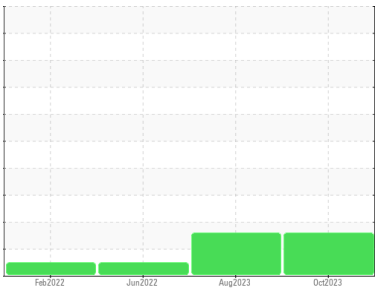
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
Plymouth & Brockton
Machine Id
11417
Component
Diesel Engine
Fluid
NOT GIVEN (39 QTS)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

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		**PCA0090719**	PCA0013384	PCA0013363
Sample Date		Client Info		**17 Oct 2023**	25 Aug 2023	17 Jun 2022
Machine Age	mls	Client Info		**384040**	373254	0
Oil Age	mls	Client Info		**12000**	12000	0
Oil Changed		Client Info		**Not Changd**	Not Changd	N/A
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	0.3	<1.0
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**60**	34	11
Chromium	ppm	ASTM D5185m	>20	**3**	2	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**2**	1	2
Lead	ppm	ASTM D5185m	>40	**17**	4	2
Copper	ppm	ASTM D5185m	>330	**87**	10	<1
Tin	ppm	ASTM D5185m	>15	**<1**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	---	---
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		**6**	3	9
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**64**	61	60
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**944**	908	922
Calcium	ppm	ASTM D5185m		**1066**	1064	1121
Phosphorus	ppm	ASTM D5185m		**940**	1000	1068
Zinc	ppm	ASTM D5185m		**1248**	1184	1279
Sulfur	ppm	ASTM D5185m		**2405**	2936	3131

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **36**	▲ 29	5
Sodium	ppm	ASTM D5185m		**7**	6	1
Potassium	ppm	ASTM D5185m	>20	**0**	2	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**1.3**	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**12.5**	9.2	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.7**	20.7	19.2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.4**	16.1	15.0
Base Number (BN)	mg KOH/g	ASTM D2896		**7.55**	10.98	8.49

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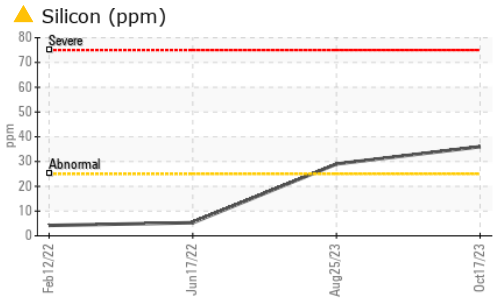
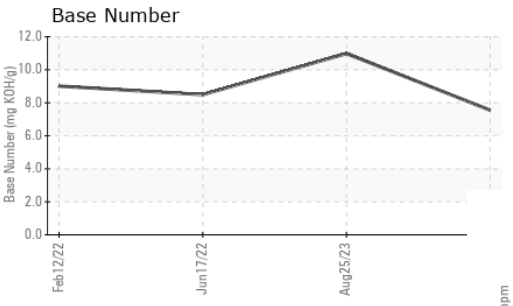
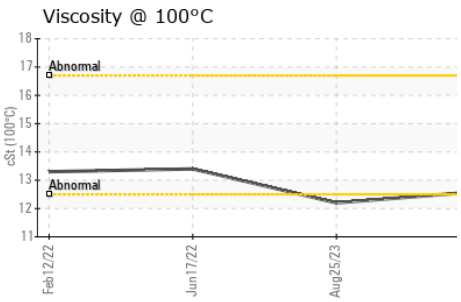


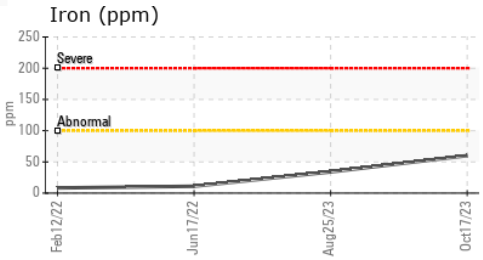


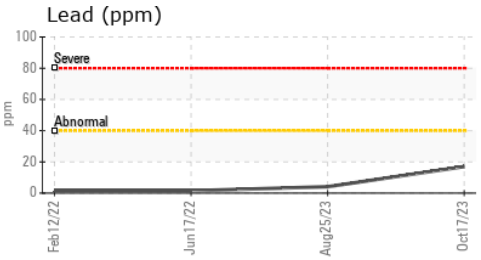


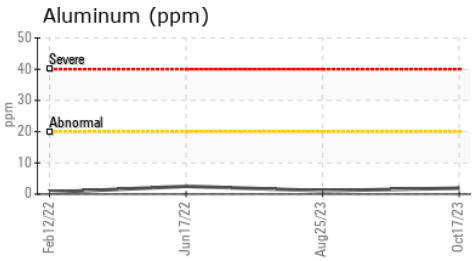
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

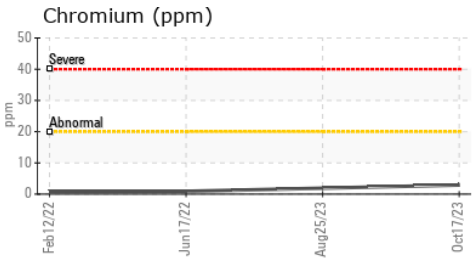
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**12.6**	12.2	13.4

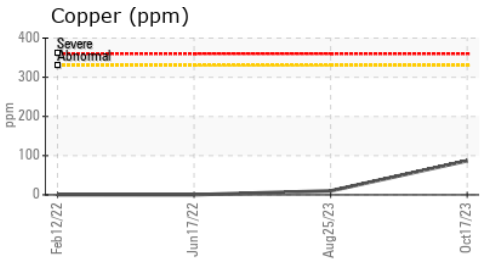
GRAPHS

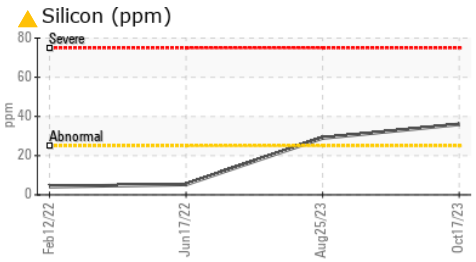


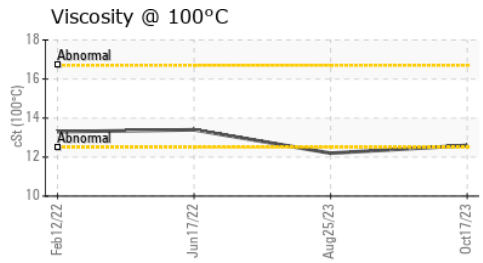


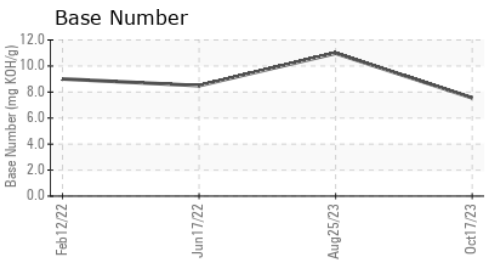












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0090719
Lab Number : 06001773
Unique Number : 10735535
Test Package : MOB 2

Received : 08 Nov 2023
Diagnosed : 10 Nov 2023
Diagnostician : Jonathan Hester

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)

PLYMOUTH & BROCKTON
8 INDUSTRIAL PARK RD
PLYMOUTH, MA
US 02360
Contact: Donald Pelpquin
Dpeloquin@P-B.com
T: (508)732-6039
F: (508)732-6091