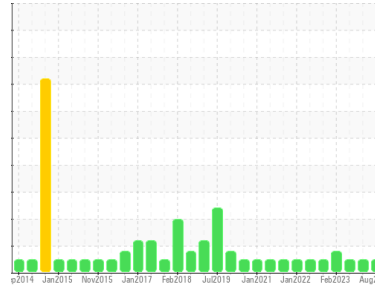




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**11077**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (25 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>GFL0088403</b>	GFL0075220	GFL0075254
Sample Date	Client Info	<b>15 Aug 2023</b>	20 Apr 2023	20 Mar 2023
Machine Age	hrs	Client Info	<b>97523</b>	97523
Oil Age	hrs	Client Info	<b>97523</b>	97523
Oil Changed	Client Info	<b>Changed</b>	Changed	Not Changed
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
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >130	<b>60</b>	33	23
Chromium	ppm ASTM D5185m >10	<b>5</b>	2	1
Nickel	ppm ASTM D5185m >4	<b>4</b>	1	1
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>4</b>	2	3
Lead	ppm ASTM D5185m >20	<b>0</b>	0	<1
Copper	ppm ASTM D5185m >125	<b>1</b>	0	3
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>0</b>	0	5
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>61</b>	58	58
Manganese	ppm ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1006</b>	953	925
Calcium	ppm ASTM D5185m 1070	<b>1126</b>	1079	1077
Phosphorus	ppm ASTM D5185m 1150	<b>1010</b>	935	1005
Zinc	ppm ASTM D5185m 1270	<b>1270</b>	1237	1219
Sulfur	ppm ASTM D5185m 2060	<b>3384</b>	3147	2718

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>5</b>	3	4
Sodium	ppm ASTM D5185m	<b>2</b>	4	0
Potassium	ppm ASTM D5185m >20	<b>2</b>	0	1

## INFRA-RED

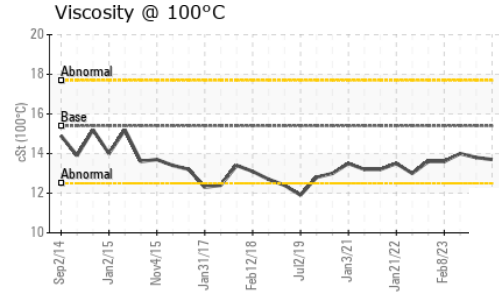
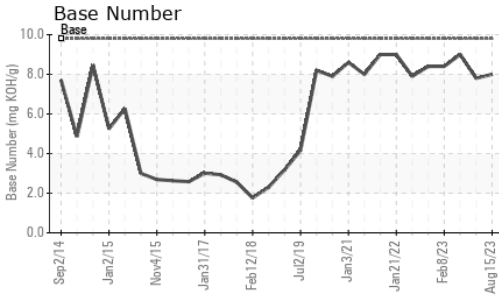
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	<b>0.7</b>	0.3	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>9.2</b>	6.8	6.1
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.3</b>	17.3	18.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.1</b>	14.2	14.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.0</b>	7.8	9.0



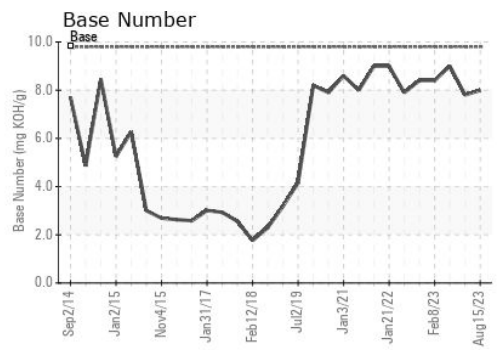
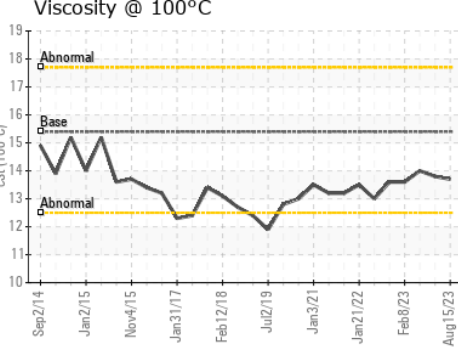
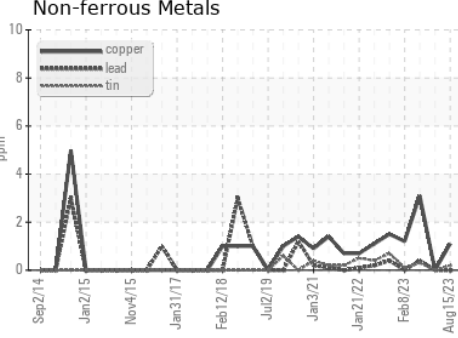
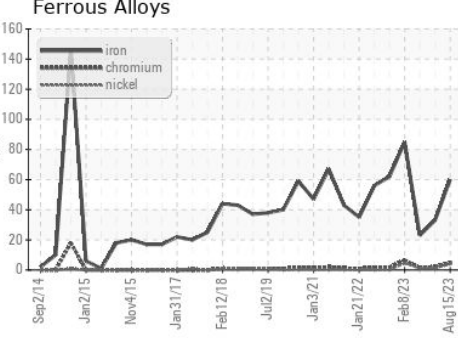
# OIL ANALYSIS REPORT



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	LIGHT
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	13.7	13.8

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0088403 **Received** : 18 Aug 2023  
**Lab Number** : 05928601 **Diagnosed** : 20 Aug 2023  
**Unique Number** : 10608548 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 084 - Clarksville**  
 699 Jack Miller Boulevard  
 Clarksville, TN  
 US 37042  
 Contact: ROBERT THIBAUT  
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 F: (931)572-9674

Certificate L2367  
 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)