



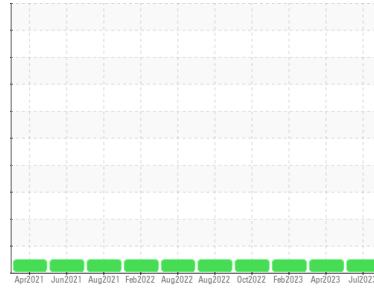
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**4643M**  
 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>GFL0082762</b>	GFL0081321	GFL0071249
Sample Date	Client Info		<b>07 Jul 2023</b>	27 Apr 2023	09 Feb 2023
Machine Age	hrs	Client Info	<b>14792</b>	14185	13606
Oil Age	hrs	Client Info	<b>600</b>	600	600
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	>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	history1	history2
Iron	ppm	ASTM D5185m >90	<b>33</b>	11	29
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	1	3
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	<1	<1
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>2</b>	4	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m 60	<b>71</b>	62	56
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1006</b>	1014	849
Calcium	ppm	ASTM D5185m 1070	<b>1212</b>	1181	985
Phosphorus	ppm	ASTM D5185m 1150	<b>1150</b>	1095	919
Zinc	ppm	ASTM D5185m 1270	<b>1416</b>	1302	1121
Sulfur	ppm	ASTM D5185m 2060	<b>3400</b>	3681	2538

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	4	7
Sodium	ppm	ASTM D5185m	<b>6</b>	4	7
Potassium	ppm	ASTM D5185m >20	<b>2</b>	1	1

## INFRA-RED

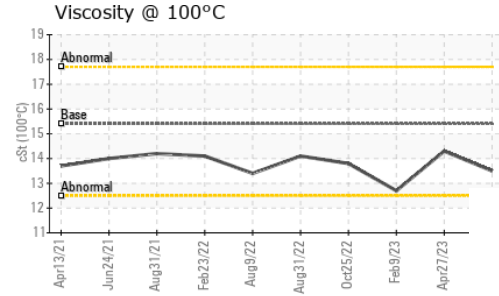
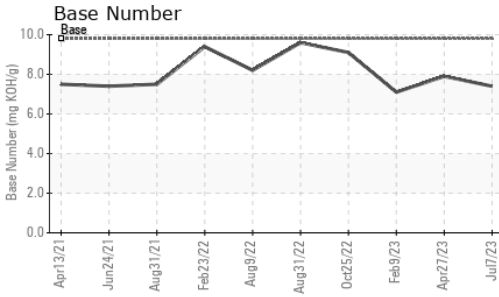
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.6</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.1</b>	6.3	10.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.9</b>	17.1	20.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.8</b>	14.0	18.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.4</b>	7.9	7.1



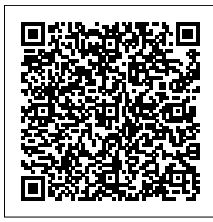
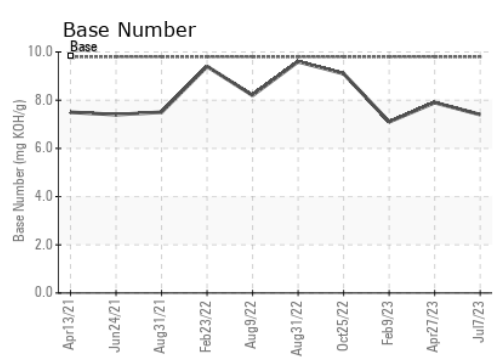
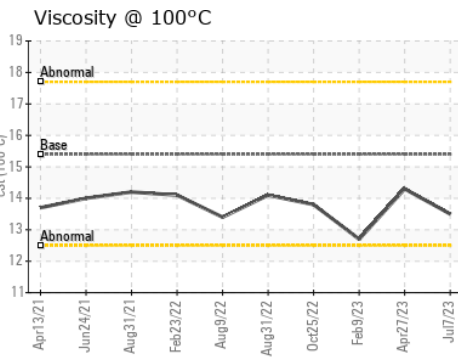
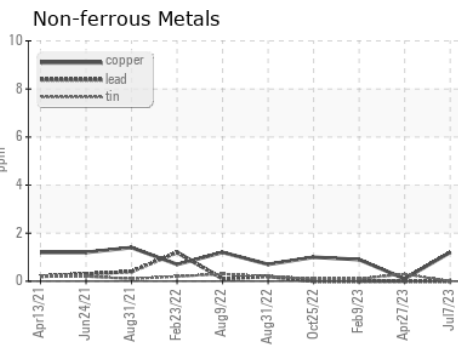
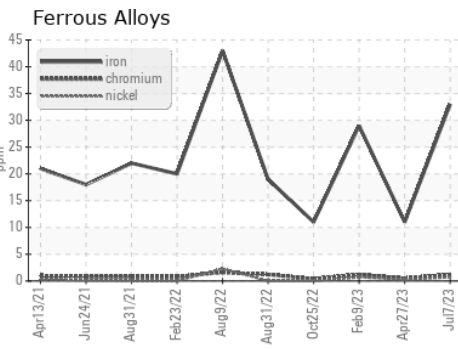
# OIL ANALYSIS REPORT



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>13.5</b>	14.3	12.7

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0082762 **Received** : 12 Jul 2023  
**Lab Number** : **05896744** **Diagnosed** : 13 Jul 2023  
**Unique Number** : 10552554 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 465 - Pontiac**  
 888 Baldwin  
 Pontiac, MI  
 US 48340  
 Contact: Ricky Matthews  
 rickymathews@gflenv.com  
 T: (586)825-9514  
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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)