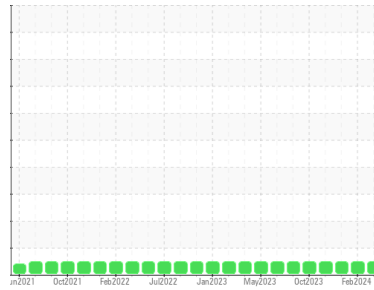


# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Area  
**Plymouth & Brockton**

Machine Id  
**435**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (36 QTS)**

### 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>PCA0109976</b>	PCA0109875	PCA0104725
Sample Date	Client Info		<b>12 May 2024</b>	16 Feb 2024	09 Jan 2024
Machine Age	mls	Client Info	<b>322550</b>	299163	287119
Oil Age	mls	Client Info	<b>12000</b>	12000	24000
Oil Changed	Client Info		<b>Not Changed</b>	Not Changd	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 >165	<b>9</b>	12	16
Chromium	ppm	ASTM D5185m >5	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	1	3
Lead	ppm	ASTM D5185m >150	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >90	<b>1</b>	<1	2
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	0
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>	7	0
Barium	ppm	ASTM D5185m 0	<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	58	60
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>964</b>	912	891
Calcium	ppm	ASTM D5185m 1070	<b>1129</b>	1094	1072
Phosphorus	ppm	ASTM D5185m 1150	<b>1149</b>	1004	981
Zinc	ppm	ASTM D5185m 1270	<b>1278</b>	1145	1224
Sulfur	ppm	ASTM D5185m 2060	<b>3402</b>	3362	2813

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	<b>4</b>	3	3
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	1	0
Potassium	ppm	ASTM D5185m >20	<b>2</b>	0	0

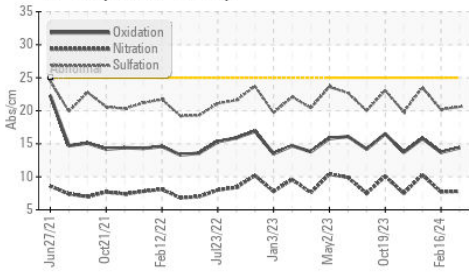
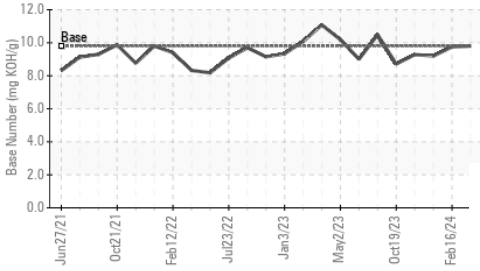
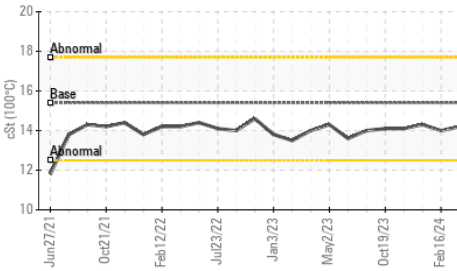
### INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	<b>1.3</b>	1.5	2.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.8</b>	7.7	10.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.6</b>	20.2	23.5

### FLUID DEGRADATION

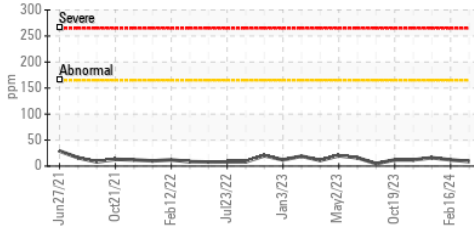
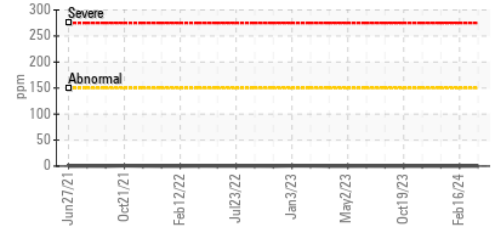
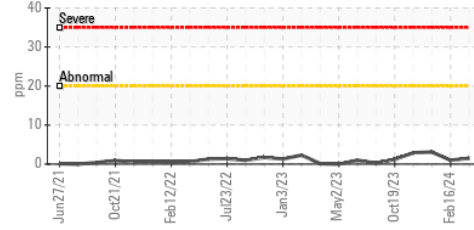
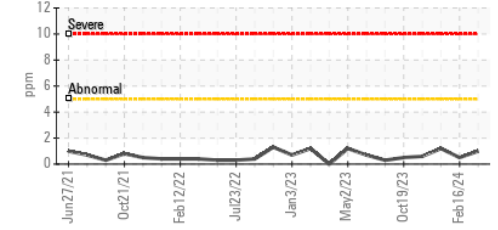
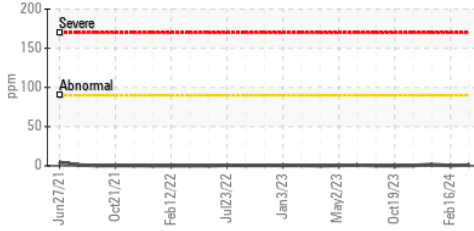
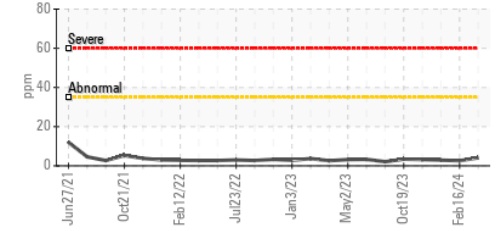
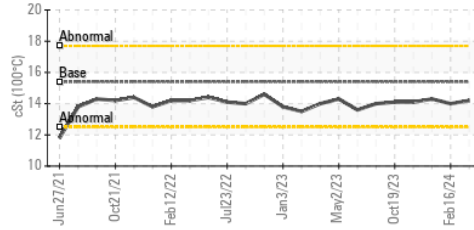
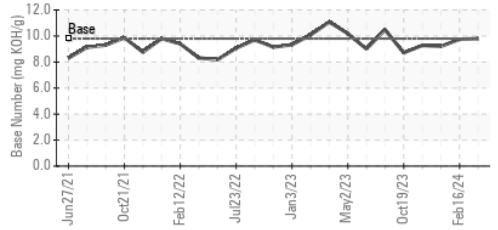
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.4</b>	13.7	15.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.80</b>	9.75	9.20

# 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>14.2</b>	14.0	14.3

**GRAPHS**
**Iron (ppm)**

**Lead (ppm)**

**Aluminum (ppm)**

**Chromium (ppm)**

**Copper (ppm)**

**Silicon (ppm)**

**Viscosity @ 100°C**

**Base Number**


Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : PCA0109976

**Lab Number** : 06196883

**Unique Number** : 11059006

**Test Package** : MOB 2

**Received** : 31 May 2024

**Tested** : 03 Jun 2024

**Diagnosed** : 03 Jun 2024 - Wes Davis

**PLYMOUTH & BROCKTON**

8 INDUSTRIAL PARK RD

PLYMOUTH, MA

US 02360

Contact: Donald Pelquin

Dpelquin@P-B.com

T: (508)732-6039

F: (508)732-6091

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)