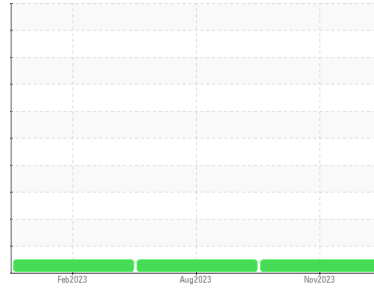




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**710034**  
 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>GFL0098421</b>	GFL0089493	GFL0071449	
Sample Date	Client Info	<b>13 Nov 2023</b>	14 Aug 2023	24 Feb 2023	
Machine Age	hrs	Client Info	<b>5870</b>	5314	4280
Oil Age	hrs	Client Info	<b>5870</b>	0	0
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
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 >80	<b>20</b>	19	14
Chromium	ppm ASTM D5185m >5	<b>&lt;1</b>	1	<1
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >30	<b>2</b>	2	2
Lead	ppm ASTM D5185m >30	<b>0</b>	<1	0
Copper	ppm ASTM D5185m >150	<b>2</b>	3	2
Tin	ppm ASTM D5185m >5	<b>0</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>0</b>	0	<1
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>61</b>	63	56
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>931</b>	1019	874
Calcium	ppm ASTM D5185m 1070	<b>1067</b>	1149	1031
Phosphorus	ppm ASTM D5185m 1150	<b>973</b>	1066	956
Zinc	ppm ASTM D5185m 1270	<b>1226</b>	1316	1147
Sulfur	ppm ASTM D5185m 2060	<b>3063</b>	3614	2711

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>6</b>	6	3
Sodium	ppm ASTM D5185m	<b>4</b>	7	3
Potassium	ppm ASTM D5185m >20	<b>6</b>	1	2

## INFRA-RED

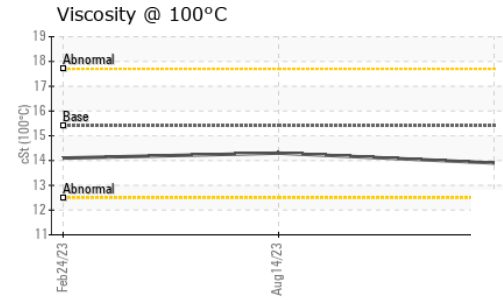
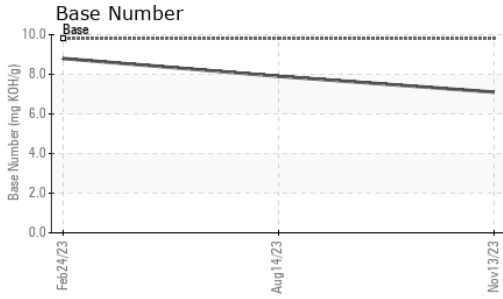
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	0.4	0.4
Nitration	Abs/cm *ASTM D7624 >20	<b>10.4</b>	9.6	9.1
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.7</b>	19.0	18.8

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>18.8</b>	16.9	16.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.1</b>	7.9	8.8



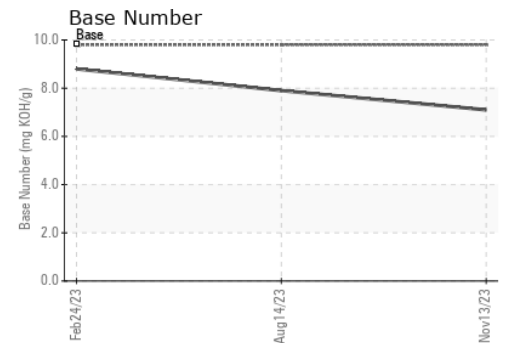
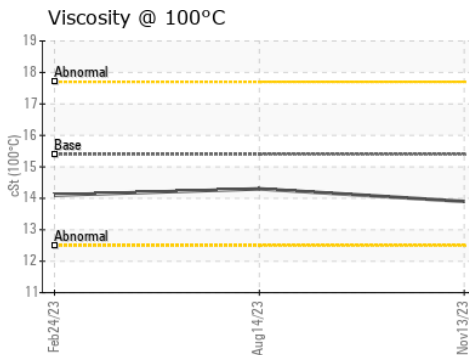
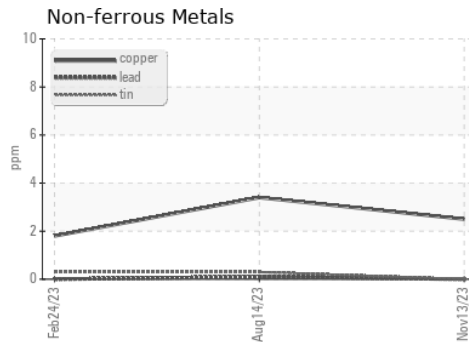
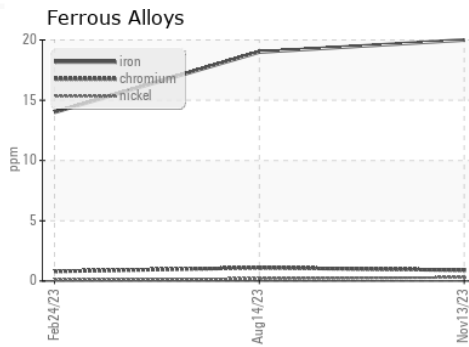
# OIL ANALYSIS REPORT



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>13.9</b>	14.3	14.1

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098421 **Received** : 20 Nov 2023  
**Lab Number** : **06012040** **Diagnosed** : 21 Nov 2023  
**Unique Number** : 10751184 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 918 - Hartland HC**  
 630 E Industrial Drive  
 Hartland, WI  
 US 53029  
 Contact: David McCall  
 david.mccall@gflenv.com  
 T: (262)369-3069  
 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)