

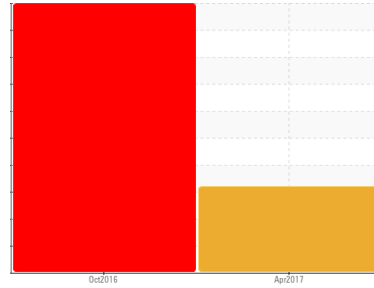


OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION

Area
DEX [DEX SAMPLE-18-17-6]
 Machine Id
A48E41 - A9 CRYSTALLIZER
 Component
Gearbox
 Fluid
CHEMTOOL WORM GEAR 680 (15 GAL)



DIAGNOSIS

Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Wear

Bearing and/or gear wear is indicated.

Contamination

There is no indication of any contamination in the component.

Fluid Condition

The oil viscosity is higher than normal. The AN level is at the top-end of the recommended limit.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WCI2316994	WCI2306815	---
Sample Date	Client Info			27 Apr 2017	19 Oct 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	SEVERE	---

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	NEG	NEG	---

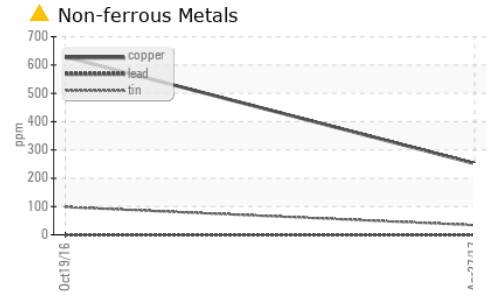
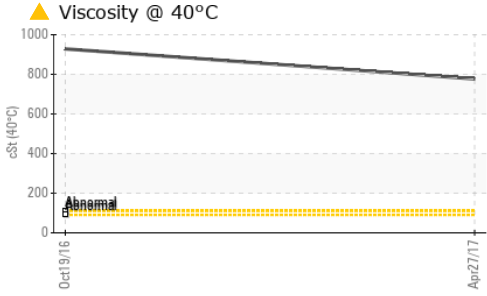
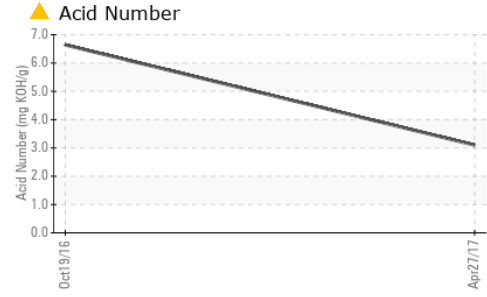
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	101	▲ 442	---
Chromium	ppm	ASTM D5185m	>15	<1	5	---
Nickel	ppm	ASTM D5185m	>15	4	14	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>25	0	<1	---
Lead	ppm	ASTM D5185m	>100	0	0	---
Copper	ppm	ASTM D5185m	>200	▲ 252	▲ 629	---
Tin	ppm	ASTM D5185m	>25	▲ 34	▲ 98	---
Antimony	ppm	ASTM D5185m		0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<1	<1	---
Barium	ppm	ASTM D5185m		<1	0	---
Molybdenum	ppm	ASTM D5185m		0	0	---
Manganese	ppm	ASTM D5185m		<1	2	---
Magnesium	ppm	ASTM D5185m		0	<1	---
Calcium	ppm	ASTM D5185m		2	26	---
Phosphorus	ppm	ASTM D5185m		58	2	---
Zinc	ppm	ASTM D5185m		2	11	---
Sulfur	ppm	ASTM D5185m		2590	2784	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	3	▲ 82	---
Sodium	ppm	ASTM D5185m		<1	<1	---
Potassium	ppm	ASTM D5185m	>20	<1	1	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ 3.100	▲ 6.64	---

OIL ANALYSIS REPORT



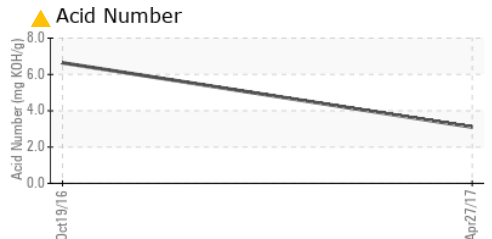
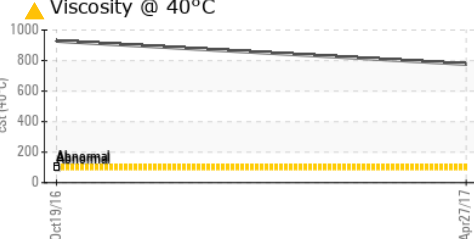
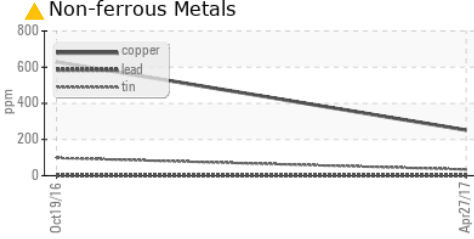
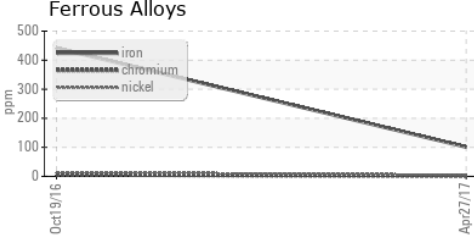
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	MODER	▲ HEAVY
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	▲ 777.0	▲ 928.5	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color		no image
Bottom		no image

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC12316994 **Received** : 04 May 2017
Lab Number : **04215720** **Tested** : 09 May 2017
Unique Number : 7784147 **Diagnosed** : 09 May 2017 - Doug Bogart
Test Package : IND 2

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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)