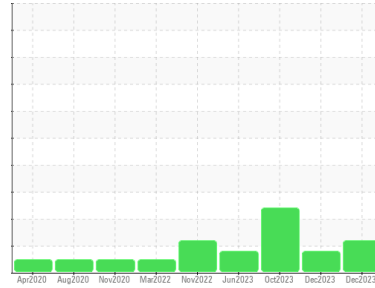




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**920092-260371**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0102497</b>	GFL0102521	GFL0093691
Sample Date	Client Info	<b>27 Dec 2023</b>	04 Dec 2023	17 Oct 2023
Machine Age	hrs	<b>23322</b>	23171	22901
Oil Age	hrs	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	Not Changd	Not Changd
Sample Status		<b>ABNORMAL</b>	ABNORMAL	SEVERE

## CONTAMINATION

method	limit/base	current	history1	history2	
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	>100	<b>6</b>	4	19
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	3
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	1	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	<b>2</b>	0	1
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>52</b>	55	53
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	1010	<b>840</b>	874	835
Calcium	ppm	ASTM D5185m	1070	<b>932</b>	932	935
Phosphorus	ppm	ASTM D5185m	1150	<b>913</b>	799	884
Zinc	ppm	ASTM D5185m	1270	<b>1115</b>	1138	1108
Sulfur	ppm	ASTM D5185m	2060	<b>2663</b>	2864	2564

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	<b>2</b>	3	4
Sodium	ppm	ASTM D5185m		<b>3</b>	1	4
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Fuel	%	ASTM D3524	>5	<b>▲ 7.6</b>	▲ 5.6	■ 11.5

## INFRA-RED

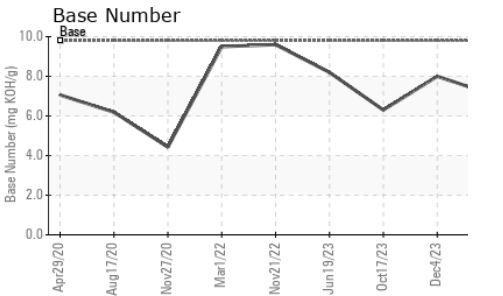
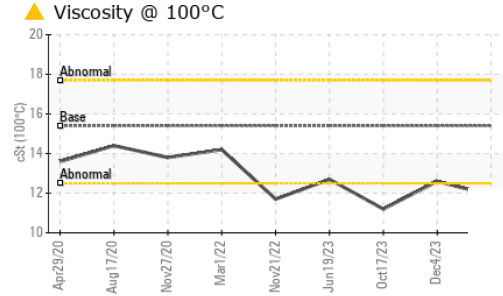
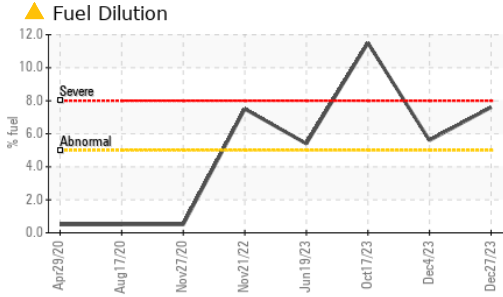
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.2	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	5.7	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.7</b>	18.7	19.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.6</b>	14.6	15.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.1</b>	8.0	6.3



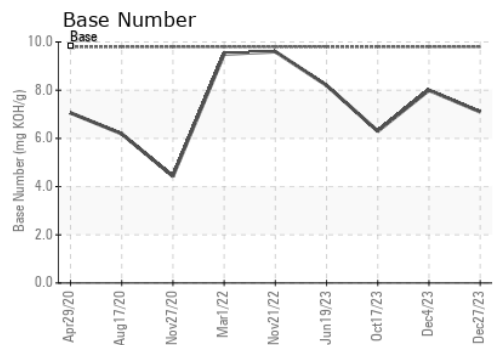
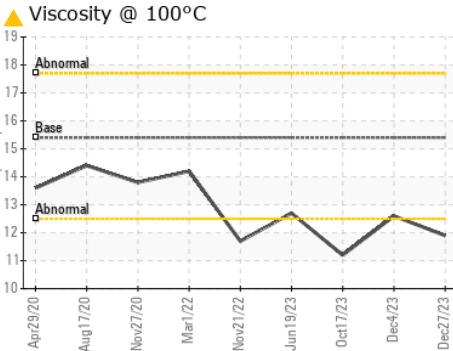
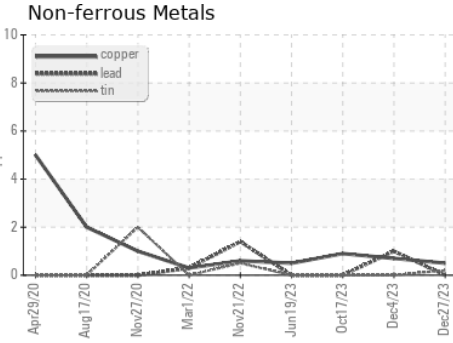
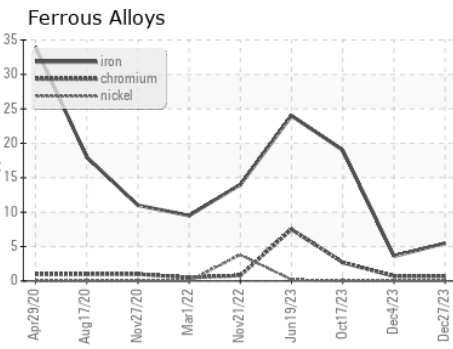
# OIL ANALYSIS REPORT



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	▲ 11.9	12.6

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0102497  
 Lab Number : 06051315  
 Unique Number : 10817264  
 Test Package : FLEET ( Additional Tests: PercentFuel )

GFL Environmental - 837 - Harrison TS  
 22820 S State Route 291  
 Harrisonville, MO  
 US 64701  
 Contact: BRYAN SWANSON  
 bryanswanson@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: