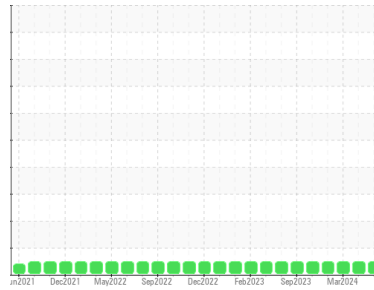


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**Plymouth & Brockton**

Machine Id  
**11436**

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>PCA0104608</b>	PCA0104425	PCA0109877
Sample Date	Client Info			<b>05 Jun 2024</b>	17 Apr 2024	01 Mar 2024
Machine Age	mls	Client Info		<b>311158</b>	299378	287094
Oil Age	mls	Client Info		<b>24000</b>	12000	24000
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	>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>24</b>	26	18
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	<1
Lead	ppm	ASTM D5185m	>150	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>90	<b>&lt;1</b>	1	<1
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>4</b>	5	5
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>61</b>	84	59
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>983</b>	1345	909
Calcium	ppm	ASTM D5185m	1070	<b>1219</b>	1597	1113
Phosphorus	ppm	ASTM D5185m	1150	<b>1034</b>	1667	979
Zinc	ppm	ASTM D5185m	1270	<b>1275</b>	1852	1137
Sulfur	ppm	ASTM D5185m	2060	<b>3275</b>	5224	3160

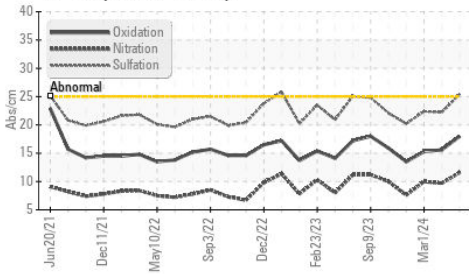
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	<b>4</b>	6	3
Sodium	ppm	ASTM D5185m		<b>4</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>7.5	<b>2.5</b>	1.9	2.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.6</b>	9.7	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.4</b>	22.2	22.4

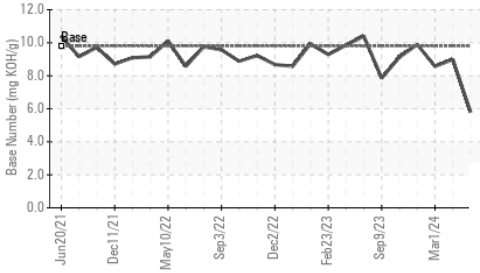
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.0</b>	15.6	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>5.79</b>	8.98	8.57

# OIL ANALYSIS REPORT

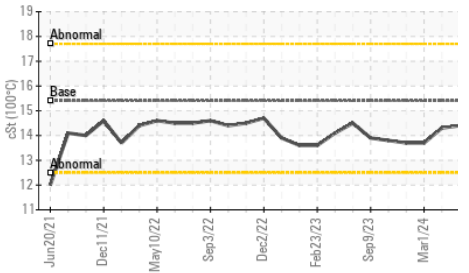
FT-IR (Direct Trend)



Base Number



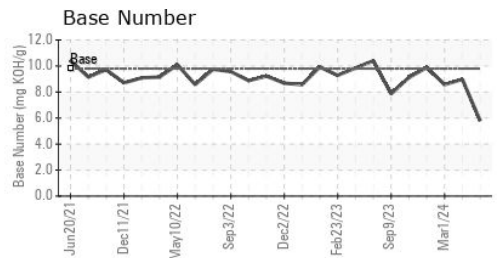
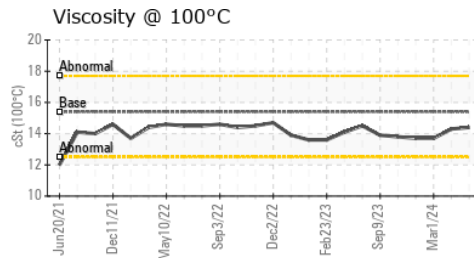
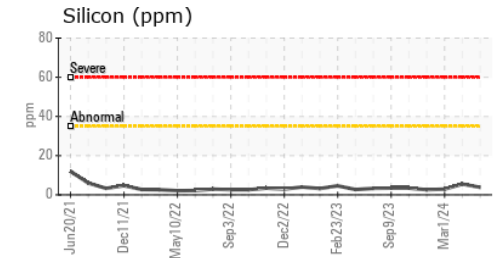
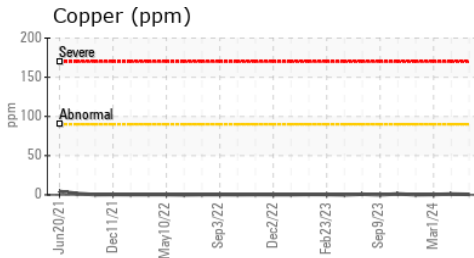
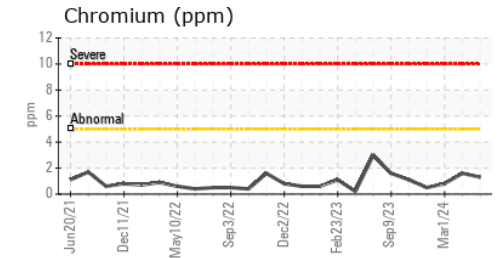
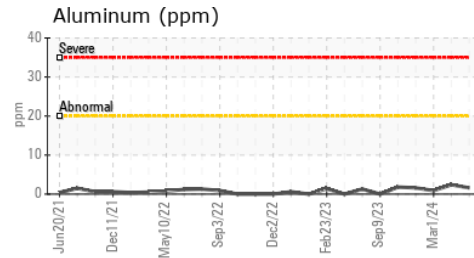
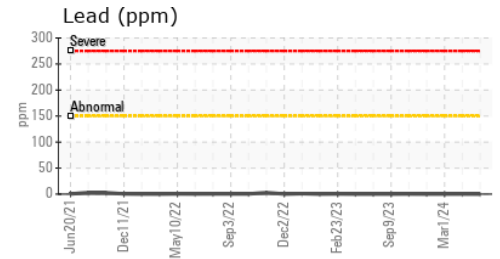
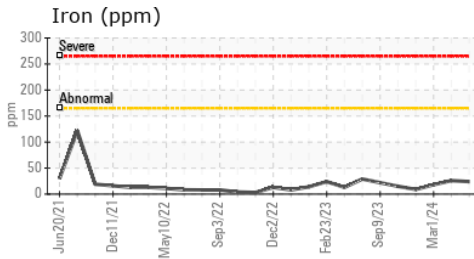
Viscosity @ 100°C



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	14.4	14.3

## GRAPHS



Certificate L2367

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

**Sample No.** : PCA0104608

**Lab Number** : 06214930

**Unique Number** : 11087794

**Test Package** : MOB 2

**Received** : 19 Jun 2024

**Tested** : 20 Jun 2024

**Diagnosed** : 20 Jun 2024 - Wes Davis

**PLYMOUTH & BROCKTON**

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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)