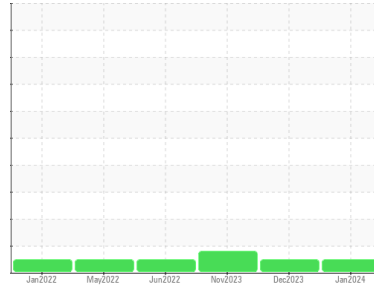




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**728051-361690**

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>GFL0065752</b>	GFL0065689	GFL0065694
Sample Date	Client Info	<b>27 Jan 2024</b>	15 Dec 2023	16 Nov 2023
Machine Age	mls Client Info	<b>0</b>	0	0
Oil Age	mls Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	Changed
Sample Status		<b>NORMAL</b>	NORMAL	ABNORMAL

## 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>5</b>	5	12
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	0	<1
Nickel	ppm ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>2</b>	<1	1
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	<1	3
Copper	ppm ASTM D5185m >330	<b>55</b>	54	▲ 337
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	0	0
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>6</b>	2	<1
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>60</b>	62	60
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	0
Magnesium	ppm ASTM D5185m 1010	<b>881</b>	1029	912
Calcium	ppm ASTM D5185m 1070	<b>985</b>	1115	1114
Phosphorus	ppm ASTM D5185m 1150	<b>971</b>	1071	1040
Zinc	ppm ASTM D5185m 1270	<b>1196</b>	1309	1233
Sulfur	ppm ASTM D5185m 2060	<b>2853</b>	3246	2885

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	3	4
Sodium	ppm ASTM D5185m	<b>4</b>	2	8
Potassium	ppm ASTM D5185m >20	<b>3</b>	0	0

## INFRA-RED

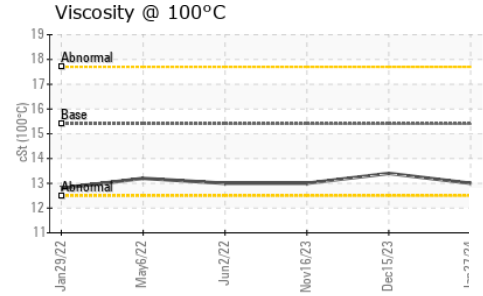
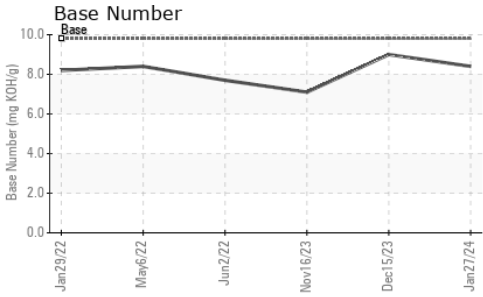
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.3</b>	0.2	0.5
Nitration	Abs/cm *ASTM D7624 >20	<b>7.4</b>	6.3	10.0
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.0</b>	18.3	19.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.2</b>	13.6	15.9
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.4</b>	9.0	7.1



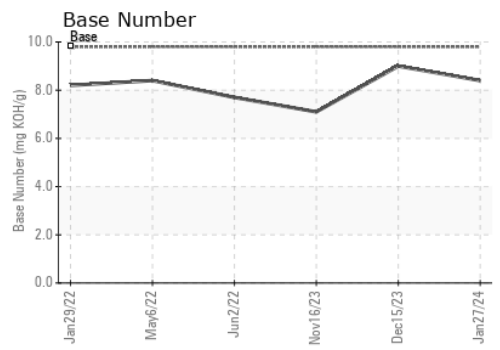
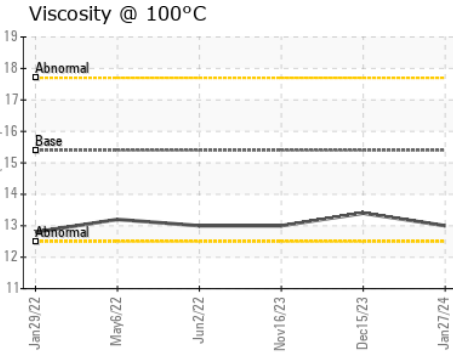
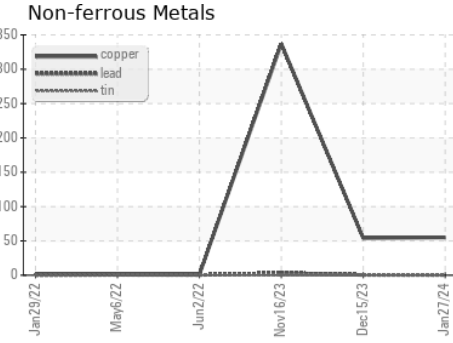
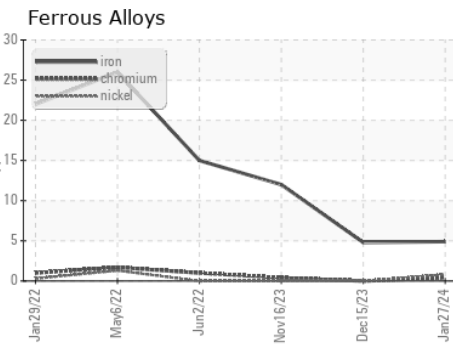
# OIL ANALYSIS REPORT



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>13.0</b>	13.4	13.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0065752 **Received** : 06 Feb 2024  
**Lab Number** : 06081873 **Tested** : 07 Feb 2024  
**Unique Number** : 10869318 **Diagnosed** : 07 Feb 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 823 - Central Missouri Hauling**  
 24461 Oak Grove Lane  
 Sedalia, MO  
 US 65301  
 Contact: Terry Randolph  
 trandolph@gflenv.com  
 T: (660)631-2116  
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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)