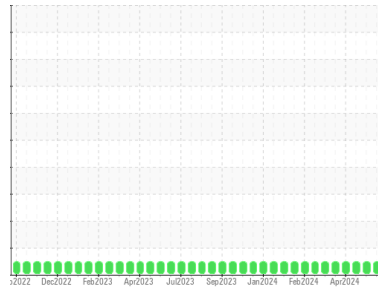




# OIL ANALYSIS REPORT

Area  
**MONTGOMERY**  
 Machine Id  
**MACK 920016-192537**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

## Sample Rating Trend



**NORMAL**



## 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 acceptable for the time in service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0088024</b>	GFL0118435	GFL0118438
Sample Date	Client Info	<b>23 May 2024</b>	06 May 2024	24 Apr 2024
Machine Age	hrs Client Info	<b>12212</b>	12077	11992
Oil Age	hrs Client Info	<b>12212</b>	12077	11992
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Not 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>4</b>	13	6
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm ASTM D5185m >2	<b>1</b>	0	<1
Aluminum	ppm ASTM D5185m >20	<b>2</b>	1	3
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	1	2
Copper	ppm ASTM D5185m >330	<b>1</b>	2	3
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	1	2
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	2
Barium	ppm ASTM D5185m 0	<b>&lt;1</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>59</b>	56	63
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm ASTM D5185m 1010	<b>926</b>	884	990
Calcium	ppm ASTM D5185m 1070	<b>995</b>	1004	1123
Phosphorus	ppm ASTM D5185m 1150	<b>1007</b>	941	1178
Zinc	ppm ASTM D5185m 1270	<b>1187</b>	1170	1301
Sulfur	ppm ASTM D5185m 2060	<b>3220</b>	3045	3304

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>5</b>	5	7
Sodium	ppm ASTM D5185m	<b>3</b>	2	1
Potassium	ppm ASTM D5185m >20	<b>3</b>	3	3

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.3</b>	0.7	0.3
Nitration	Abs/cm *ASTM D7624 >20	<b>5.4</b>	8.8	6.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.6</b>	19.6	18.3

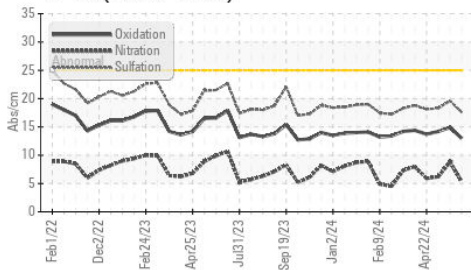
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.0</b>	14.9	14.2
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.5</b>	7.1	8.3

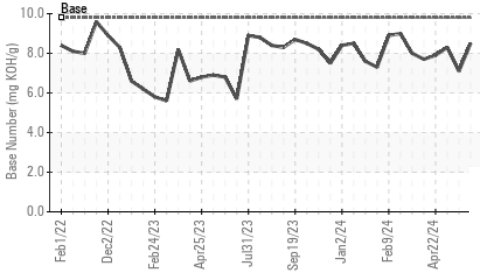


# OIL ANALYSIS REPORT

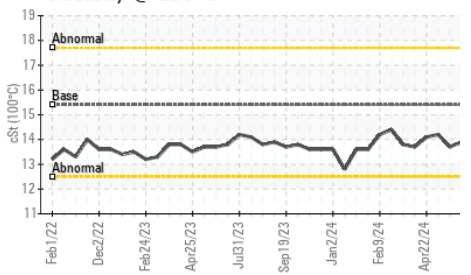
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

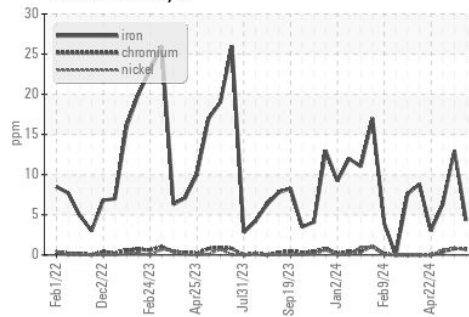


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

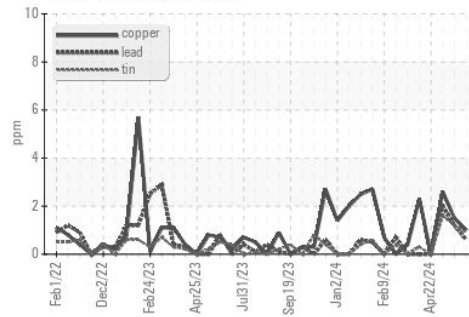
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.7

## GRAPHS

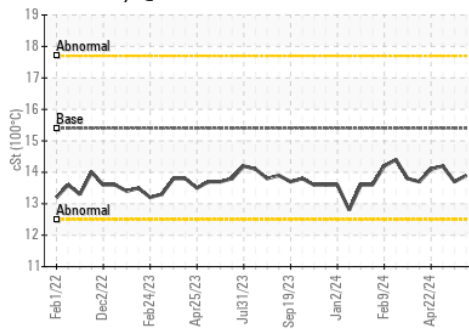
Ferrous Alloys



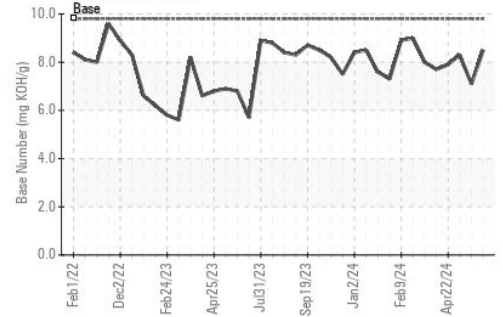
Non-ferrous Metals



Viscosity @ 100°C



Base Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088024 **Received** : 28 May 2024  
**Lab Number** : 06191923 **Tested** : 29 May 2024  
**Unique Number** : 11048675 **Diagnosed** : 30 May 2024 - Don Baldrige  
**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: