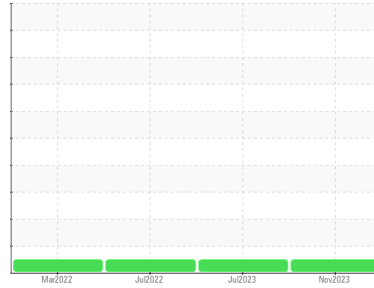




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**4667M**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (36 QTS)**

## 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>GFL0059157</b>	GFL0085031	GFL0052072
Sample Date	Client Info		<b>08 Nov 2023</b>	19 Jul 2023	14 Jul 2022
Machine Age	hrs	Client Info	<b>120330</b>	114281	11334
Oil Age	hrs	Client Info	<b>120330</b>	0	11334
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >90	<b>31</b>	74	26
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	9	3
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	4	1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	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>0</b>	7	2
Barium	ppm	ASTM D5185m 0	<b>6</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	78	53
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>871</b>	1232	818
Calcium	ppm	ASTM D5185m 1070	<b>1049</b>	1356	1005
Phosphorus	ppm	ASTM D5185m 1150	<b>976</b>	1292	889
Zinc	ppm	ASTM D5185m 1270	<b>1163</b>	1585	1123
Sulfur	ppm	ASTM D5185m 2060	<b>3239</b>	3802	2927

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	10	10
Sodium	ppm	ASTM D5185m	<b>0</b>	50	7
Potassium	ppm	ASTM D5185m >20	<b>9</b>	7	1

## INFRA-RED

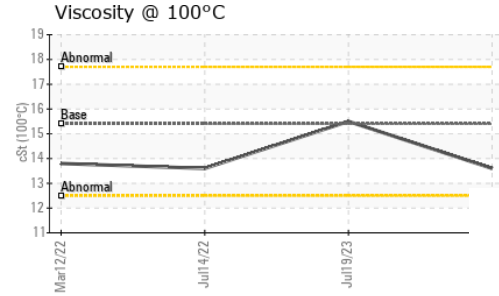
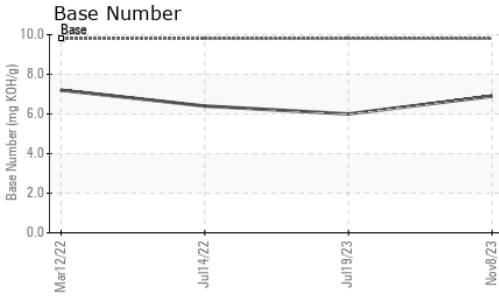
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.6</b>	1.2	0.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.9</b>	14.7	11.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.5</b>	28.0	25.3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.2</b>	26.5	22.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.9</b>	6.0	6.4



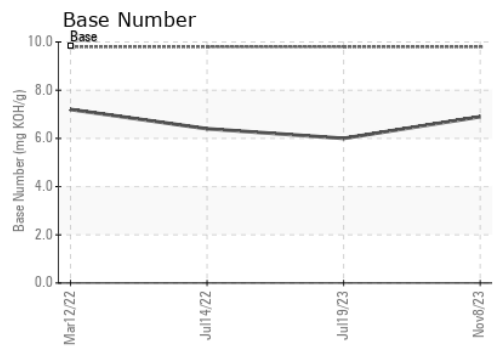
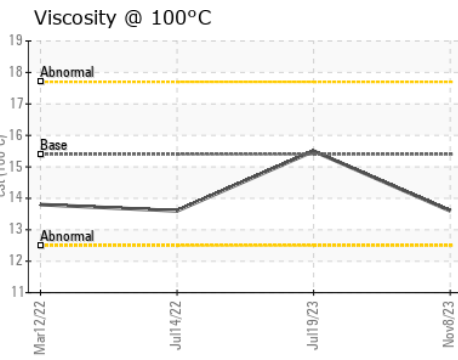
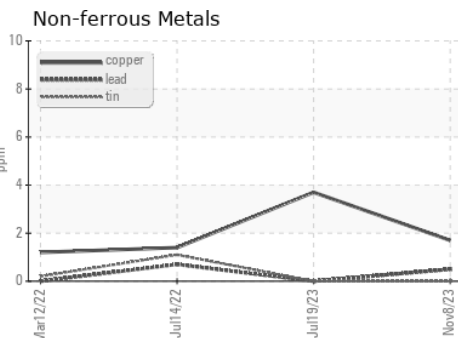
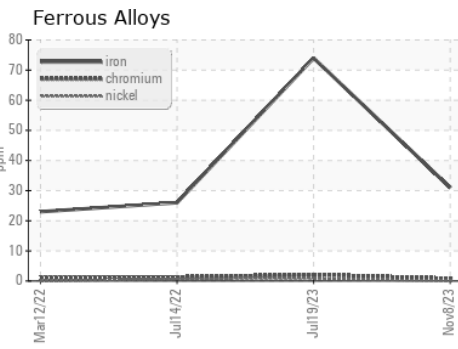
# OIL ANALYSIS REPORT



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>13.6</b>	15.5	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0059157 **Received** : 14 Nov 2023  
**Lab Number** : **06006711** **Diagnosed** : 14 Nov 2023  
**Unique Number** : 10740473 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 405 - Arbor Hills**  
 7400 Napier Rd  
 NORTHVILLE, MI  
 US 48168  
 Contact: Anthony Hopkins  
 ahopkins@gflenv.com  
 T:  
 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)