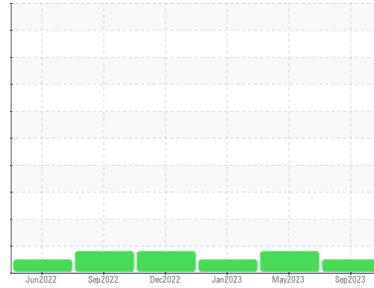




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**720032**

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>GFL0092927</b>	GFL0067570	GFL0067545
Sample Date	Client Info	<b>19 Sep 2023</b>	01 May 2023	23 Jan 2023
Machine Age	hrs	<b>0</b>	4318	3942
Oil Age	hrs	<b>0</b>	599	0
Oil Changed	Client Info	<b>N/A</b>	Changed	N/A
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>22</b>	▲ 155	47
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	2	<1
Nickel	ppm ASTM D5185m >4	<b>0</b>	<1	0
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>14</b>	20	8
Lead	ppm ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	4	1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</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>34</b>	42	110
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>64</b>	16	<1
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	2	<1
Magnesium	ppm ASTM D5185m 1010	<b>1158</b>	678	652
Calcium	ppm ASTM D5185m 1070	<b>878</b>	1183	1214
Phosphorus	ppm ASTM D5185m 1150	<b>1005</b>	941	913
Zinc	ppm ASTM D5185m 1270	<b>1299</b>	1158	1182
Sulfur	ppm ASTM D5185m 2060	<b>3825</b>	2889	3936

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>6</b>	7	5
Sodium	ppm ASTM D5185m	<b>3</b>	2	3
Potassium	ppm ASTM D5185m >20	<b>20</b>	18	9

## INFRA-RED

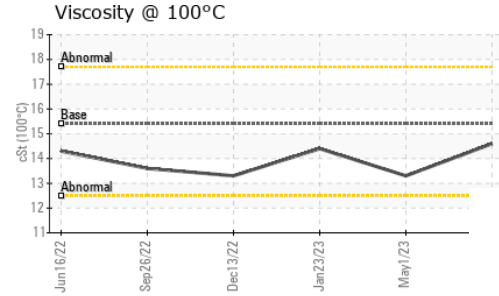
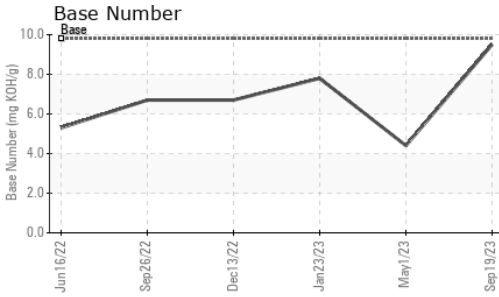
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0</b>	1.4	0.5
Nitration	Abs/cm *ASTM D7624 >20	<b>11.8</b>	15.0	11.1
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>25.0</b>	28.0	21.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>23.1</b>	29.2	17.6
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.5</b>	4.4	7.8



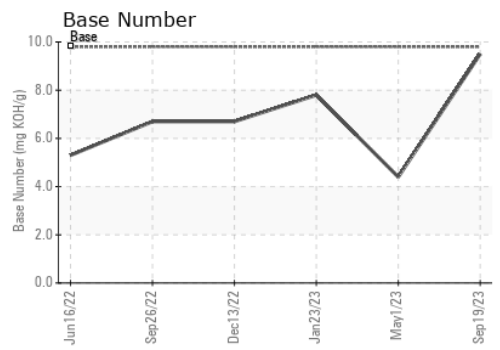
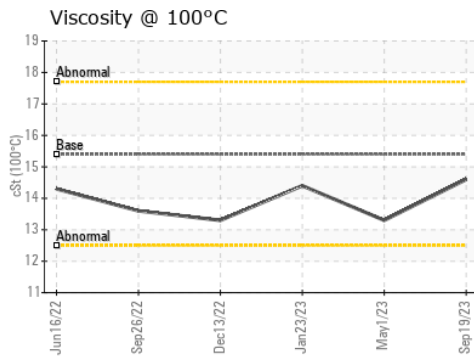
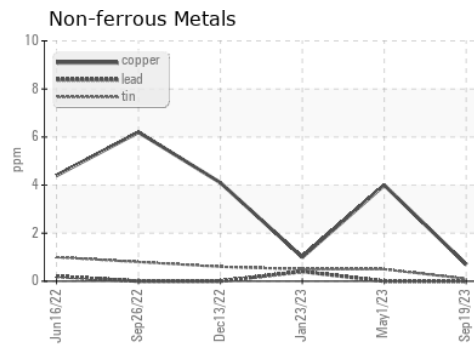
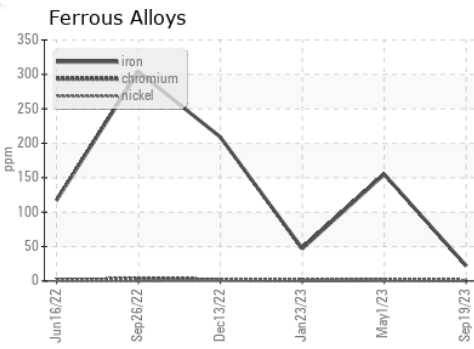
# OIL ANALYSIS REPORT



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>14.6</b>	13.3	14.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0092927 **Received** : 20 Sep 2023  
**Lab Number** : 05956350 **Diagnosed** : 21 Sep 2023  
**Unique Number** : 10657563 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 641 - Alpena**  
 1241 KING SETTLEMENT RD  
 ALPENA, MI  
 US 49707  
 Contact: DYLAN TOLAN  
 dylan.tolan@gflenv.com  
 T: (989)854-7203  
 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)