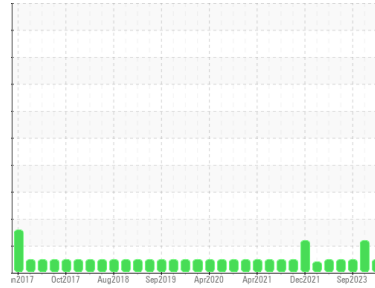




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**MACK 2657**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (7 GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. 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>GFL0109056</b>	GFL0086179	GFL0086207
Sample Date	Client Info		<b>14 Feb 2024</b>	30 Nov 2023	26 Sep 2023
Machine Age	hrs	Client Info	<b>33890</b>	33472	33472
Oil Age	hrs	Client Info	<b>2394</b>	33828	33472
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>0</b>	9	21
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	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>19</b>	32	15
Barium	ppm	ASTM D5185m 0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m 60	<b>52</b>	55	50
Manganese	ppm	ASTM D5185m 0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m 1010	<b>673</b>	696	631
Calcium	ppm	ASTM D5185m 1070	<b>978</b>	1107	820
Phosphorus	ppm	ASTM D5185m 1150	<b>803</b>	929	712
Zinc	ppm	ASTM D5185m 1270	<b>978</b>	1172	881
Sulfur	ppm	ASTM D5185m 2060	<b>2355</b>	2991	2263

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>2</b>	6	3
Sodium	ppm	ASTM D5185m	<b>0</b>	1	<1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	1	<1
Fuel	%	ASTM D3524 >3.0	<b>0.4</b>	▲ 4.6	<1.0

## INFRA-RED

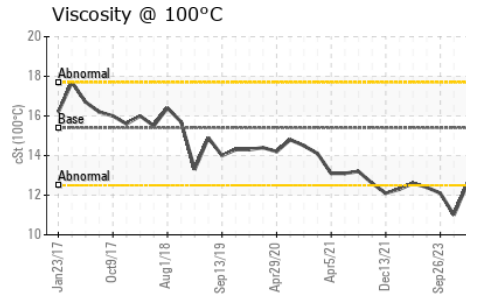
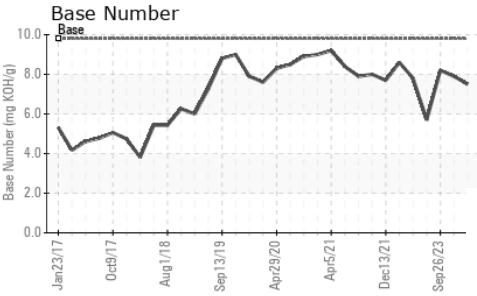
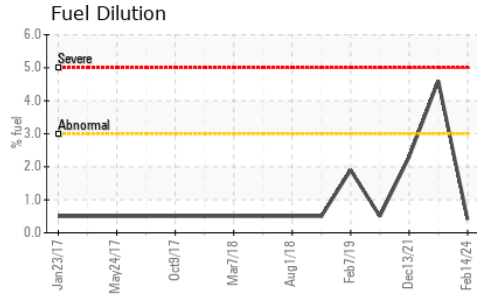
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.1</b>	0.1	1.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.0</b>	4.3	6.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.2</b>	15.7	18.4

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>12.3</b>	10.5	11.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.5</b>	7.9	8.2



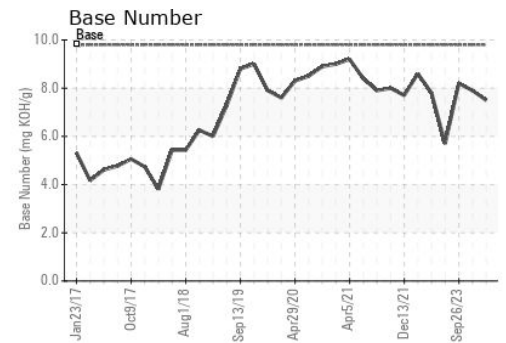
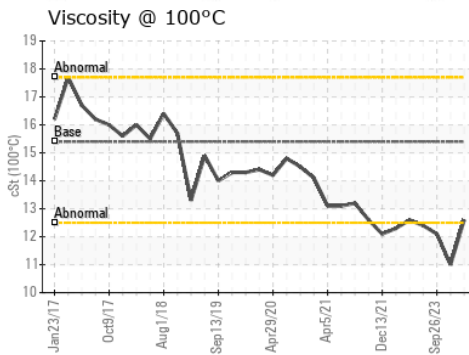
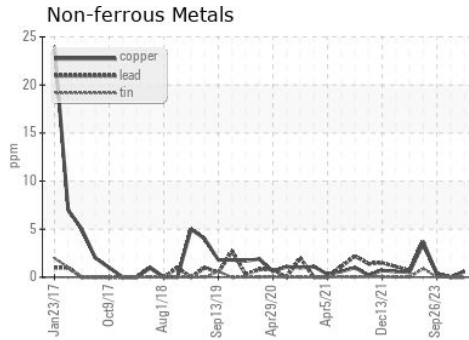
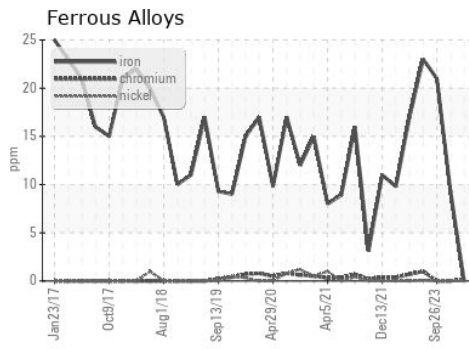
# OIL ANALYSIS REPORT



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	12.6	▲ 11.0	12.1

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0109056 Received : 21 Feb 2024  
 Lab Number : 06095317 Tested : 23 Feb 2024  
 Unique Number : 10888170 Diagnosed : 23 Feb 2024 - Wes Davis  
 Test Package : FLEET ( Additional Tests: PercentFuel )

**GFL Environmental - 009 - Fairburn**  
 6905 Roosevelt Hwy  
 Fairburn, GA  
 US 30213  
 Contact: Eric Jones  
 erjones@gflenv.com  
 T: (678)630-9927  
 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)