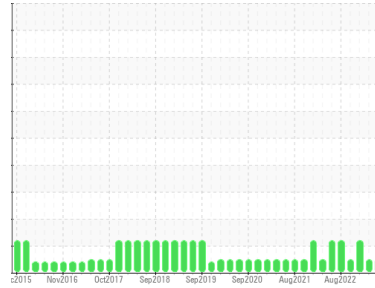




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**2469**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (10 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	history1	history2	
Sample Number	Client Info	<b>GFL0079023</b>	GFL0049467	GFL0049384	
Sample Date	Client Info	<b>24 Aug 2023</b>	08 Mar 2023	01 Feb 2023	
Machine Age	hrs	Client Info	<b>22047</b>	502842	498285
Oil Age	hrs	Client Info	<b>502842</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed	
Sample Status		<b>NORMAL</b>	NORMAL	ATTENTION	

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<b>&lt;1.0</b>	<1.0	▲ 2.2
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >120	<b>10</b>	3	7
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<b>&lt;1</b>	0	0
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>4</b>	1	3
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm ASTM D5185m >330	<b>4</b>	1	6
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	history1	history2
Boron	ppm ASTM D5185m 0	<b>2</b>	5	0
Barium	ppm ASTM D5185m 0	<b>2</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>67</b>	51	50
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>984</b>	793	766
Calcium	ppm ASTM D5185m 1070	<b>1248</b>	995	1049
Phosphorus	ppm ASTM D5185m 1150	<b>1146</b>	898	858
Zinc	ppm ASTM D5185m 1270	<b>1334</b>	1094	1104
Sulfur	ppm ASTM D5185m 2060	<b>3553</b>	3338	3185

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>7</b>	4	9
Sodium	ppm ASTM D5185m	<b>2</b>	0	2
Potassium	ppm ASTM D5185m >20	<b>1</b>	0	0

## INFRA-RED

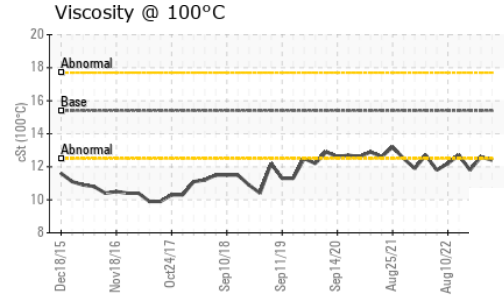
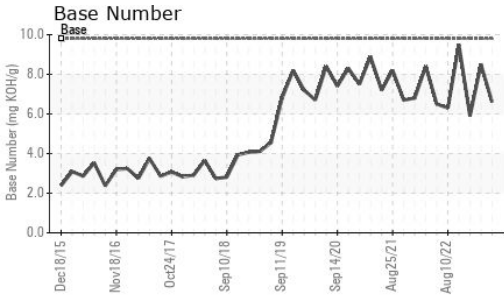
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.4</b>	0.2	0.4
Nitration	Abs/cm *ASTM D7624 >20	<b>9.6</b>	6.5	10.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.9</b>	17.3	18.7

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.2</b>	13.0	14.6
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>6.6</b>	8.5	5.9



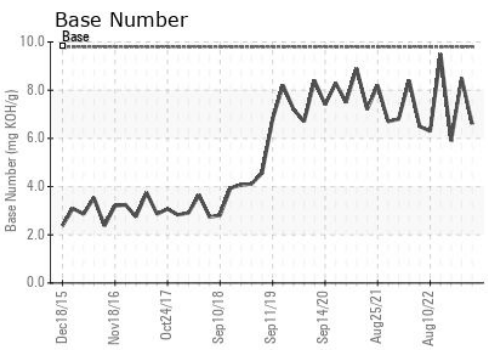
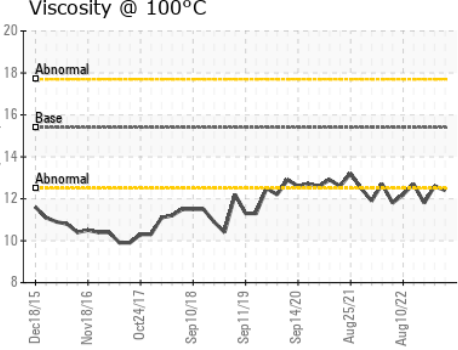
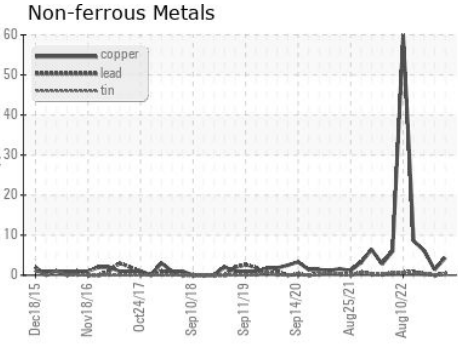
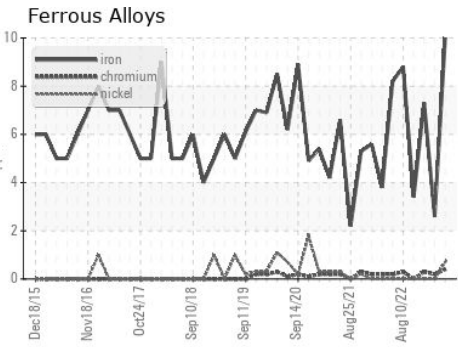
# OIL ANALYSIS REPORT



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	12.4	12.6 ▲ 11.8

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0079023  
 Lab Number : 05936553  
 Unique Number : 10621824  
 Test Package : FLEET

**GFL Environmental - 029 - Wytheville**  
 2390 North 4th Street  
 Wytheville, VA  
 US 24382  
 Contact: CHARLES CORVIN  
 charles.corvin@gflenv.com; canastasio@wearcheckusa.com  
 T: (276)223-4476  
 F: (276)223-1283

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)