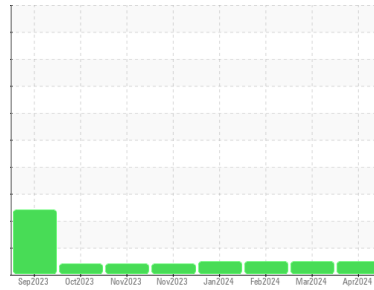




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**713025**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### 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>GFL0104891</b>	GFL0104887	GFL0104956
Sample Date	Client Info		<b>08 Apr 2024</b>	15 Mar 2024	02 Feb 2024
Machine Age	mls	Client Info	<b>16139</b>	14500	12707
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Not Changed</b>	Not Changd	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
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 >90	<b>8</b>	4	17
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>0</b>	0	2
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>0</b>	0	1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	59	58
Manganese	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>977</b>	993	928
Calcium	ppm	ASTM D5185m 1070	<b>1130</b>	1137	1003
Phosphorus	ppm	ASTM D5185m 1150	<b>1088</b>	1090	998
Zinc	ppm	ASTM D5185m 1270	<b>1329</b>	1350	1181
Sulfur	ppm	ASTM D5185m 2060	<b>3710</b>	3820	2865

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>1</b>	<1	4
Sodium	ppm	ASTM D5185m	<b>2</b>	1	4
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	1

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.3</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.9</b>	5.9	7.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.0</b>	18.0	18.7

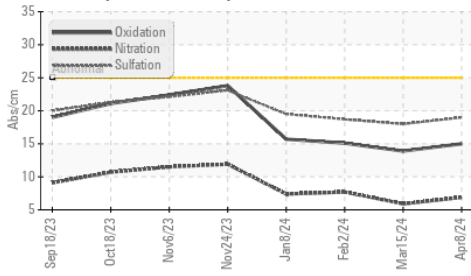
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.0</b>	13.9	15.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.2</b>	8.6	7.5

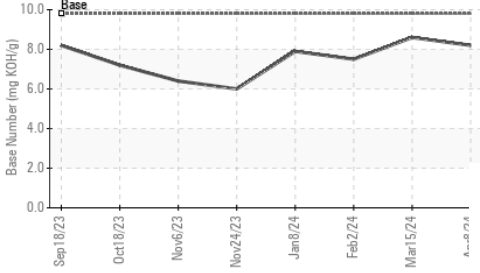


# OIL ANALYSIS REPORT

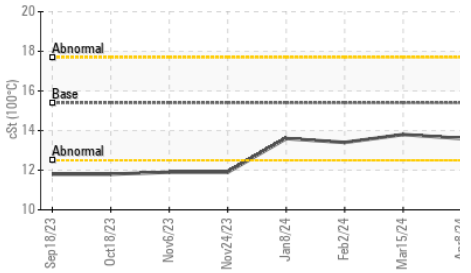
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

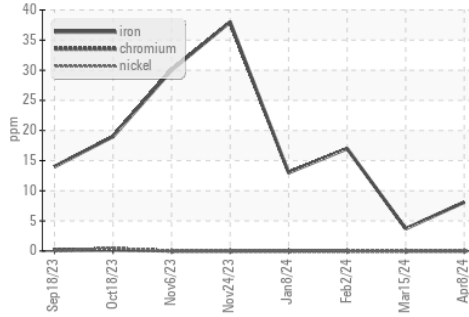


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

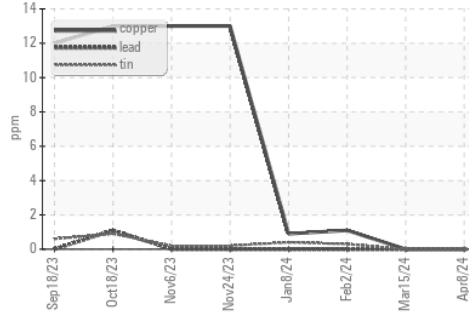
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.8

## GRAPHS

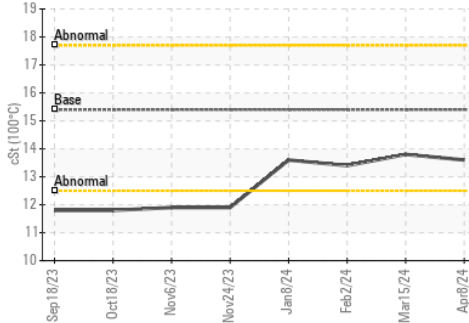
Ferrous Alloys



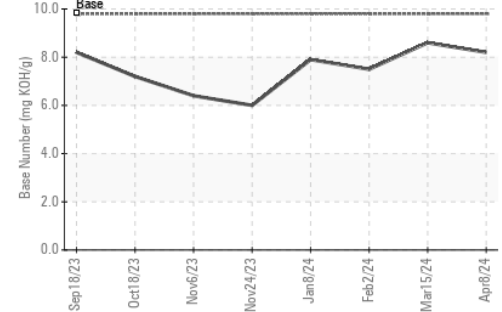
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0104891  
 Lab Number : 06158735  
 Unique Number : 10994158  
 Test Package : FLEET

Received : 24 Apr 2024  
 Tested : 25 Apr 2024  
 Diagnosed : 25 Apr 2024 - Wes Davis

GFL Environmental - 820 - Joplin Hauling  
 3700 West 7th Street  
 Joplin, MO  
 US 64801

Contact: James Jarrett  
 jjarrett@gflenv.com  
 T: (417)310-2802

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)