

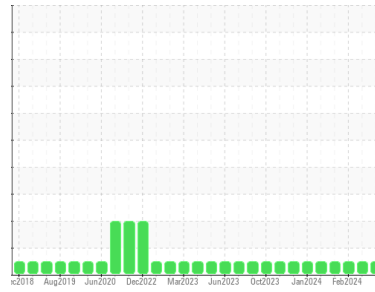


# OIL ANALYSIS REPORT



Machine Id  
**428033-402325**  
 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>GFL0117158</b>	GFL0114000	GFL0109799
Sample Date	Client Info		<b>23 Apr 2024</b>	28 Mar 2024	28 Feb 2024
Machine Age	hrs	Client Info	<b>3198</b>	3075	2935
Oil Age	hrs	Client Info	<b>0</b>	0	600
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	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>3</b>	40	3
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	3	<1
Nickel	ppm	ASTM D5185m >5	<b>1</b>	<1	0
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>2</b>	7	1
Lead	ppm	ASTM D5185m >40	<b>2</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	2	1
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>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>6</b>	0	6
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>62</b>	56	55
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>895</b>	935	872
Calcium	ppm	ASTM D5185m 1070	<b>1101</b>	1101	1030
Phosphorus	ppm	ASTM D5185m 1150	<b>950</b>	1038	983
Zinc	ppm	ASTM D5185m 1270	<b>1177</b>	1258	1230
Sulfur	ppm	ASTM D5185m 2060	<b>3219</b>	3571	2970

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	16	6
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	6	1
Potassium	ppm	ASTM D5185m >20	<b>3</b>	9	<1

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.1</b>	0.7	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.6</b>	10.3	6.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.4</b>	20.1	17.6

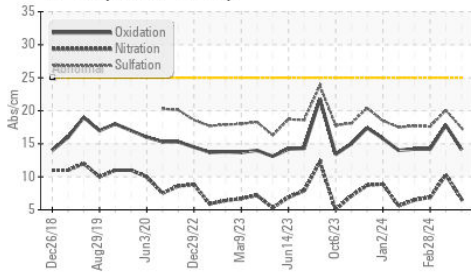
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.1</b>	17.8	14.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.7</b>	7.3	8.0

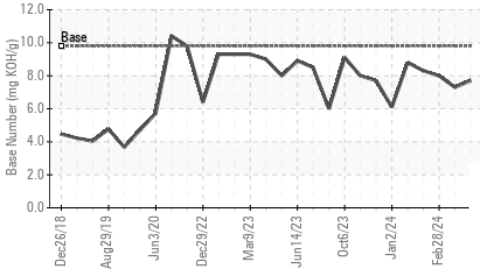


# OIL ANALYSIS REPORT

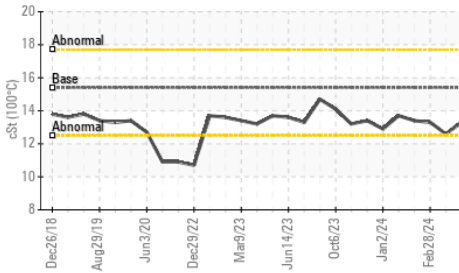
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

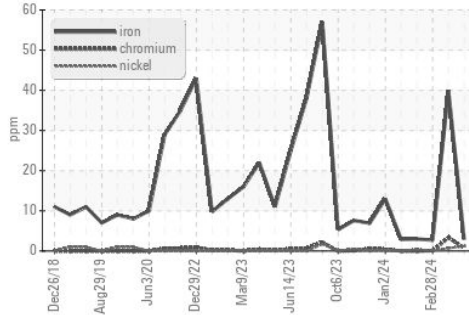


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

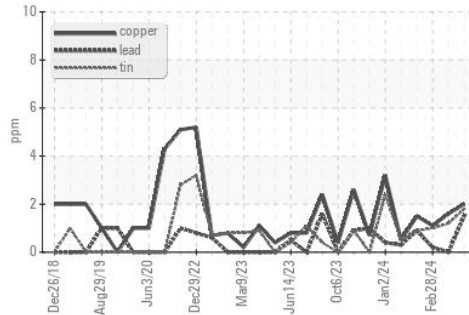
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	12.6

## GRAPHS

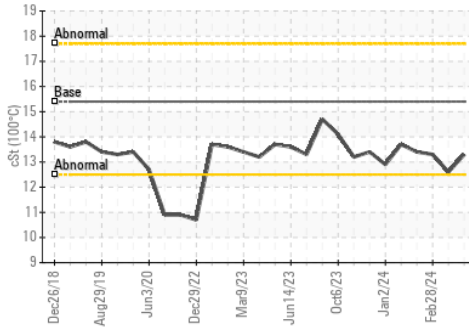
Ferrous Alloys



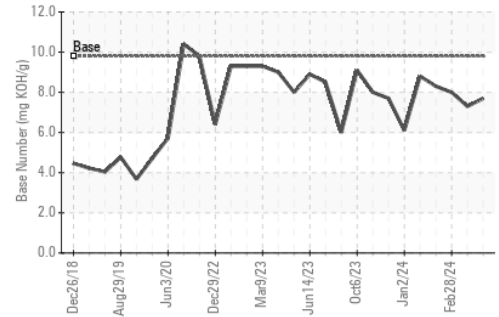
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0117158  
 Lab Number : 06160215  
 Unique Number : 10995638  
 Test Package : FLEET

GFL Environmental - 836 - Kansas City Hauling  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Loyce Stewart  
 loyce.stewart@gflenv.com

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)

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F: