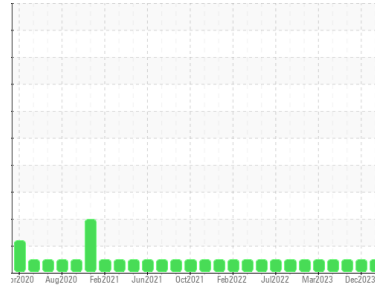




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
910001

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (12 GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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	GFL0099751	GFL0073346	GFL0073280
Sample Date	Client Info	27 Feb 2024	22 Dec 2023	04 Oct 2023
Machine Age	hrs	600	600	600
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
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	11	8	7
Chromium	ppm ASTM D5185m >20	<1	<1	<1
Nickel	ppm ASTM D5185m >4	<1	0	0
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	3	3	2
Lead	ppm ASTM D5185m >40	0	0	0
Copper	ppm ASTM D5185m >330	<1	0	1
Tin	ppm ASTM D5185m >15	<1	1	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	12	12	10
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	87	82	88
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	827	835	912
Calcium	ppm ASTM D5185m 1070	997	992	1105
Phosphorus	ppm ASTM D5185m 1150	910	939	990
Zinc	ppm ASTM D5185m 1270	1138	1174	1237
Sulfur	ppm ASTM D5185m 2060	2885	2773	3060

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	5	3	4
Sodium	ppm ASTM D5185m	6	3	7
Potassium	ppm ASTM D5185m >20	2	4	3
Fuel	% ASTM D3524 >5	1.5	<1.0	<1.0

INFRA-RED

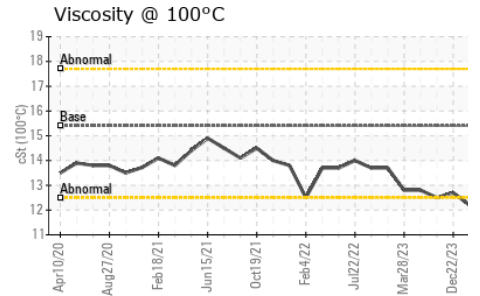
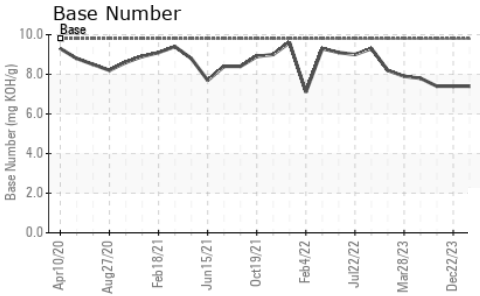
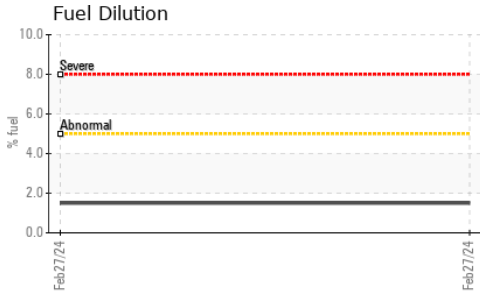
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.7	1.1	0.7
Nitration	Abs/cm *ASTM D7624 >20	7.2	8.9	8.0
Sulfation	Abs/.1mm *ASTM D7415 >30	18.1	19.7	18.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	12.6	14.2	13.5
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.4	7.4	7.4



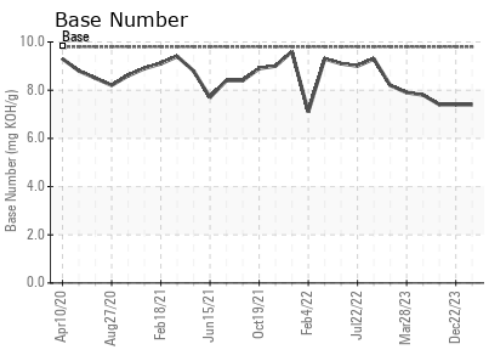
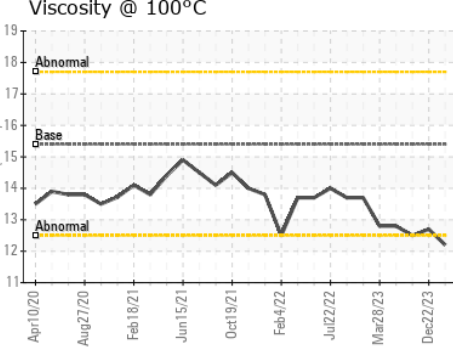
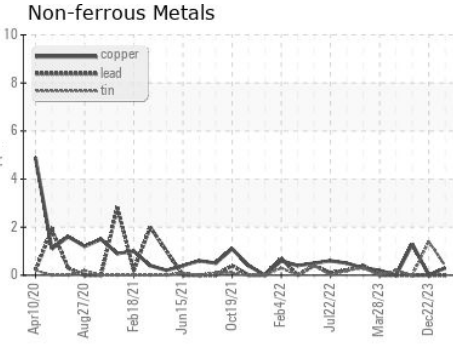
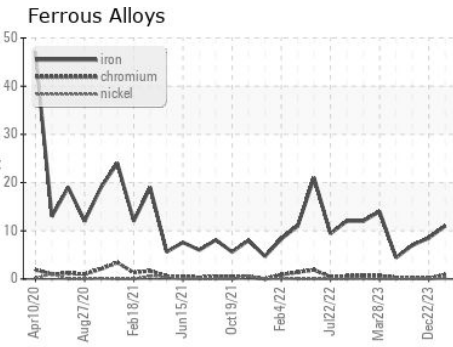
OIL ANALYSIS REPORT



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	12.2	12.7	12.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0099751
Lab Number : 06104054
Unique Number : 10902284
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 102 - Morristown TN
 415 Ryder Lane, PO Box 1894
 Morristown, TN
 US 37813
 Contact: Ricky Dunlap
 ricky.dunlap@gflenv.com
 T: (800)207-6618
 F:

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)