : 06109257
 Unique Number : 10912754
 Test Package : FLEET

Received : 05 Mar 2024
 Tested : 06 Mar 2024
 Diagnosed : 06 Mar 2024 - Wes Davis

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@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: