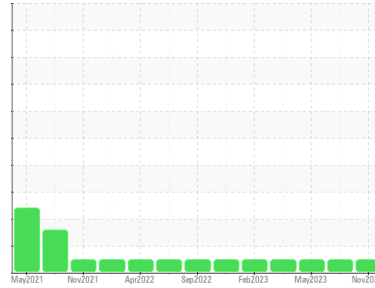




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**420033-44**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

## 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>GFL0075101</b>	GFL0091961	GFL0075095
Sample Date	Client Info	<b>13 Nov 2023</b>	29 Aug 2023	29 May 2023
Machine Age	hrs	<b>5091</b>	4852	4247
Oil Age	hrs	<b>239</b>	605	345
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
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	history1	history2
Iron	ppm ASTM D5185m >100	<b>10</b>	27	22
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	1	1
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	0	<1
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >3	<b>0</b>	<1	<1
Aluminum	ppm ASTM D5185m >20	<b>2</b>	5	5
Lead	ppm ASTM D5185m >40	<b>0</b>	0	1
Copper	ppm ASTM D5185m >330	<b>1</b>	4	1
Tin	ppm ASTM D5185m >15	<b>0</b>	0	<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>1</b>	0	4
Barium	ppm ASTM D5185m 0	<b>6</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>59</b>	61	61
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>886</b>	967	970
Calcium	ppm ASTM D5185m 1070	<b>1014</b>	1060	1083
Phosphorus	ppm ASTM D5185m 1150	<b>1056</b>	1016	1074
Zinc	ppm ASTM D5185m 1270	<b>1170</b>	1285	1330
Sulfur	ppm ASTM D5185m 2060	<b>3362</b>	3451	3859

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	6	6
Sodium	ppm ASTM D5185m	<b>&lt;1</b>	7	6
Potassium	ppm ASTM D5185m >20	<b>4</b>	10	6

## INFRA-RED

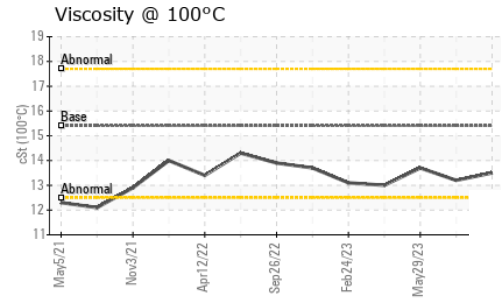
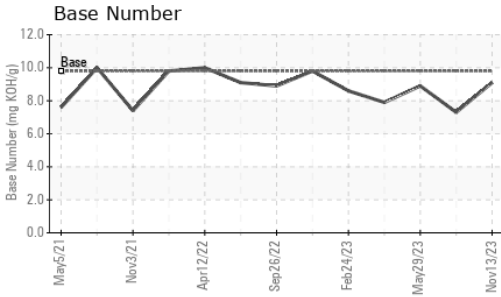
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.4</b>	0.9	0.9
Nitration	Abs/cm *ASTM D7624 >20	<b>7.9</b>	11.3	9.5
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.4</b>	21.9	20.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.6</b>	19.7	17.4
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.1</b>	7.3	8.9



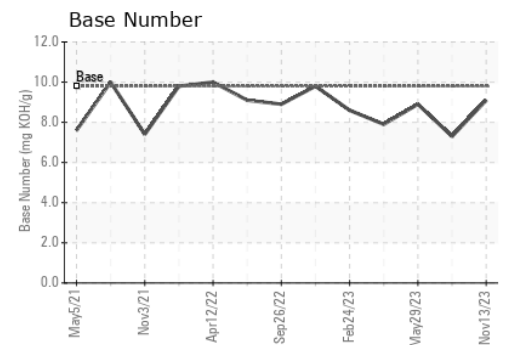
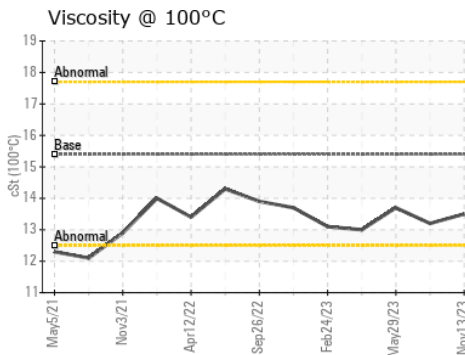
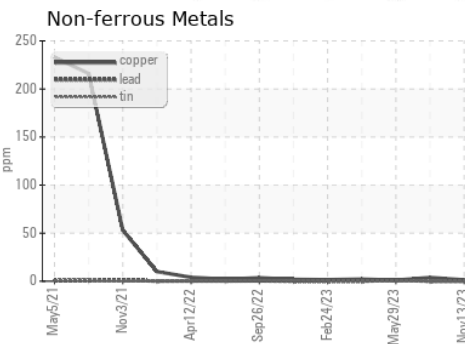
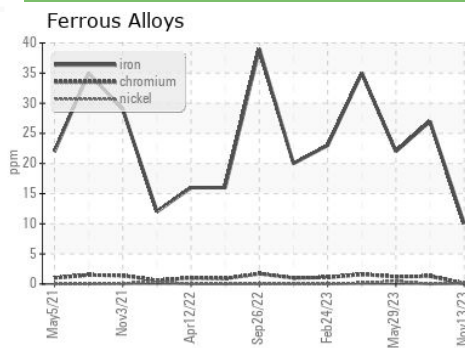
# OIL ANALYSIS REPORT



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	13.5	13.2

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0075101  
 Lab Number : 06009011  
 Unique Number : 10742773  
 Test Package : FLEET

Received : 15 Nov 2023  
 Diagnosed : 16 Nov 2023  
 Diagnostician : Wes Davis

GFL Environmental - 683 - Ruckersville Hauling  
 261 INDUSTRIAL DR  
 Ruckersville, VA  
 US 22698  
 Contact: Jaf Finney  
 jfinney@gflenv.com  
 T: (434)990-4972  
 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)