

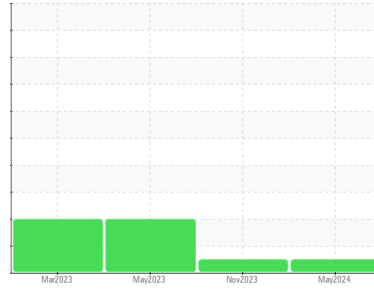


# OIL ANALYSIS REPORT



Area  
**(BD33494)**  
 Machine Id  
**913029**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (9 GAL)**

Sample Rating Trend



**NORMAL**



## 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>GFL0124818</b>	GFL0097729	GFL0072910
Sample Date	Client Info		<b>30 May 2024</b>	21 Nov 2023	23 May 2023
Machine Age	hrs	Client Info	<b>2775</b>	2798	1397
Oil Age	hrs	Client Info	<b>534</b>	700	612
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	0.5
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 >120	<b>34</b>	34	84
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	2
Nickel	ppm	ASTM D5185m >5	<b>3</b>	7	11
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	<1	5
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m >330	<b>29</b>	37	74
Tin	ppm	ASTM D5185m >15	<b>2</b>	<1	5
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>0</b>	1	88
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	65	121
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	5
Magnesium	ppm	ASTM D5185m 1010	<b>932</b>	1031	725
Calcium	ppm	ASTM D5185m 1070	<b>1098</b>	1245	1374
Phosphorus	ppm	ASTM D5185m 1150	<b>1101</b>	1063	704
Zinc	ppm	ASTM D5185m 1270	<b>1254</b>	1448	924
Sulfur	ppm	ASTM D5185m 2060	<b>2579</b>	2614	2589

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	7	▲ 63
Sodium	ppm	ASTM D5185m	<b>2</b>	4	3
Potassium	ppm	ASTM D5185m >20	<b>4</b>	0	8

## INFRA-RED

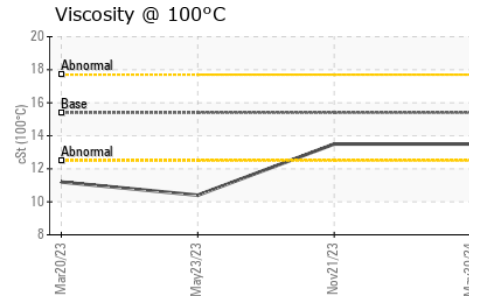
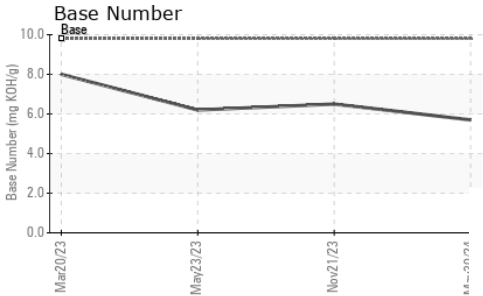
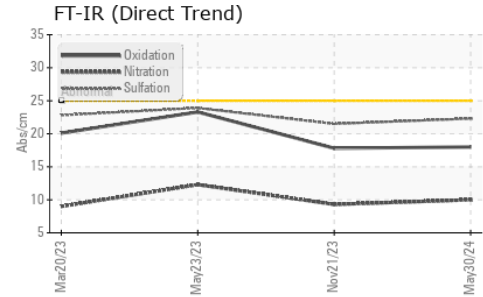
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>1.2</b>	0.9	0.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.0</b>	9.3	12.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.3</b>	21.5	23.9

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.0</b>	17.8	23.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>5.7</b>	6.5	6.2



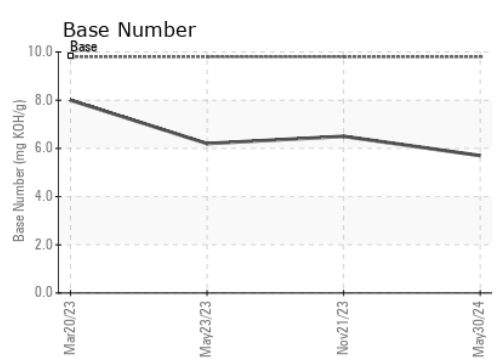
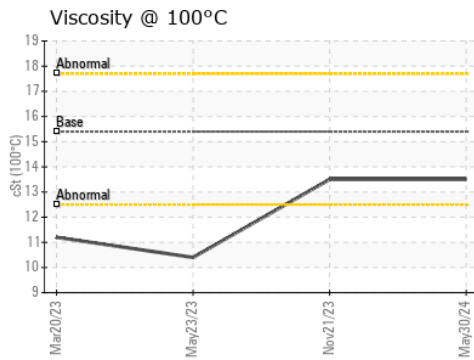
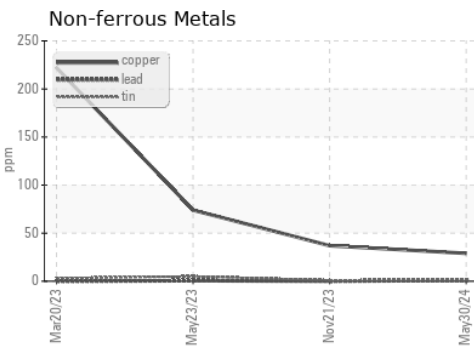
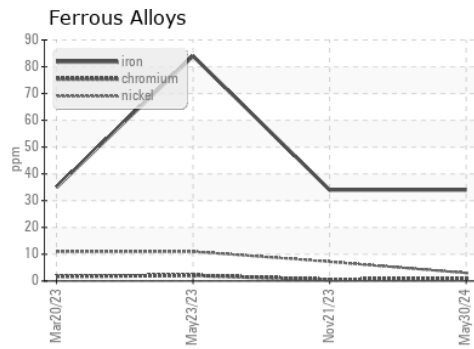
# OIL ANALYSIS REPORT



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	13.5	10.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0124818      **Received** : 06 Jun 2024  
**Lab Number** : 06202234      **Tested** : 10 Jun 2024  
**Unique Number** : 11069695      **Diagnosed** : 10 Jun 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 405 - Arbor Hills**  
 7811 Chubb Rd  
 NORTHVILLE, MI  
 US 48168  
 Contact: Anthony Hopkins  
 ahopkins@gflenv.com

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)