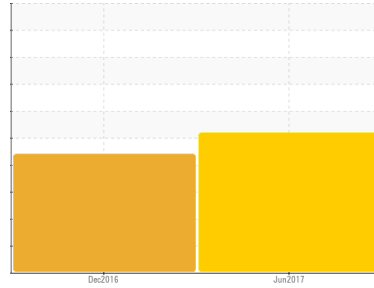




OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL



Area
DEX [DEX-SAMPLE-24-17-80]
 Machine Id
A48E90 D-20 CRYSTALIZER
 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. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear

High concentration of visible metal present. 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. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WCI2312468	WCI2303113	---
Sample Date	Client Info		07 Jun 2017	01 Dec 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	ABNORMAL	---

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	▲ 184	▲ 213	---
Chromium	ppm	ASTM D5185m >15	2	2	---
Nickel	ppm	ASTM D5185m >15	6	7	---
Titanium	ppm	ASTM D5185m	0	0	---
Silver	ppm	ASTM D5185m	0	0	---
Aluminum	ppm	ASTM D5185m >25	<1	<1	---
Lead	ppm	ASTM D5185m >100	<1	<1	---
Copper	ppm	ASTM D5185m >200	▲ 249	▲ 301	---
Tin	ppm	ASTM D5185m >25	▲ 36	▲ 42	---
Antimony	ppm	ASTM D5185m	4	3	---
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	3	4	---
Manganese	ppm	ASTM D5185m	1	2	---
Magnesium	ppm	ASTM D5185m	<1	<1	---
Calcium	ppm	ASTM D5185m	10	7	---
Phosphorus	ppm	ASTM D5185m	14	6	---
Zinc	ppm	ASTM D5185m	2	1	---
Sulfur	ppm	ASTM D5185m	2013	2422	---

CONTAMINANTS

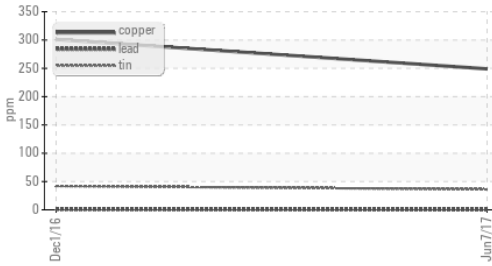
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	19	31	---
Sodium	ppm	ASTM D5185m	<1	<1	---
Potassium	ppm	ASTM D5185m >20	2	5	---

FLUID DEGRADATION

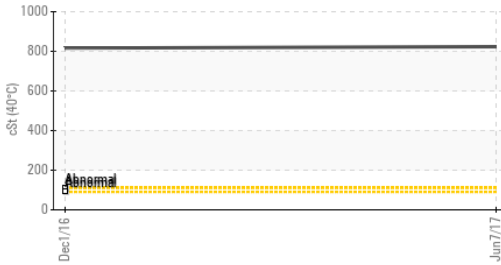
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	▲ 3.324	▲ 5.19	---

OIL ANALYSIS REPORT

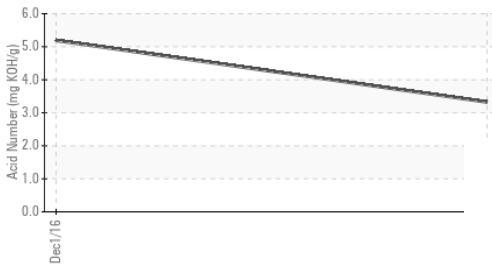
▲ Non-ferrous Metals



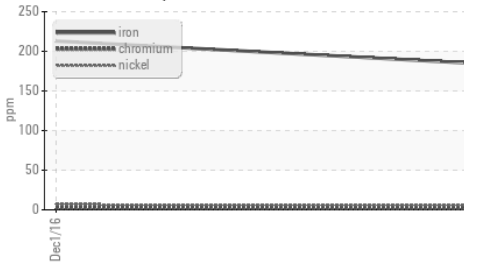
▲ Viscosity @ 40°C



▲ Acid Number



▲ Ferrous Alloys



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	▲ HEAVY	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
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	0.2%
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	▲ 823.4	▲ 816.4	---

SAMPLE IMAGES

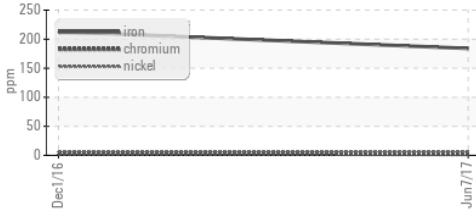
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

no image

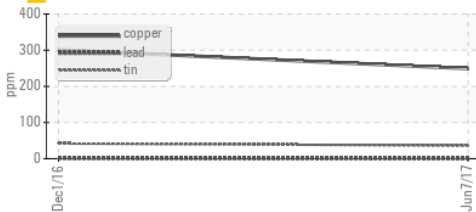
no image

GRAPHS

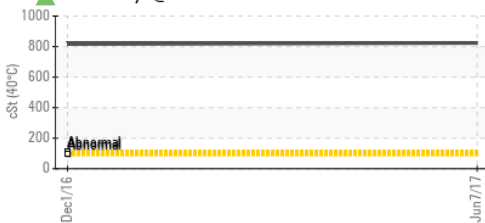
▲ Ferrous Alloys



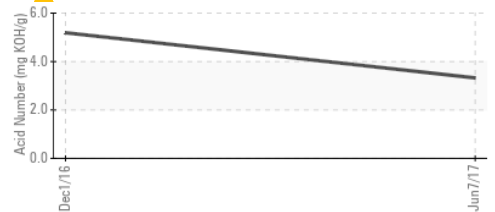
▲ Non-ferrous Metals



▲ Viscosity @ 40°C



▲ Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC12312468 **Received** : 15 Jun 2017
Lab Number : **04243473** **Diagnosed** : 22 Jun 2017
Unique Number : 7831908 **Diagnostician** : Doug Bogart
Test Package : IND 2

INGREDION - BEDFORD PARK
 6400 SOUTH ARCHER ROAD
 BEDFORD PARK, IL
 US 60501
 Contact: Ricardo Gutierrez
 Ricardo.Gutierrez@ingredion.com
 T: (219)805-1307
 F:

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)