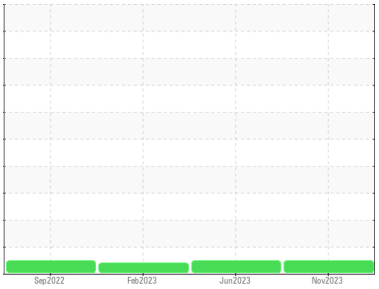
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
MCLAUGHLIN TANK 3
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		**WC0788789**	WC0788799	WC0661357
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	MARGINAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		**27**	29	24
Chromium	ppm	ASTM D5185m		**<1**	0	<1
Nickel	ppm	ASTM D5185m		**2**	1	<1
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		**<1**	<1	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		**5**	5	4
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	<1
Calcium	ppm	ASTM D5185m		**16**	15	7
Phosphorus	ppm	ASTM D5185m		**4**	2	<1
Zinc	ppm	ASTM D5185m		**15**	21	<1
Sulfur	ppm	ASTM D5185m		**289**	331	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		**<1**	0	2
Sodium	ppm	ASTM D5185m		**16**	10	8
Potassium	ppm	ASTM D5185m	>20	**12**	12	5
Water	%	ASTM D6304		**0.013**	---	---
ppm Water	ppm	ASTM D6304		**133**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.40**	0.22	0.463

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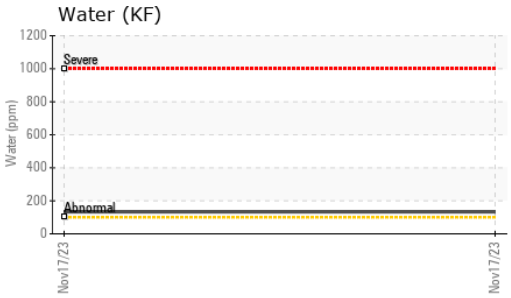
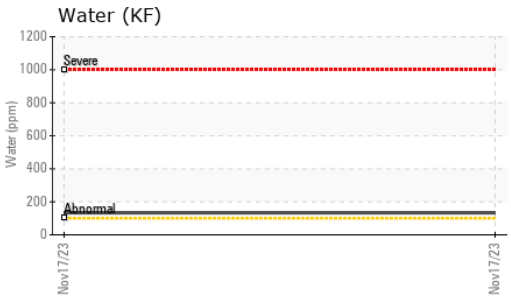
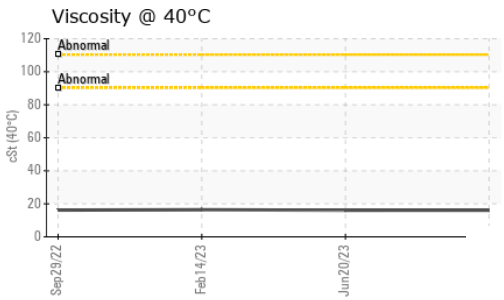
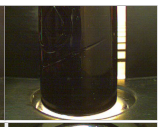
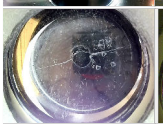
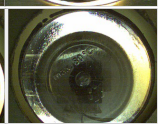




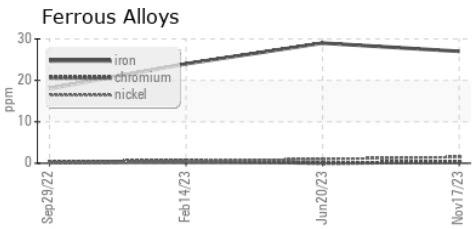


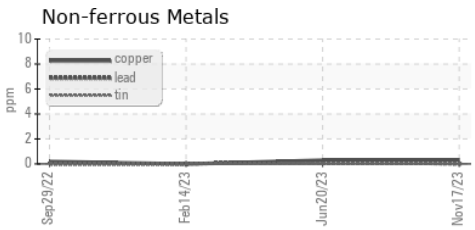
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Sand/Dirt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

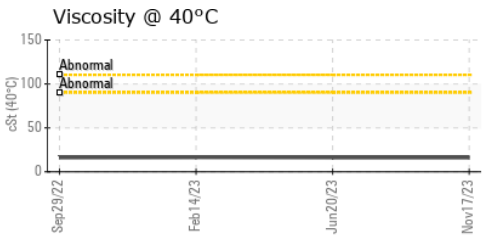
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**16.1**	16.08	16.4

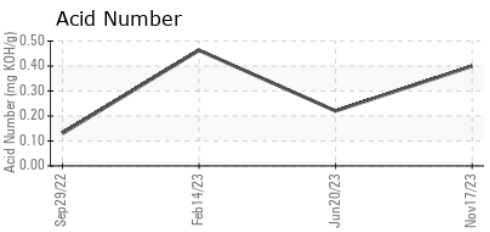
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0788789 **Received** : 22 Nov 2023
Lab Number : 06015558 **Diagnosed** : 27 Nov 2023
Unique Number : 10754702 **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: