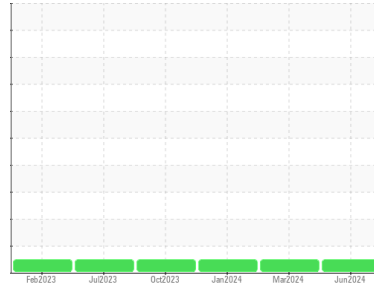




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

**427159**

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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0123532</b>	GFL0112095	GFL0105539
Sample Date	Client Info		<b>17 Jun 2024</b>	27 Mar 2024	10 Jan 2024
Machine Age	mls	Client Info	<b>327652</b>	317434	309279
Oil Age	mls	Client Info	<b>327652</b>	317434	309279
Oil Changed	Client Info		<b>N/A</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<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 >100	<b>6</b>	12	7
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	2	<1
Lead	ppm	ASTM D5185m >40	<b>1</b>	1	2
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m 0	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>46</b>	58	52
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>33</b>	24	0
Calcium	ppm	ASTM D5185m 1070	<b>2474</b>	2759	2579
Phosphorus	ppm	ASTM D5185m 1150	<b>1041</b>	1084	1166
Zinc	ppm	ASTM D5185m 1270	<b>1189</b>	1370	1328
Sulfur	ppm	ASTM D5185m 2060	<b>3004</b>	3495	3240

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	7	7
Sodium	ppm	ASTM D5185m	<b>2</b>	2	3
Potassium	ppm	ASTM D5185m >20	<b>3</b>	3	0

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.4</b>	8.4	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.3</b>	19.1	18.9

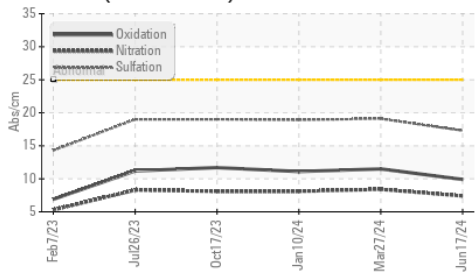
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>9.9</b>	11.5	11.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.5</b>	7.4	6.9

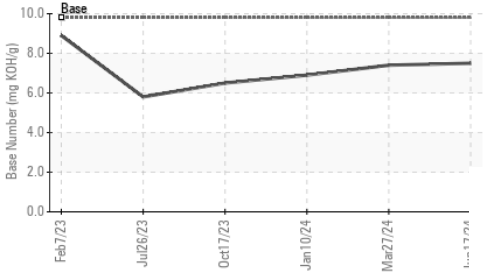


# OIL ANALYSIS REPORT

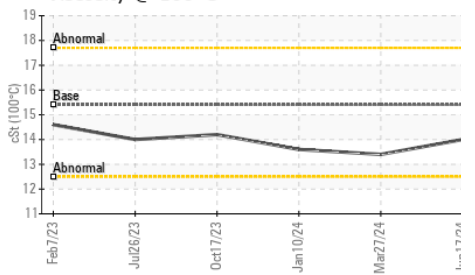
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

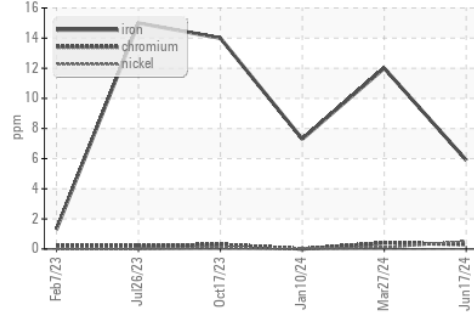


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

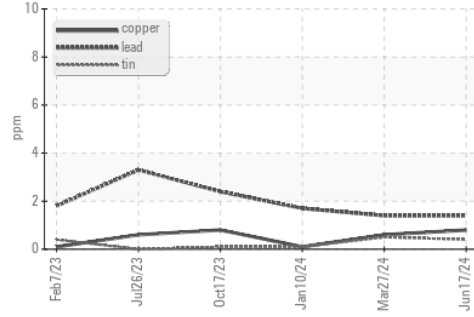
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.0</b>	13.4	13.6

## GRAPHS

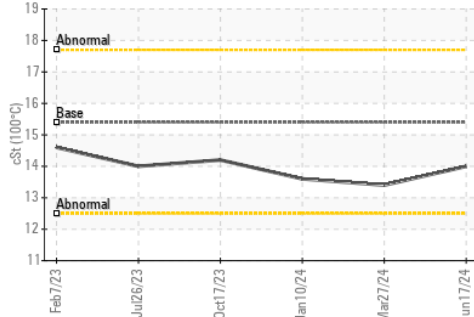
Ferrous Alloys



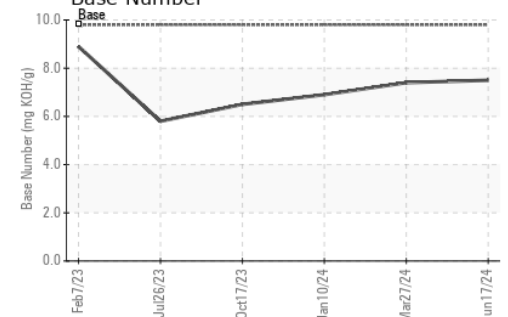
Non-ferrous Metals



Viscosity @ 100°C



Base Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0123532      **Received** : 25 Jun 2024  
**Lab Number** : 06219291      **Tested** : 25 Jun 2024  
**Unique Number** : 11097488      **Diagnosed** : 26 Jun 2024 - Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 983 - Sugar Land Hauling**  
 16011 West Belfort Street  
 Sugar Land, TX  
 US 77498  
 Contact: Adrian Martinez  
 adrianmartinez@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)