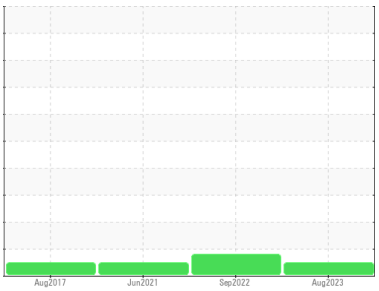
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
PIERCE ENGINE 5
Component
Diesel Engine
Fluid
15W40 LX SUPER S-3 (22 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		**WC0576826**	WC0558983	WC0501984
Sample Date		Client Info		**15 Aug 2023**	01 Sep 2022	24 Jun 2021
Machine Age	hrs	Client Info		**12513**	11577	10666
Oil Age	hrs	Client Info		**936**	740	3581
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	ATTENTION	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	>75	**65**	72	43
Chromium	ppm	ASTM D5185m	>5	**2**	2	1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	<1
Silver	ppm	ASTM D5185m	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>15	**2**	8	4
Lead	ppm	ASTM D5185m	>25	**0**	3	<1
Copper	ppm	ASTM D5185m	>100	**28**	▲ 95	3
Tin	ppm	ASTM D5185m	>4	**0**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	---	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		**2**	4	6
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**61**	57	31
Manganese	ppm	ASTM D5185m		**<1**	1	<1
Magnesium	ppm	ASTM D5185m		**1017**	878	498
Calcium	ppm	ASTM D5185m		**1150**	1072	1851
Phosphorus	ppm	ASTM D5185m		**951**	812	1000
Zinc	ppm	ASTM D5185m		**1284**	1145	1202
Sulfur	ppm	ASTM D5185m		**3113**	2546	3168

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**13**	11	8
Sodium	ppm	ASTM D5185m		**4**	5	3
Potassium	ppm	ASTM D5185m	>20	**0**	<1	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**1**	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	**11.6**	12.4	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.3**	26.2	23.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.8**	22.4	16.4
Base Number (BN)	mg KOH/g	ASTM D2896		**5.8**	7.0	5.56

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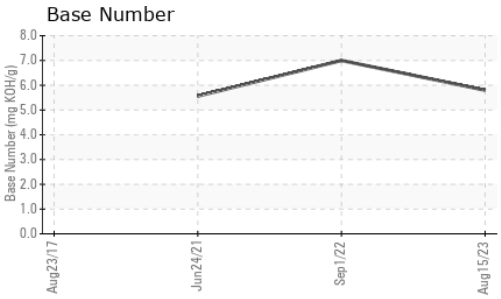
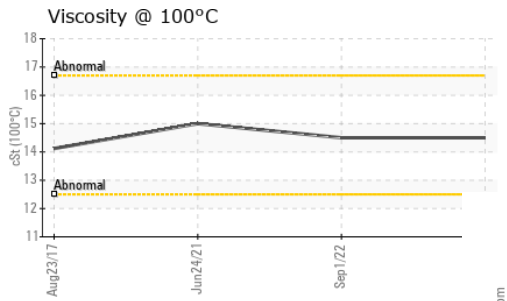
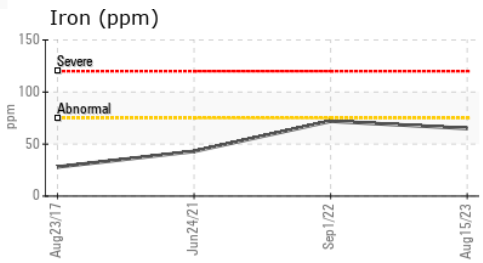


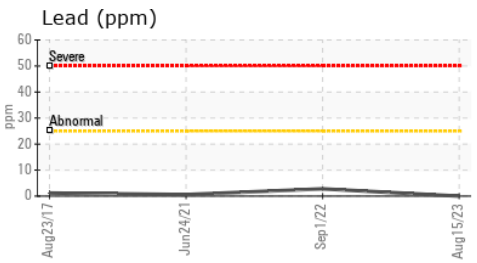


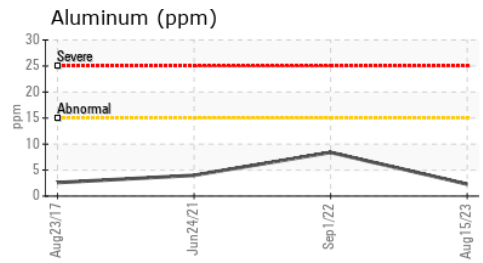
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

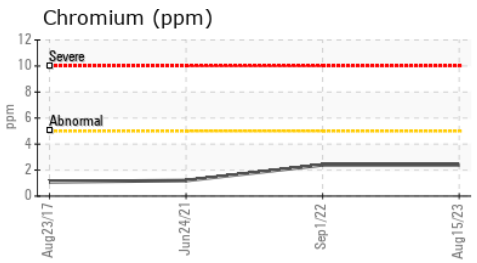
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**14.5**	14.5	15.0

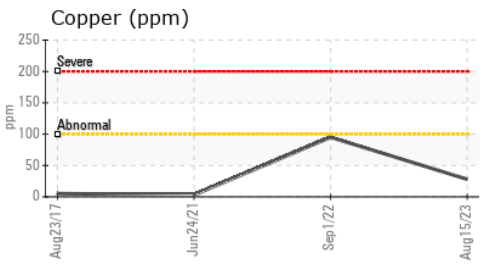
GRAPHS

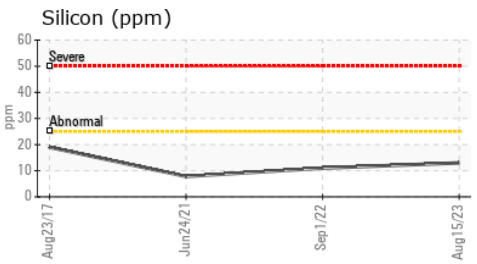


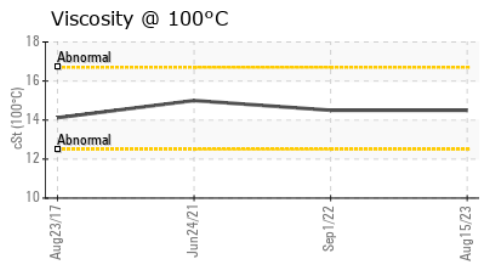


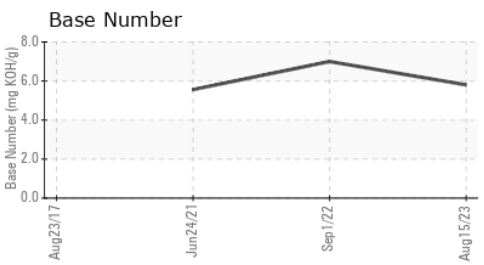












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0576826
Lab Number : 05961634
Unique Number : 10662847
Test Package : MOB 1 (Additional Tests: TBN)

Received : 26 Sep 2023
Diagnosed : 28 Sep 2023
Diagnostician : Wes Davis

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)

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