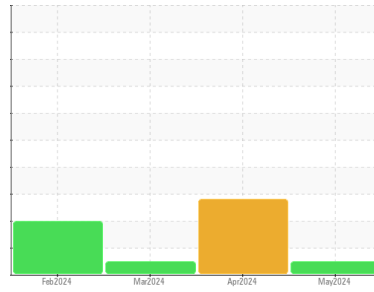




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**814055**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### 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>GFL0099334</b>	GFL0099258	GFL0099264
Sample Date	Client Info		<b>20 May 2024</b>	02 Apr 2024	07 Mar 2024
Machine Age	hrs	Client Info	<b>874</b>	612	466
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	N/A	Not Changd
Sample Status			<b>NORMAL</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	0.3	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>13</b>	45	9
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>6</b>	▲ 11	2
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>2</b>	5	3
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>25</b>	123	17
Tin	ppm	ASTM D5185m >15	<b>1</b>	3	2
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>18</b>	146	60
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>69</b>	115	73
Manganese	ppm	ASTM D5185m 0	<b>1</b>	7	2
Magnesium	ppm	ASTM D5185m 1010	<b>844</b>	720	873
Calcium	ppm	ASTM D5185m 1070	<b>1072</b>	1545	1165
Phosphorus	ppm	ASTM D5185m 1150	<b>1033</b>	747	858
Zinc	ppm	ASTM D5185m 1270	<b>1176</b>	891	1135
Sulfur	ppm	ASTM D5185m 2060	<b>3199</b>	2817	3449

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>9</b>	▲ 63	20
Sodium	ppm	ASTM D5185m	<b>9</b>	9	2
Potassium	ppm	ASTM D5185m >20	<b>62</b>	67	9
Glycol	%	*ASTM D2982	<b>NEG</b>	0.0	NEG

## INFRA-RED

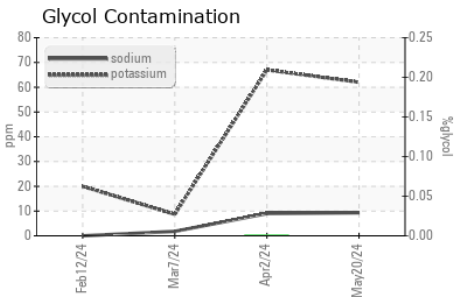
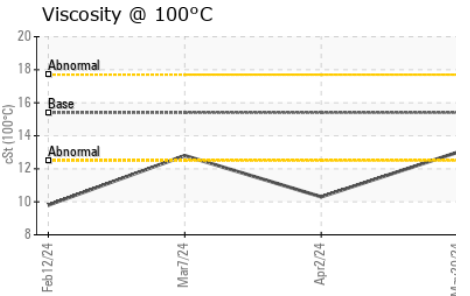
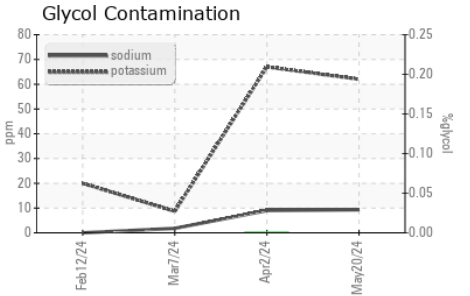
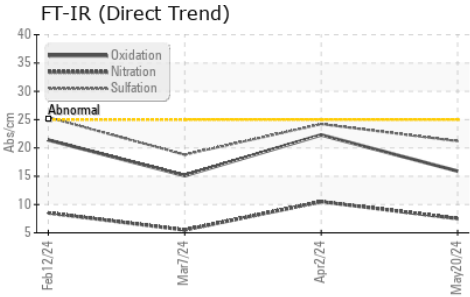
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.4</b>	0.6	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.5</b>	10.5	5.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.2</b>	24.2	18.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.9</b>	22.3	15.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.0</b>	7.1	8.6



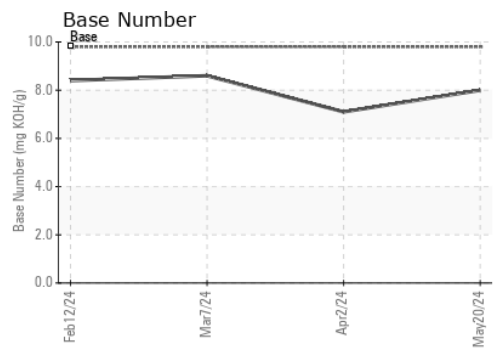
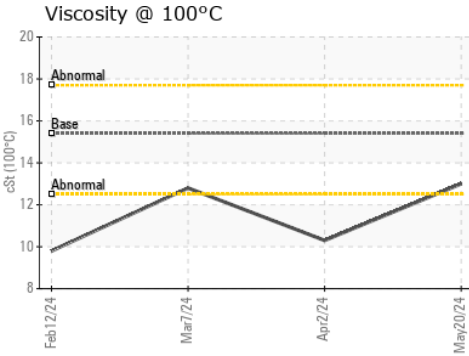
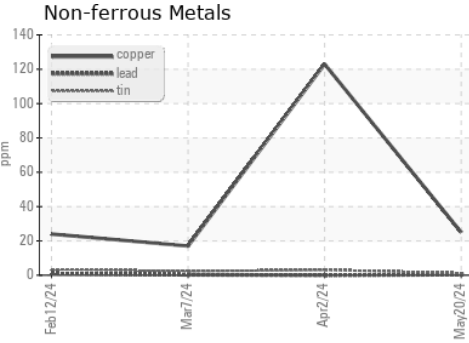
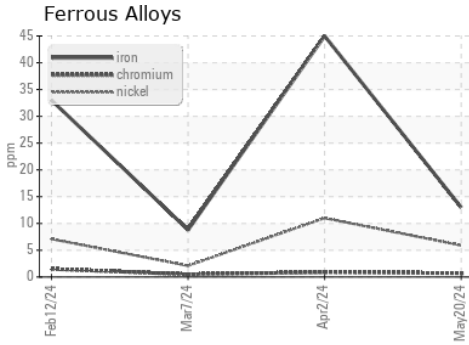
# OIL ANALYSIS REPORT



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	13.0	10.3	12.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0099334      **Received** : 23 May 2024  
**Lab Number** : 06190000      **Tested** : 31 May 2024  
**Unique Number** : 11046752      **Diagnosed** : 31 May 2024 - Sean Felton  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 844 - Princeton Hauling**  
 10129 Highway 62 West  
 Princeton, KY  
 US 42445  
**Contact: ROBERT THIBAUT**  
 robert.thibault@gflenv.com  
 T: (931)237-6045  
 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)