



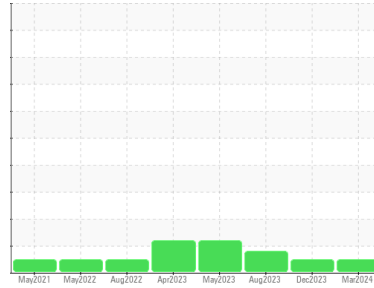
# OIL ANALYSIS REPORT

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>GFL0116939</b>	GFL0107021	GFL0091488
Sample Date	Client Info	<b>21 Mar 2024</b>	07 Dec 2023	18 Aug 2023
Machine Age	hrs	<b>10004</b>	9751	12094
Oil Age	hrs	<b>600</b>	600	600
Oil Changed	Client Info	<b>Changed</b>	N/A	Changed
Sample Status		<b>NORMAL</b>	NORMAL	MARGINAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	▲ 3.3
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>17</b>	40	24
Chromium	ppm ASTM D5185m >5	<b>0</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>2</b>	6	3
Lead	ppm ASTM D5185m >30	<b>0</b>	<1	<1
Copper	ppm ASTM D5185m >150	<b>&lt;1</b>	2	2
Tin	ppm ASTM D5185m >5	<b>&lt;1</b>	0	0
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>3</b>	<1	0
Barium	ppm ASTM D5185m 0	<b>0</b>	0	2
Molybdenum	ppm ASTM D5185m 60	<b>50</b>	60	62
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>852</b>	1085	878
Calcium	ppm ASTM D5185m 1070	<b>960</b>	1234	1102
Phosphorus	ppm ASTM D5185m 1150	<b>895</b>	1132	1028
Zinc	ppm ASTM D5185m 1270	<b>1159</b>	1323	1229
Sulfur	ppm ASTM D5185m 2060	<b>3012</b>	2788	2829

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>2</b>	11	4
Sodium	ppm ASTM D5185m	<b>3</b>	7	4
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	3	6

## INFRA-RED

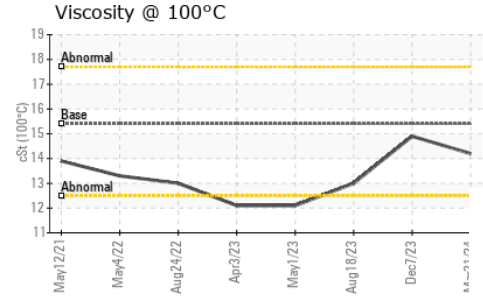
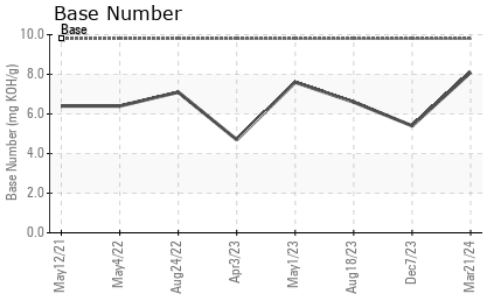
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.7</b>	1.3	0.5
Nitration	Abs/cm *ASTM D7624 >20	<b>9.6</b>	12.6	9.9
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>20.8</b>	25.5	20.6

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>17.6</b>	22.6	18.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.1</b>	5.4	6.6



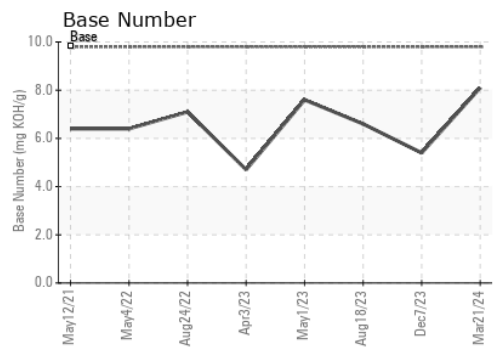
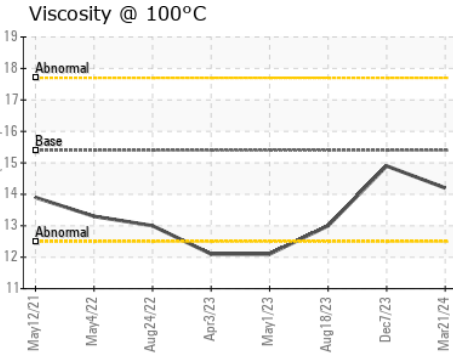
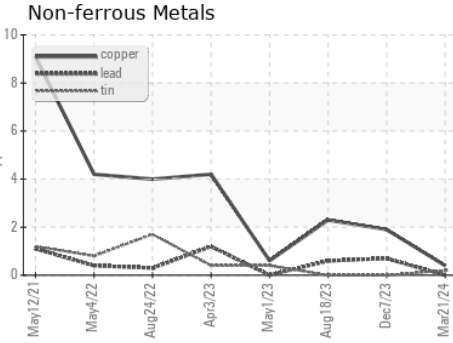
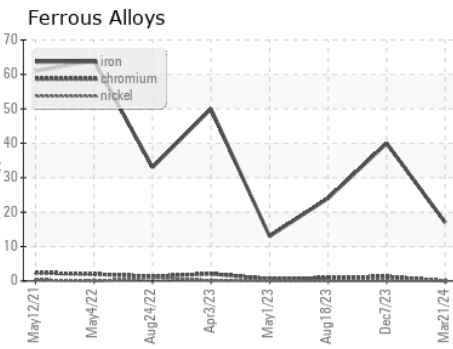
# OIL ANALYSIS REPORT



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>14.2</b>	14.9	13.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116939 **Received** : 22 Mar 2024  
**Lab Number** : **06126318** **Tested** : 25 Mar 2024  
**Unique Number** : 10940469 **Diagnosed** : 25 Mar 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 465 - Pontiac**  
 888 Baldwin  
 Pontiac, MI  
 US 48340  
 Contact: Ricky Matthews  
 rickymathews@gflenv.com  
 T: (586)825-9514  
 F:

Certificate L2367  
 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)