



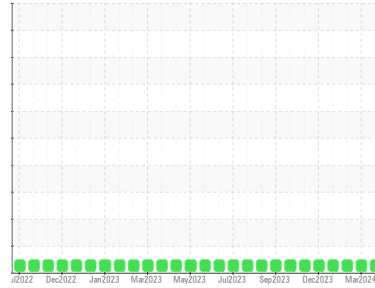
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**(1203953)**  
Machine Id  
**429073-26**  
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

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>GFL0110584</b>	GFL0110588	GFL0110604
Sample Date	Client Info		<b>22 Mar 2024</b>	20 Mar 2024	11 Mar 2024
Machine Age	hrs	Client Info	<b>10617</b>	10591	12649
Oil Age	hrs	Client Info	<b>600</b>	200	1200
Oil Changed	Client Info		<b>Changed</b>	Not Changd	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
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>6</b>	8	12
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >15	<b>&lt;1</b>	1	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	2	2
Lead	ppm	ASTM D5185m >40	<b>0</b>	1	<1
Copper	ppm	ASTM D5185m >330	<b>4</b>	5	2
Tin	ppm	ASTM D5185m >15	<b>2</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	<1	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m 60	<b>57</b>	63	65
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	0
Magnesium	ppm	ASTM D5185m 1010	<b>992</b>	942	989
Calcium	ppm	ASTM D5185m 1070	<b>1085</b>	1087	1082
Phosphorus	ppm	ASTM D5185m 1150	<b>940</b>	959	1021
Zinc	ppm	ASTM D5185m 1270	<b>1236</b>	1192	1252
Sulfur	ppm	ASTM D5185m 2060	<b>3471</b>	2885	2816

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	9	8
Sodium	ppm	ASTM D5185m	<b>3</b>	0	4
Potassium	ppm	ASTM D5185m >20	<b>2</b>	3	2

## INFRA-RED

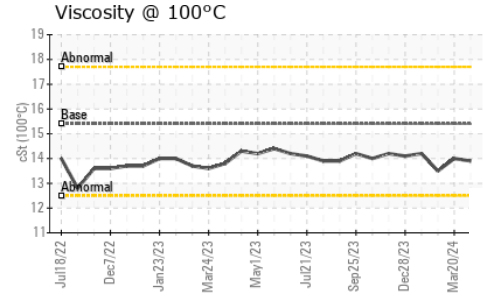
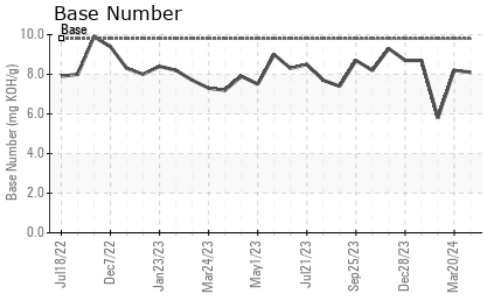
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.8</b>	7.7	9.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.8</b>	18.7	21.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.2</b>	15.1	18.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.1</b>	8.2	5.8



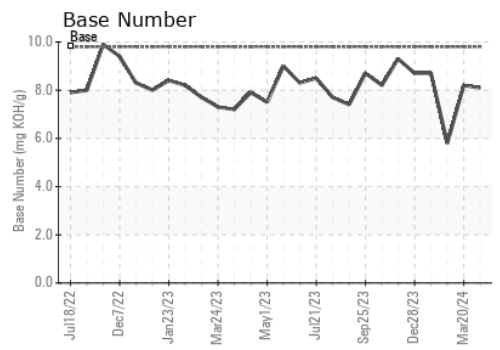
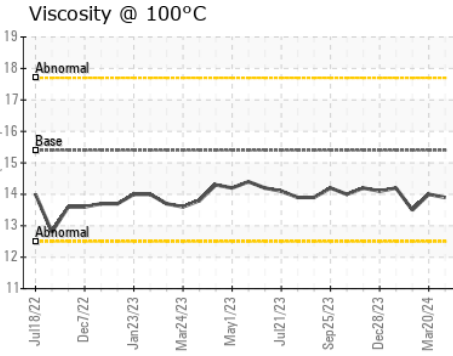
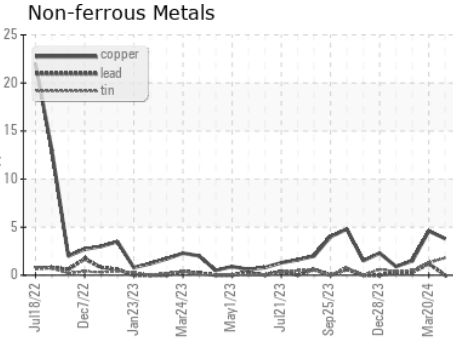
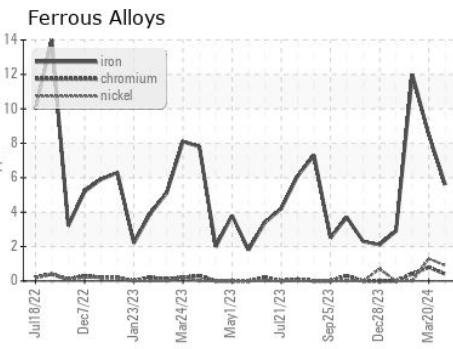
# OIL ANALYSIS REPORT



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>13.9</b>	14.0	13.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110584  
**Lab Number** : **06131597**  
**Unique Number** : 10951062  
**Test Package** : FLEET  
**Received** : 28 Mar 2024  
**Tested** : 28 Mar 2024  
**Diagnosed** : 28 Mar 2024 - Wes Davis

**GFL Environmental - 166 - Phenix City**  
 18 Old Brickyard Rd  
 Phenix City, AL  
 US 36869  
 Contact: DEAN PEACE JR  
 dean.peace@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)