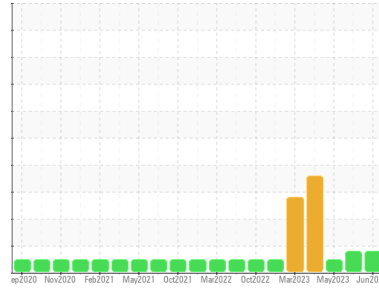


# PROBLEM SUMMARY



Machine Id  
**30066**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (9 GAL)**

Sample Rating Trend

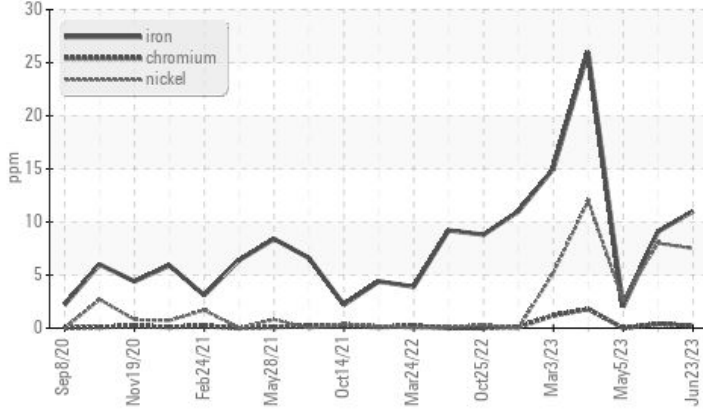


**WEAR**



## COMPONENT CONDITION SUMMARY

### ▲ Ferrous Alloys



## RECOMMENDATION

No corrective action is recommended at this time.  
Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			<b>ABNORMAL</b>	ABNORMAL	NORMAL	
Nickel	ppm	ASTM D5185m	>5	▲ 8	▲ 8	3

Customer Id: ORIBET  
Sample No.: PCA0098097  
Lab Number: 05889565  
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Angela Borella +1 800-237-1369  
[angela.borella@wearcheckusa.com](mailto:angela.borella@wearcheckusa.com)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

There are no recommended actions for this sample.

## HISTORICAL DIAGNOSIS

### 08 Jun 2023 Diag: Don Baldrige

#### WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. Valve wear is indicated. All other component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



### 05 May 2023 Diag: Wes Davis

#### NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



### 30 Apr 2023 Diag: Jonathan Hester

#### DIRT



We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend an early resample to monitor this condition. Valve wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

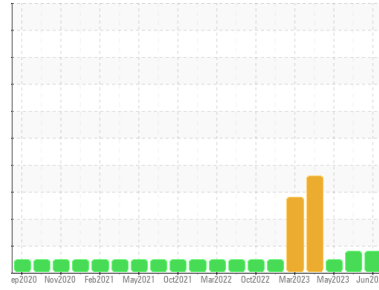


# OIL ANALYSIS REPORT



Machine Id  
**30066**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (9 GAL)**

Sample Rating Trend



**WEAR**



## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### ▲ Wear

Valve wear is indicated. All other 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	history 1	history 2
Sample Number	Client Info		<b>PCA0098097</b>	PCA0098118	PCA0098084
Sample Date	Client Info		<b>23 Jun 2023</b>	08 Jun 2023	05 May 2023
Machine Age	hrs	Client Info	<b>18861</b>	18770	18498
Oil Age	hrs	Client Info	<b>91</b>	272	434
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status			<b>ABNORMAL</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >120	<b>11</b>	9	2
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m >5	<b>▲ 8</b>	▲ 8	3
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>4</b>	5	5
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>3</b>	4	1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 0	<b>1</b>	4	14
Barium	ppm	ASTM D5185m 0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m 60	<b>59</b>	71	64
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1010	<b>889</b>	930	971
Calcium	ppm	ASTM D5185m 1070	<b>1060</b>	1169	1247
Phosphorus	ppm	ASTM D5185m 1150	<b>946</b>	1082	1089
Zinc	ppm	ASTM D5185m 1270	<b>1175</b>	1293	1347
Sulfur	ppm	ASTM D5185m 2060	<b>3410</b>	3672	3790

## CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	6	6
Sodium	ppm	ASTM D5185m	<b>9</b>	8	4
Potassium	ppm	ASTM D5185m >20	<b>18</b>	19	8

## INFRA-RED

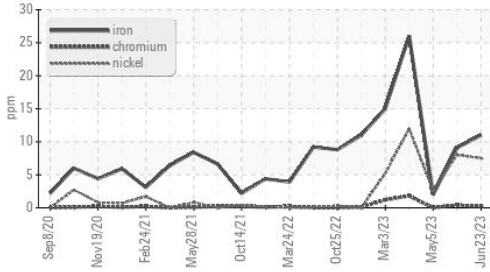
	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844 >4	<b>0.5</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.6</b>	7.9	5.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.8</b>	20.5	18.6

## FLUID DEGRADATION

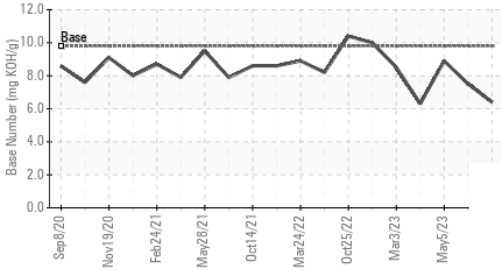
	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.4</b>	17.1	14.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.4</b>	7.5	8.9

# OIL ANALYSIS REPORT

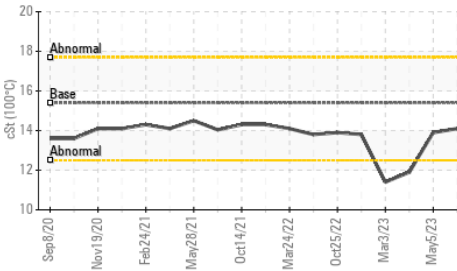
**▲ Ferrous Alloys**



**Base Number**



**Viscosity @ 100°C**

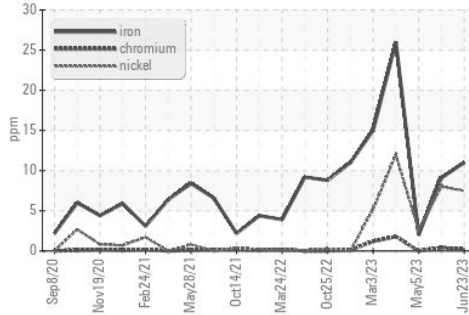


VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

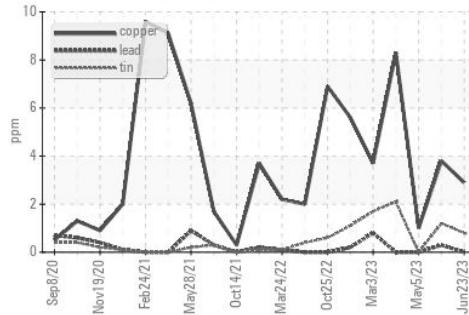
FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	13.9

**GRAPHS**

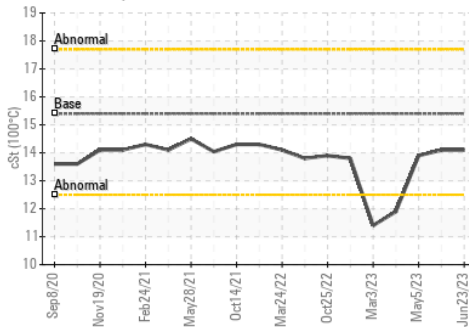
**▲ Ferrous Alloys**



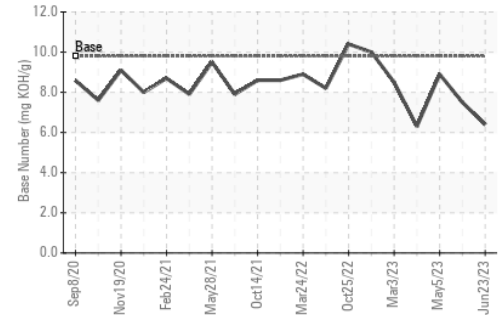
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0098097  
**Lab Number** : 05889565  
**Unique Number** : 10540048  
**Test Package** : FLEET

**LRS - BETHEL HEIGHTS (NWA AR)**  
 848 HWY 264 E  
 BETHEL HEIGHTS, AR  
 US 72764  
 Contact: ROBERT HEATH  
 rheath@lrsrecycles.com  
 T: (479)305-8958  
 F:

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)