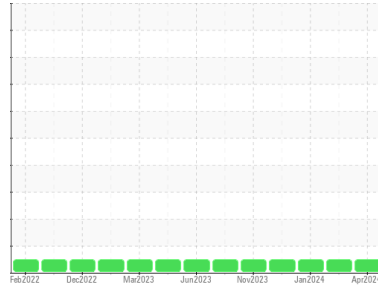




# OIL ANALYSIS REPORT

## 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>GFL0083553</b>	GFL0088642	GFL0081890
Sample Date	Client Info		<b>03 Apr 2024</b>	06 Feb 2024	05 Jan 2024
Machine Age	hrs	Client Info	<b>22150</b>	22089	21973
Oil Age	hrs	Client Info	<b>177</b>	116	331
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	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
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>30</b>	9	8
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>6</b>	4	5
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>6</b>	6	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>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>5</b>	9	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	89	61
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1010	<b>1072</b>	1435	976
Calcium	ppm	ASTM D5185m 1070	<b>1174</b>	1481	1061
Phosphorus	ppm	ASTM D5185m 1150	<b>1152</b>	1506	1041
Zinc	ppm	ASTM D5185m 1270	<b>1427</b>	1842	1242
Sulfur	ppm	ASTM D5185m 2060	<b>4424</b>	4723	3367

## CONTAMINANTS

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

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.2</b>	0.1	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.1</b>	5.3	6.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.5</b>	17.4	17.9

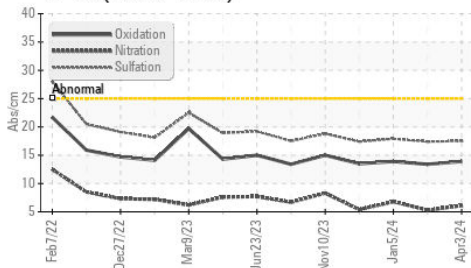
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.9</b>	13.4	13.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.2</b>	9.4	8.6

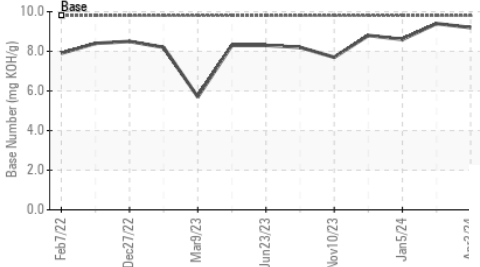


# OIL ANALYSIS REPORT

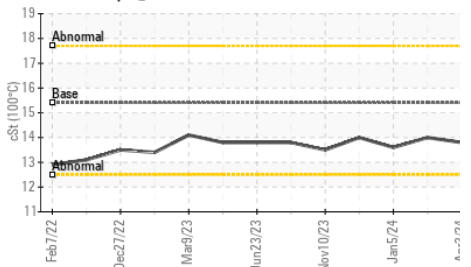
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

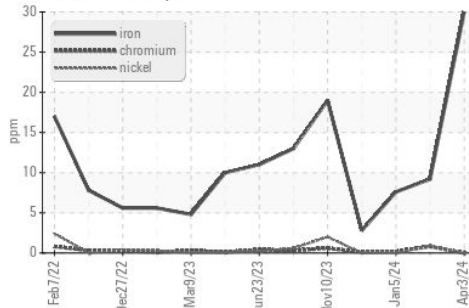


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

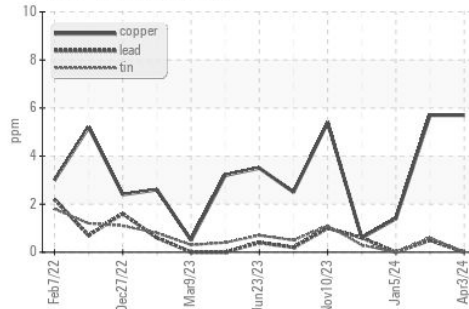
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	14.0

## GRAPHS

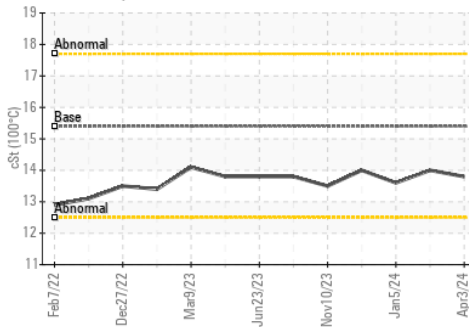
Ferrous Alloys



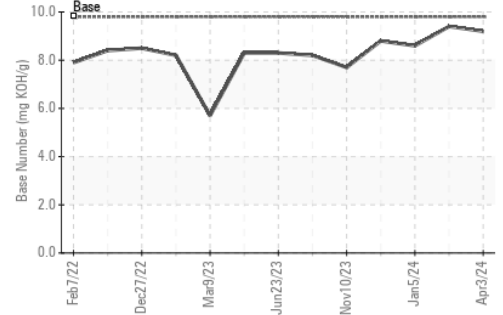
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0083553  
**Lab Number** : 06139731  
**Unique Number** : 10964539  
**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)

T:  
F: