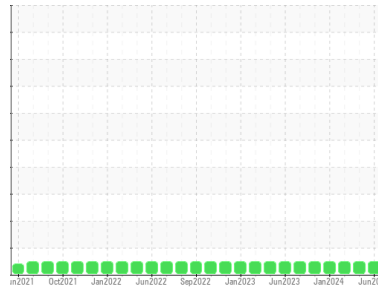


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Plymouth & Brockton

Machine Id
437
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			PCA0110102	PCA0083369	PCA0109876
Sample Date	Client Info			29 Jun 2024	07 May 2024	13 Feb 2024
Machine Age	mls	Client Info		317118	305414	281472
Oil Age	mls	Client Info		24000	12000	12000
Oil Changed	Client Info			Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>165	21	14	13
Chromium	ppm	ASTM D5185m	>5	2	2	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	3	3	1
Lead	ppm	ASTM D5185m	>150	<1	<1	0
Copper	ppm	ASTM D5185m	>90	1	1	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	<1	0

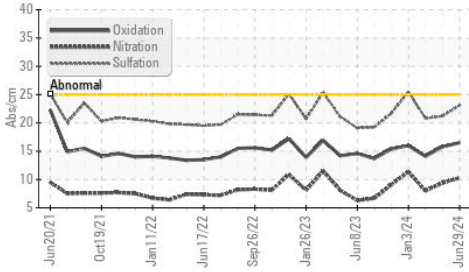
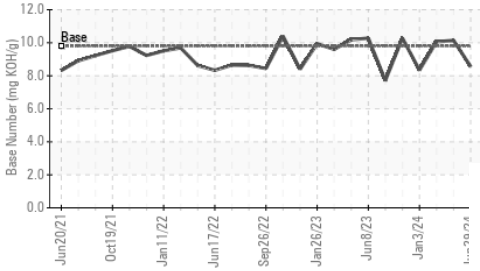
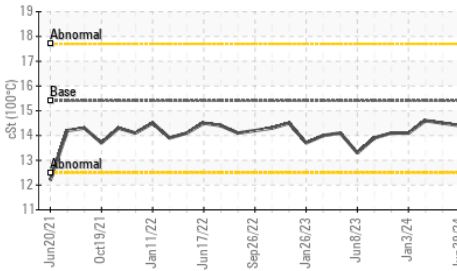
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	3	2	2
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	60	59	57
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	945	902	917
Calcium	ppm	ASTM D5185m	1070	1131	1101	1082
Phosphorus	ppm	ASTM D5185m	1150	971	1071	994
Zinc	ppm	ASTM D5185m	1270	1271	1195	1143
Sulfur	ppm	ASTM D5185m	2060	2905	3283	3338

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

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>7.5	2.1	1.5	1.7
Nitration	Abs/cm	*ASTM D7624	>20	10.3	9.4	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	21.2	20.8

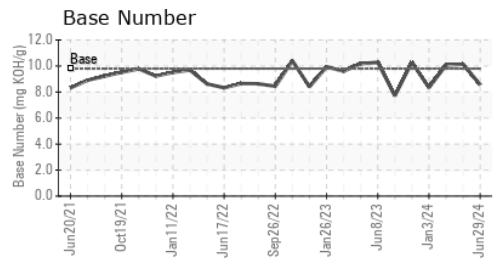
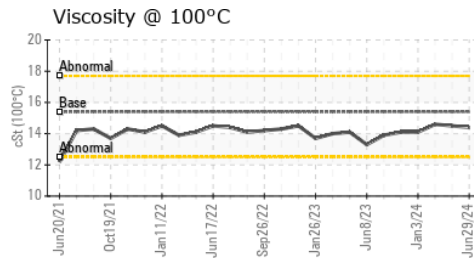
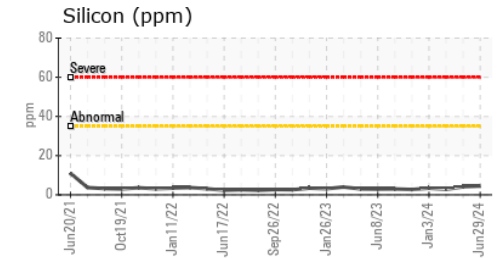
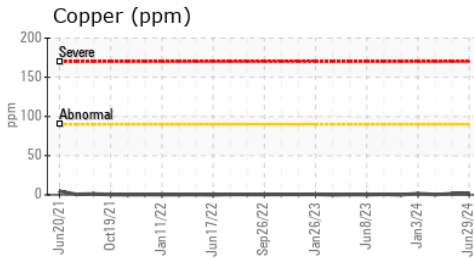
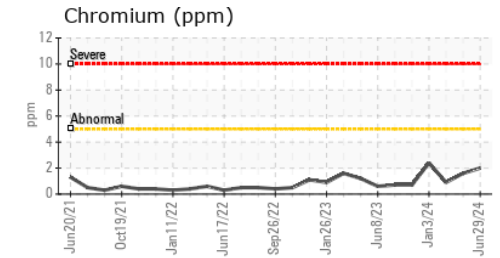
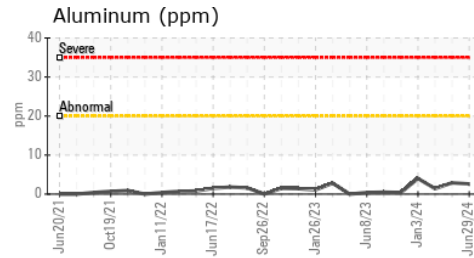
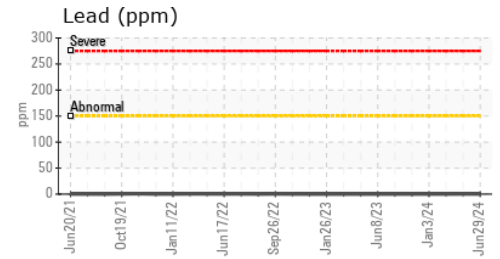
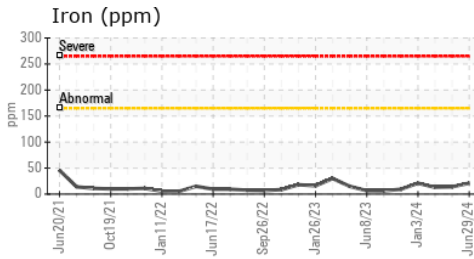
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	15.8	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.56	10.14	10.06

OIL ANALYSIS REPORT

FT-IR (Direct Trend)

Base Number

Viscosity @ 100°C


PARAMETER	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	14.5

GRAPHS


Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0110102 **Received** : 08 Jul 2024
Lab Number : 06230373 **Tested** : 09 Jul 2024
Unique Number : 11113866 **Diagnosed** : 09 Jul 2024 - Wes Davis
Test Package : MOB 2

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)