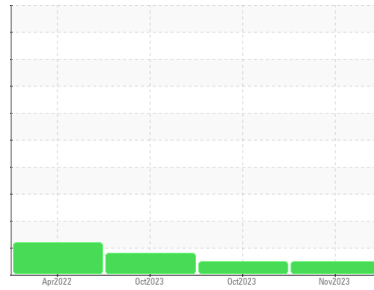




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**924032-260252**

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>GFL0088089</b>	GFL0088239	GFL0088064
Sample Date	Client Info		<b>09 Nov 2023</b>	12 Oct 2023	09 Oct 2023
Machine Age	hrs	Client Info	<b>6382</b>	0	6226
Oil Age	hrs	Client Info	<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	▲ 2.5
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>14</b>	7	9
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	<1
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>10</b>	2	3
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>1</b>	2	3
Tin	ppm	ASTM D5185m >15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	10
Molybdenum	ppm	ASTM D5185m 60	<b>50</b>	51	54
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>740</b>	831	808
Calcium	ppm	ASTM D5185m 1070	<b>849</b>	927	923
Phosphorus	ppm	ASTM D5185m 1150	<b>768</b>	912	896
Zinc	ppm	ASTM D5185m 1270	<b>989</b>	1101	1068
Sulfur	ppm	ASTM D5185m 2060	<b>2436</b>	2579	2799

## CONTAMINANTS

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

## INFRA-RED

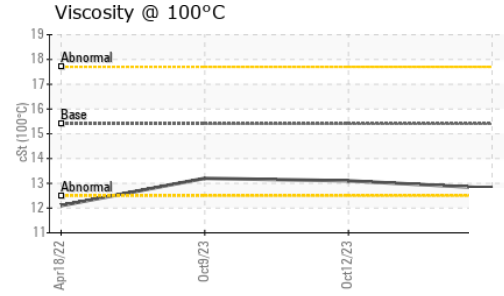
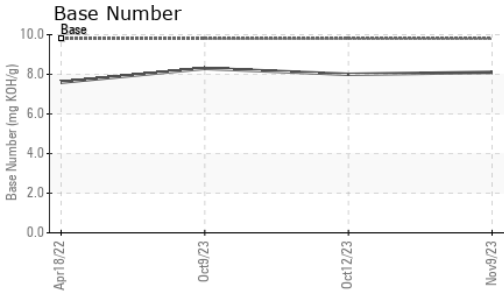
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.7</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.6</b>	6.2	6.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.3</b>	17.6	18.0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.2</b>	12.9	13.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.1</b>	8.0	8.3



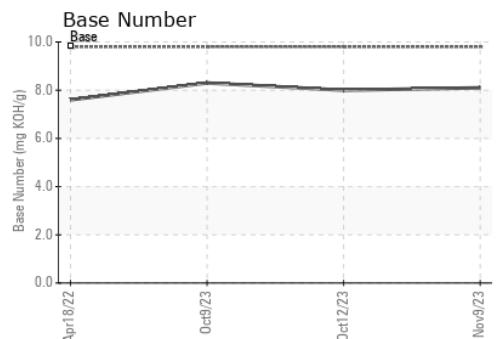
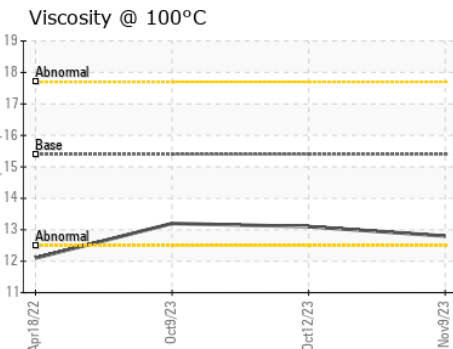
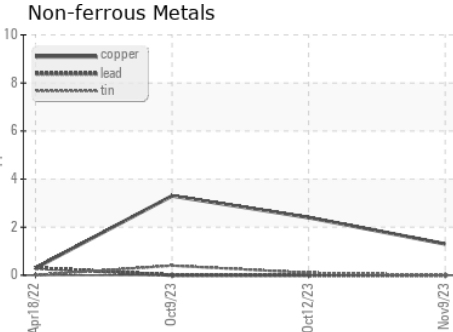
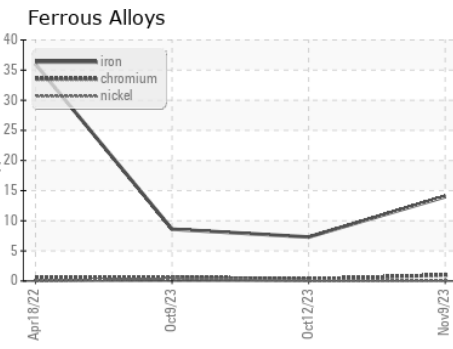
# OIL ANALYSIS REPORT



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>12.8</b>	13.1	13.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088089 **Received** : 20 Nov 2023  
**Lab Number** : 06011870 **Diagnosed** : 20 Nov 2023  
**Unique Number** : 10751014 **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)