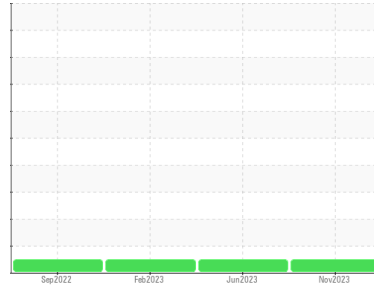




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
MCLAUGHLIN TANK 1
 Component
Quench Oil
 Fluid
TUXTON TECH QUENCH 5209 (4000 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 quenching fluid.

Fluid Condition

The condition of the quenching fluid is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0788787	WC0788796	WC0661355
Sample Date	Client Info			17 Nov 2023	20 Jun 2023	14 Feb 2023
Machine Age	hrs	Client Info		0	14000	0
Oil Age	hrs	Client Info		0	0	11000
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		26	24	15
Chromium	ppm	ASTM D5185m		0	0	<1
Nickel	ppm	ASTM D5185m		1	<1	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		0	1	<1
Lead	ppm	ASTM D5185m		0	<1	0
Copper	ppm	ASTM D5185m		0	0	0
Tin	ppm	ASTM D5185m		0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

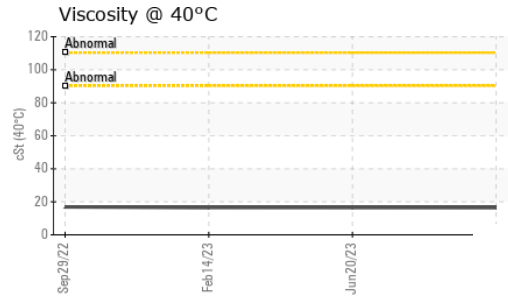
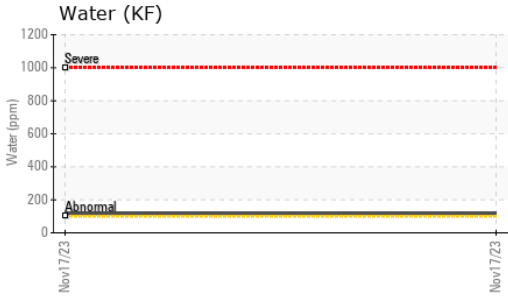
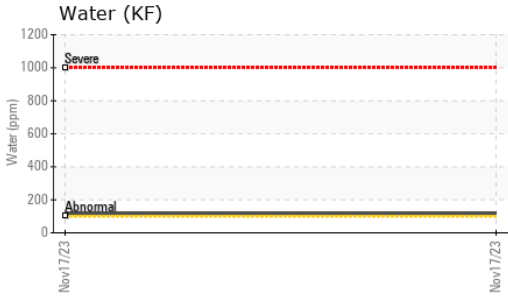
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		4	4	3
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		1	<1	1
Magnesium	ppm	ASTM D5185m		1	3	6
Calcium	ppm	ASTM D5185m		20	16	23
Phosphorus	ppm	ASTM D5185m		3	2	5
Zinc	ppm	ASTM D5185m		26	31	11
Sulfur	ppm	ASTM D5185m		306	328	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		<1	0	2
Sodium	ppm	ASTM D5185m		19	10	8
Potassium	ppm	ASTM D5185m	>20	15	12	4
Water	%	ASTM D6304		0.011	---	---
ppm Water	ppm	ASTM D6304		117	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.39	0.213	0.109



OIL ANALYSIS REPORT



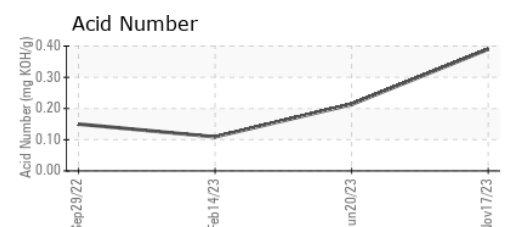
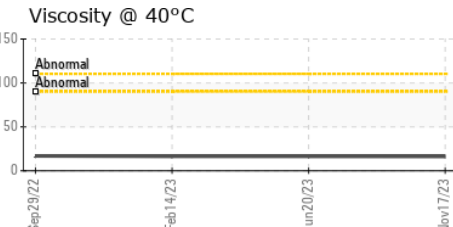
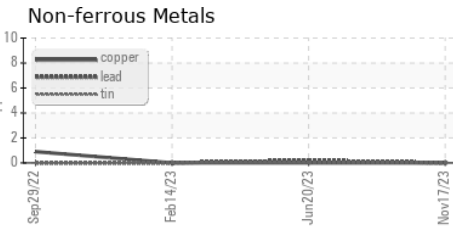
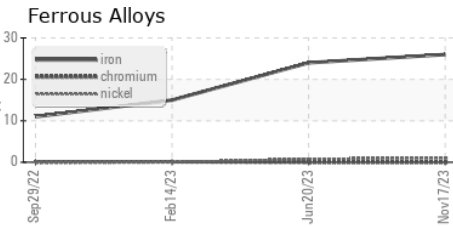
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	16.3	16.4	16.44

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0788787 **Received** : 22 Nov 2023
Lab Number : 06015559 **Diagnosed** : 27 Nov 2023
Unique Number : 10754703 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF)

BODYCOTE HEAT TREATING
 8 DWIGHT PARK DRIVE
 SYRACUSE, NY
 US 13209
 Contact: Service Manager

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)

T:
F: