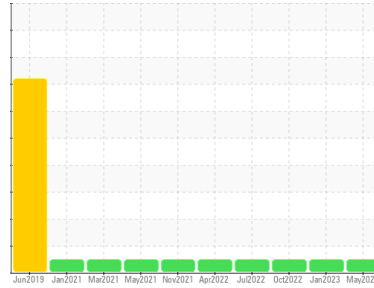




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**2832**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (12 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	<b>GFL0070486</b>	GFL0058561	GFL0058555
Sample Date	Client Info	<b>09 May 2023</b>	12 Jan 2023	28 Oct 2022
Machine Age	hrs	<b>9569</b>	9569	8940
Oil Age	hrs	<b>9569</b>	629	812
Oil Changed	Client Info	<b>N/A</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185m >90	<b>4</b>	13	25
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	3
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	1	3
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history 1	history 2	
Boron	ppm	ASTM D5185m 0	<b>4</b>	9	10
Barium	ppm	ASTM D5185m 0	<b>2</b>	1	2
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	71	67
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>928</b>	1038	905
Calcium	ppm	ASTM D5185m 1070	<b>1129</b>	1243	1199
Phosphorus	ppm	ASTM D5185m 1150	<b>1028</b>	1124	1013
Zinc	ppm	ASTM D5185m 1270	<b>1212</b>	1362	1242
Sulfur	ppm	ASTM D5185m 2060	<b>3097</b>	3602	3276

## CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >25	<b>3</b>	6	6
Sodium	ppm	ASTM D5185m	<b>2</b>	5	3
Potassium	ppm	ASTM D5185m >20	<b>1</b>	2	4

## INFRA-RED

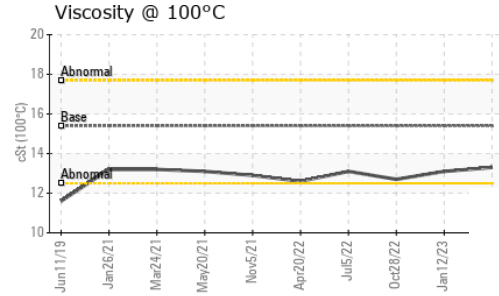
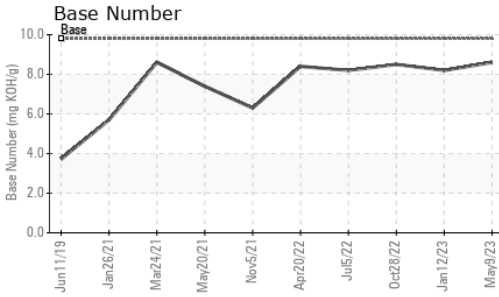
method	limit/base	current	history 1	history 2	
Soot %	%	*ASTM D7844 >6	<b>0.2</b>	0.3	0.8
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.1</b>	7.6	10.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.3</b>	18.7	21.8

## FLUID DEGRADATION

method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.8</b>	14.2	16.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.6</b>	8.2	8.5



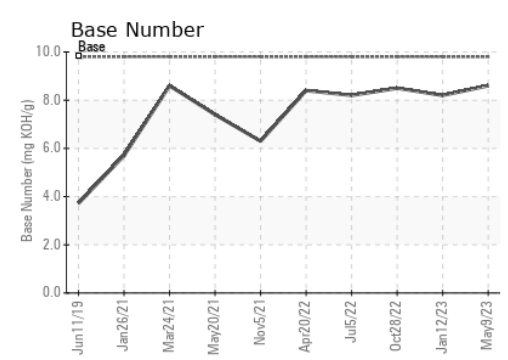
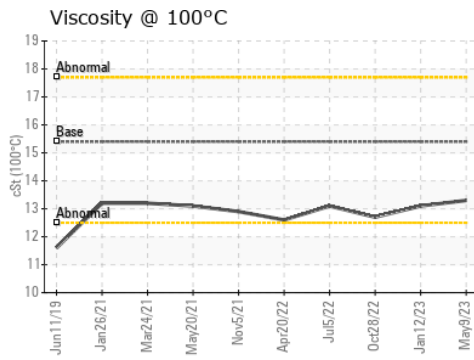
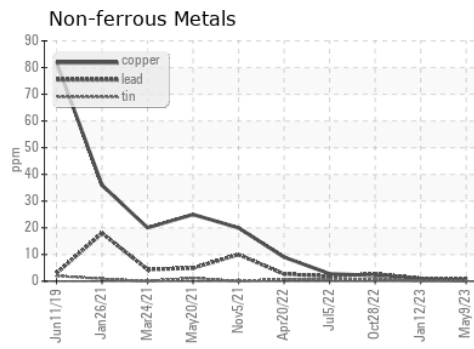
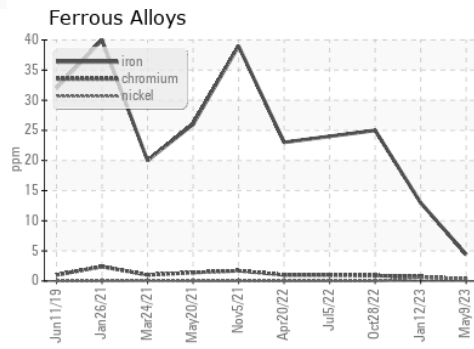
# OIL ANALYSIS REPORT



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	<b>13.3</b>	13.1	12.7

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0070486 **Received** : 15 May 2023  
**Lab Number** : **05846846** **Diagnosed** : 16 May 2023  
**Unique Number** : 10470953 **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:

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)