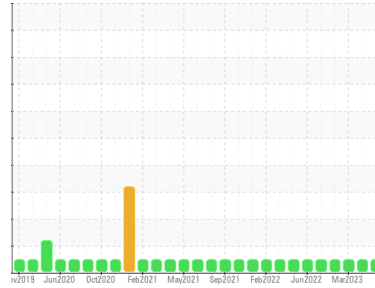




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
10978

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (5 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	history 1	history 2	
Sample Number	Client Info	GFL0083299	GFL0083318	GFL0069422	
Sample Date	Client Info	29 Jun 2023	22 May 2023	27 Mar 2023	
Machine Age	hrs	Client Info	1432	1432	1432
Oil Age	hrs	Client Info	320	120	897
Oil Changed	Client Info	N/A	N/A	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	11	10	22
Chromium	ppm	ASTM D5185m >20	<1	0	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	<1	0	1
Lead	ppm	ASTM D5185m >40	0	0	0
Copper	ppm	ASTM D5185m >330	<1	<1	<1
Tin	ppm	ASTM D5185m >15	0	0	<1
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	4	<1	0
Barium	ppm	ASTM D5185m 0	14	0	0
Molybdenum	ppm	ASTM D5185m 60	61	61	60
Manganese	ppm	ASTM D5185m 0	0	<1	1
Magnesium	ppm	ASTM D5185m 1010	971	1005	999
Calcium	ppm	ASTM D5185m 1070	1177	1160	1096
Phosphorus	ppm	ASTM D5185m 1150	1052	1071	1025
Zinc	ppm	ASTM D5185m 1270	1316	1363	1317
Sulfur	ppm	ASTM D5185m 2060	3765	3747	3147

CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >25	4	3	4
Sodium	ppm	ASTM D5185m	4	3	2
Potassium	ppm	ASTM D5185m >20	3	6	2

INFRA-RED

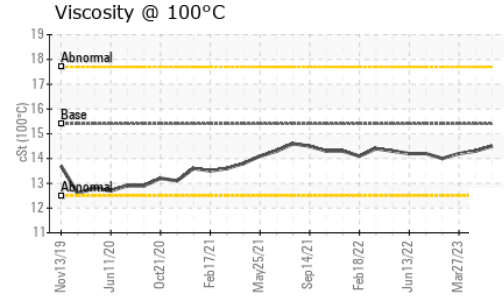
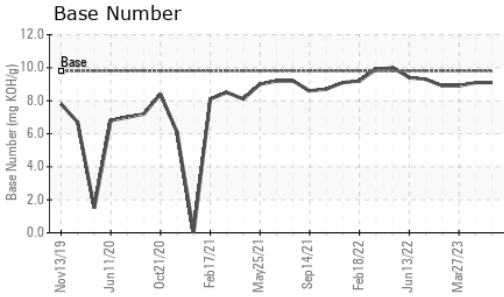
method	limit/base	current	history 1	history 2	
Soot %	%	*ASTM D7844 >3	0.7	0.6	0.6
Nitration	Abs/cm	*ASTM D7624 >20	7.8	6.9	7.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.3	19.6	19.4

FLUID DEGRADATION

method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.7	15.0	14.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.1	9.1	8.9



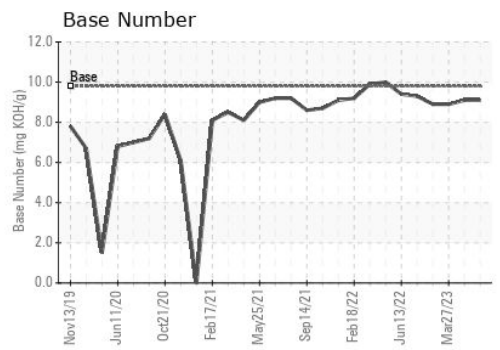
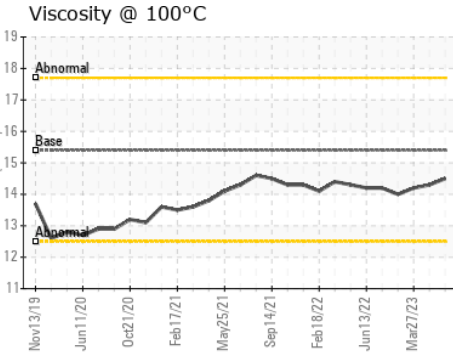
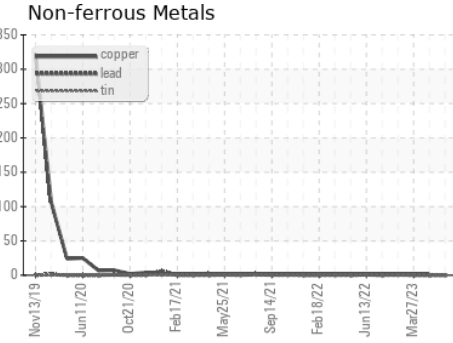
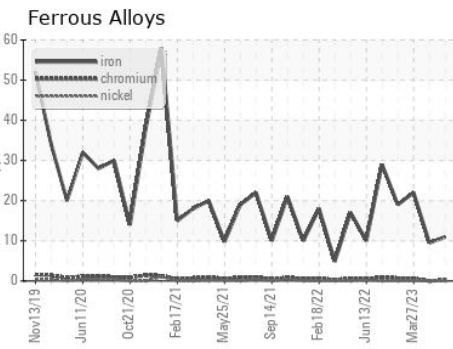
OIL ANALYSIS REPORT



VISUAL	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

FLUID PROPERTIES	method	limit/base	current	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.4	14.5	14.3	14.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0083299 **Received** : 30 Jun 2023
Lab Number : **05887641** **Diagnosed** : 02 Jul 2023
Unique Number : 10538124 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 017 - Durham
 148 Stone Park Court
 Durham, NC
 US 27703
 Contact: Shane Parks
 shane.parks@gflenv.com
 T: (919)596-1363
 F: (919)598-1852

Certificate L2367
 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)