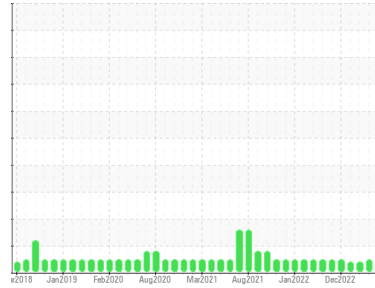




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
(H904550)

Machine Id
2683

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (10 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

Fuel content negligible. There is no indication of any contamination in the oil.

● Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0099749	GFL0073290	GFL0073357
Sample Date	Client Info	27 Feb 2024	08 Nov 2023	07 Aug 2023
Machine Age	hrs	600	600	600
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ATTENTION	NORMAL	ATTENTION

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	0.0	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >110	11	32	13
Chromium	ppm ASTM D5185m >4	<1	2	<1
Nickel	ppm ASTM D5185m >2	<1	0	0
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >25	8	3	<1
Lead	ppm ASTM D5185m >45	<1	30	0
Copper	ppm ASTM D5185m >85	<1	4	4
Tin	ppm ASTM D5185m >4	<1	1	<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	9	18	19
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	65	110	75
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	795	905	851
Calcium	ppm ASTM D5185m 1070	948	1164	1057
Phosphorus	ppm ASTM D5185m 1150	920	971	926
Zinc	ppm ASTM D5185m 1270	1148	1233	1121
Sulfur	ppm ASTM D5185m 2060	3002	2816	3435

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	6	10	5
Sodium	ppm ASTM D5185m	3	224	3
Potassium	ppm ASTM D5185m >20	1	50	2
Fuel	% ASTM D3524 >5	0.3	<1.0	<1.0

INFRA-RED

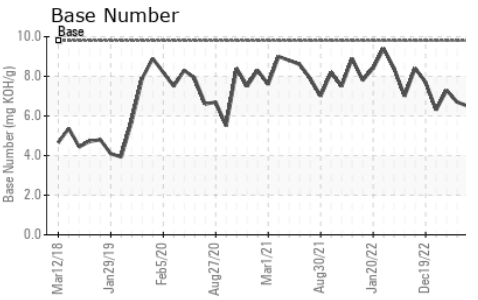
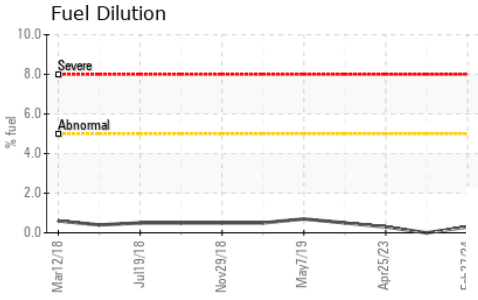
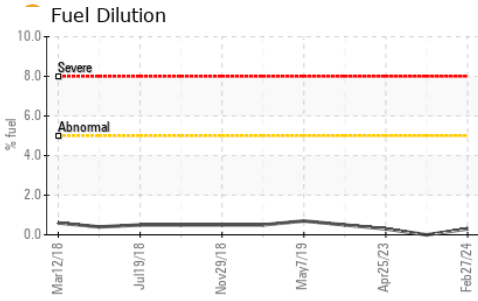
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.2	2.3	0.3
Nitration	Abs/cm *ASTM D7624 >20	6.8	14.5	8.1
Sulfation	Abs/.1mm *ASTM D7415 >30	17.6	28.3	18.5

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.1	23.8	13.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	6.5	6.7	7.3



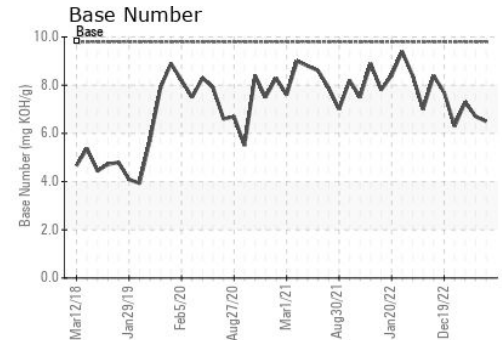
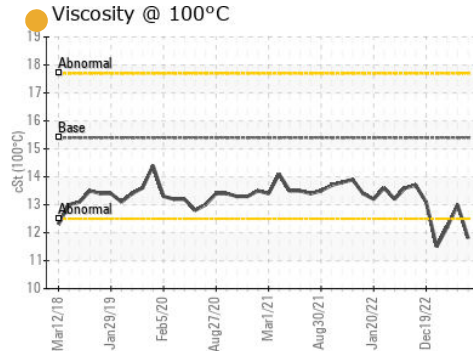
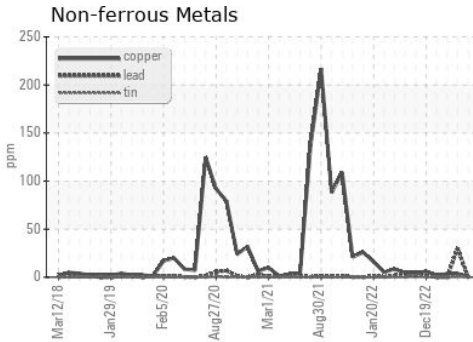
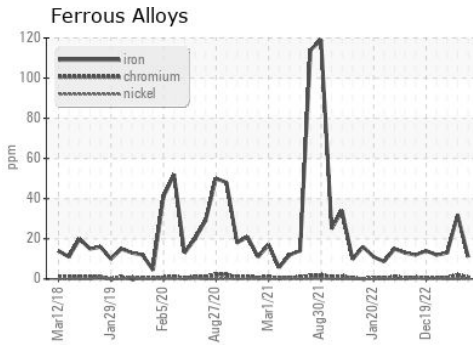
OIL ANALYSIS REPORT



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	● 11.8	13.0	● 12.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0099749 **Received** : 29 Feb 2024
Lab Number : 06104025 **Tested** : 04 Mar 2024
Unique Number : 10902255 **Diagnosed** : 04 Mar 2024 - Jonathan Hester
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)