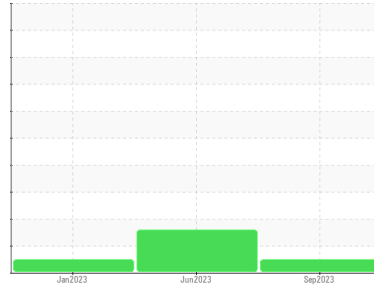




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**522020-120**

Component  
**Diesel Engine**

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

## 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>GFL0066121</b>	GFL0060342	GFL0055741
Sample Date	Client Info		<b>01 Sep 2023</b>	08 Jun 2023	17 Jan 2023
Machine Age	hrs	Client Info	<b>20503</b>	19903	19171
Oil Age	hrs	Client Info	<b>500</b>	600	500
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	>5	<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 >80	<b>6</b>	6	11
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<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 >30	<b>3</b>	1	<1
Lead	ppm	ASTM D5185m >30	<b>3</b>	2	9
Copper	ppm	ASTM D5185m >150	<b>&lt;1</b>	0	1
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</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>7</b>	13	23
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>67</b>	66	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>938</b>	1000	873
Calcium	ppm	ASTM D5185m 1070	<b>1138</b>	1147	1371
Phosphorus	ppm	ASTM D5185m 1150	<b>1039</b>	1036	989
Zinc	ppm	ASTM D5185m 1270	<b>1263</b>	1343	1265
Sulfur	ppm	ASTM D5185m 2060	<b>3201</b>	3629	3416

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>8</b>	▲ 22	4
Sodium	ppm	ASTM D5185m	<b>3</b>	2	3
Potassium	ppm	ASTM D5185m >20	<b>2</b>	1	<1

## INFRA-RED

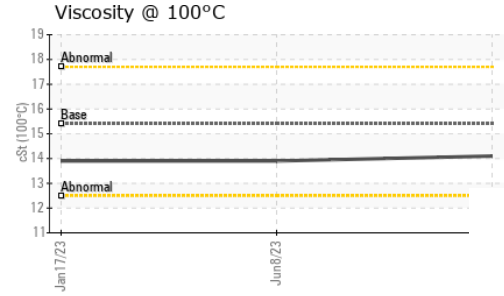
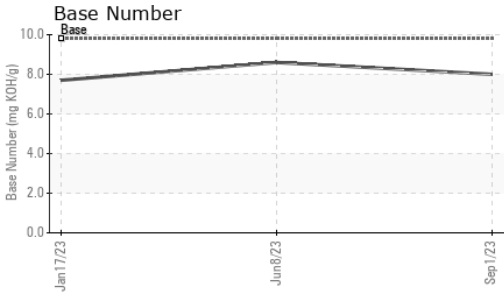
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.9</b>	8.1	9.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.9</b>	20.4	21.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.8</b>	16.3	17.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.0</b>	8.6	7.7



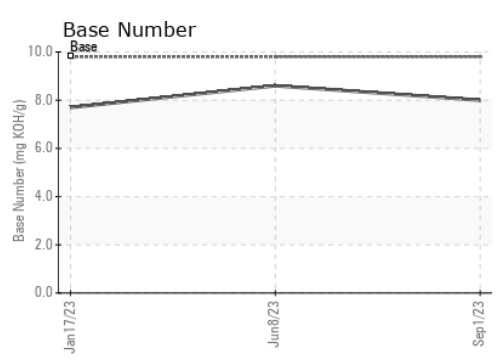
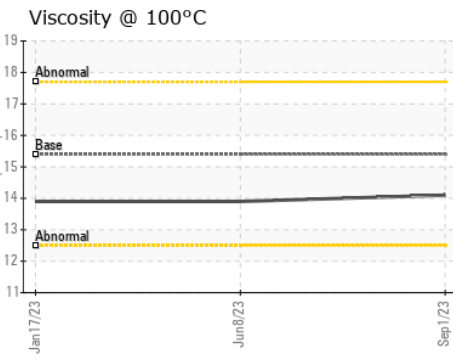
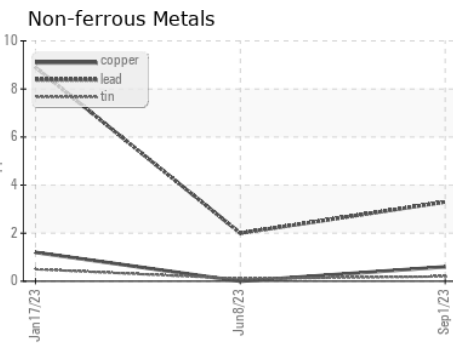
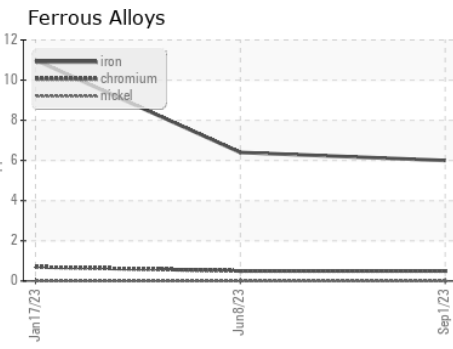
# OIL ANALYSIS REPORT



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>14.1</b>	13.9	13.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0066121 **Received** : 20 Sep 2023  
**Lab Number** : 05956244 **Diagnosed** : 21 Sep 2023  
**Unique Number** : 10657457 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 904A - Thorpe**  
 N14985 Tieman Ave  
 Thorp, WI  
 US 54771  
 Contact: Andy Kane  
 akane@gflenv.com  
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 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)