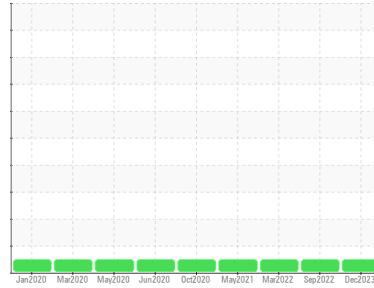




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id

**3862**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (11 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>GFL0058870</b>	GFL0048091	GFL0029456
Sample Date	Client Info		<b>01 Dec 2023</b>	19 Sep 2022	03 Mar 2022
Machine Age	hrs	Client Info	<b>8479</b>	8479	5550
Oil Age	hrs	Client Info	<b>5550</b>	0	600
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	>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 >165	<b>11</b>	9	19
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m >4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	0	4
Lead	ppm	ASTM D5185m >150	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >90	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >5	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m	<b>---</b>	---	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>6</b>	6	1
Barium	ppm	ASTM D5185m 0	<b>5</b>	2	0
Molybdenum	ppm	ASTM D5185m 60	<b>62</b>	56	66
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>864</b>	866	1054
Calcium	ppm	ASTM D5185m 1070	<b>1054</b>	1054	1236
Phosphorus	ppm	ASTM D5185m 1150	<b>1008</b>	928	1156
Zinc	ppm	ASTM D5185m 1270	<b>1127</b>	1153	1448
Sulfur	ppm	ASTM D5185m 2060	<b>2609</b>	3475	2911

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	<b>2</b>	1	4
Sodium	ppm	ASTM D5185m	<b>0</b>	6	5
Potassium	ppm	ASTM D5185m >20	<b>4</b>	2	5

## INFRA-RED

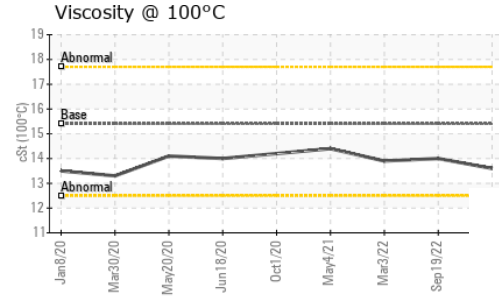
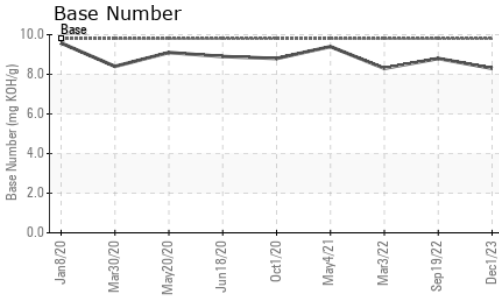
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	<b>0.7</b>	0.8	1.8
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.9</b>	8.4	10.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.0</b>	20.7	24.5

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.5</b>	14.9	18.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.3</b>	8.8	8.3



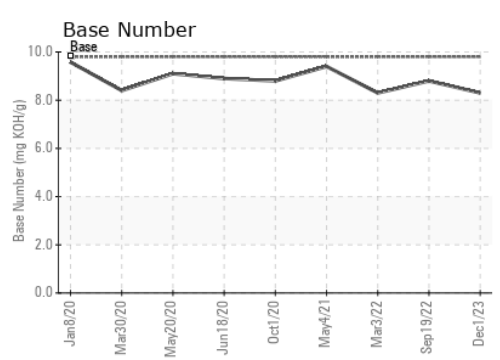
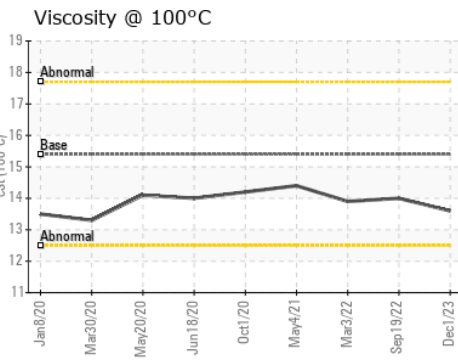
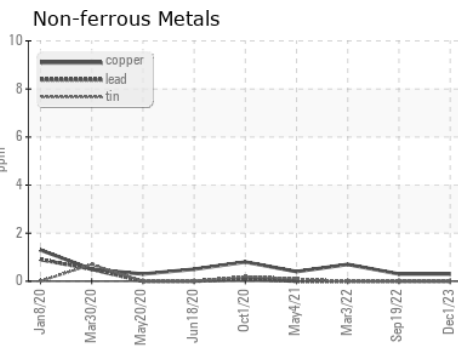
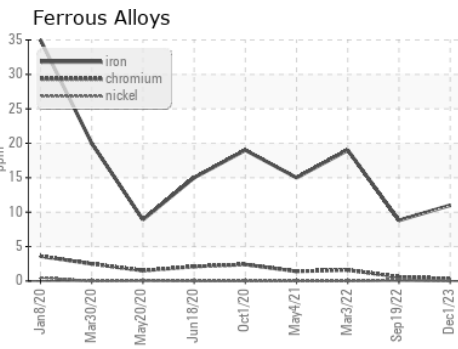
# OIL ANALYSIS REPORT



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>13.6</b>	14.0	13.9

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0058870 **Received** : 07 Dec 2023  
**Lab Number** : **06028430** **Diagnosed** : 09 Dec 2023  
**Unique Number** : 10778221 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 119 - Williamston Hauling/TriEast**  
 1805 West Main Street  
 Williamston, NC  
 US 27892  
 Contact: Spencer Ligon  
 spencer.ligon@gflenv.com  
 T: (800)207-6618  
 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)