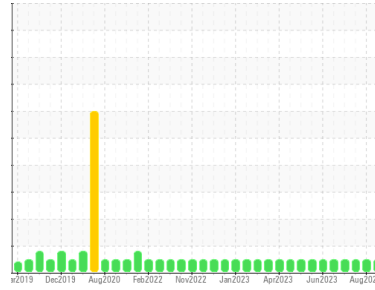




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**429048-402450**

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>GFL0090656</b>	GFL0087205	GFL0087221
Sample Date	Client Info	<b>06 Sep 2023</b>	15 Aug 2023	01 Aug 2023
Machine Age	hrs	<b>15896</b>	15644	15503
Oil Age	hrs	<b>0</b>	600	0
Oil Changed	Client Info	<b>Not Changed</b>	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>24</b>	19	15
Chromium	ppm ASTM D5185m >4	<b>1</b>	1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m	<b>0</b>	<1	0
Silver	ppm ASTM D5185m >2	<b>0</b>	<1	<1
Aluminum	ppm ASTM D5185m >25	<b>6</b>	4	2
Lead	ppm ASTM D5185m >45	<b>12</b>	5	3
Copper	ppm ASTM D5185m >85	<b>2</b>	2	1
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	<1	<1
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>1</b>	0	0
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>67</b>	66	66
Manganese	ppm ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1074</b>	1033	938
Calcium	ppm ASTM D5185m 1070	<b>1180</b>	1176	1126
Phosphorus	ppm ASTM D5185m 1150	<b>1101</b>	1046	1050
Zinc	ppm ASTM D5185m 1270	<b>1410</b>	1274	1250
Sulfur	ppm ASTM D5185m 2060	<b>3651</b>	3402	2893

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>11</b>	8	8
Sodium	ppm ASTM D5185m	<b>6</b>	7	0
Potassium	ppm ASTM D5185m >20	<b>11</b>	10	8

## INFRA-RED

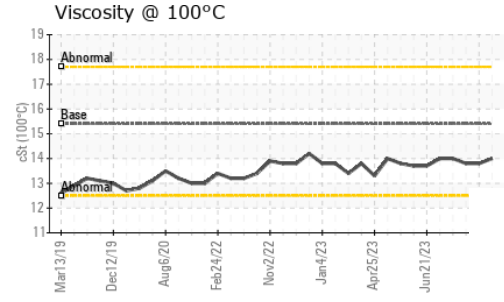
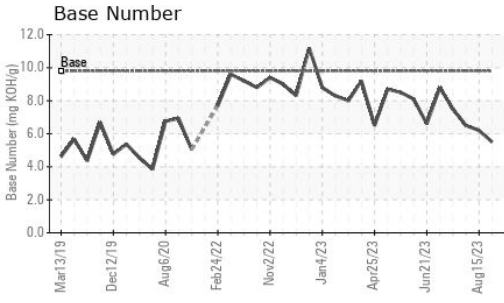
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.5</b>	0.5	0.3
Nitration	Abs/cm *ASTM D7624 >20	<b>11.6</b>	11.3	10.1
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>25.1</b>	24.0	21.6

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>23.6</b>	22.0	19.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>5.5</b>	6.2	6.5



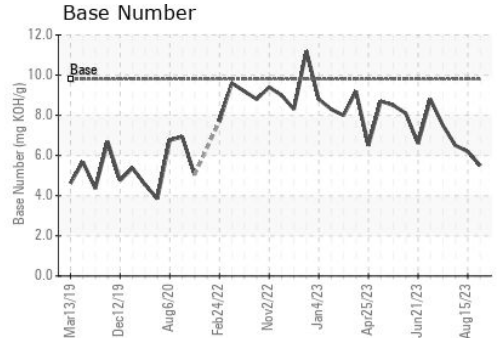
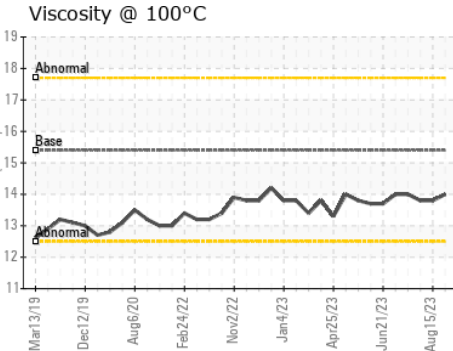
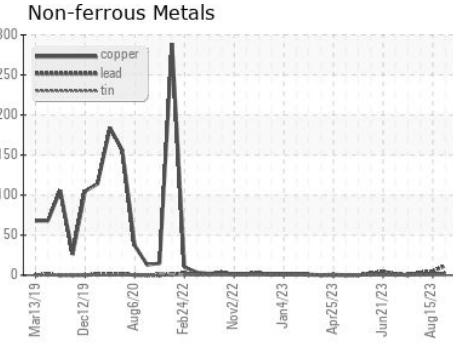
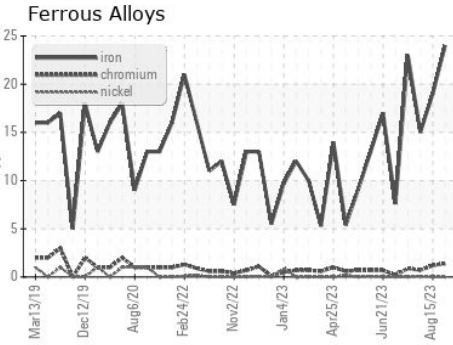
# OIL ANALYSIS REPORT



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>14.0</b>	13.8	13.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0090656 **Received** : 11 Sep 2023  
**Lab Number** : **05946886** **Diagnosed** : 12 Sep 2023  
**Unique Number** : 10642845 **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)