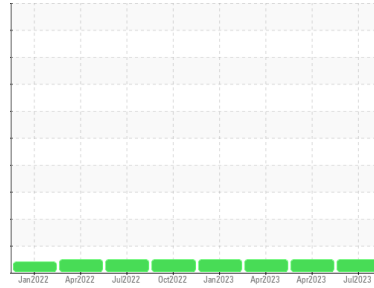




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
812035

Component
Diesel Engine

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

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	history 1	history 2
Sample Number	Client Info	GFL0080401	GFL0066736	GFL0066735
Sample Date	Client Info	07 Jul 2023	20 Apr 2023	18 Apr 2023
Machine Age	hrs	4061	3442	3422
Oil Age	hrs	600	600	0
Oil Changed	Client Info	Changed	Changed	Not Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m >100	10	9	8
Chromium	ppm ASTM D5185m >20	<1	<1	0
Nickel	ppm ASTM D5185m >4	0	0	0
Titanium	ppm ASTM D5185m	<1	<1	<1
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	5	5	4
Lead	ppm ASTM D5185m >40	<1	0	0
Copper	ppm ASTM D5185m >330	2	<1	<1
Tin	ppm ASTM D5185m >15	<1	<1	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m 0	6	3	7
Barium	ppm ASTM D5185m 0	0	0	1
Molybdenum	ppm ASTM D5185m 60	60	62	58
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 1010	938	962	936
Calcium	ppm ASTM D5185m 1070	1132	1106	1049
Phosphorus	ppm ASTM D5185m 1150	967	1051	926
Zinc	ppm ASTM D5185m 1270	1184	1312	1188
Sulfur	ppm ASTM D5185m 2060	2838	3338	3005

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >25	9	5	9
Sodium	ppm ASTM D5185m	0	1	1
Potassium	ppm ASTM D5185m >20	10	7	5

INFRA-RED

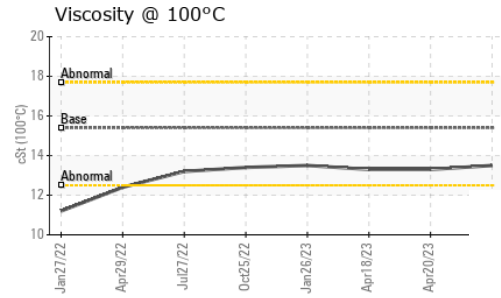
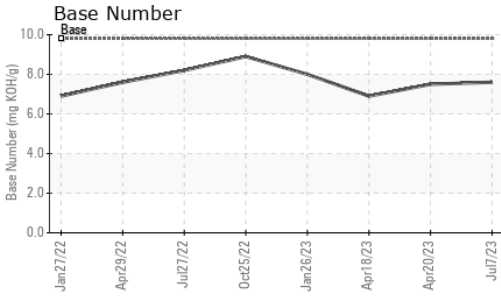
method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >3	0.5	0.4	0.4
Nitration	Abs/cm *ASTM D7624 >20	8.2	7.6	7.3
Sulfation	Abs/.1mm *ASTM D7415 >30	21.3	19.6	18.4

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	17.6	15.2	15.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.6	7.5	6.9



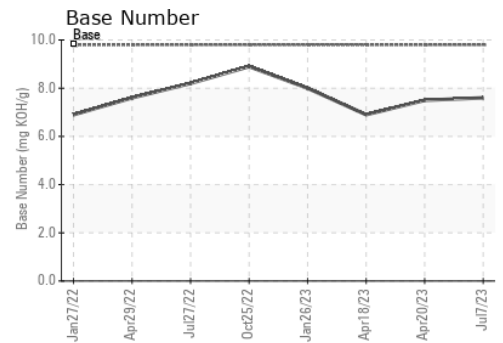
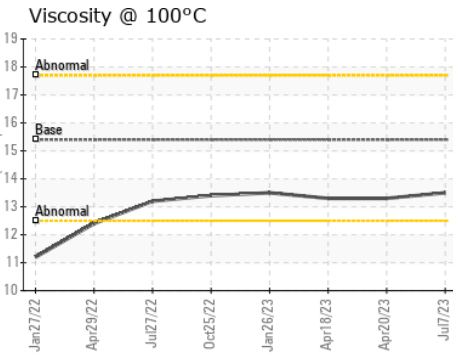
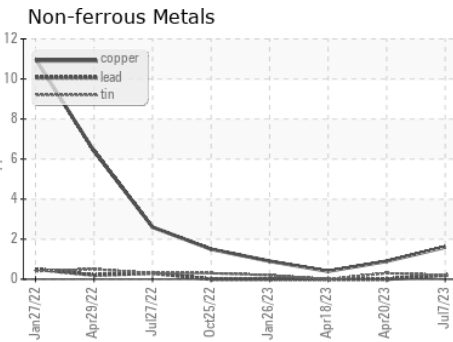
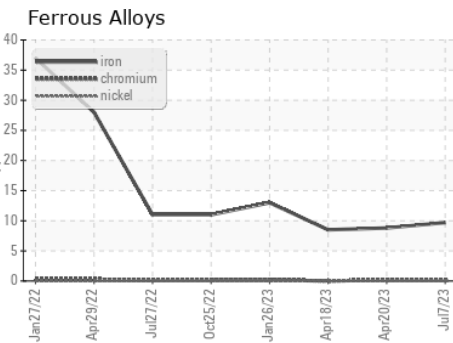
OIL ANALYSIS REPORT



PARAMETER	method	limit/base	current	history 1	history 2
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

PARAMETER	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0080401
Lab Number : 05894848
Unique Number : 10550658
Test Package : FLEET

GFL Environmental - 892 - Pauls Valley Hauling
 405 East Airport Industrial Road
 Pauls Valley, OK
 US 73075
 Contact: Tony Graham
 tgraham2@wcamerica.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: