

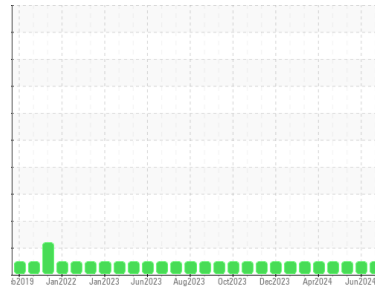


# OIL ANALYSIS REPORT



Machine Id  
**428060-402359**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- 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>GFL0123167</b>	GFL0123142	GFL0104983
Sample Date	Client Info		<b>02 Jul 2024</b>	06 Jun 2024	15 May 2024
Machine Age	hrs	Client Info	<b>16826</b>	16826	292102
Oil Age	hrs	Client Info	<b>292102</b>	16826	292102
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >120	<b>3</b>	2	9
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	2	5
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	2	4
Tin	ppm	ASTM D5185m >15	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	6	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m 60	<b>56</b>	54	58
Manganese	ppm	ASTM D5185m 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>901</b>	926	922
Calcium	ppm	ASTM D5185m 1070	<b>1111</b>	1025	1024
Phosphorus	ppm	ASTM D5185m 1150	<b>1008</b>	1071	940
Zinc	ppm	ASTM D5185m 1270	<b>1182</b>	1227	1178
Sulfur	ppm	ASTM D5185m 2060	<b>3353</b>	3600	2872

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>3</b>	4	6
Sodium	ppm	ASTM D5185m	<b>4</b>	3	4
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	3	4

## INFRA-RED

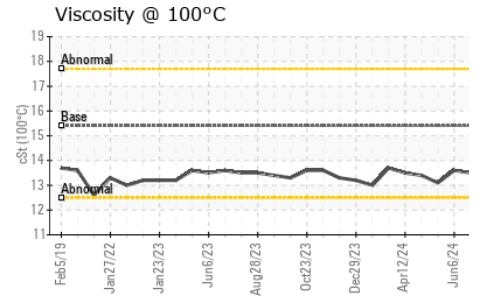
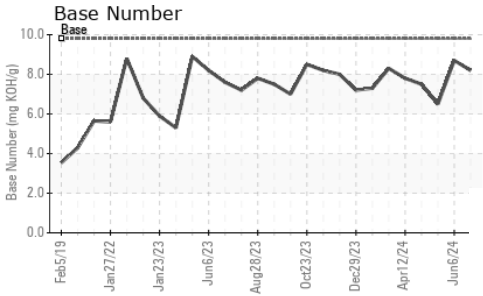
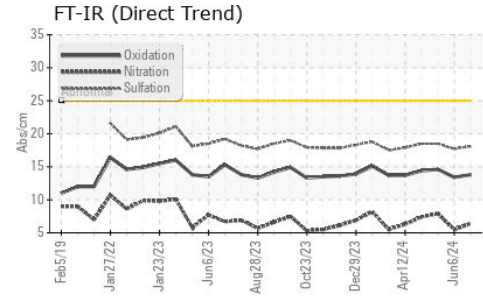
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.2</b>	0.1	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.4</b>	5.5	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.1</b>	17.7	18.5

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.8</b>	13.4	14.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.2</b>	8.7	6.5



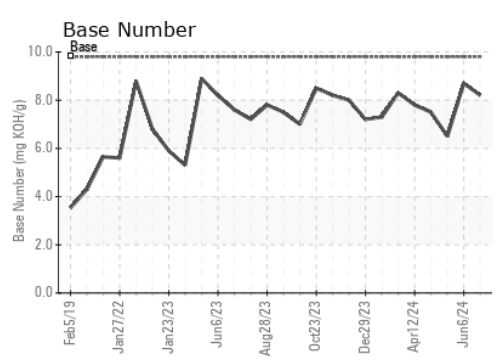
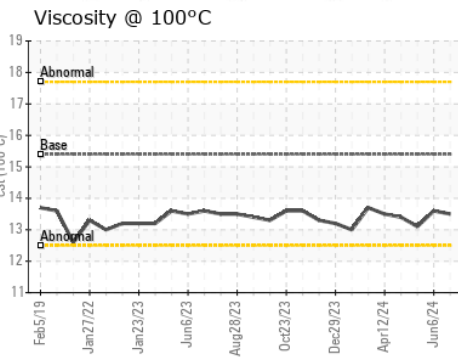
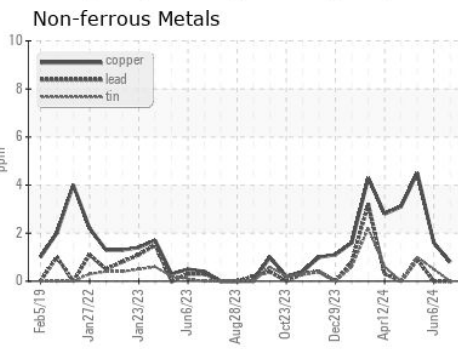
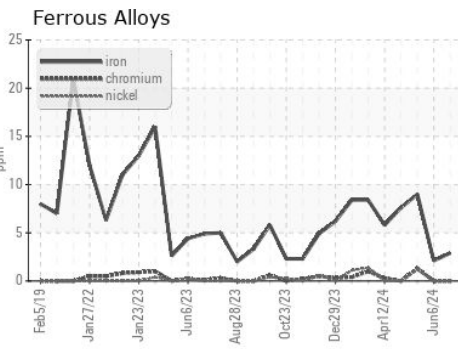
# OIL ANALYSIS REPORT



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>13.5</b>	13.6	13.1

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0123167  
**Lab Number** : 06234271  
**Unique Number** : 11123105  
**Test Package** : FLEET

**GFL Environmental - 820 - Joplin Hauling**  
 3700 West 7th Street  
 Joplin, MO  
 US 64801  
 Contact: James Jarrett  
 jjarrett@gflenv.com  
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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)