



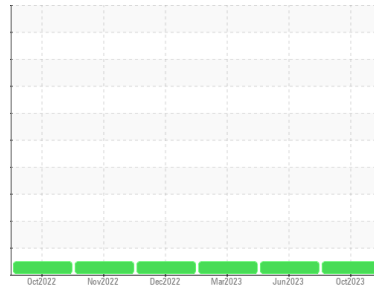
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**637M**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- QTS)**



## 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>GFL0087311</b>	GFL0072914	GFL0072916
Sample Date	Client Info		<b>01 Oct 2023</b>	05 Jun 2023	14 Mar 2023
Machine Age	hrs	Client Info	<b>10728</b>	9973	7820
Oil Age	hrs	Client Info	<b>755</b>	720	390
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 >120	<b>16</b>	12	7
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>1</b>	<1	2
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>0</b>	1	2
Lead	ppm	ASTM D5185m >40	<b>2</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>3</b>	2	4
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>&lt;1</b>	2	3
Barium	ppm	ASTM D5185m 0	<b>2</b>	0	2
Molybdenum	ppm	ASTM D5185m 60	<b>60</b>	62	57
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>842</b>	1020	879
Calcium	ppm	ASTM D5185m 1070	<b>1035</b>	1164	1055
Phosphorus	ppm	ASTM D5185m 1150	<b>904</b>	992	929
Zinc	ppm	ASTM D5185m 1270	<b>1133</b>	1314	1170
Sulfur	ppm	ASTM D5185m 2060	<b>2387</b>	3255	2553

## CONTAMINANTS

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

## INFRA-RED

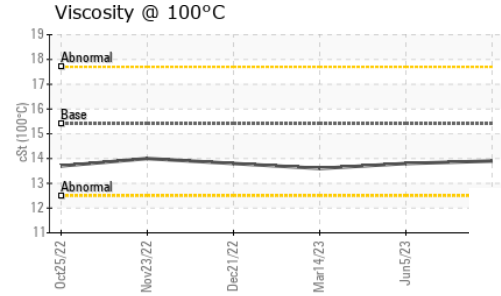
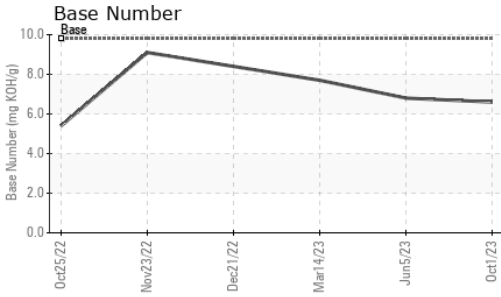
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.8</b>	0.7	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.5</b>	8.2	7.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.4</b>	21.0	19.4

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.5</b>	17.8	14.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.6</b>	6.8	7.7



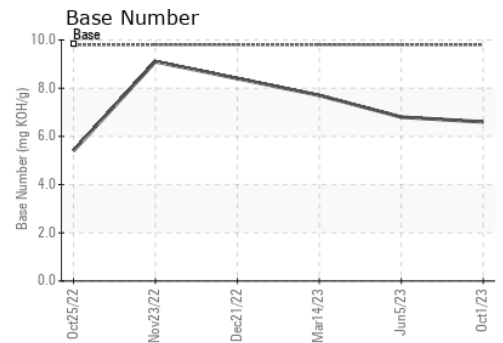
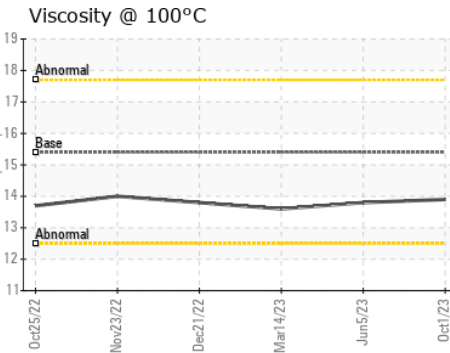
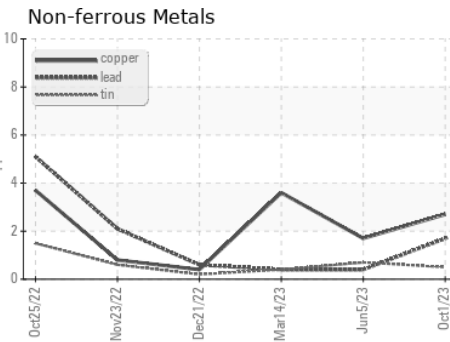
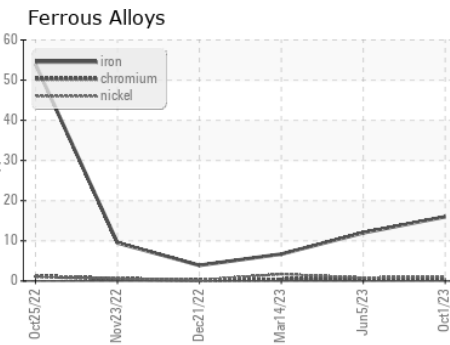
# OIL ANALYSIS REPORT



PARAMETER	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>13.9</b>	13.8	13.6

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0087311 Received : 16 Oct 2023  
 Lab Number : 05979467 Diagnosed : 17 Oct 2023  
 Unique Number : 10696762 Diagnostician : Wes Davis  
 Test Package : FLEET

GFL Environmental - 405 - Arbor Hills  
 7400 Napier Rd  
 NORTHVILLE, MI  
 US 48168  
 Contact: John Nahal  
 jnahal@gflenv.com

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)

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F: