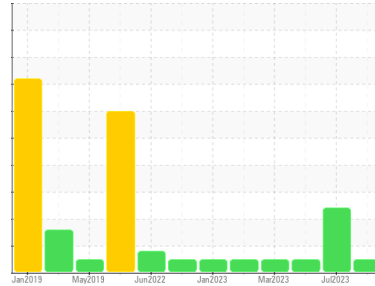




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**527039-651093**

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>GFL0083693</b>	GFL0083666	GFL0078259
Sample Date	Client Info	<b>04 Oct 2023</b>	14 Jul 2023	20 Apr 2023
Machine Age	hrs	<b>34210</b>	0	0
Oil Age	hrs	<b>4388</b>	450	0
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Not Changed
Sample Status		<b>NORMAL</b>	ABNORMAL	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 >100	<b>14</b>	66	24
Chromium	ppm ASTM D5185m >20	<b>1</b>	5	2
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	0
Aluminum	ppm ASTM D5185m >20	<b>2</b>	8	0
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	1	1
Copper	ppm ASTM D5185m >330	<b>4</b>	16	10
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	2	1
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>4</b>	1	0
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>54</b>	56	55
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>852</b>	885	852
Calcium	ppm ASTM D5185m 1070	<b>1113</b>	1172	1204
Phosphorus	ppm ASTM D5185m 1150	<b>1010</b>	947	995
Zinc	ppm ASTM D5185m 1270	<b>1215</b>	1234	1244
Sulfur	ppm ASTM D5185m 2060	<b>2931</b>	3574	2992

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>7</b>	36	11
Sodium	ppm ASTM D5185m	<b>12</b>	13	6
Potassium	ppm ASTM D5185m >20	<b>2</b>	4	3

## INFRA-RED

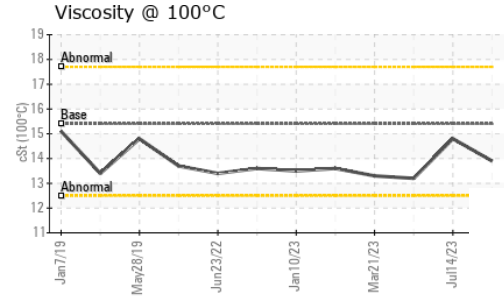
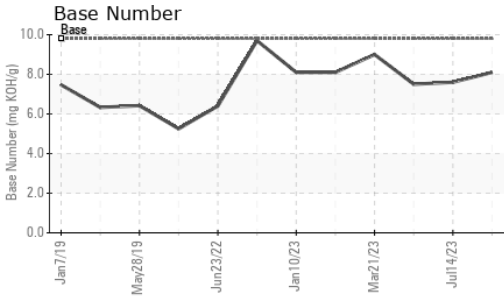
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.3</b>	0.5	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>6.8</b>	8.1	6.5
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.8</b>	20.8	17.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.2</b>	16.3	13.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.1</b>	7.6	7.5



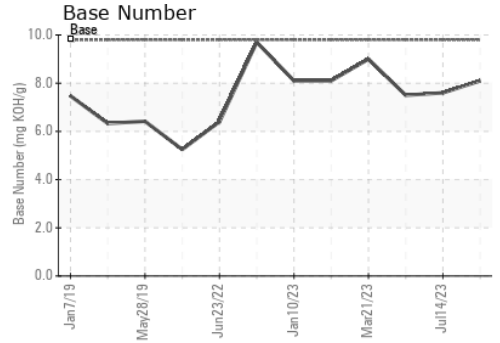
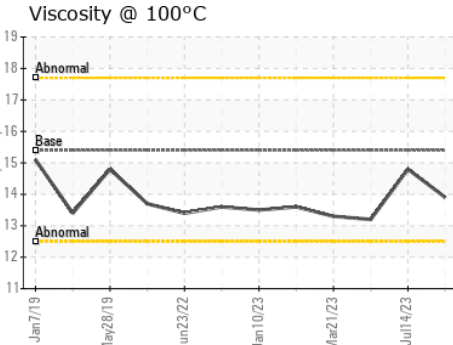
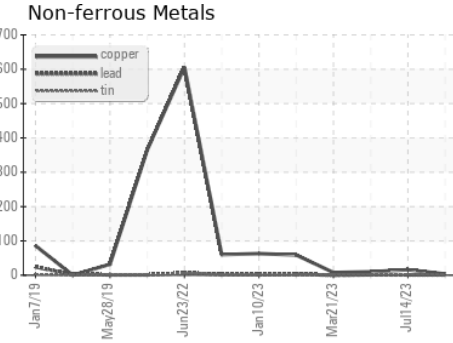
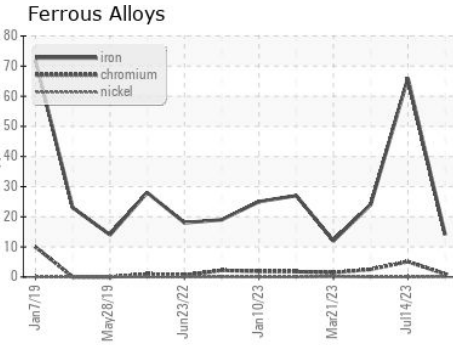
# OIL ANALYSIS REPORT



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>13.9</b>	14.8	13.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0083693 **Received** : 13 Oct 2023  
**Lab Number** : 05978825 **Diagnosed** : 16 Oct 2023  
**Unique Number** : 10696120 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 846 - Mayfield Hauling**  
 3426 State Route 45  
 Mayfield, KY  
 US 42066  
 Contact: Jack Lindsey  
 jack.lindsey@gflenv.com  
 T: (270)970-3690  
 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)