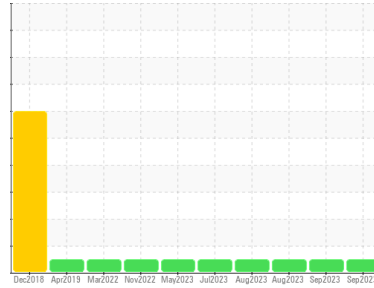




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**428057-402383**

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>GFL0088192</b>	GFL0088194	GFL0088198
Sample Date	Client Info		<b>28 Sep 2023</b>	13 Sep 2023	24 Aug 2023
Machine Age	mls	Client Info	<b>433080</b>	428355	425469
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	Not 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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >110	<b>13</b>	12	12
Chromium	ppm	ASTM D5185m >4	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>6</b>	4	5
Lead	ppm	ASTM D5185m >45	<b>2</b>	2	2
Copper	ppm	ASTM D5185m >85	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >4	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>23</b>	3	<1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>50</b>	60	69
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>846</b>	962	1020
Calcium	ppm	ASTM D5185m 1070	<b>926</b>	1053	1158
Phosphorus	ppm	ASTM D5185m 1150	<b>864</b>	1049	1100
Zinc	ppm	ASTM D5185m 1270	<b>1079</b>	1257	1366
Sulfur	ppm	ASTM D5185m 2060	<b>2431</b>	2765	3546

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>7</b>	7	9
Sodium	ppm	ASTM D5185m	<b>7</b>	7	6
Potassium	ppm	ASTM D5185m >20	<b>15</b>	6	6

## INFRA-RED

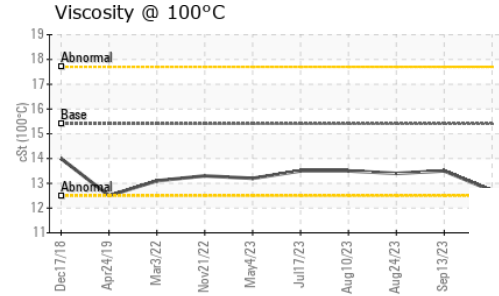
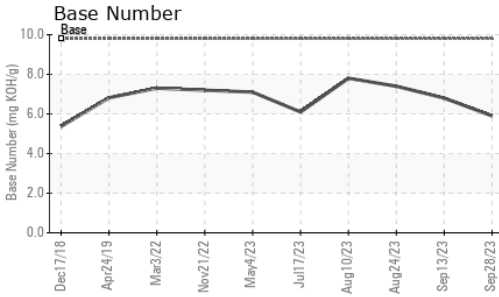
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.7</b>	10.6	10.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.3</b>	21.5	21.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>20.3</b>	18.7	18.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>5.9</b>	6.8	7.4



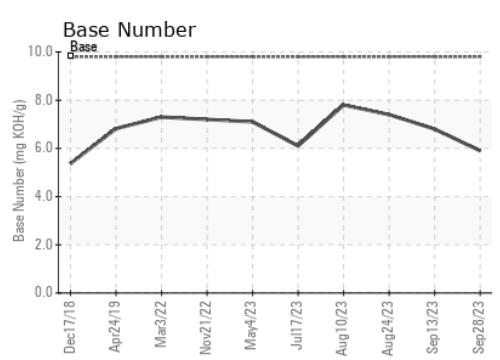
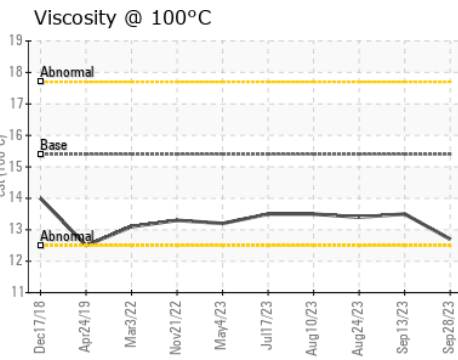
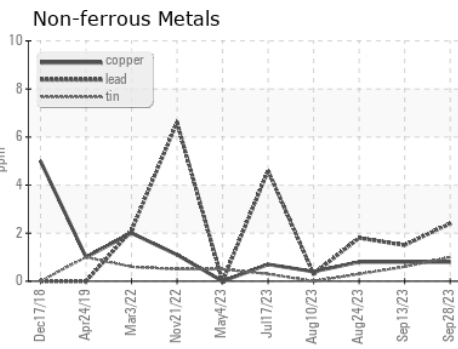
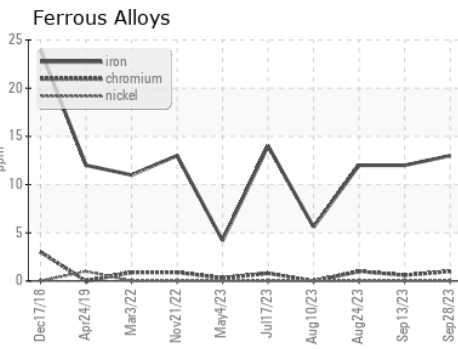
# OIL ANALYSIS REPORT



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>12.7</b>	13.5	13.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088192 **Received** : 23 Oct 2023  
**Lab Number** : **05986043** **Diagnosed** : 23 Oct 2023  
**Unique Number** : 10708705 **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)