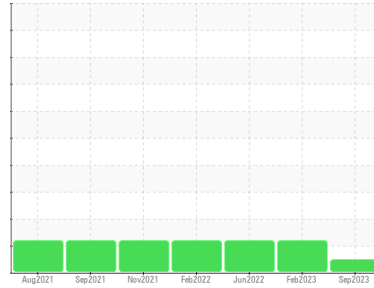




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**729036-361501**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. 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>GFL0089732</b>	GFL0066750	GFL0053493
Sample Date	Client Info	<b>07 Sep 2023</b>	17 Feb 2023	23 Jun 2022
Machine Age	hrs	<b>26308</b>	25232	24355
Oil Age	hrs	<b>1076</b>	877	16131
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	ABNORMAL	ABNORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	<b>4</b>	4	10
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	0	3
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	2
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>26</b>	11	7
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>49</b>	56	59
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>621</b>	660	826
Calcium	ppm	ASTM D5185m 1070	<b>1590</b>	1150	1076
Phosphorus	ppm	ASTM D5185m 1150	<b>803</b>	897	978
Zinc	ppm	ASTM D5185m 1270	<b>1031</b>	1045	1161
Sulfur	ppm	ASTM D5185m 2060	<b>3192</b>	2655	3619

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	<b>3</b>	2	4
Sodium	ppm	ASTM D5185m	<b>4</b>	5	37
Potassium	ppm	ASTM D5185m >20	<b>3</b>	4	5
Fuel	%	ASTM D3524 >2.0	<b>0.5</b>	▲ 4.6	▲ 4.2

## INFRA-RED

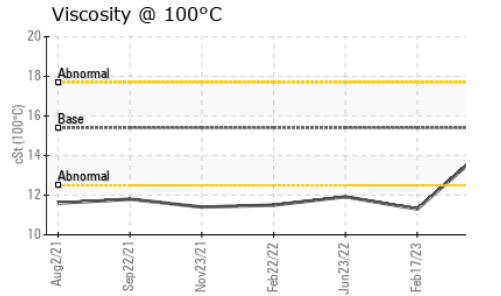
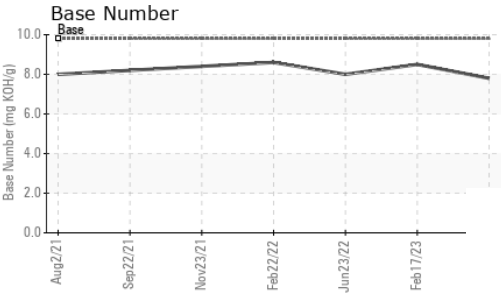
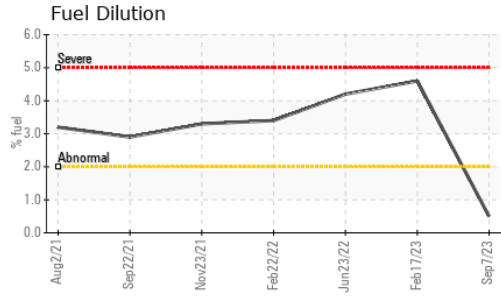
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.1</b>	6.9	6.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.2</b>	18.3	19.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.5</b>	14.8	15.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.8</b>	8.5	8.0



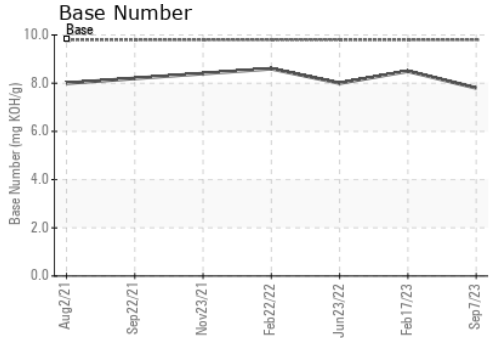
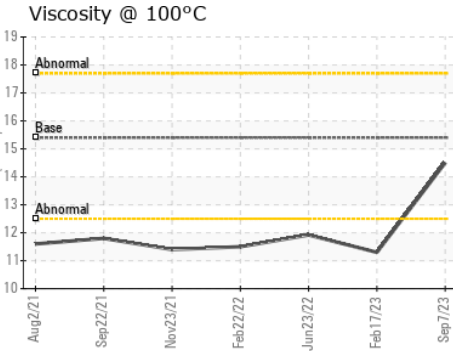
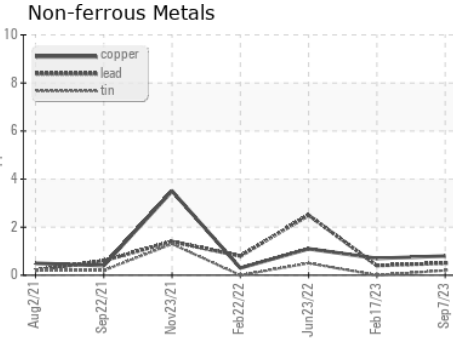
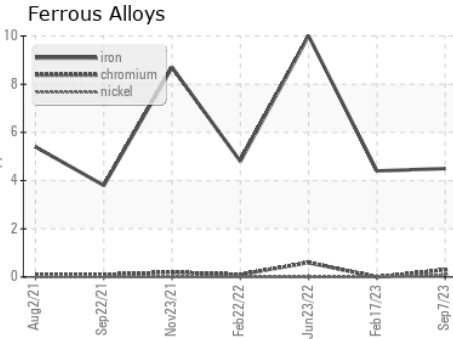
# OIL ANALYSIS REPORT



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>14.5</b>	▲ 11.3 ▲ 11.92

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0089732 **Received** : 11 Sep 2023  
**Lab Number** : **05946916** **Diagnosed** : 13 Sep 2023  
**Unique Number** : 10642875 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**GFL Environmental - 882 - Gainesville**  
 5002 SW 41st Blvd  
 Gainesville, FL  
 US 32608  
 Contact: ROBERT CLARK  
 robert.clark@gflenv.com

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)