



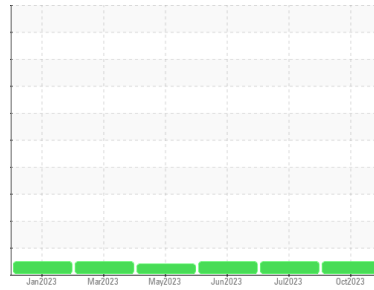
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**913001**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (9 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>GFL0087276</b>	GFL0087330	GFL0060588
Sample Date	Client Info		<b>08 Oct 2023</b>	07 Jul 2023	15 Jun 2023
Machine Age	hrs	Client Info	<b>3117</b>	2562	1990
Oil Age	hrs	Client Info	<b>555</b>	725	625
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>22</b>	28	17
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	1
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	3	8
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>5</b>	21	78
Tin	ppm	ASTM D5185m >15	<b>1</b>	1	3
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>3</b>	5	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	61	64
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m 1010	<b>909</b>	990	1012
Calcium	ppm	ASTM D5185m 1070	<b>1110</b>	1189	1165
Phosphorus	ppm	ASTM D5185m 1150	<b>980</b>	1048	987
Zinc	ppm	ASTM D5185m 1270	<b>1236</b>	1369	1274
Sulfur	ppm	ASTM D5185m 2060	<b>3044</b>	3210	3085

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>10</b>	9	10
Sodium	ppm	ASTM D5185m	<b>3</b>	6	4
Potassium	ppm	ASTM D5185m >20	<b>2</b>	1	20

## INFRA-RED

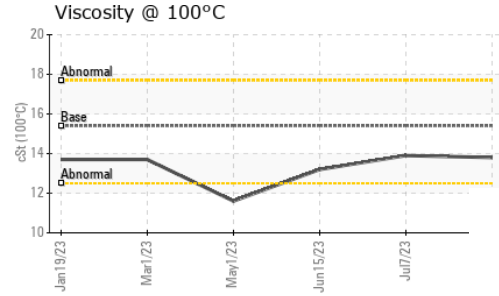
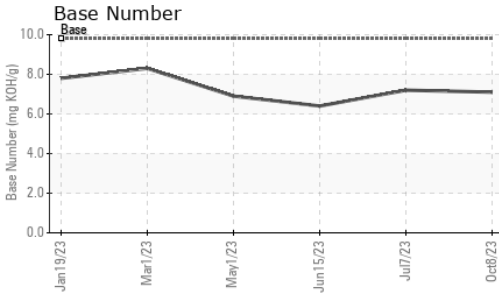
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.6</b>	0.8	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.4</b>	9.5	8.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.0</b>	21.8	20.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.2</b>	18.1	18.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.1</b>	7.2	6.4



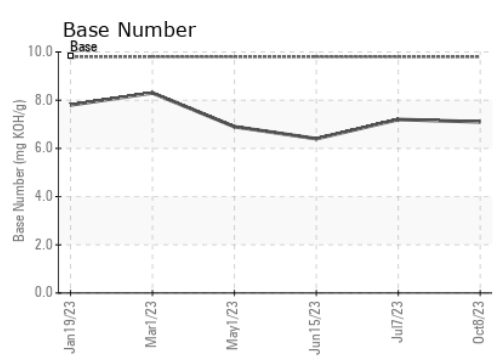
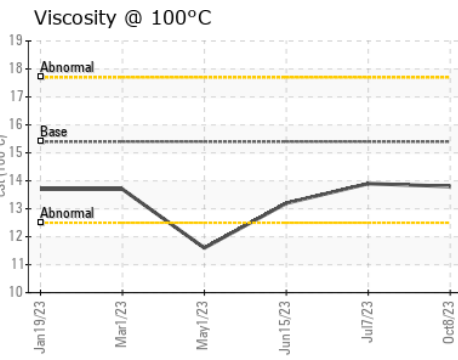
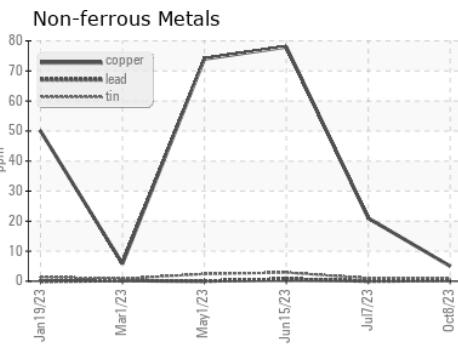
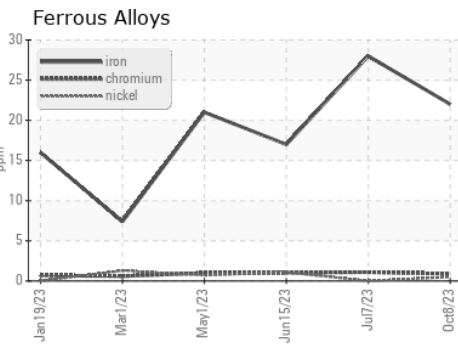
# OIL ANALYSIS REPORT



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>13.8</b>	13.9	13.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0087276 **Received** : 19 Oct 2023  
**Lab Number** : **05983388** **Diagnosed** : 20 Oct 2023  
**Unique Number** : 10700683 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 405 - Arbor Hills**  
 7400 Napier Rd  
 NORTHVILLE, MI  
 US 48168  
 Contact: Anthony Hopkins  
 ahopkins@gflenv.com  
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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)