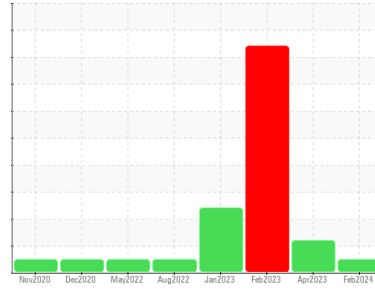




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
929095-260368

Component
Diesel Engine

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

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	GFL0087915	GFL0068558	GFL0056952	
Sample Date	Client Info	27 Feb 2024	12 Apr 2023	28 Feb 2023	
Machine Age	mls	Client Info	0	143116	34936
Oil Age	mls	Client Info	0	0	600
Oil Changed	Client Info	N/A	Changed	Changed	
Sample Status		NORMAL	ATTENTION	SEVERE	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	▲ 0.12

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	28	9	22
Chromium	ppm ASTM D5185m >20	2	<1	2
Nickel	ppm ASTM D5185m >4	<1	0	0
Titanium	ppm ASTM D5185m	<1	0	<1
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	5	0	4
Lead	ppm ASTM D5185m >40	0	0	<1
Copper	ppm ASTM D5185m >330	13	5	38
Tin	ppm ASTM D5185m >15	<1	0	<1
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	<1	6
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	62	67	172
Manganese	ppm ASTM D5185m 0	<1	<1	2
Magnesium	ppm ASTM D5185m 1010	951	906	816
Calcium	ppm ASTM D5185m 1070	1056	1091	942
Phosphorus	ppm ASTM D5185m 1150	1017	1016	902
Zinc	ppm ASTM D5185m 1270	1243	1231	1116
Sulfur	ppm ASTM D5185m 2060	3046	3313	2796

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	10	3	10
Sodium	ppm ASTM D5185m	18	● 136	● 2898
Potassium	ppm ASTM D5185m >20	16	8	▲ 139

INFRA-RED

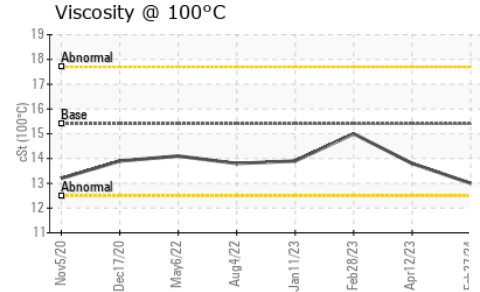
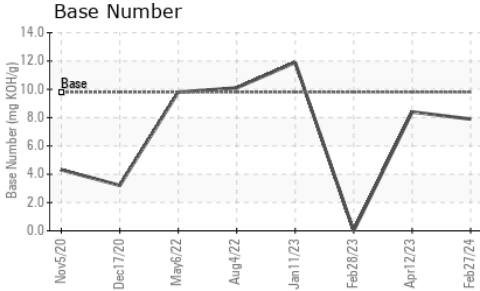
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.5	0.3	0.3
Nitration	Abs/cm *ASTM D7624 >20	10.7	6.2	11.6
Sulfation	Abs/.1mm *ASTM D7415 >30	21.5	16.8	20.1

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	19.9	13.3	14.8
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.9	8.4	0



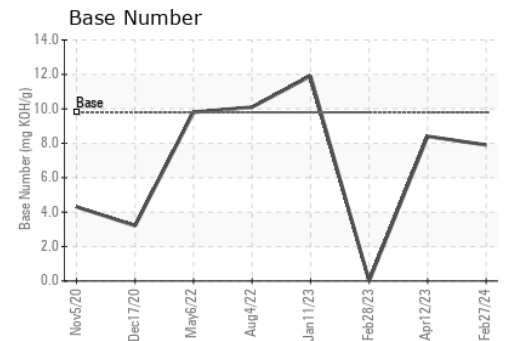
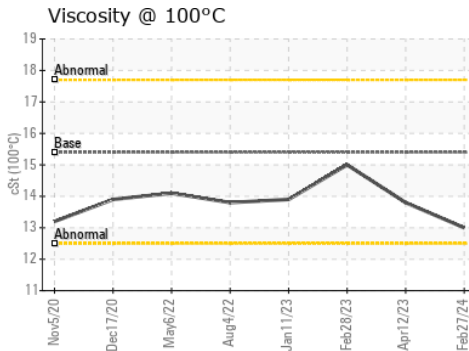
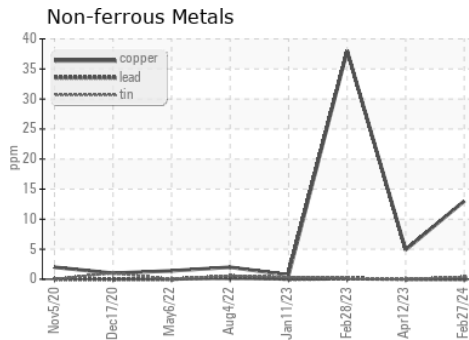
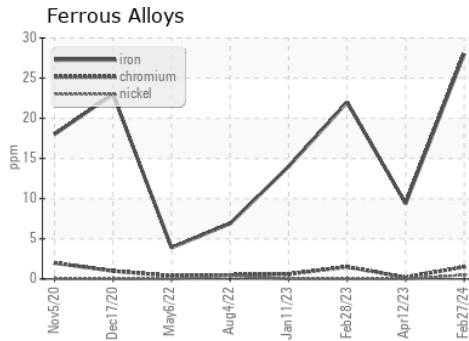
OIL ANALYSIS REPORT



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	13.0	13.8	15.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0087915
 Lab Number : **06102803**
 Unique Number : 10901033
 Test Package : FLEET

Received : 28 Feb 2024
 Tested : 29 Feb 2024
 Diagnosed : 29 Feb 2024 - Wes Davis

GFL Environmental - 859 - Bay City
 700 Avenue F
 Bay City, TX
 US 77414

Contact: JONATHON BROWN
 jonathon.brown@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)

T:
F: