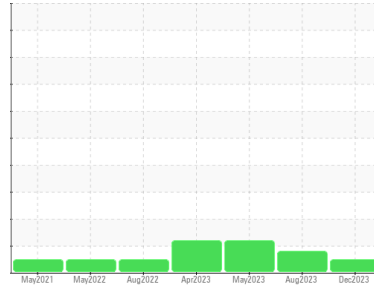




# OIL ANALYSIS REPORT

## Sample Rating Trend

**NORMAL**



Machine Id  
**4710M**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- 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>GFL0107021</b>	GFL0091488	GFL0081293
Sample Date	Client Info	<b>07 Dec 2023</b>	18 Aug 2023	01 May 2023
Machine Age	hrs	<b>9751</b>	12094	8677
Oil Age	hrs	<b>600</b>	600	600
Oil Changed	Client Info	<b>N/A</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	MARGINAL	ABNORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	▲ 3.3	▲ 7.2
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 >80	<b>40</b>	24	13
Chromium	ppm ASTM D5185m >5	<b>1</b>	<1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm ASTM D5185m	<b>0</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >30	<b>6</b>	3	4
Lead	ppm ASTM D5185m >30	<b>&lt;1</b>	<1	0
Copper	ppm ASTM D5185m >150	<b>2</b>	2	<1
Tin	ppm ASTM D5185m >5	<b>0</b>	0	<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>&lt;1</b>	0	3
Barium	ppm ASTM D5185m 0	<b>0</b>	2	0
Molybdenum	ppm ASTM D5185m 60	<b>60</b>	62	54
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1085</b>	878	901
Calcium	ppm ASTM D5185m 1070	<b>1234</b>	1102	1013
Phosphorus	ppm ASTM D5185m 1150	<b>1132</b>	1028	964
Zinc	ppm ASTM D5185m 1270	<b>1323</b>	1229	1171
Sulfur	ppm ASTM D5185m 2060	<b>2788</b>	2829	3189

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>11</b>	4	3
Sodium	ppm ASTM D5185m	<b>7</b>	4	2
Potassium	ppm ASTM D5185m >20	<b>3</b>	6	5

## INFRA-RED

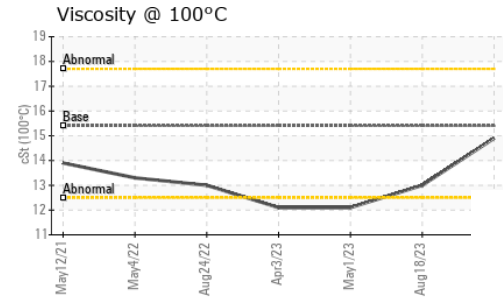
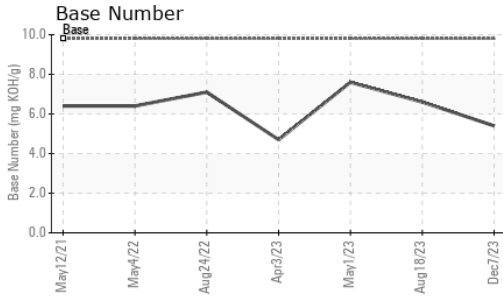
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1.3</b>	0.5	0.4
Nitration	Abs/cm *ASTM D7624 >20	<b>12.6</b>	9.9	7.6
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>25.5</b>	20.6	17.6

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>22.6</b>	18.7	15.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>5.4</b>	6.6	7.6



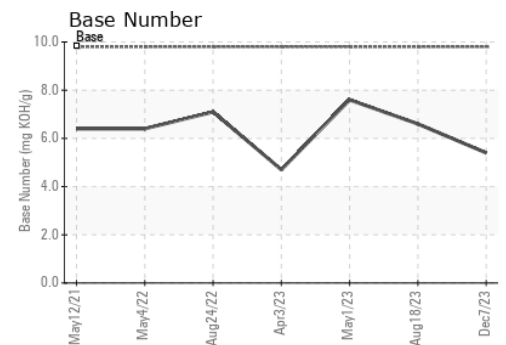
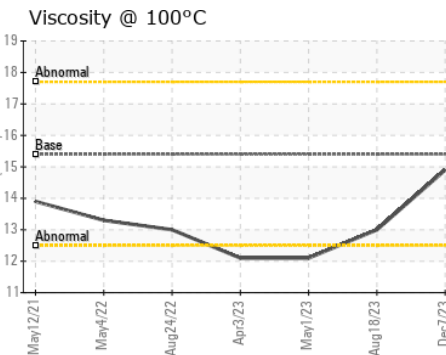
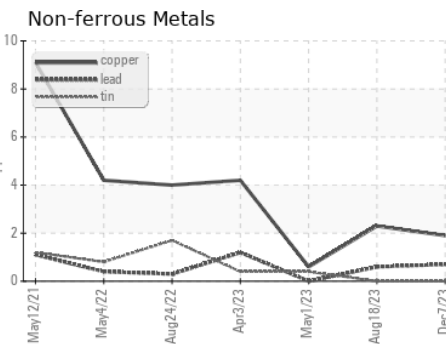
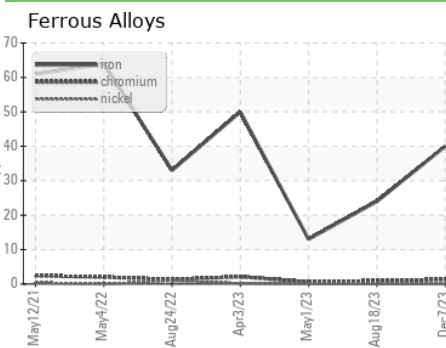
# OIL ANALYSIS REPORT



PARAMETER	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	14.9	13.0 ▲ 12.1

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0107021  
 Lab Number : 06035666  
 Unique Number : 10790895  
 Test Package : FLEET

GFL Environmental - 465 - Pontiac  
 888 Baldwin  
 Pontiac, MI  
 US 48340

Contact: Ricky Matthews  
 rickymathews@gflenv.com  
 T: (586)825-9514

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)

F: