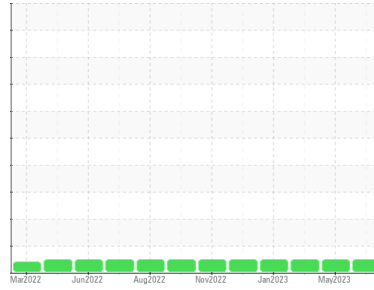


OIL ANALYSIS REPORT

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	history 1	history 2	
Sample Number	Client Info	PCA0090671	PCA0090510	PCA0083298	
Sample Date	Client Info	27 Jun 2023	21 May 2023	02 Mar 2023	
Machine Age	mls	Client Info	155485	144228	119110
Oil Age	mls	Client Info	12000	24000	24000
Oil Changed	Client Info	Not Chngd	Changed	Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m >165	10	20	25
Chromium	ppm ASTM D5185m >5	<1	<1	1
Nickel	ppm ASTM D5185m >4	<1	0	0
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	<1	<1	2
Lead	ppm ASTM D5185m >150	0	0	<1
Copper	ppm ASTM D5185m >90	1	<1	<1
Tin	ppm ASTM D5185m >5	0	0	<1
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m	13	5	8
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	62	63	59
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m	874	1013	877
Calcium	ppm ASTM D5185m	1094	1152	1069
Phosphorus	ppm ASTM D5185m	980	1039	950
Zinc	ppm ASTM D5185m	1170	1270	1171
Sulfur	ppm ASTM D5185m	2928	3575	2916

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >35	3	3	4
Sodium	ppm ASTM D5185m	0	2	<1
Potassium	ppm ASTM D5185m >20	1	0	<1

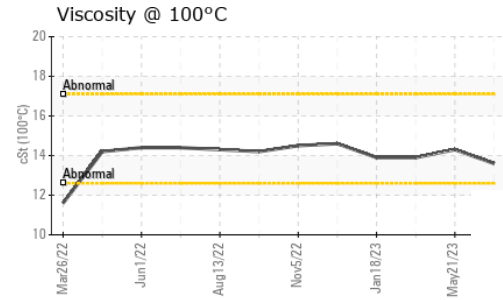
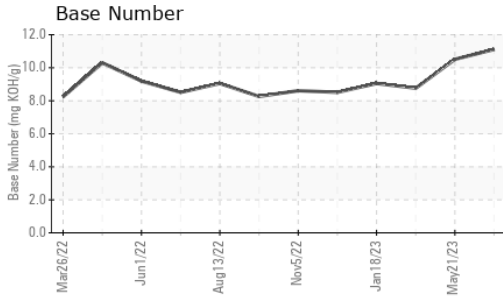
INFRA-RED

method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >7.5	1.1	2.1	2.6
Nitration	Abs/cm *ASTM D7624 >20	7.5	10.2	10.7
Sulfation	Abs/.1mm *ASTM D7415 >30	20.2	23.4	24.1

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.2	16.1	15.9
Base Number (BN)	mg KOH/g ASTM D2896	11.11	10.51	8.76

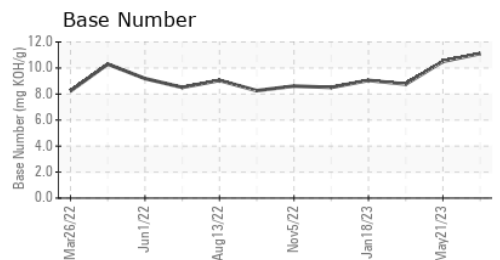
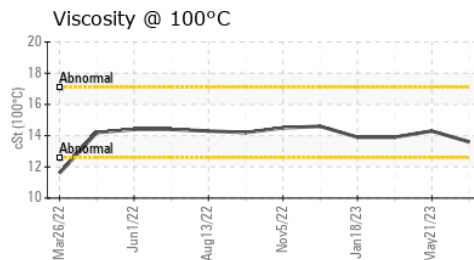
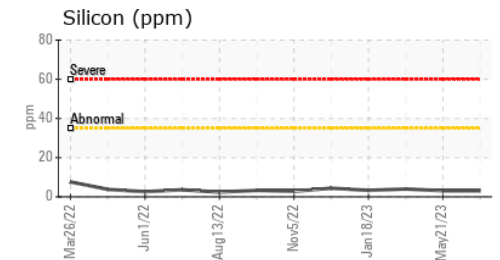
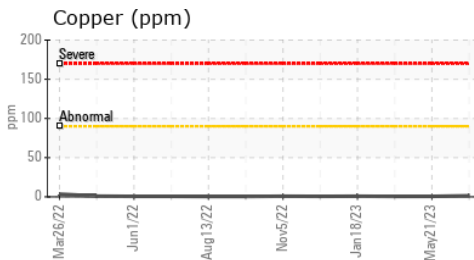
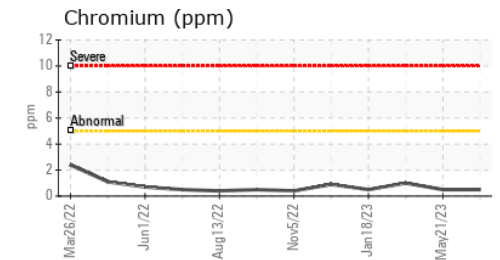
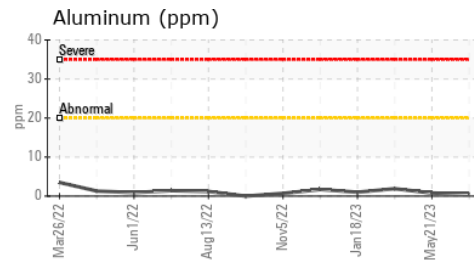
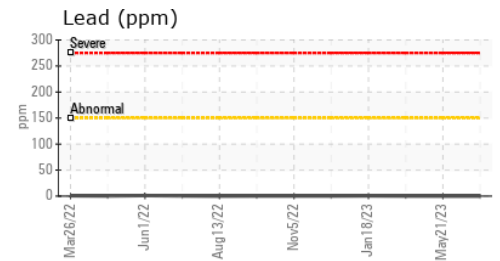
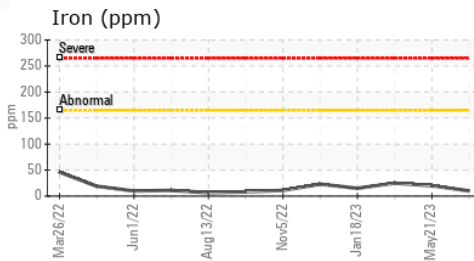
OIL ANALYSIS REPORT



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	13.6	14.3	13.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0090671 **Received** : 05 Jul 2023
Lab Number : 05890409 **Diagnosed** : 06 Jul 2023
Unique Number : 10546219 **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)