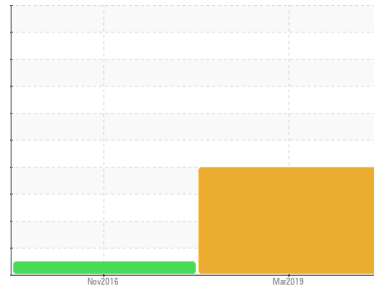


PROBLEM SUMMARY

Sample Rating Trend



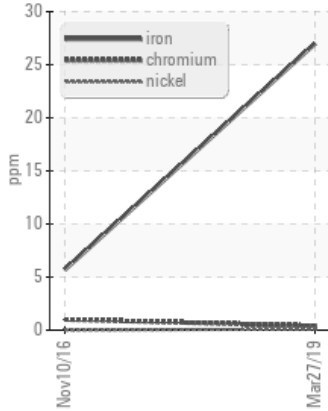
WEAR



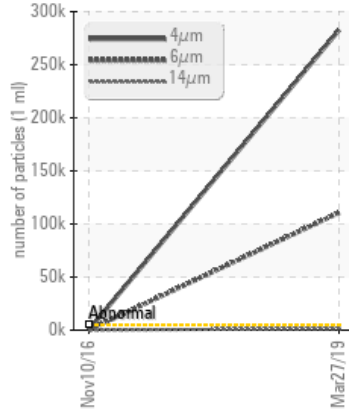
Area
MELT SHOP - CRANES
Machine Id
MELT SHOP E CRANE POWER UNIT (S/N 15-7130-0050)
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- QTS)

COMPONENT CONDITION SUMMARY

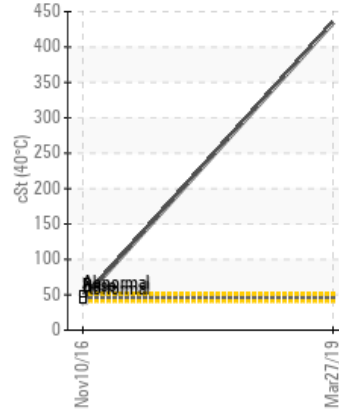
▲ Ferrous Alloys



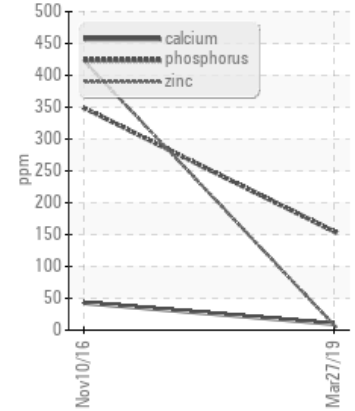
▲ Particle Trend



▲ Viscosity @ 40°C



▲ Additives



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	---
Iron	ppm	ASTM D5185m	>20	▲ 27	6	---
Boron	ppm	ASTM D5185m	5	▲ 17	<1	---
Zinc	ppm	ASTM D5185m	370	▲ 8	423	---
Particles >4µm		ASTM D7647	>5000	▲ 282700	309	---
Particles >6µm		ASTM D7647	>1300	▲ 110587	168	---
Particles >14µm		ASTM D7647	>160	▲ 1413	28	---
Particles >21µm		ASTM D7647	>40	▲ 129	9	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 25/24/18	15/15/12	---
Visc @ 40°C	cSt	ASTM D445	46	▲ 434.4	43.59	---

Customer Id: OUTCALAL
Sample No.: RP194542
Lab Number: 04683961
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

10 Nov 2016 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system is acceptable. There is no indication of any contamination in the component. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

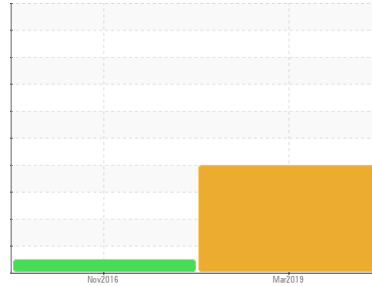
view report



OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Area
MELT SHOP - CRANES
 Machine Id
MELT SHOP E CRANE POWER UNIT (S/N 15-7130-0050)
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 46 (--- QTS)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

▲ Wear

The iron level is abnormal.

▲ Contamination

There is a high amount of particulates present in the oil.

▲ Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within ISO 460 range, advise investigate. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			RP194542	RP176370	---
Sample Date	Client Info			27 Mar 2019	10 Nov 2016	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		0	0	---
Oil Changed	Client Info			N/A	N/A	---
Sample Status				ABNORMAL	NORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	▲ 27	6	---
Chromium	ppm	ASTM D5185m	>20	<1	1	---
Nickel	ppm	ASTM D5185m	>20	<1	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m		0	<1	---
Aluminum	ppm	ASTM D5185m	>20	<1	<1	---
Lead	ppm	ASTM D5185m	>20	0	1	---
Copper	ppm	ASTM D5185m	>20	<1	3	---
Tin	ppm	ASTM D5185m	>20	0	0	---
Antimony	ppm	ASTM D5185m		1	6	---
Vanadium	ppm	ASTM D5185m		<1	0	---
Cadmium	ppm	ASTM D5185m		<1	0	---

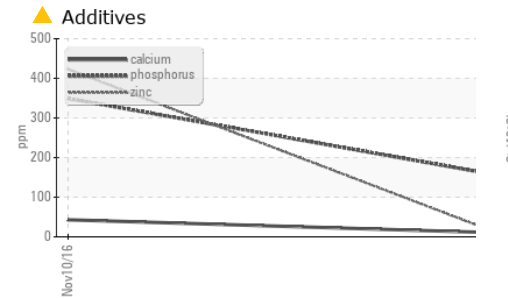
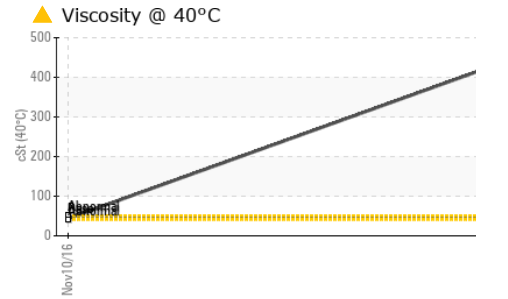
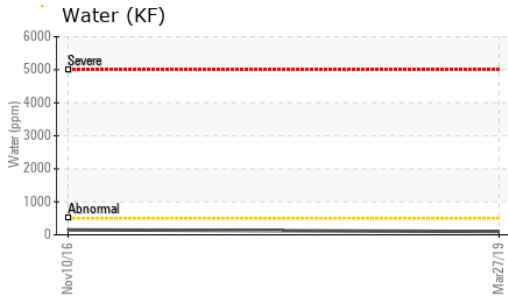
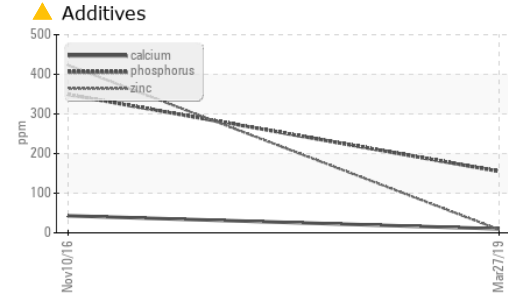
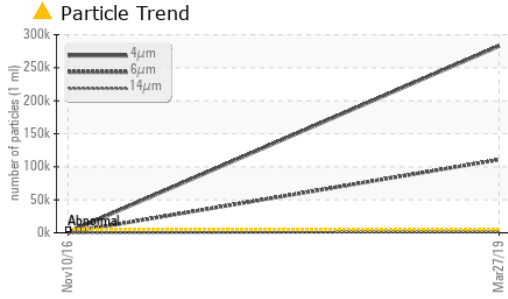
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	▲ 17	<1	---
Barium	ppm	ASTM D5185m	5	<1	0	---
Molybdenum	ppm	ASTM D5185m	5	3	2	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m	25	3	<1	---
Calcium	ppm	ASTM D5185m	200	10	43	---
Phosphorus	ppm	ASTM D5185m	300	155	349	---
Zinc	ppm	ASTM D5185m	370	▲ 8	423	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	3	0	---
Sodium	ppm	ASTM D5185m		2	<1	---
Potassium	ppm	ASTM D5185m	>20	5	7	---
Water	%	ASTM D6304	>0.05	0.010	0.015	---
ppm Water	ppm	ASTM D6304	>500	100	150	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ 282700	309	---
Particles >6µm		ASTM D7647	>1300	▲ 110587	168	---
Particles >14µm		ASTM D7647	>160	▲ 1413	28	---
Particles >21µm		ASTM D7647	>40	▲ 129	9	---
Particles >38µm		ASTM D7647	>10	2	1	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 25/24/18	15/15/12	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.592	0.471	---

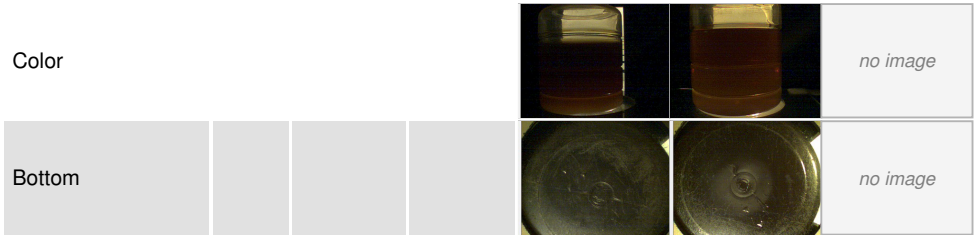
OIL ANALYSIS REPORT



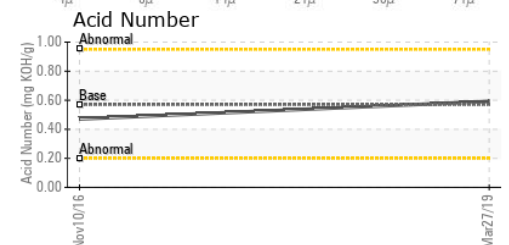
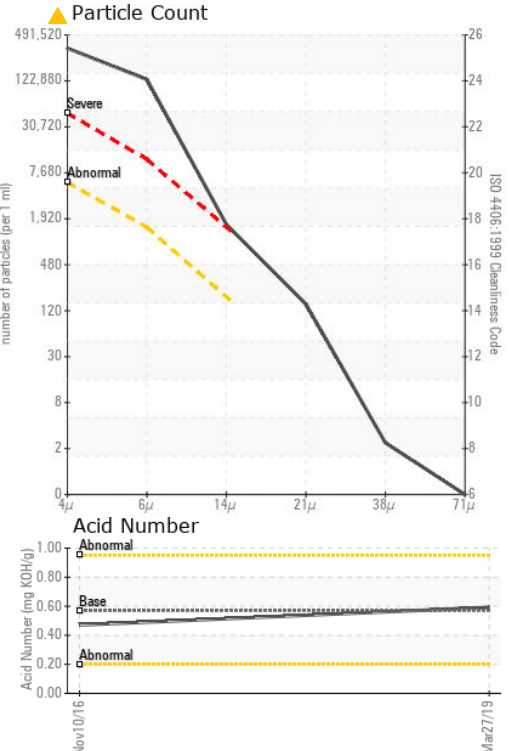
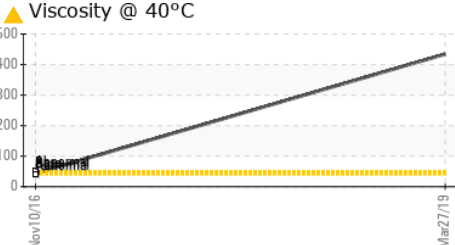
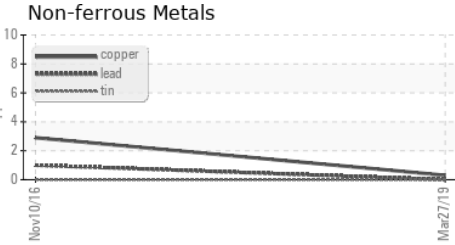
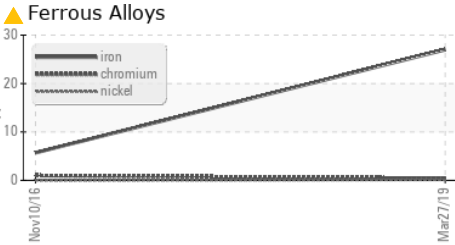
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 46	▲ 434.4	43.59	---

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. : RP194542 **Received** : 03 Apr 2019
Lab Number : 04683961 **Diagnosed** : 05 Apr 2019
Unique Number : 8550477 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: PQ)

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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