



# OIL ANALYSIS REPORT

Sample Rating Trend

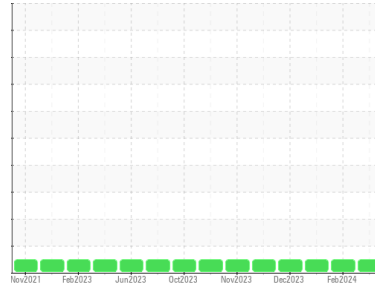
**NORMAL**



Machine Id  
**411026-411026**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## 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>GFL0104947</b>	GFL0104908	GFL0104923
Sample Date	Client Info	<b>13 Feb 2024</b>	05 Feb 2024	08 Jan 2024
Machine Age	hrs	<b>7005</b>	6862	6703
Oil Age	hrs	<b>0</b>	0	6703
Oil Changed	Client Info	<b>N/A</b>	N/A	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<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 >100	<b>14</b>	9	8
Chromium	ppm ASTM D5185m >20	<b>1</b>	1	<1
Nickel	ppm ASTM D5185m >4	<b>0</b>	<1	0
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>6</b>	6	2
Lead	ppm ASTM D5185m >40	<b>0</b>	<1	0
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	1	<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>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>55</b>	54	57
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>852</b>	841	946
Calcium	ppm ASTM D5185m 1070	<b>947</b>	920	1037
Phosphorus	ppm ASTM D5185m 1150	<b>927</b>	967	998
Zinc	ppm ASTM D5185m 1270	<b>1083</b>	1147	1206
Sulfur	ppm ASTM D5185m 2060	<b>2639</b>	2806	2997

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>2</b>	3	2
Sodium	ppm ASTM D5185m	<b>7</b>	4	3
Potassium	ppm ASTM D5185m >20	<b>6</b>	9	2

## INFRA-RED

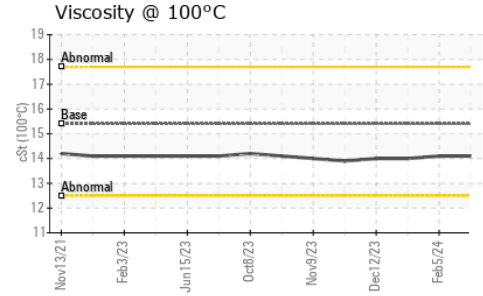
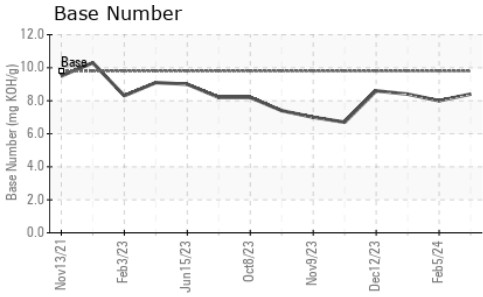
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1.3</b>	0.3	0.7
Nitration	Abs/cm *ASTM D7624 >20	<b>8.0</b>	7.9	6.1
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.3</b>	18.3	18.9

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.1</b>	14.4	13.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.4</b>	8.0	8.4



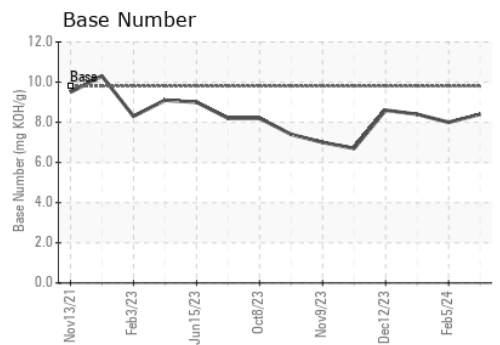
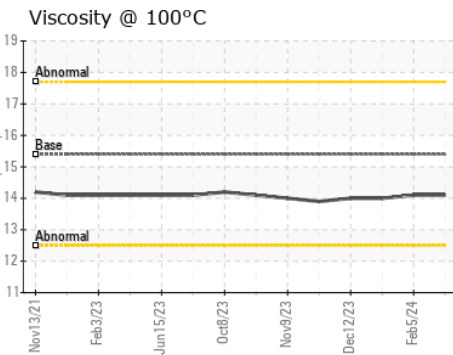
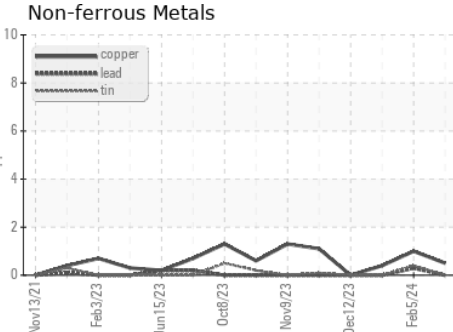
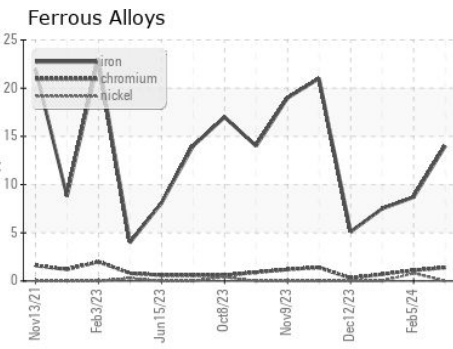
# OIL ANALYSIS REPORT



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>14.1</b>	14.1	14.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0104947 **Received** : 26 Feb 2024  
**Lab Number** : **06099816** **Tested** : 27 Feb 2024  
**Unique Number** : 10898046 **Diagnosed** : 27 Feb 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 820 - Joplin Hauling**  
 3700 West 7th Street  
 Joplin, MO  
 US 64801  
 Contact: James Jarrett  
 jjarrett@gflenv.com  
 T: (417)310-2802  
 F:

Certificate L2367  
 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)