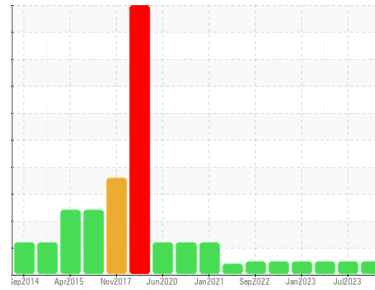




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**MACK 812099**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (9 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>GFL0086269</b>	GFL0086238	GFL0057645
Sample Date	Client Info		<b>09 Aug 2023</b>	18 Jul 2023	10 Apr 2023
Machine Age	hrs	Client Info	<b>5164</b>	95312	95312
Oil Age	hrs	Client Info	<b>5164</b>	5004	4416
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
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 >120	<b>4</b>	17	15
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	1	3
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>0</b>	1	<1
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	2	1
Tin	ppm	ASTM D5185m >15	<b>0</b>	<1	0
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>20</b>	10	12
Barium	ppm	ASTM D5185m 0	<b>2</b>	0	1
Molybdenum	ppm	ASTM D5185m 60	<b>66</b>	65	64
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>751</b>	797	838
Calcium	ppm	ASTM D5185m 1070	<b>1169</b>	1075	1066
Phosphorus	ppm	ASTM D5185m 1150	<b>929</b>	895	880
Zinc	ppm	ASTM D5185m 1270	<b>1133</b>	1138	1161
Sulfur	ppm	ASTM D5185m 2060	<b>3074</b>	2523	2634

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>2</b>	4	4
Sodium	ppm	ASTM D5185m	<b>0</b>	<1	4
Potassium	ppm	ASTM D5185m >20	<b>2</b>	<1	<1

## INFRA-RED

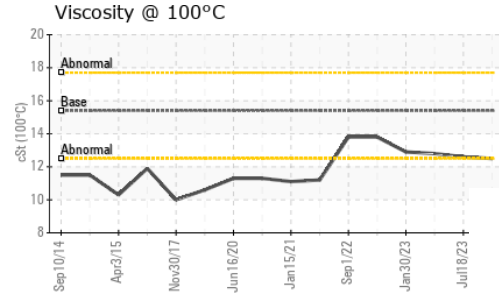
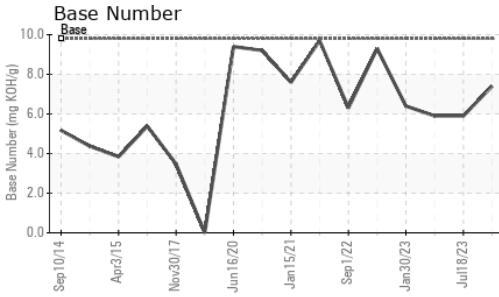
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.2</b>	0.6	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.7</b>	8.5	7.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.3</b>	20.2	17.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>12.0</b>	15.5	14.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.4</b>	5.9	5.9



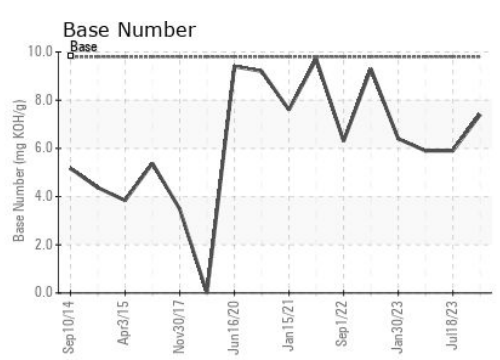
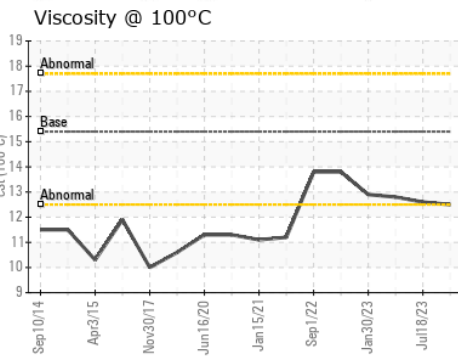
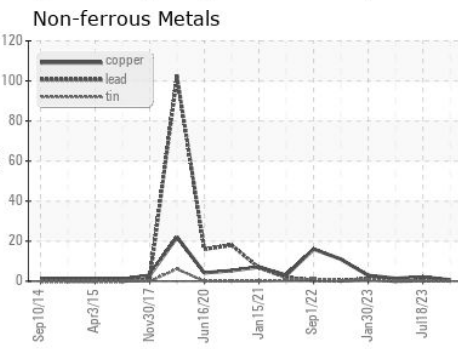
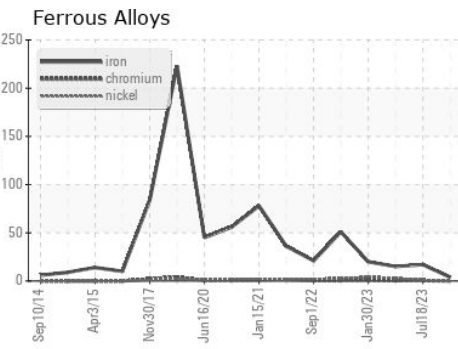
# OIL ANALYSIS REPORT



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>12.5</b>	12.6	12.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0086269 **Received** : 14 Aug 2023  
**Lab Number** : **05923139** **Diagnosed** : 14 Aug 2023  
**Unique Number** : 10603086 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 009 - Fairburn**  
 6905 Roosevelt Hwy  
 Fairburn, GA  
 US 30213  
 Contact: Eric Jones  
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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)