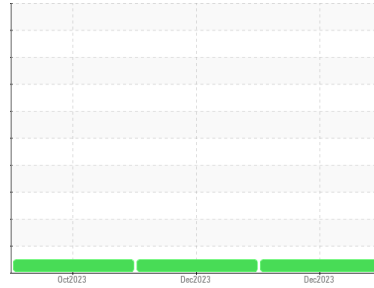




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**{UNASSIGNED}**  
 Machine Id  
**834092**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (8 GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected 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>GFL0101163</b>	GFL0101242	GFL0088730
Sample Date	Client Info		<b>22 Dec 2023</b>	04 Dec 2023	30 Oct 2023
Machine Age	hrs	Client Info	<b>502</b>	382	147
Oil Age	hrs	Client Info	<b>502</b>	382	147
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >50	<b>43</b>	49	35
Chromium	ppm	ASTM D5185m >4	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>1</b>	<1	1
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >9	<b>26</b>	29	17
Lead	ppm	ASTM D5185m >30	<b>&lt;1</b>	0	2
Copper	ppm	ASTM D5185m >35	<b>17</b>	18	16
Tin	ppm	ASTM D5185m >4	<b>1</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>11</b>	19	36
Barium	ppm	ASTM D5185m 0	<b>0</b>	5	2
Molybdenum	ppm	ASTM D5185m 60	<b>58</b>	54	50
Manganese	ppm	ASTM D5185m 0	<b>12</b>	13	13
Magnesium	ppm	ASTM D5185m 1010	<b>743</b>	682	708
Calcium	ppm	ASTM D5185m 1070	<b>1127</b>	1111	1046
Phosphorus	ppm	ASTM D5185m 1150	<b>714</b>	598	715
Zinc	ppm	ASTM D5185m 1270	<b>922</b>	814	814
Sulfur	ppm	ASTM D5185m 2060	<b>2447</b>	2572	2080

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	<b>31</b>	37	37
Sodium	ppm	ASTM D5185m	<b>4</b>	5	8
Potassium	ppm	ASTM D5185m >20	<b>117</b>	125	79

## INFRA-RED

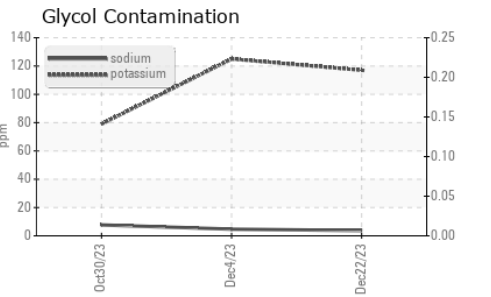
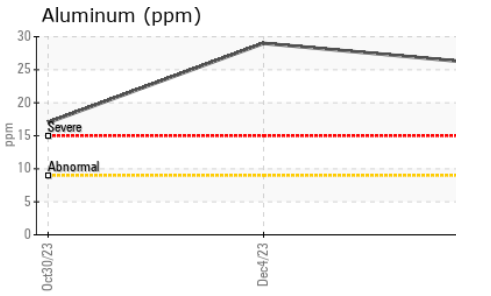
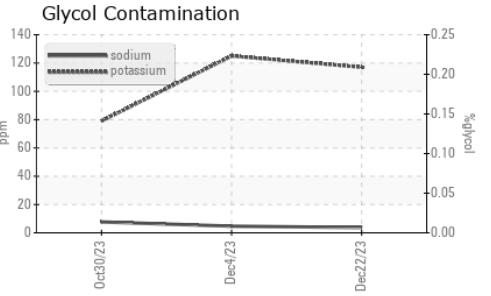
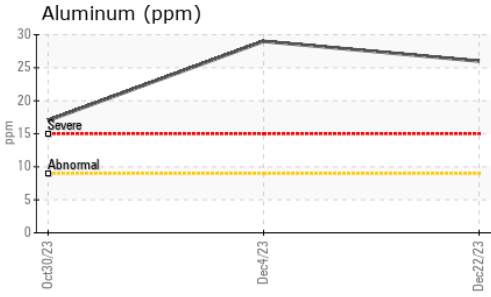
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.3</b>	11.3	9.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.3</b>	21.7	20.5

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.5</b>	20.1	18.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>4.0</b>	4.4	7.0



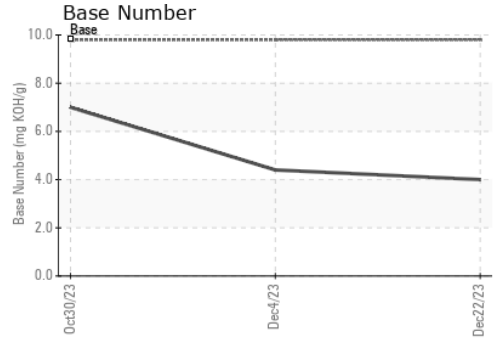
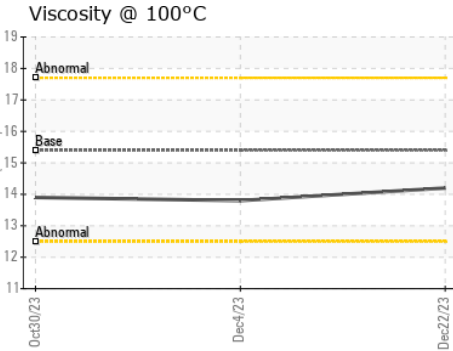
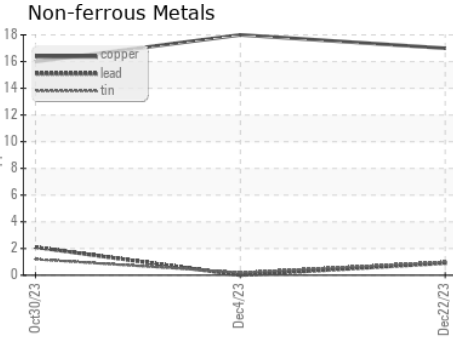
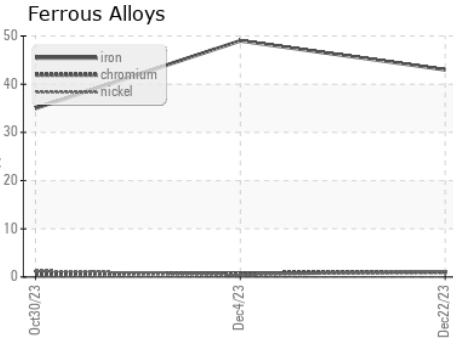
# OIL ANALYSIS REPORT



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	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	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>14.2</b>	13.8	13.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0101163 **Received** : 27 Dec 2023  
**Lab Number** : **06045815** **Diagnosed** : 28 Dec 2023  
**Unique Number** : 10806423 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 010 - Stockbridge**  
 1280 Rum Creek Parkway  
 Stockbridge, GA  
 US 30281  
 Contact: JOSHUA TINKER  
 joshuatinker@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)