



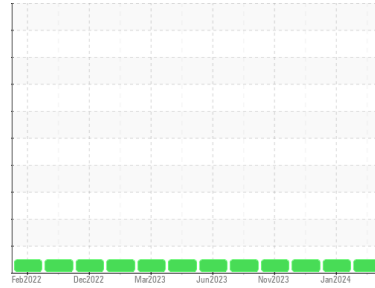
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**MONTGOMERY**  
 Machine Id  
**MACK 924016-142519**  
 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>GFL0088642</b>	GFL0081890	GFL0091259
Sample Date	Client Info	<b>06 Feb 2024</b>	05 Jan 2024	04 Dec 2023
Machine Age	hrs	<b>22089</b>	21973	21786
Oil Age	hrs	<b>116</b>	331	144
Oil Changed	Client Info	<b>Not Chngd</b>	Changed	Not Chngd
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
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>9</b>	8	3
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<b>&lt;1</b>	0	0
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>4</b>	5	3
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm ASTM D5185m >330	<b>6</b>	1	<1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>9</b>	2	4
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>89</b>	61	42
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>1435</b>	976	746
Calcium	ppm ASTM D5185m 1070	<b>1481</b>	1061	615
Phosphorus	ppm ASTM D5185m 1150	<b>1506</b>	1041	625
Zinc	ppm ASTM D5185m 1270	<b>1842</b>	1242	761
Sulfur	ppm ASTM D5185m 2060	<b>4723</b>	3367	1928

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>7</b>	6	4
Sodium	ppm ASTM D5185m	<b>3</b>	6	3
Potassium	ppm ASTM D5185m >20	<b>2</b>	3	8

## INFRA-RED

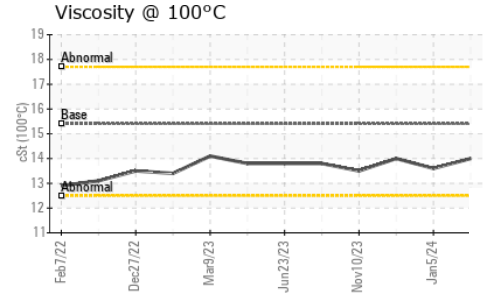
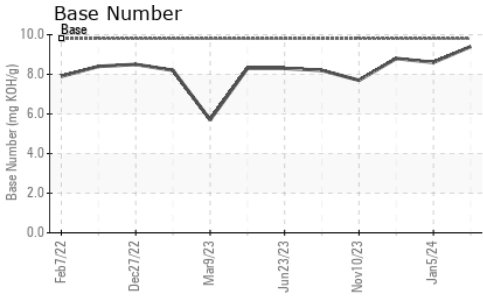
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.1</b>	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>5.3</b>	6.8	5.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.4</b>	17.9	17.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.4</b>	13.9	13.5
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.4</b>	8.6	8.8



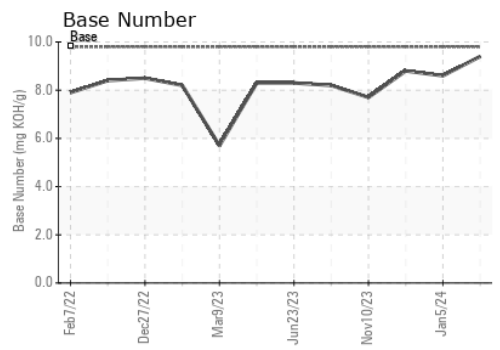
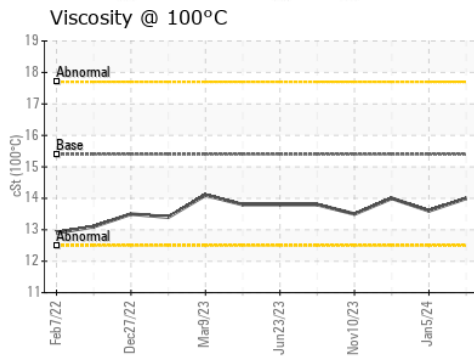
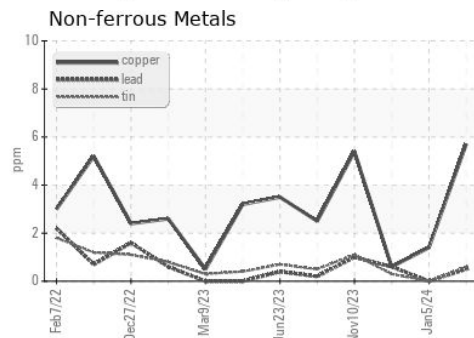
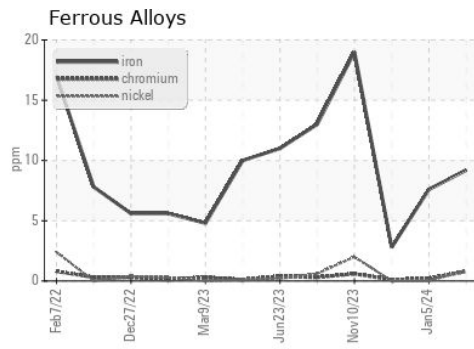
# OIL ANALYSIS REPORT



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>14.0</b>	13.6	14.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088642  
**Lab Number** : **06085247**  
**Unique Number** : 10872692  
**Test Package** : FLEET  
**Received** : 09 Feb 2024  
**Tested** : 12 Feb 2024  
**Diagnosed** : 12 Feb 2024 - Don Baldrige

**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)