



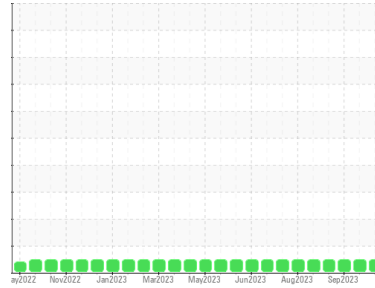
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**MONTGOMERY**  
 Machine Id  
**MACK 420047**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**



## 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>GFL0087999</b>	GFL0092373	GFL0089884
Sample Date	Client Info		<b>15 Nov 2023</b>	04 Oct 2023	13 Sep 2023
Machine Age	hrs	Client Info	<b>9632</b>	9370	9220
Oil Age	hrs	Client Info	<b>547</b>	285	135
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
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>2</b>	4	3
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	7	3
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	<1	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	64	59
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>937</b>	917	1029
Calcium	ppm	ASTM D5185m 1070	<b>1021</b>	1046	1174
Phosphorus	ppm	ASTM D5185m 1150	<b>1020</b>	1008	1029
Zinc	ppm	ASTM D5185m 1270	<b>1219</b>	1210	1278
Sulfur	ppm	ASTM D5185m 2060	<b>2748</b>	3318	3855

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	8	5
Sodium	ppm	ASTM D5185m	<b>0</b>	3	3
Potassium	ppm	ASTM D5185m >20	<b>3</b>	4	5

## INFRA-RED

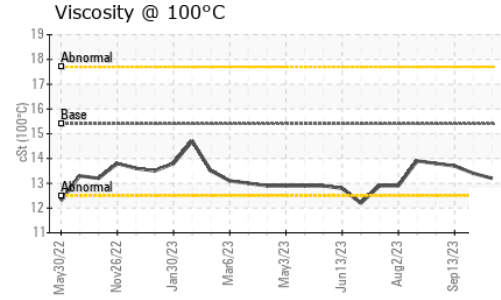
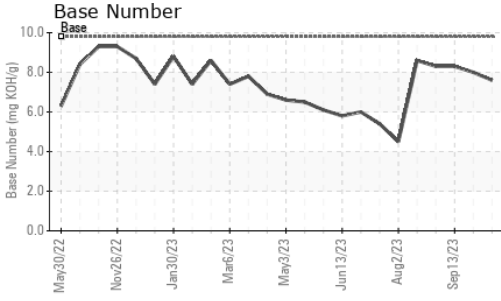
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.3</b>	6.0	5.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.9</b>	17.7	17.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.8</b>	13.6	12.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.6</b>	8.0	8.3



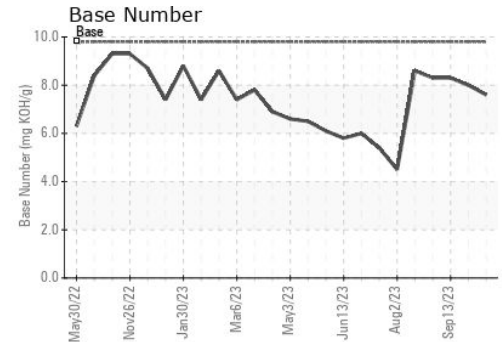
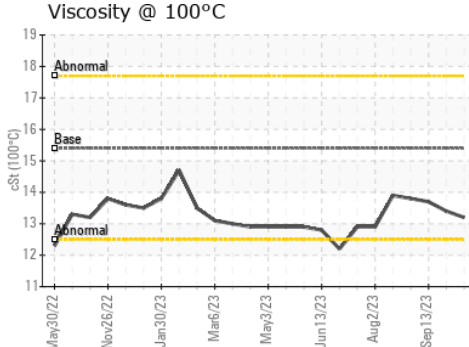
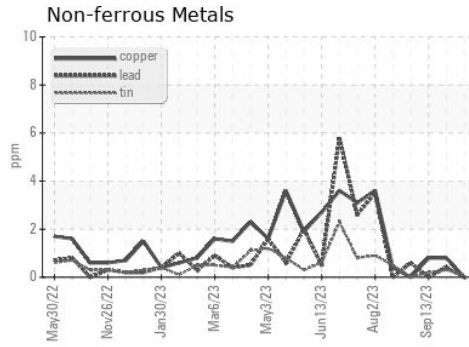
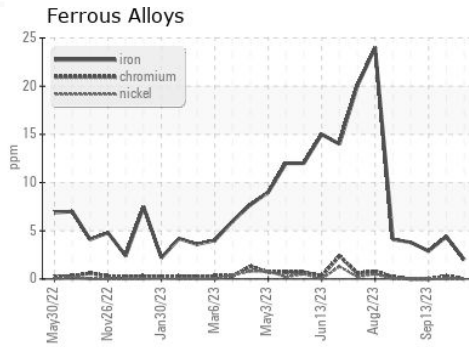
# OIL ANALYSIS REPORT



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>13.2</b>	13.4	13.7

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0087999 **Received** : 16 Nov 2023  
**Lab Number** : **06010014** **Diagnosed** : 17 Nov 2023  
**Unique Number** : 10749158 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 955 - Montgomery**  
 1121 Wilbanks St  
 Montgomery, AL  
 US 36108  
 Contact: LISA REEVES

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)

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F: