



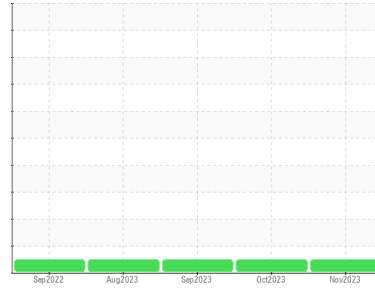
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**196M**  
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	history1	history2
Sample Number	Client Info		<b>GFL0059225</b>	GFL0084955	GFL0085012
Sample Date	Client Info		<b>16 Nov 2023</b>	26 Oct 2023	18 Sep 2023
Machine Age	hrs	Client Info	<b>11842</b>	11700	11381
Oil Age	hrs	Client Info	<b>11842</b>	11700	11381
Oil Changed	Client Info		<b>Changed</b>	Changed	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	<b>7</b>	16	16
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	2
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>30	<b>4</b>	21	21
Lead	ppm	ASTM D5185m	>30	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>30	<b>12</b>	2	1
Tin	ppm	ASTM D5185m	>15	<b>0</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>3</b>	<1	2
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>54</b>	57	61
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>902</b>	984	1021
Calcium	ppm	ASTM D5185m	1070	<b>1028</b>	1078	1171
Phosphorus	ppm	ASTM D5185m	1150	<b>967</b>	999	1103
Zinc	ppm	ASTM D5185m	1270	<b>1183</b>	1292	1363
Sulfur	ppm	ASTM D5185m	2060	<b>2886</b>	2881	3898

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>30	<b>6</b>	4	15
Sodium	ppm	ASTM D5185m		<b>3</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	42	30

## INFRA-RED

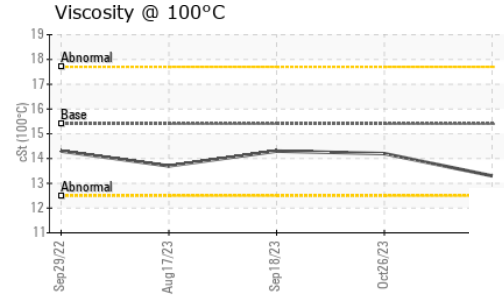
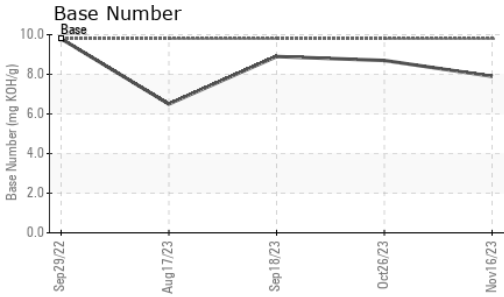
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.3</b>	7.5	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	19.2	18.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.3</b>	15.0	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.9</b>	8.7	8.9



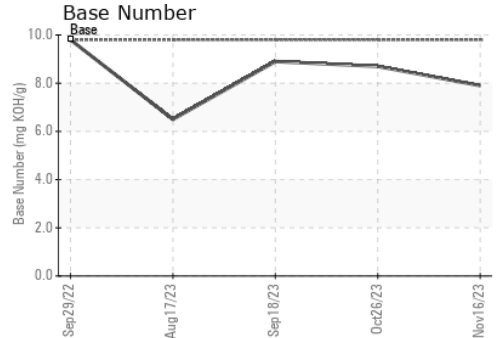
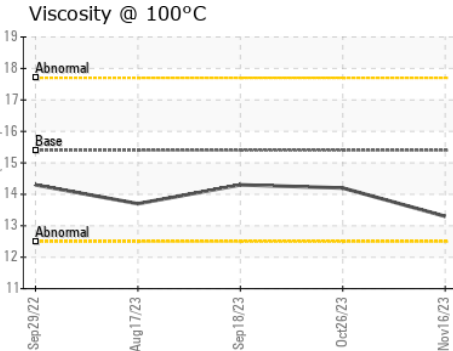
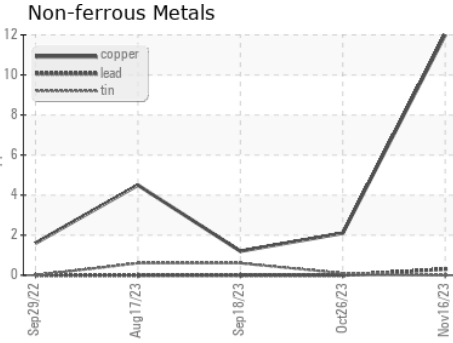
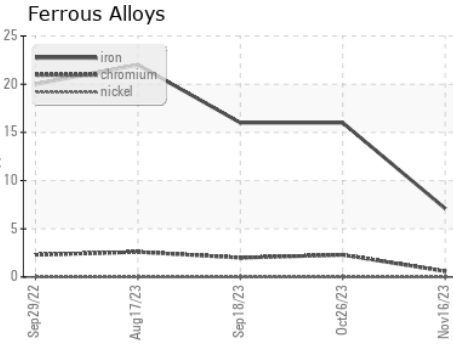
# OIL ANALYSIS REPORT



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	<b>13.3</b>	14.2	14.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0059225 **Received** : 22 Nov 2023  
**Lab Number** : **06014777** **Diagnosed** : 23 Nov 2023  
**Unique Number** : 10753921 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 410 - Michigan West**  
 39000 Van Born Rd  
 Wayne, MI  
 US 48184  
 Contact: Belal Dgheish  
 bdgheish@gflenv.com  
 T: (734)714-2340  
 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)