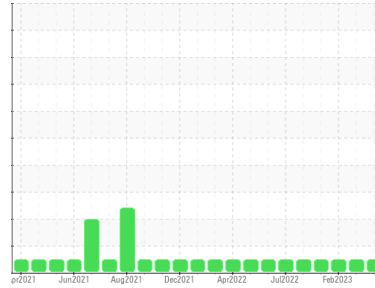




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**{UNASSIGNED}**  
 Machine Id  
**411025**

Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (10 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	history 1	history 2
Sample Number	Client Info	<b>GFL0066865</b>	GFL0055899	GFL0055817
Sample Date	Client Info	<b>04 Jul 2023</b>	07 Apr 2023	24 Feb 2023
Machine Age	hrs	Client Info	<b>1328</b>	1328
Oil Age	hrs	Client Info	<b>1328</b>	1328
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m >90	<b>7</b>	33	24
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	2
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>3</b>	8	16
Lead	ppm ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm ASTM D5185m >330	<b>2</b>	0	0
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m 0	<b>2</b>	2	3
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>62</b>	54	58
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>988</b>	803	864
Calcium	ppm ASTM D5185m 1070	<b>1084</b>	1012	1146
Phosphorus	ppm ASTM D5185m 1150	<b>1078</b>	876	910
Zinc	ppm ASTM D5185m 1270	<b>1319</b>	1050	1139
Sulfur	ppm ASTM D5185m 2060	<b>3851</b>	2603	2976

## CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >25	<b>2</b>	4	4
Sodium	ppm ASTM D5185m	<b>3</b>	4	4
Potassium	ppm ASTM D5185m >20	<b>9</b>	19	30

## INFRA-RED

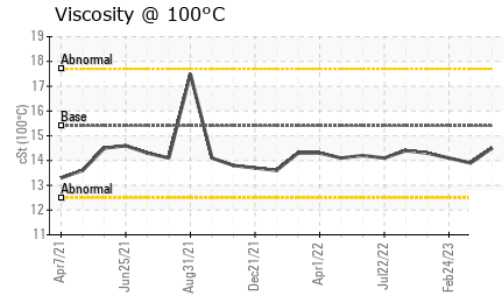
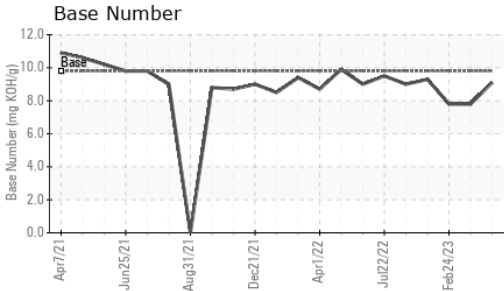
method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >6	<b>0.6</b>	0.9	1.6
Nitration	Abs/cm *ASTM D7624 >20	<b>8.0</b>	9.9	10.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.3</b>	21.2	22.7

## FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.5</b>	17.2	17.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.1</b>	7.8	7.8



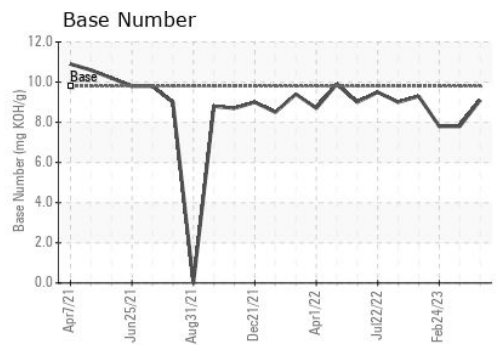
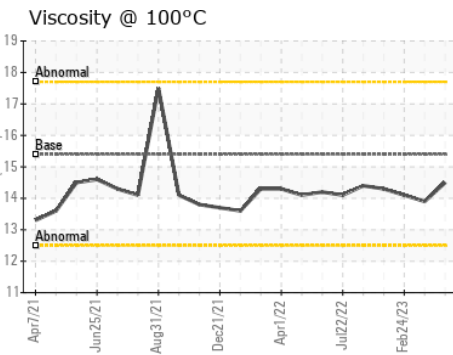
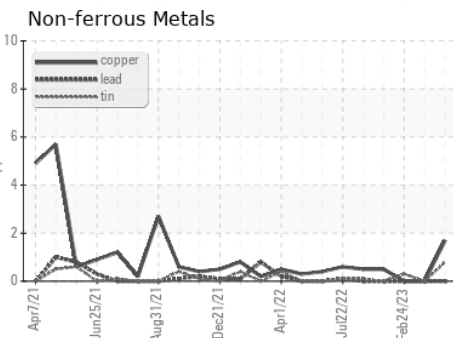
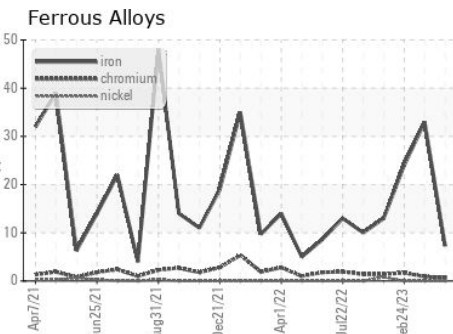
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.5</b>	13.9	14.1

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0066865 **Received** : 06 Jul 2023  
**Lab Number** : **05891124** **Diagnosed** : 06 Jul 2023  
**Unique Number** : 10546934 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 018 - Fayetteville**  
 4621 Marracco Drive  
 Hope Mills, NC  
 US 28348  
 Contact: Robert Carter  
 robert.carter@gflenv.com  
 T: (910)596-1170  
 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)