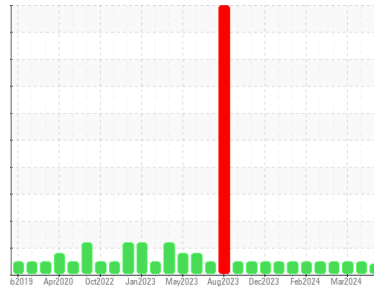




# OIL ANALYSIS REPORT

Sample Rating Trend



## VISCOSITY



Machine Id  
**727089-361674**

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

Fuel content negligible. There is no indication of any contamination in the oil.

#### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0121558</b>	GFL0105203	GFL0105114
Sample Date	Client Info		<b>20 Jun 2024</b>	11 Apr 2024	25 Mar 2024
Machine Age	hrs	Client Info	<b>6996</b>	6874	6750
Oil Age	hrs	Client Info	<b>150</b>	150	600
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Sample Status			<b>ATTENTION</b>	NORMAL	NORMAL

### CONTAMINATION

	method	limit/base	current	history1	history2
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 >100	<b>6</b>	0	20
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	2
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	0	2
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>5</b>	0	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>90</b>	1	<1
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Molybdenum	ppm	ASTM D5185m 60	<b>11</b>	51	60
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>647</b>	842	908
Calcium	ppm	ASTM D5185m 1070	<b>1262</b>	952	1083
Phosphorus	ppm	ASTM D5185m 1150	<b>751</b>	969	1094
Zinc	ppm	ASTM D5185m 1270	<b>834</b>	1106	1193
Sulfur	ppm	ASTM D5185m 2060	<b>2977</b>	3122	3095

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>15</b>	4	6
Sodium	ppm	ASTM D5185m	<b>1</b>	0	<1
Potassium	ppm	ASTM D5185m >20	<b>3</b>	0	2
Fuel	%	ASTM D3524 >5	<b>0.5</b>	<1.0	<1.0

### INFRA-RED

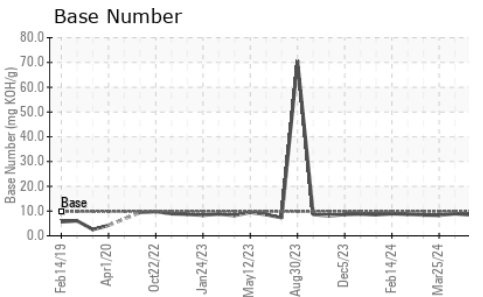
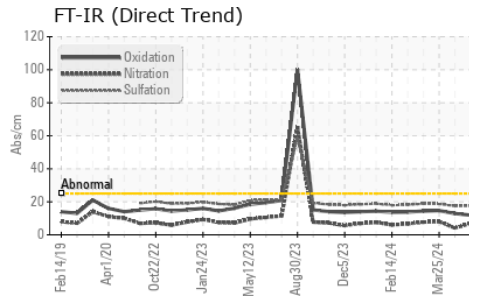
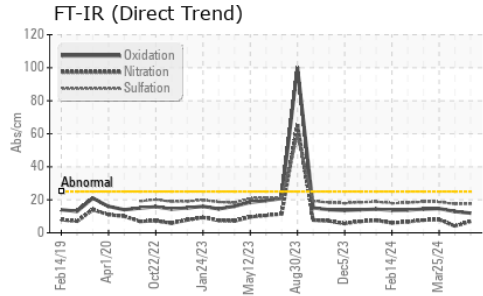
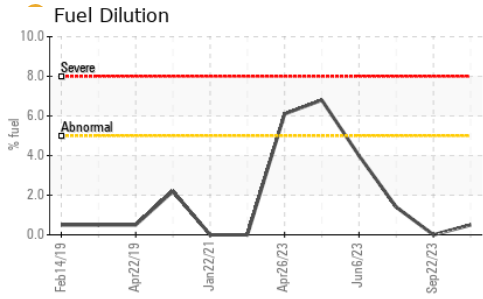
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.1	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.9</b>	4.1	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.5</b>	17.4	18.7

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>11.9</b>	12.9	14.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.5</b>	8.9	8.3



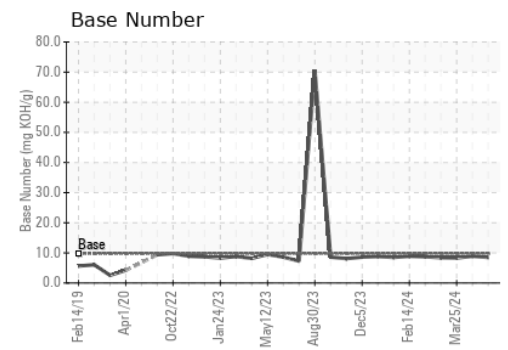
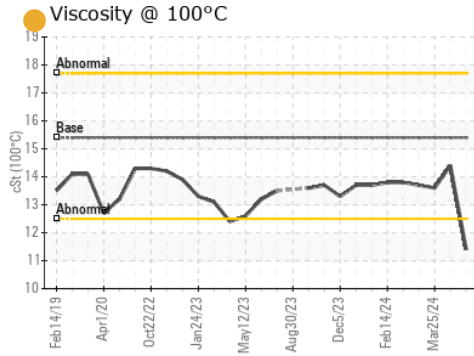
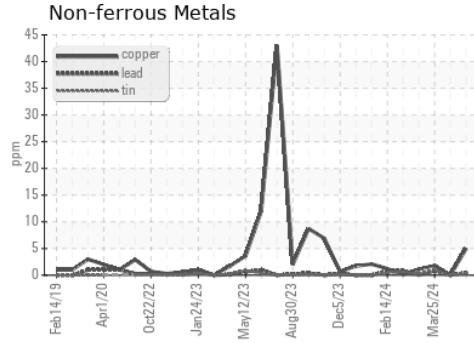
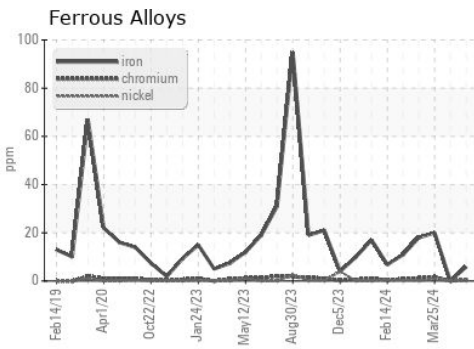
# OIL ANALYSIS REPORT



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	● 11.4	14.4	13.6

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0121558      **Received** : 25 Jun 2024  
**Lab Number** : 06219273      **Tested** : 27 Jun 2024  
**Unique Number** : 11097470      **Diagnosed** : 27 Jun 2024 - Don Baldrige  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 821 - Ozarks Hauling**  
 33924 Olath Drive  
 Lebanon, MO 65536  
 Contact: Landen Johnson  
 landen.johnson@gflenv.com  
 T: (417)664-0010  
 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)