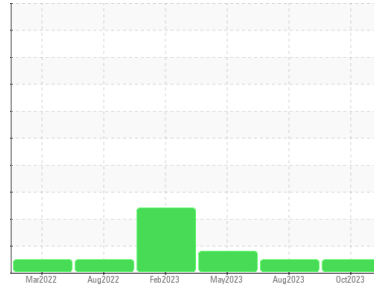




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**427057-401390.1**

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>GFL0088083</b>	GFL0067683	GFL0067659
Sample Date	Client Info	<b>31 Oct 2023</b>	14 Aug 2023	18 May 2023
Machine Age	hrs	<b>33602</b>	0	0
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	MARGINAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	▲ 2.0
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>5</b>	18	11
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	4	2
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >3	<b>0</b>	<1	0
Aluminum	ppm ASTM D5185m >20	<b>&lt;1</b>	5	0
Lead	ppm ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm ASTM D5185m >330	<b>0</b>	0	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>0</b>	5	2
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>55</b>	73	57
Manganese	ppm ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>889</b>	1123	930
Calcium	ppm ASTM D5185m 1070	<b>940</b>	1264	1079
Phosphorus	ppm ASTM D5185m 1150	<b>967</b>	1223	981
Zinc	ppm ASTM D5185m 1270	<b>1188</b>	1610	1239
Sulfur	ppm ASTM D5185m 2060	<b>2911</b>	4963	3493

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>5</b>	10	6
Sodium	ppm ASTM D5185m	<b>1</b>	0	2
Potassium	ppm ASTM D5185m >20	<b>0</b>	0	3

## INFRA-RED

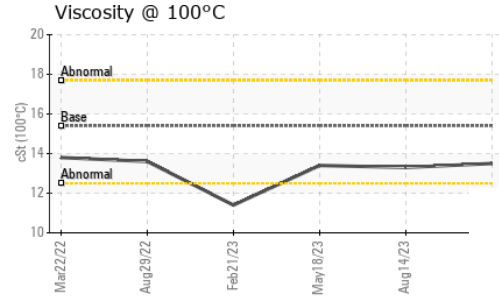
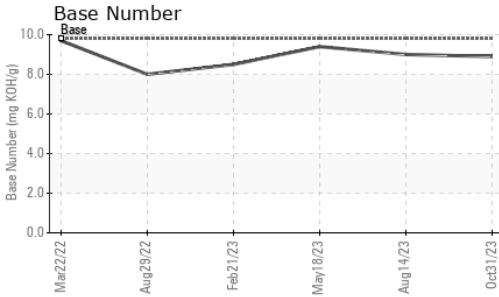
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.1</b>	0.2	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>4.5</b>	5.2	4.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.1</b>	17.3	17.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>12.4</b>	12.5	12.5
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.9</b>	9.0	9.4



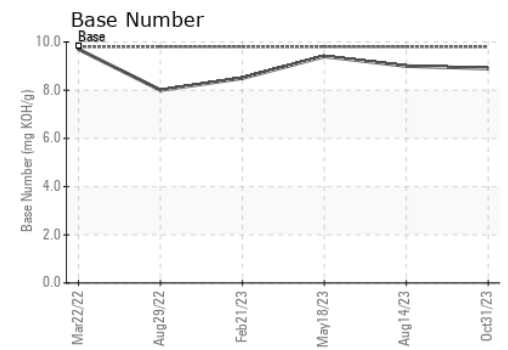
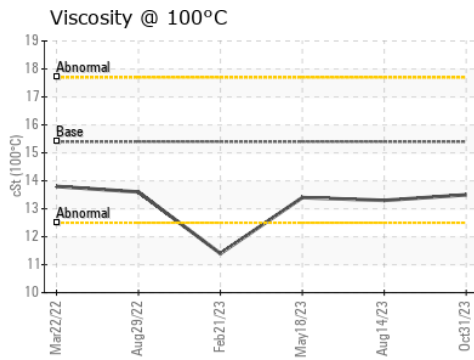
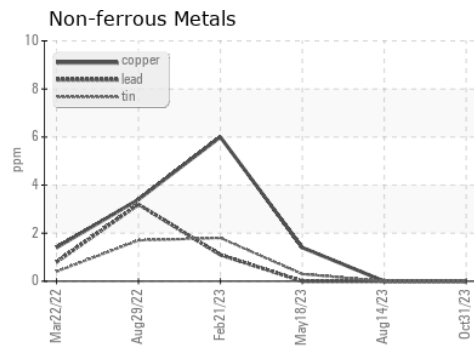
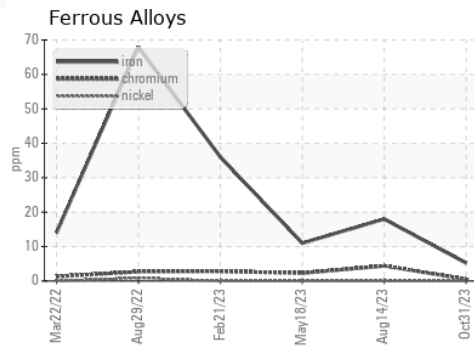
# OIL ANALYSIS REPORT



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>13.5</b>	13.3	13.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088083 **Received** : 06 Nov 2023  
**Lab Number** : **05998661** **Diagnosed** : 06 Nov 2023  
**Unique Number** : 10727021 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 820 - Joplin Hauling**  
 3700 West 7th Street  
 Joplin, MO  
 US 64801  
 Contact: James Jarrett  
 jjarrett@gflenv.com  
 T: (417)310-2802  
 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)