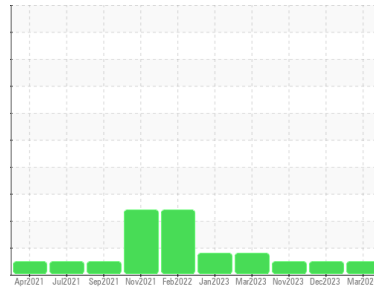




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**493M**  
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>GFL0108963</b>	GFL0105595	GFL0089119
Sample Date	Client Info	<b>05 Mar 2024</b>	11 Dec 2023	20 Nov 2023
Machine Age	hrs Client Info	<b>29696</b>	28984	24454
Oil Age	hrs Client Info	<b>28984</b>	27464	27464
Oil Changed	Client Info	<b>Changed</b>	N/A	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>21</b>	19	17
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>&lt;1</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >30	<b>3</b>	2	2
Lead	ppm ASTM D5185m >30	<b>0</b>	0	<1
Copper	ppm ASTM D5185m >150	<b>&lt;1</b>	<1	<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	<1
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>58</b>	54	60
Manganese	ppm ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>924</b>	1023	1042
Calcium	ppm ASTM D5185m 1070	<b>1057</b>	1082	1150
Phosphorus	ppm ASTM D5185m 1150	<b>945</b>	1079	951
Zinc	ppm ASTM D5185m 1270	<b>1207</b>	1271	1289
Sulfur	ppm ASTM D5185m 2060	<b>3013</b>	3171	3303

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>4</b>	4	5
Sodium	ppm ASTM D5185m	<b>3</b>	4	4
Potassium	ppm ASTM D5185m >20	<b>2</b>	<1	<1

## INFRA-RED

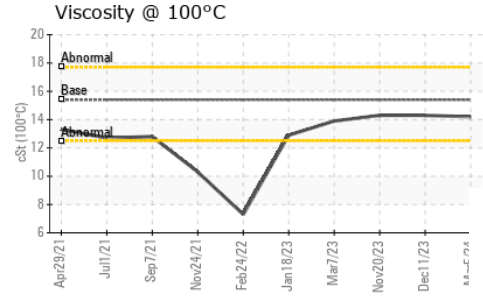
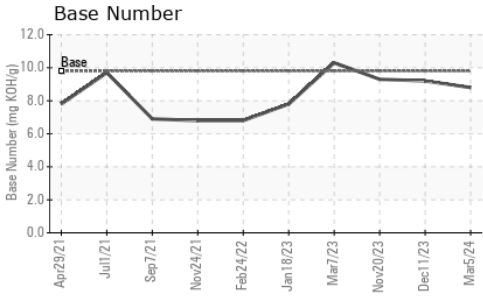
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.1</b>	0.6	0.7
Nitration	Abs/cm *ASTM D7624 >20	<b>6.1</b>	6.7	6.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>17.8</b>	18.9	18.7

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.0</b>	14.0	13.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.8</b>	9.2	9.3



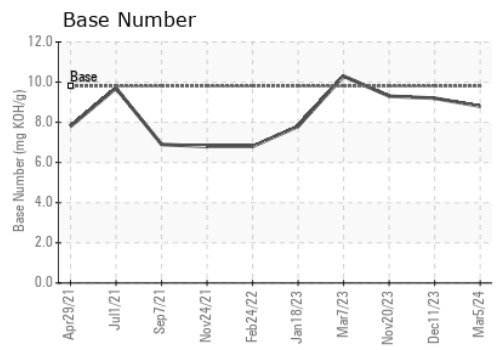
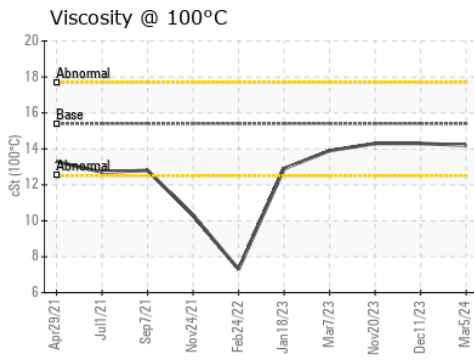
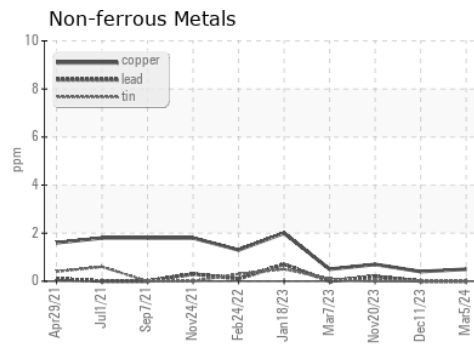
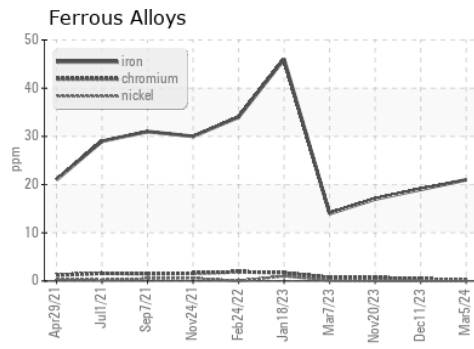
# OIL ANALYSIS REPORT



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>	14.3	14.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108963 **Received** : 07 Mar 2024  
**Lab Number** : 06111124 **Tested** : 07 Mar 2024  
**Unique Number** : 10914621 **Diagnosed** : 07 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)