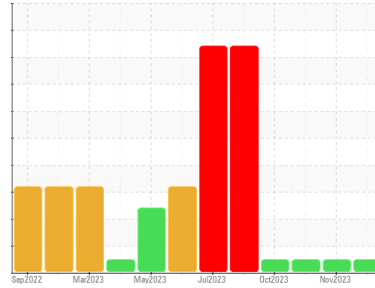




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**721018-361460**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### 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>GFL0088145</b>	GFL0088100	GFL0088077
Sample Date	Client Info	<b>01 Dec 2023</b>	14 Nov 2023	24 Oct 2023
Machine Age	hrs	<b>829</b>	735	590
Oil Age	hrs	<b>0</b>	0	467
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
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 >100	<b>13</b>	19	15
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	2	2
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	0	<1
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>2</b>	2	2
Lead	ppm ASTM D5185m >40	<b>0</b>	2	2
Copper	ppm ASTM D5185m >330	<b>1</b>	2	<1
Tin	ppm ASTM D5185m >15	<b>0</b>	2	2
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>3</b>	20	36
Barium	ppm ASTM D5185m 0	<b>0</b>	0	4
Molybdenum	ppm ASTM D5185m 60	<b>65</b>	55	51
Manganese	ppm ASTM D5185m 0	<b>0</b>	2	2
Magnesium	ppm ASTM D5185m 1010	<b>984</b>	849	835
Calcium	ppm ASTM D5185m 1070	<b>1156</b>	1136	1176
Phosphorus	ppm ASTM D5185m 1150	<b>1116</b>	855	795
Zinc	ppm ASTM D5185m 1270	<b>1317</b>	1024	979
Sulfur	ppm ASTM D5185m 2060	<b>3403</b>	2568	2544

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>3</b>	12	14
Sodium	ppm ASTM D5185m	<b>4</b>	31	18
Potassium	ppm ASTM D5185m >20	<b>2</b>	7	4

## INFRA-RED

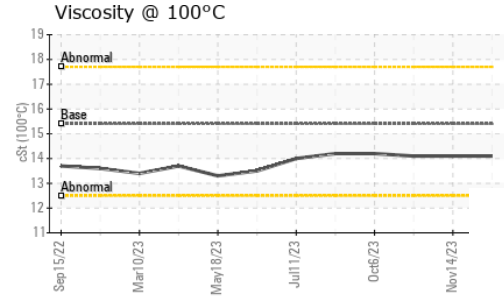
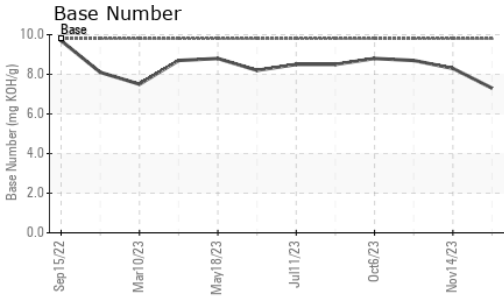
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.8</b>	0.5	0.4
Nitration	Abs/cm *ASTM D7624 >20	<b>10.4</b>	8.6	8.3
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>21.0</b>	20.1	20.7

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>18.6</b>	17.1	17.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.3</b>	8.3	8.7



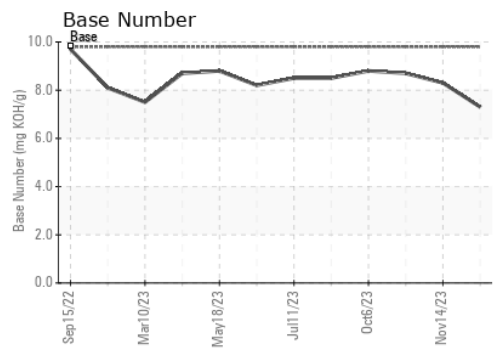
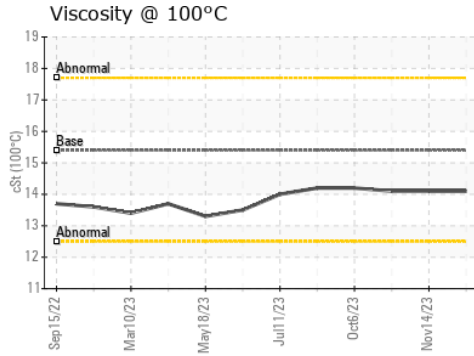
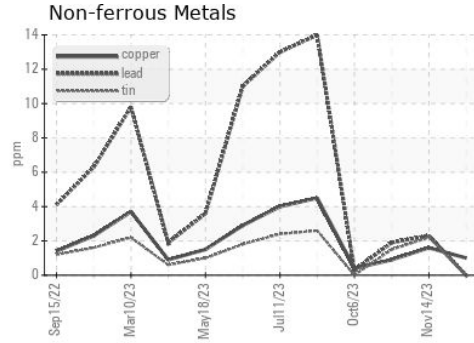
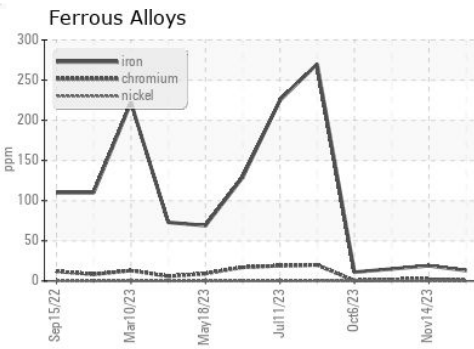
# OIL ANALYSIS REPORT



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>14.1</b>	14.1	14.1

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088145 **Received** : 07 Dec 2023  
**Lab Number** : **06027314** **Diagnosed** : 08 Dec 2023  
**Unique Number** : 10777105 **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)