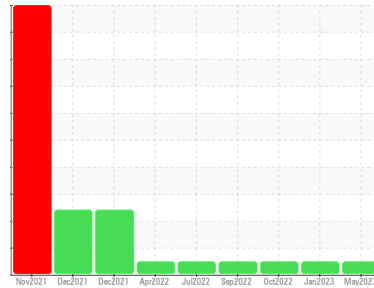




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

3715

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (8 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	GFL0070492	GFL0070496	GFL0058554
Sample Date	Client Info	09 May 2023	12 Jan 2023	27 Oct 2022
Machine Age	hrs	23862	23862	23252
Oil Age	hrs	23862	610	334
Oil Changed	Client Info	N/A	Changed	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 >90	31	18	11
Chromium	ppm	ASTM D5185m >4	2	1	<1
Nickel	ppm	ASTM D5185m >4	<1	<1	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >15	10	7	4
Lead	ppm	ASTM D5185m >50	<1	0	<1
Copper	ppm	ASTM D5185m >55	4	3	2
Tin	ppm	ASTM D5185m >4	<1	0	<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	3	6	15
Barium	ppm	ASTM D5185m 0	2	1	2
Molybdenum	ppm	ASTM D5185m 60	60	61	62
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	874	908	899
Calcium	ppm	ASTM D5185m 1070	1089	1093	1137
Phosphorus	ppm	ASTM D5185m 1150	1000	989	1015
Zinc	ppm	ASTM D5185m 1270	1176	1174	1206
Sulfur	ppm	ASTM D5185m 2060	3060	3168	3401

CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >15	9	7	4
Sodium	ppm	ASTM D5185m	20	6	3
Potassium	ppm	ASTM D5185m >20	3	1	2

INFRA-RED

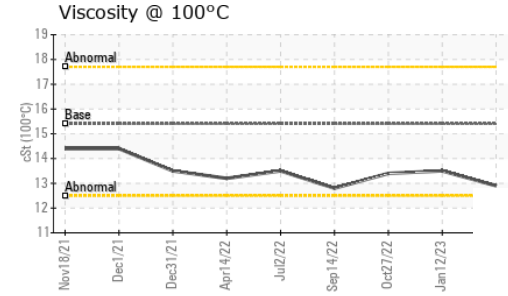
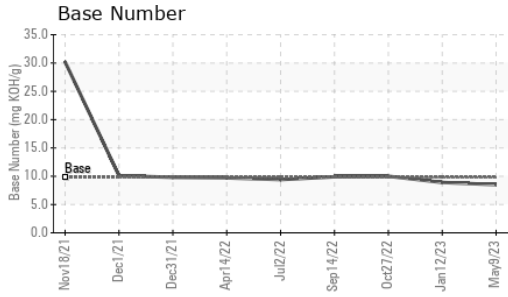
method	limit/base	current	history 1	history 2	
Soot %	%	*ASTM D7844 >6	0.3	0.4	0.3
Nitration	Abs/cm	*ASTM D7624 >20	6.7	7.2	6.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.4	18.8	19.0

FLUID DEGRADATION

method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.1	14.2	14.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.5	8.9	10.0



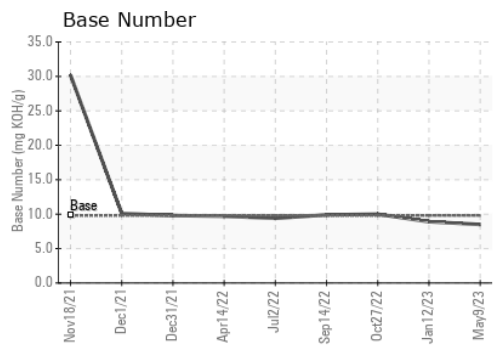
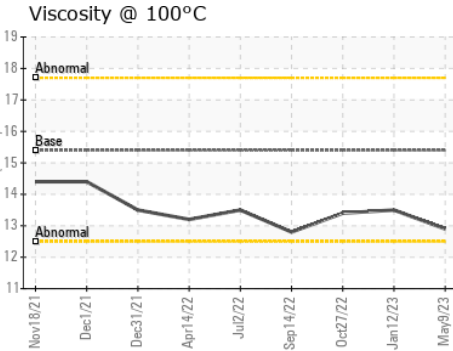
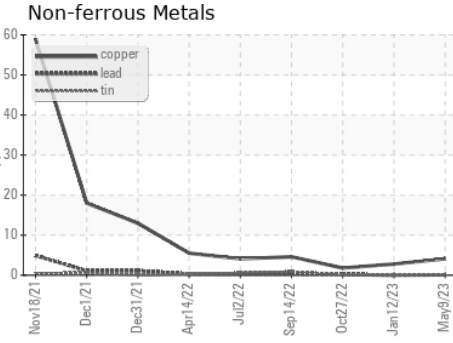
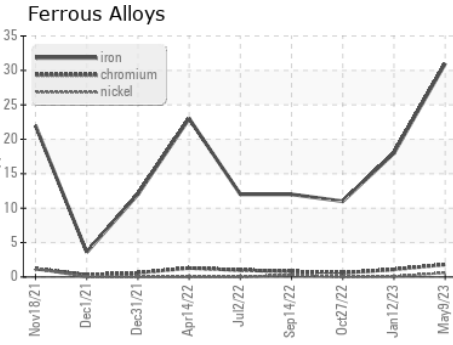
OIL ANALYSIS REPORT



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	12.9	13.5	13.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0070492 **Received** : 15 May 2023
Lab Number : **05846845** **Diagnosed** : 16 May 2023
Unique Number : 10470952 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 19DR - Deep Run/TriEast
 2287 Leslie R Stroud Road
 Kinston, NC
 US 28504-9477
 Contact: Spencer Ligon
 spencer.ligon@gflenv.com
 T: (800)207-6618
 F:

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)