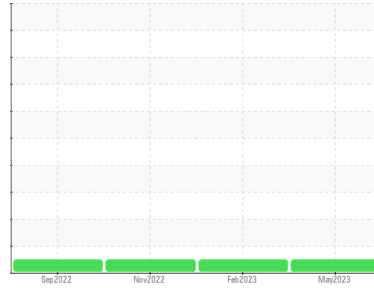




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
920032
 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	history 1	history 2
Sample Number	Client Info		GFL0071266	GFL0065049	GFL0060638
Sample Date	Client Info		03 May 2023	15 Feb 2023	22 Nov 2022
Machine Age	hrs	Client Info	24542	23984	23324
Oil Age	hrs	Client Info	24542	23984	23324
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>3.0	<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 >120	16	21	13
Chromium	ppm	ASTM D5185m >20	<1	1	<1
Nickel	ppm	ASTM D5185m >5	2	3	2
Titanium	ppm	ASTM D5185m >2	0	<1	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	7	10	7
Lead	ppm	ASTM D5185m >40	0	2	1
Copper	ppm	ASTM D5185m >330	31	181	16
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 0	1	3	4
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	62	64	56
Manganese	ppm	ASTM D5185m 0	<1	1	<1
Magnesium	ppm	ASTM D5185m 1010	1001	1029	899
Calcium	ppm	ASTM D5185m 1070	1109	1264	1048
Phosphorus	ppm	ASTM D5185m 1150	1016	1010	935
Zinc	ppm	ASTM D5185m 1270	1328	1338	1133
Sulfur	ppm	ASTM D5185m 2060	3384	3198	3155

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	4	6	6
Sodium	ppm	ASTM D5185m	6	6	9
Potassium	ppm	ASTM D5185m >20	2	1	<1

INFRA-RED

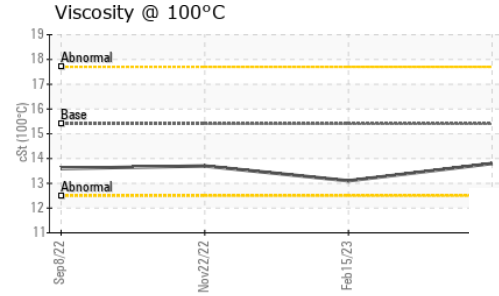
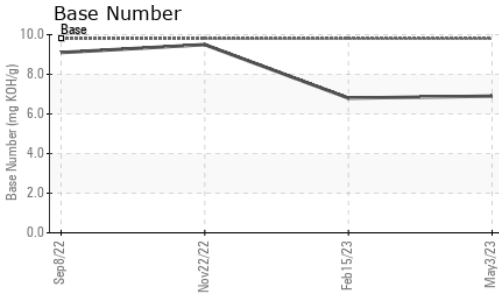
	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844 >4	0.7	0.7	0.5
Nitration	Abs/cm	*ASTM D7624 >20	9.7	10.3	8.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.2	20.6	20.6

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.0	17.0	16.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	6.9	6.8	9.5



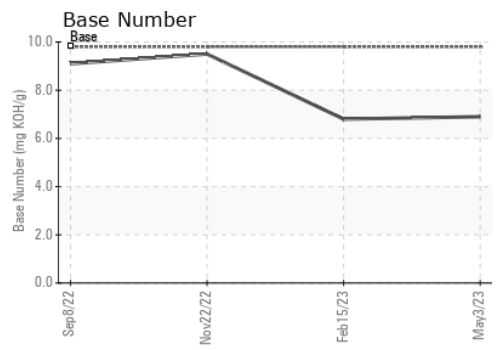
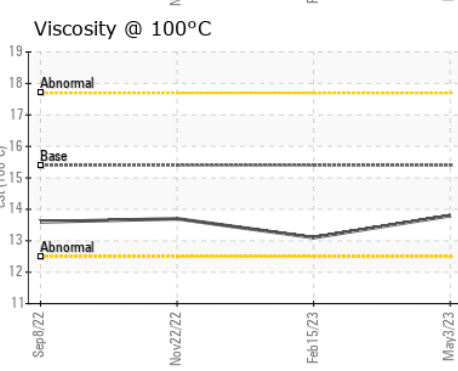
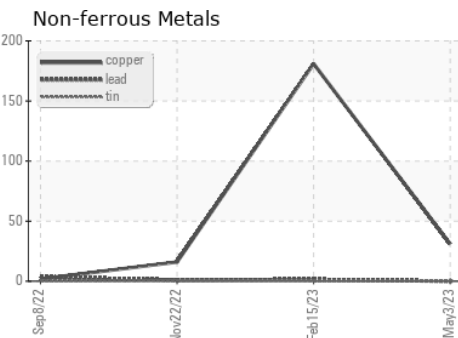
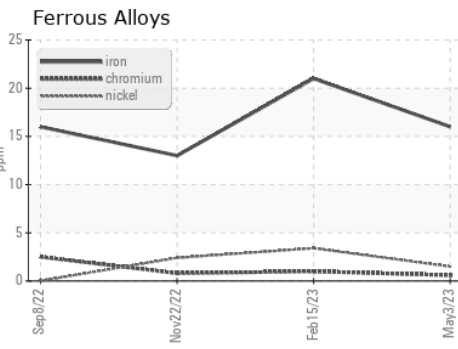
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.1	13.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0071266 **Received** : 05 Jul 2023
Lab Number : **05889970** **Diagnosed** : 06 Jul 2023
Unique Number : 10545780 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 932 - Muskego HC
 W144 S6400 College Ct.
 Muskego, WI
 US 53150
 Contact: Brian Schlomann
 brian.schlomann@gflenv.com
 T: (262)510-4586
 F:

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)