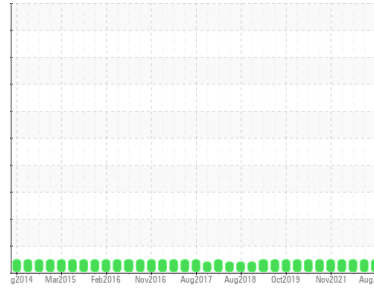




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
2580

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (40 QTS)

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	GFL0091184	GFL0076949	GFL0055799
Sample Date	Client Info	23 Aug 2023	19 May 2023	18 Aug 2022
Machine Age	mls	Client Info	0	297147
Oil Age	mls	Client Info	600	600
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>100	5	3	4
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	0	1
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Antimony	ppm	ASTM D5185m		---	---	---
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	4	10	7
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	57	60	61
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	934	953	873
Calcium	ppm	ASTM D5185m	1070	1095	1116	1065
Phosphorus	ppm	ASTM D5185m	1150	1035	1079	1015
Zinc	ppm	ASTM D5185m	1270	1258	1285	1222
Sulfur	ppm	ASTM D5185m	2060	3623	3892	3068

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	4	4	3
Sodium	ppm	ASTM D5185m		7	2	3
Potassium	ppm	ASTM D5185m	>20	<1	1	2

INFRA-RED

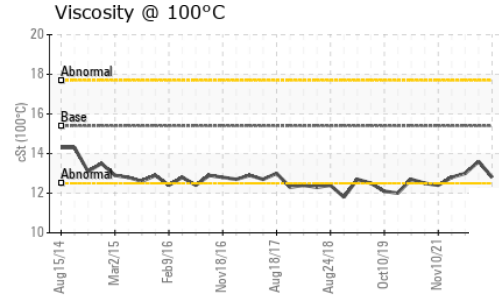
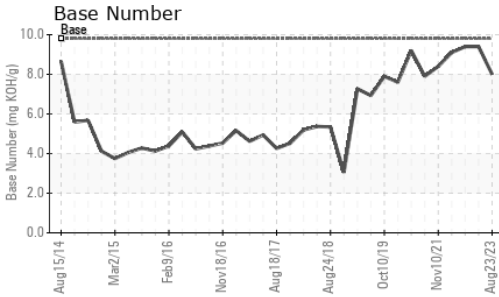
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.8	5.4	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	18.1	20.0

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	13.9	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.0	9.4	9.4



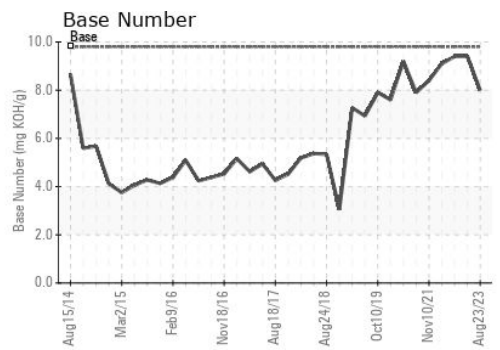
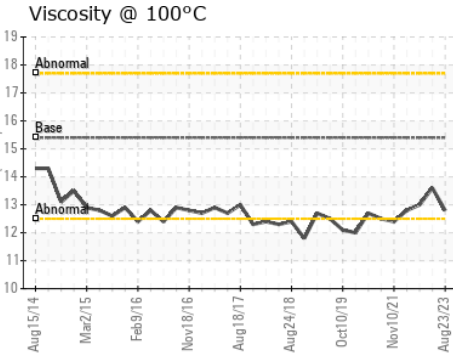
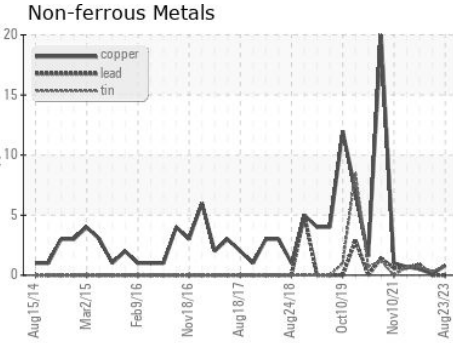
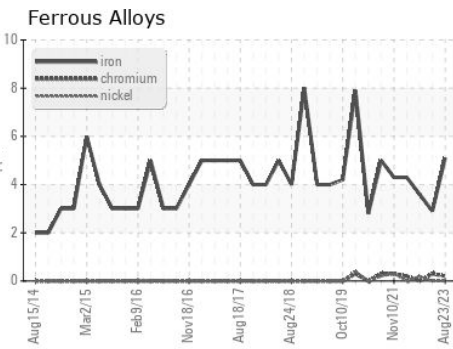
OIL ANALYSIS REPORT



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	12.8	13.6	13.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0091184 **Received** : 25 Aug 2023
Lab Number : **05934719** **Diagnosed** : 25 Aug 2023
Unique Number : 10619990 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 020 - Alamance
 703 East Gilbreath St
 Graham, NC
 US 27253
 Contact:
 richard.belcher@gflenv.com
 T: (800)207-6618
 F: (336)229-0526

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)