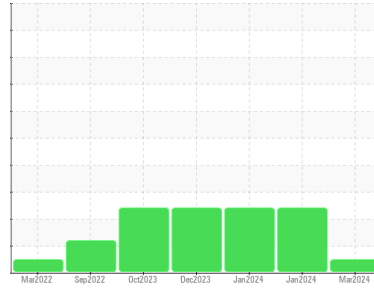




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
428068-402225.1

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	GFL0109324	GFL0093567	GFL0093538
Sample Date	Client Info	07 Mar 2024	29 Jan 2024	17 Jan 2024
Machine Age	hrs	18331	18329	18291
Oil Age	hrs	2	597	553
Oil Changed	Client Info	Not Changed	Changed	Not Changed
Sample Status		NORMAL	ABNORMAL	ATTENTION

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	0.0

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	13	42	38
Chromium	ppm ASTM D5185m >20	1	3	3
Nickel	ppm ASTM D5185m >4	<1	<1	0
Titanium	ppm ASTM D5185m	7	1	<1
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	3	4	4
Lead	ppm ASTM D5185m >40	0	4	3
Copper	ppm ASTM D5185m >330	0	4	4
Tin	ppm ASTM D5185m >15	<1	<1	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	13	5	1
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	54	75	71
Manganese	ppm ASTM D5185m 0	<1	<1	1
Magnesium	ppm ASTM D5185m 1010	886	971	944
Calcium	ppm ASTM D5185m 1070	1037	1152	1046
Phosphorus	ppm ASTM D5185m 1150	1013	918	1036
Zinc	ppm ASTM D5185m 1270	1247	1281	1240
Sulfur	ppm ASTM D5185m 2060	3165	3106	2725

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	10	10
Sodium	ppm ASTM D5185m	31	▲ 214	● 197
Potassium	ppm ASTM D5185m >20	30	▲ 65	● 55

INFRA-RED

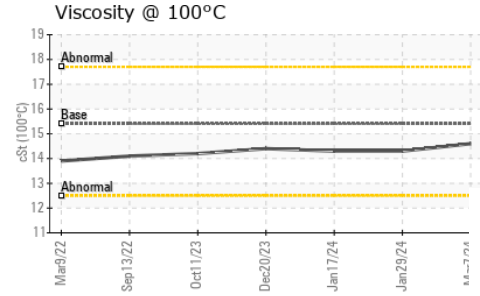
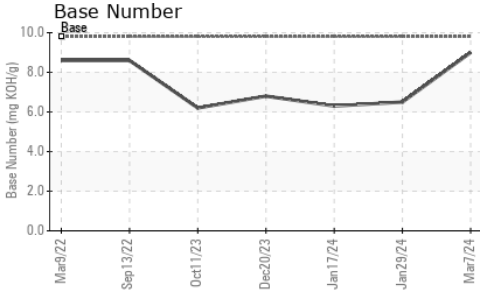
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.1	0.4	0.4
Nitration	Abs/cm *ASTM D7624 >20	5.3	10.4	10.2
Sulfation	Abs/.1mm *ASTM D7415 >30	17.7	22.7	22.6

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.7	19.6	19.5
Base Number (BN)	mg KOH/g ASTM D2896 9.8	9.0	6.5	6.3



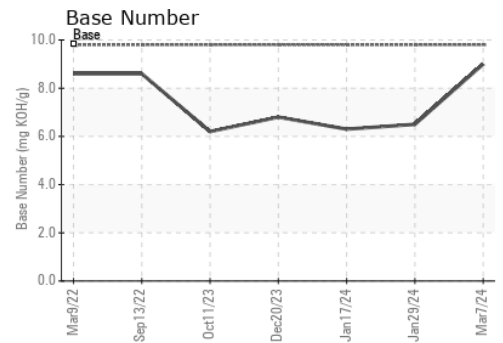
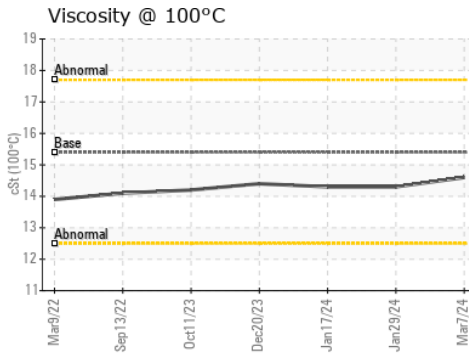
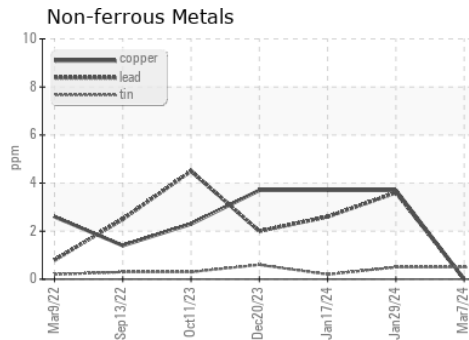
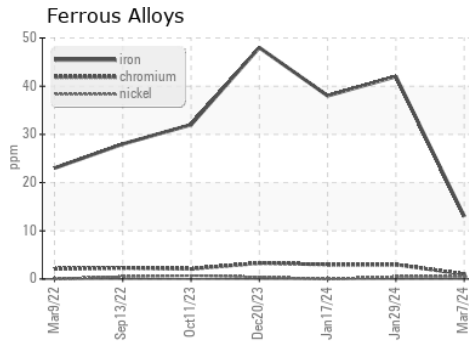
OIL ANALYSIS REPORT



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	14.6	14.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0109324
 Lab Number : 06112711
 Unique Number : 10916208
 Test Package : FLEET

Received : 08 Mar 2024
 Tested : 11 Mar 2024
 Diagnosed : 11 Mar 2024 - Wes Davis

GFL Environmental - 891 - Oklahoma City Hauling
 1001 South Rockwell
 Oklahoma City, OK
 US 73128
 Contact: Andy Smith
 andrew.smith@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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