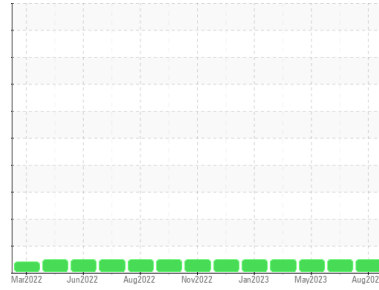


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Plymouth & Brockton
 Machine Id
11442
 Component
Diesel Engine
 Fluid
PETRO CANADA 15W40 (--- GAL)

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			PCA0090649	PCA0090671	PCA0090510
Sample Date	Client Info			09 Aug 2023	27 Jun 2023	21 May 2023
Machine Age	mls	Client Info		167340	155485	144228
Oil Age	mls	Client Info		24000	12000	24000
Oil Changed	Client Info			Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>165	19	10	20
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	<1	<1
Lead	ppm	ASTM D5185m	>150	0	0	0
Copper	ppm	ASTM D5185m	>90	0	1	<1
Tin	ppm	ASTM D5185m	>5	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

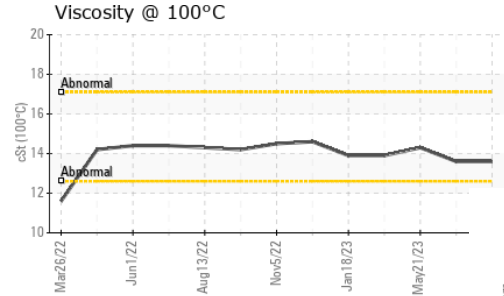
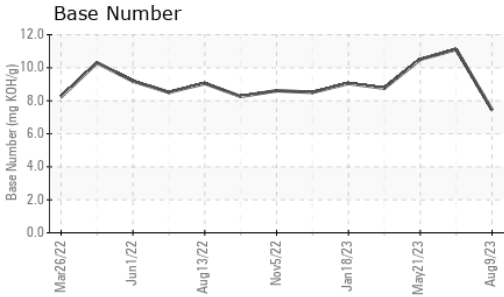
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		8	13	5
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		65	62	63
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1056	874	1013
Calcium	ppm	ASTM D5185m		1201	1094	1152
Phosphorus	ppm	ASTM D5185m		1053	980	1039
Zinc	ppm	ASTM D5185m		1372	1170	1270
Sulfur	ppm	ASTM D5185m		3815	2928	3575

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

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>7.5	2	1.1	2.1
Nitration	Abs/cm	*ASTM D7624	>20	10.3	7.5	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	20.2	23.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	15.2	16.1
Base Number (BN)	mg KOH/g	ASTM D2896		7.44	11.11	10.51

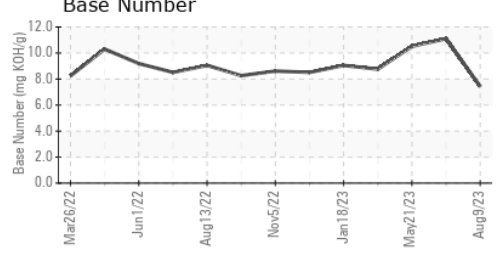
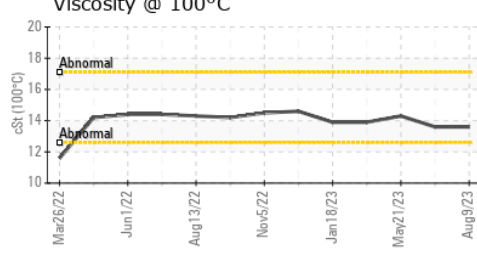
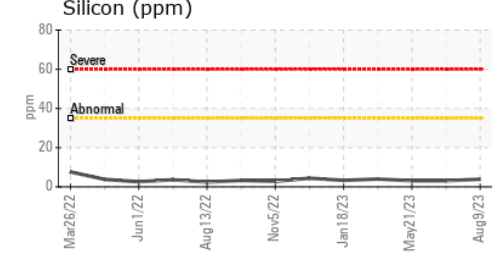
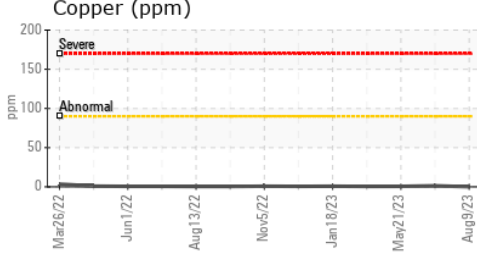
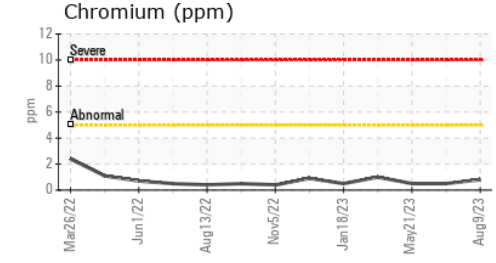
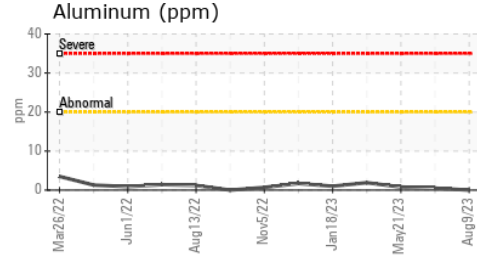
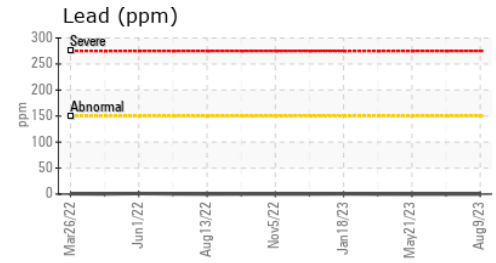
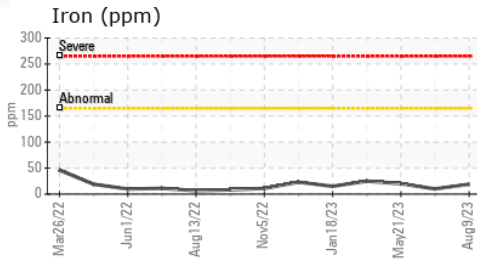
OIL ANALYSIS REPORT



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	13.6	13.6	14.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0090649 **Received** : 14 Sep 2023
Lab Number : 05951609 **Diagnosed** : 18 Sep 2023
Unique Number : 10647568 **Diagnostician** : 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)