



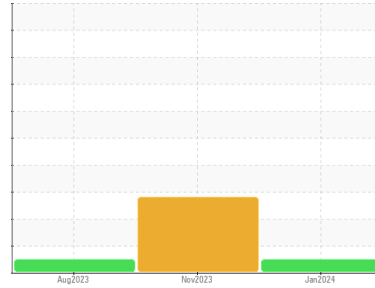
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**(BD49499) {UNASSIGNED}**  
 Machine Id  
**711046**  
 Component  
**1 Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (7 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>GFL0106639</b>	GFL0097662	GFL0087295
Sample Date	Client Info		<b>11 Jan 2024</b>	04 Nov 2023	21 Aug 2023
Machine Age	hrs	Client Info	<b>5519</b>	4933	0
Oil Age	hrs	Client Info	<b>586</b>	723	600
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	0.5	<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 >90	<b>22</b>	41	41
Chromium	ppm	ASTM D5185m >20	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	3	0
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>	3	4
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	▲ 70	4
Tin	ppm	ASTM D5185m >15	<b>0</b>	3	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</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>&lt;1</b>	47	4
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>58</b>	91	68
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	4	1
Magnesium	ppm	ASTM D5185m 1010	<b>985</b>	728	1007
Calcium	ppm	ASTM D5185m 1070	<b>1068</b>	1294	1186
Phosphorus	ppm	ASTM D5185m 1150	<b>1071</b>	724	1088
Zinc	ppm	ASTM D5185m 1270	<b>1289</b>	936	1350
Sulfur	ppm	ASTM D5185m 2060	<b>3067</b>	2023	3545

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	▲ 36	6
Sodium	ppm	ASTM D5185m	<b>6</b>	6	4
Potassium	ppm	ASTM D5185m >20	<b>2</b>	4	<1

## INFRA-RED

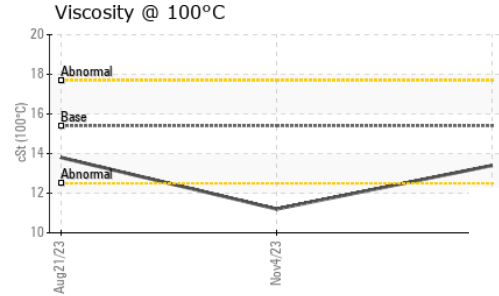
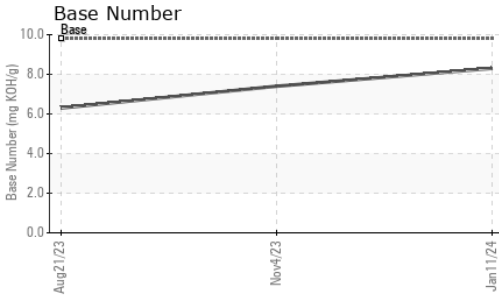
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.5</b>	1	0.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.6</b>	12.1	9.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.2</b>	24.2	20.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.1</b>	22.0	17.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.3</b>	7.4	6.3



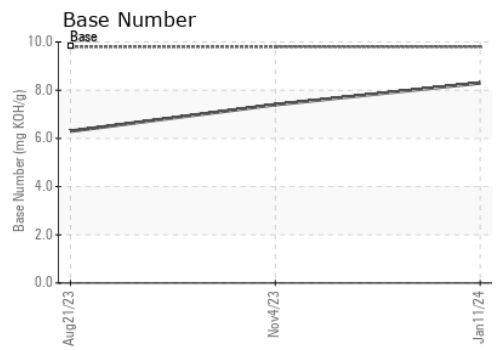
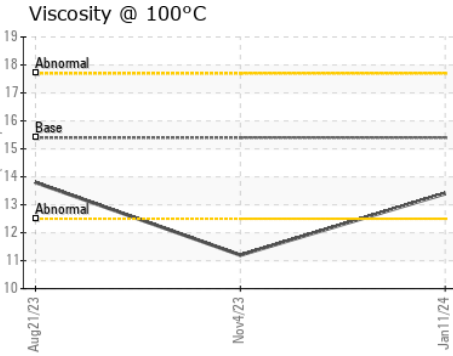
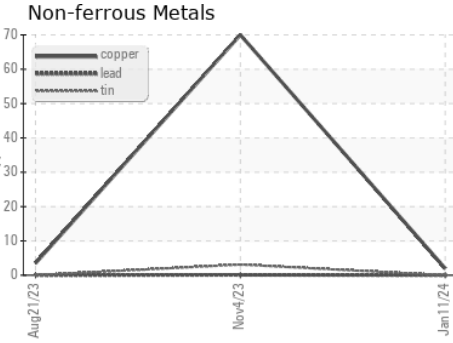
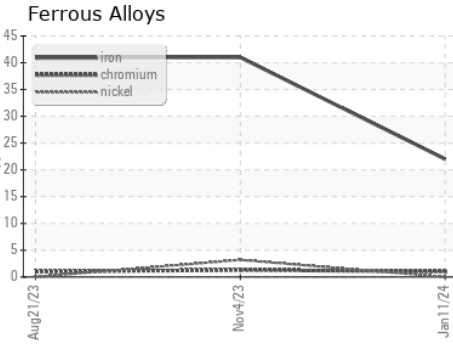
# OIL ANALYSIS REPORT



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>13.4</b>	▲ 11.2	13.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0106639 **Recieved** : 19 Jan 2024  
**Lab Number** : **06065315** **Diagnosed** : 20 Jan 2024  
**Unique Number** : 10836697 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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