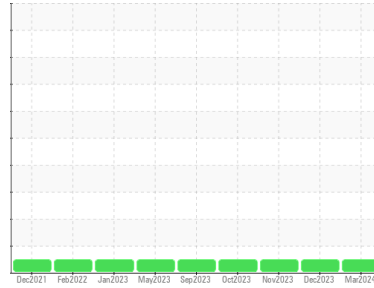




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**4598M**  
 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>GFL0108740</b>	GFL0105600	GFL0089108
Sample Date	Client Info		<b>20 Mar 2024</b>	12 Dec 2023	21 Nov 2023
Machine Age	hrs	Client Info	<b>9181</b>	8998	8838
Oil Age	hrs	Client Info	<b>9181</b>	8838	8524
Oil Changed	Client Info		<b>Not Chngd</b>	N/A	Not Chngd
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
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 >90	<b>7</b>	27	10
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	3	2
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>1</b>	24	<1
Tin	ppm	ASTM D5185m >15	<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>&lt;1</b>	30	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>58</b>	69	51
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>915</b>	1068	852
Calcium	ppm	ASTM D5185m 1070	<b>1192</b>	1237	1013
Phosphorus	ppm	ASTM D5185m 1150	<b>1019</b>	1142	1040
Zinc	ppm	ASTM D5185m 1270	<b>1231</b>	1450	1191
Sulfur	ppm	ASTM D5185m 2060	<b>3044</b>	3175	2926

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	10	4
Sodium	ppm	ASTM D5185m	<b>6</b>	1	5
Potassium	ppm	ASTM D5185m >20	<b>2</b>	<1	2

## INFRA-RED

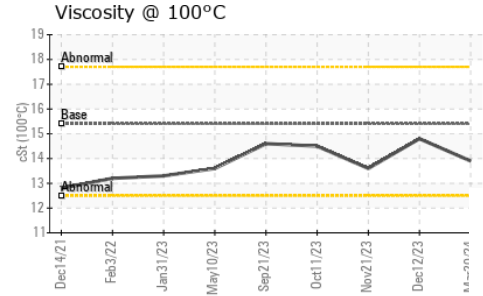
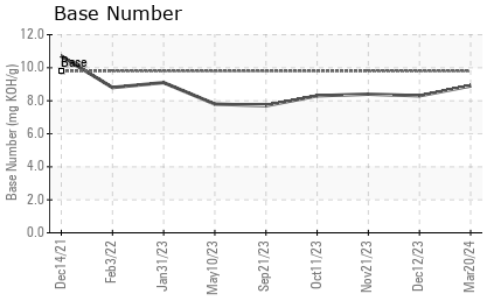
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.1</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.8</b>	9.9	7.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.6</b>	22.9	19.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.6</b>	20.2	15.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.9</b>	8.3	8.4



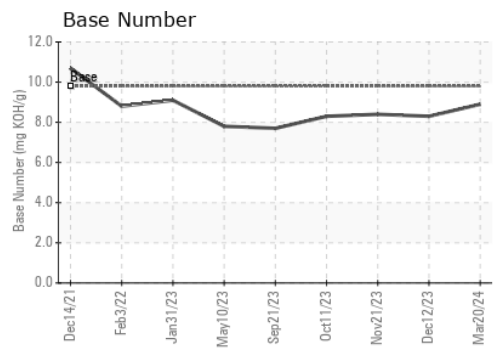
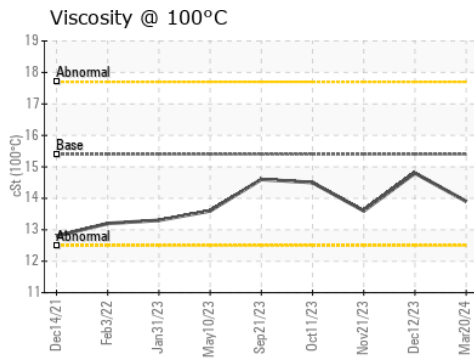
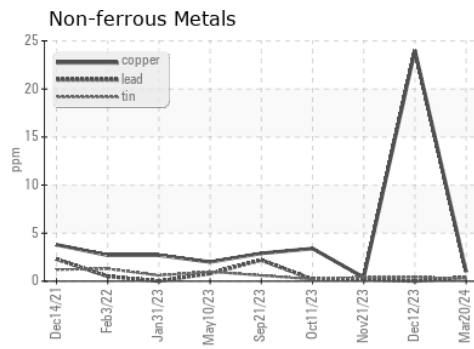
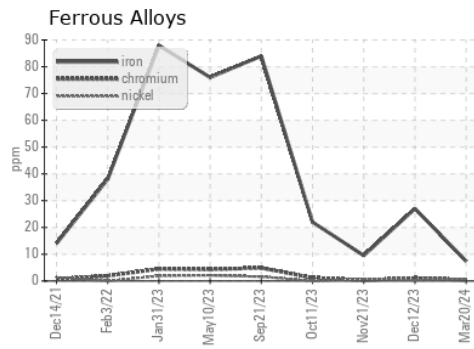
# OIL ANALYSIS REPORT



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>13.9</b>	14.8	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108740 **Received** : 22 Mar 2024  
**Lab Number** : **06126182** **Tested** : 24 Mar 2024  
**Unique Number** : 10940333 **Diagnosed** : 24 Mar 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 415 - Michigan East**  
 6200 Elmridge  
 Sterling Heights, MI  
 US 48313  
 Contact: Frank Wolak  
 fwolak@gflenv.com  
 T: (586)825-9514  
 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)