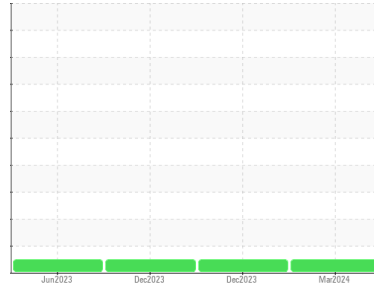




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**7828M**

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>GFL0117680</b>	GFL0105765	GFL0101467
Sample Date	Client Info	<b>23 Mar 2024</b>	13 Dec 2023	06 Dec 2023
Machine Age	hrs	<b>6076</b>	5896	5876
Oil Age	hrs	<b>5896</b>	0	0
Oil Changed	Client Info	<b>Not Changed</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<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 >80	<b>15</b>	2	6
Chromium	ppm ASTM D5185m >5	<b>&lt;1</b>	0	<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>	2	<1
Lead	ppm ASTM D5185m >30	<b>0</b>	<1	0
Copper	ppm ASTM D5185m >150	<b>&lt;1</b>	0	<1
Tin	ppm ASTM D5185m >5	<b>0</b>	0	0
Vanadium	ppm ASTM D5185m	<b>&lt;1</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>2</b>	1	9
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>61</b>	57	57
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m 1010	<b>1004</b>	1031	905
Calcium	ppm ASTM D5185m 1070	<b>1128</b>	1144	1133
Phosphorus	ppm ASTM D5185m 1150	<b>1054</b>	1102	1002
Zinc	ppm ASTM D5185m 1270	<b>1259</b>	1266	1229
Sulfur	ppm ASTM D5185m 2060	<b>3653</b>	3243	3039

## CONTAMINANTS

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

## INFRA-RED

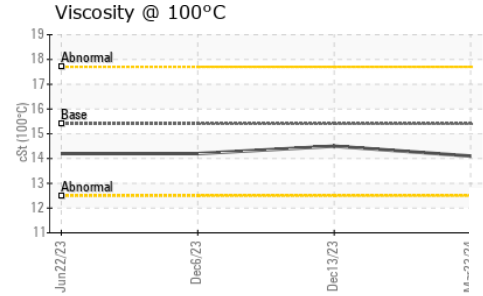
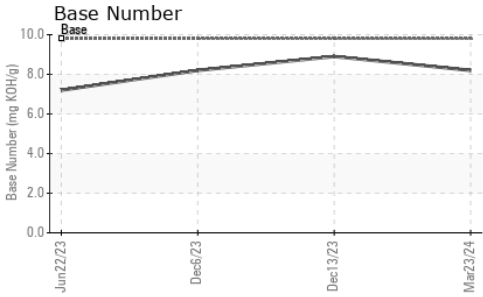
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>7.1</b>	4.9	7.4
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.0</b>	17.8	19.4

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.2</b>	13.5	16.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.2</b>	8.9	8.2



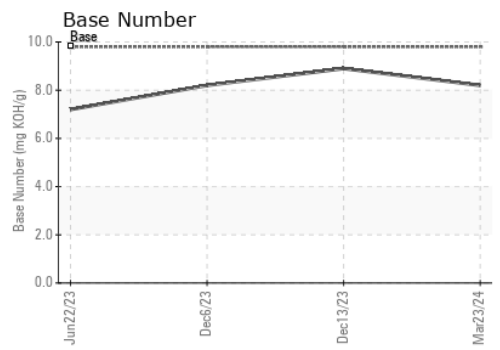
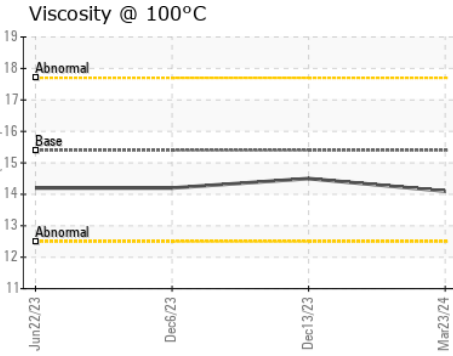
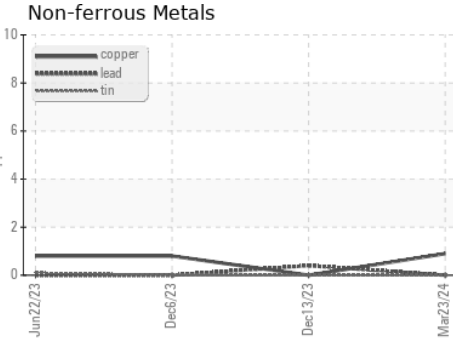
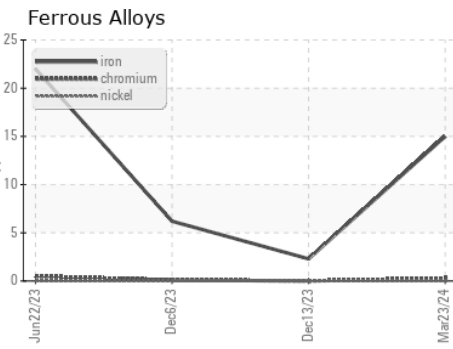
# OIL ANALYSIS REPORT



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>	14.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0117680      **Received** : 26 Mar 2024  
**Lab Number** : **06129288**      **Tested** : 27 Mar 2024  
**Unique Number** : 10943439      **Diagnosed** : 27 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)