



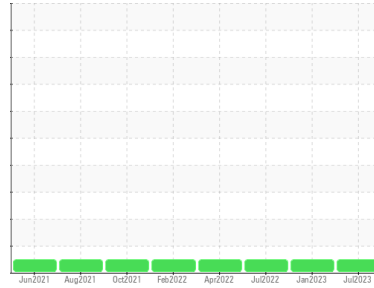
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**728033-361504**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**



## 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>GFL0085400</b>	GFL0066754	GFL0053471
Sample Date	Client Info		<b>07 Jul 2023</b>	19 Jan 2023	12 Jul 2022
Machine Age	hrs	Client Info	<b>6253</b>	5512	14418
Oil Age	hrs	Client Info	<b>14418</b>	0	587
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	>5	<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 >80	<b>75</b>	58	29
Chromium	ppm	ASTM D5185m >5	<b>5</b>	4	1
Nickel	ppm	ASTM D5185m >2	<b>2</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >30	<b>7</b>	6	6
Lead	ppm	ASTM D5185m >30	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >150	<b>3</b>	2	2
Tin	ppm	ASTM D5185m >5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	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>	10	5
Barium	ppm	ASTM D5185m 0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m 60	<b>69</b>	65	61
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>962</b>	868	873
Calcium	ppm	ASTM D5185m 1070	<b>1439</b>	1263	1176
Phosphorus	ppm	ASTM D5185m 1150	<b>1055</b>	997	947
Zinc	ppm	ASTM D5185m 1270	<b>1393</b>	1268	1197
Sulfur	ppm	ASTM D5185m 2060	<b>3414</b>	3021	3227

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>11</b>	8	5
Sodium	ppm	ASTM D5185m	<b>2</b>	3	1
Potassium	ppm	ASTM D5185m >20	<b>3</b>	0	0

## INFRA-RED

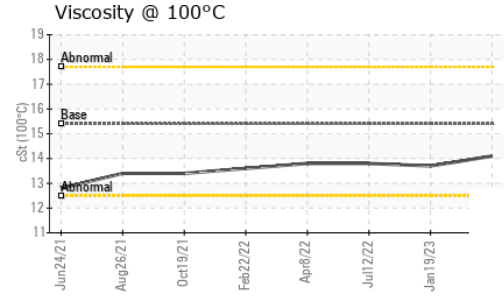
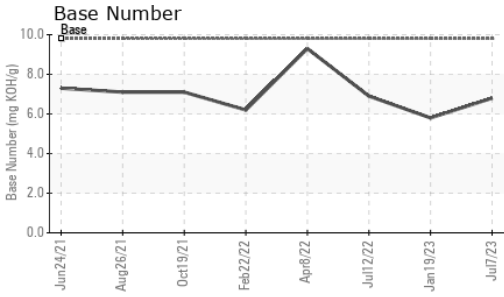
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.8</b>	0.8	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>13.2</b>	13.6	10.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>26.9</b>	28.0	23.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>26.4</b>	30.1	20.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.8</b>	5.8	6.9



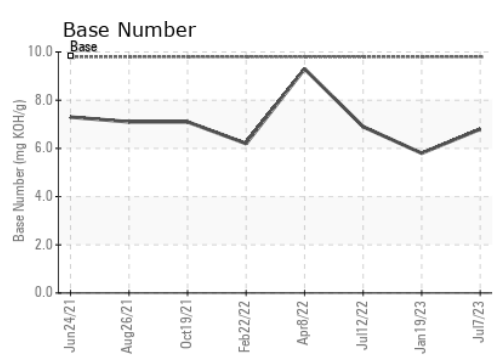
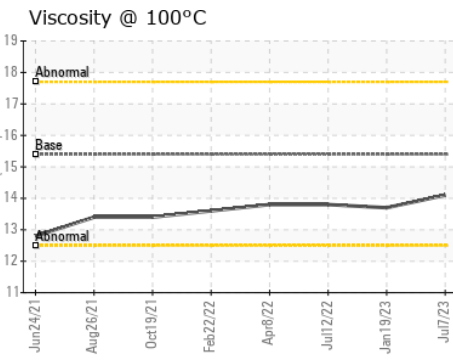
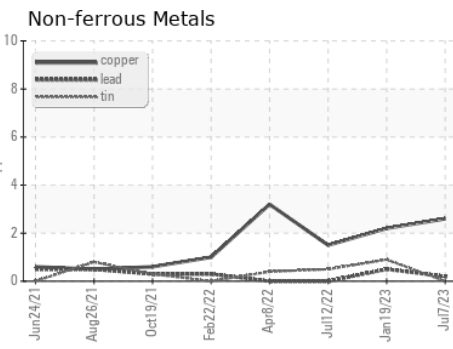
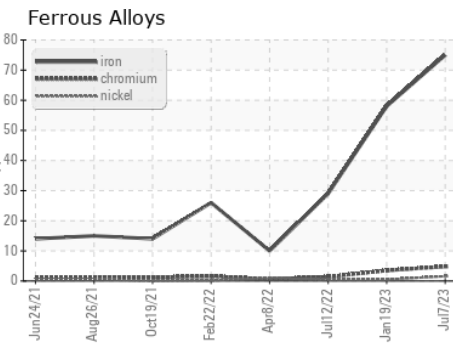
# OIL ANALYSIS REPORT



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>14.1</b>	13.7	13.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0085400 **Received** : 11 Jul 2023  
**Lab Number** : **05894825** **Diagnosed** : 12 Jul 2023  
**Unique Number** : 10550635 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 882 - Gainesville**  
 5002 SW 41st Blvd  
 Gainesville, FL  
 US 32608  
 Contact: ROBERT CLARK  
 robert.clark@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: