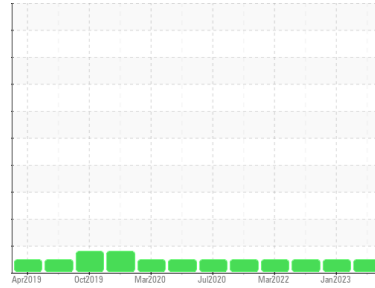




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**728048-361999**

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>GFL0108000</b>	GFL0062965	GFL0062975
Sample Date	Client Info	<b>16 Feb 2024</b>	18 Jan 2023	17 Nov 2022
Machine Age	hrs	Client Info	11811	11490
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>Changed</b>	Changed	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>8</b>	10	20
Chromium	ppm ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm ASTM D5185m >4	<b>0</b>	<1	0
Titanium	ppm ASTM D5185m	<b>0</b>	<1	0
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>2</b>	2	3
Lead	ppm ASTM D5185m >40	<b>0</b>	1	<1
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	<1	1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	<1
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>4</b>	3	0
Barium	ppm ASTM D5185m 0	<b>0</b>	4	0
Molybdenum	ppm ASTM D5185m 60	<b>58</b>	59	66
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>871</b>	900	962
Calcium	ppm ASTM D5185m 1070	<b>1026</b>	1039	1140
Phosphorus	ppm ASTM D5185m 1150	<b>993</b>	968	1053
Zinc	ppm ASTM D5185m 1270	<b>1161</b>	1221	1257
Sulfur	ppm ASTM D5185m 2060	<b>3263</b>	3310	3372

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	4	10
Sodium	ppm ASTM D5185m	<b>4</b>	7	17
Potassium	ppm ASTM D5185m >20	<b>0</b>	<1	0

## INFRA-RED

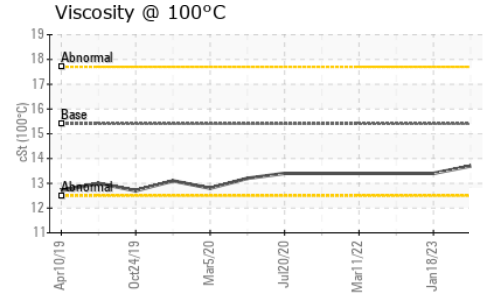
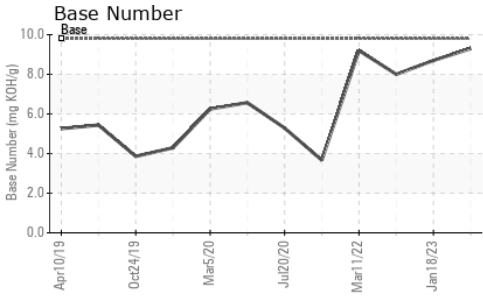
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.3	0.8
Nitration	Abs/cm *ASTM D7624 >20	<b>5.5</b>	7.2	11.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.6</b>	18.7	24.2

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>13.6</b>	14.4	20.6
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.3</b>	8.7	8.0



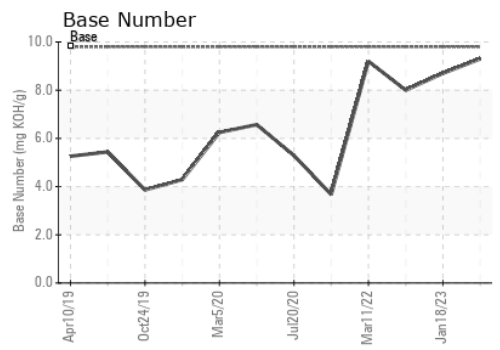
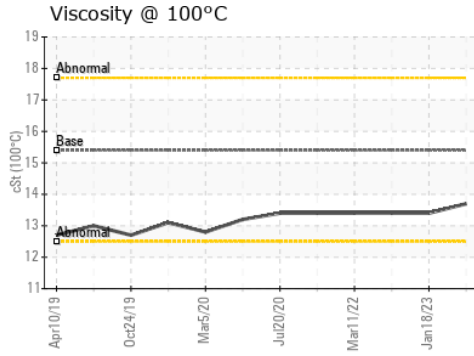
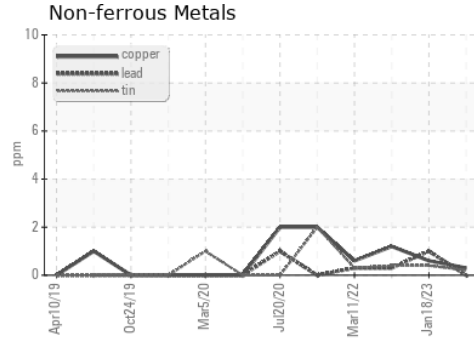
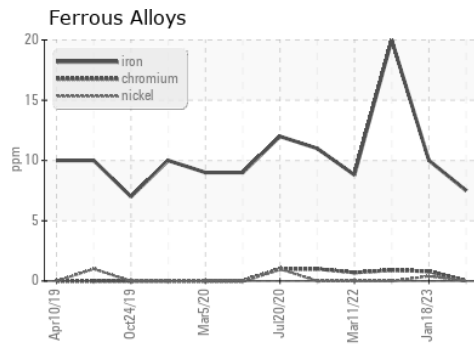
# OIL ANALYSIS REPORT



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>13.7</b>	13.4	13.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108000      **Received** : 14 Mar 2024  
**Lab Number** : **06118173**      **Tested** : 15 Mar 2024  
**Unique Number** : 10927006      **Diagnosed** : 15 Mar 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  
 F:

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)