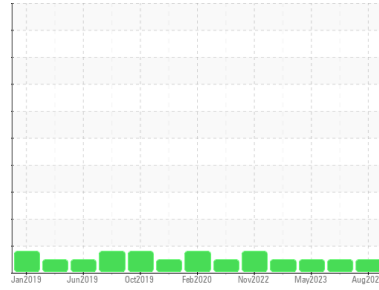




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**923032-260314**

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>GFL0087161</b>	GFL0087216	GFL0083818
Sample Date	Client Info	<b>08 Aug 2023</b>	06 Jul 2023	31 May 2023
Machine Age	hrs	<b>2662</b>	2463	2284
Oil Age	hrs	<b>600</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
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>50</b>	38	16
Chromium	ppm ASTM D5185m >4	<b>2</b>	2	1
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>4</b>	7	3
Lead	ppm ASTM D5185m >45	<b>1</b>	3	<1
Copper	ppm ASTM D5185m >85	<b>6</b>	8	2
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	0
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>1</b>	5	1
Barium	ppm ASTM D5185m 0	<b>2</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>66</b>	66	52
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	1	<1
Magnesium	ppm ASTM D5185m 1010	<b>926</b>	998	899
Calcium	ppm ASTM D5185m 1070	<b>1131</b>	1150	1002
Phosphorus	ppm ASTM D5185m 1150	<b>1032</b>	1080	962
Zinc	ppm ASTM D5185m 1270	<b>1243</b>	1333	1224
Sulfur	ppm ASTM D5185m 2060	<b>3192</b>	3633	3541

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>5</b>	10	4
Sodium	ppm ASTM D5185m	<b>21</b>	69	2
Potassium	ppm ASTM D5185m >20	<b>2</b>	2	<1

## INFRA-RED

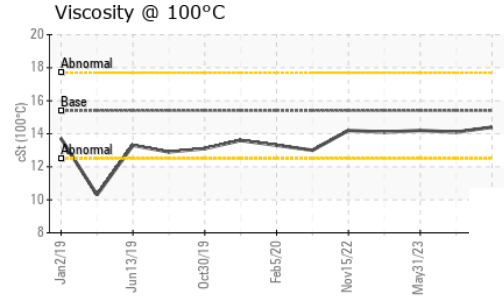
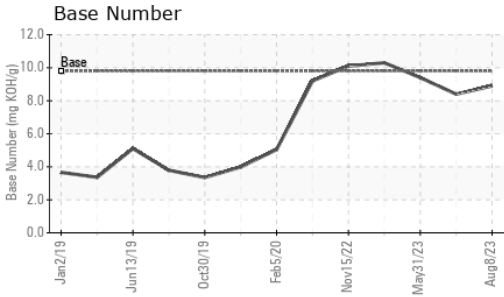
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>2.2</b>	1.8	0.6
Nitration	Abs/cm *ASTM D7624 >20	<b>9.7</b>	12.7	6.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>22.8</b>	25.3	19.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.3</b>	19.4	14.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.9</b>	8.4	9.4



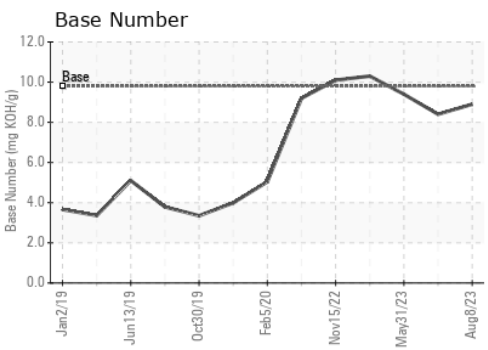
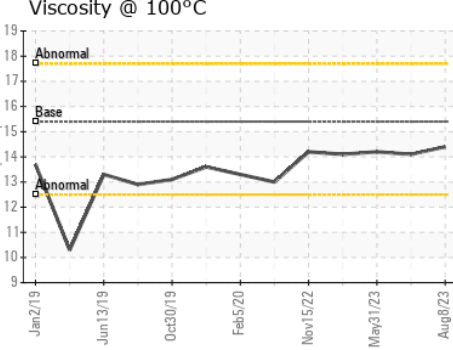
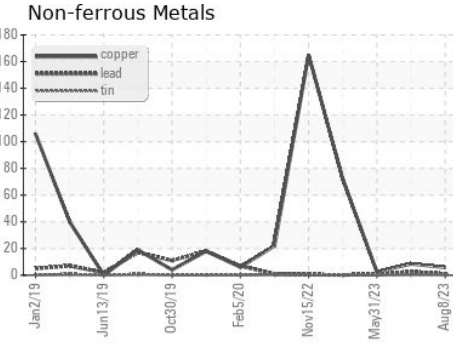
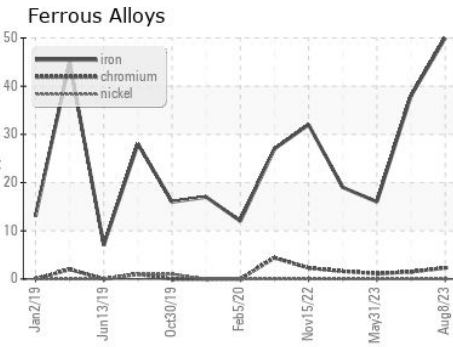
# OIL ANALYSIS REPORT



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>14.4</b>	14.1	14.2

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0087161 **Received** : 14 Aug 2023  
**Lab Number** : **05923127** **Diagnosed** : 14 Aug 2023  
**Unique Number** : 10603074 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 836 - Kansas City Hauling**  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Robert Hart  
 rhart@gflenv.com  
 T: (580)461-1509  
 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)