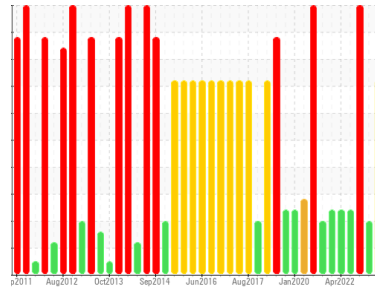


PROBLEM SUMMARY

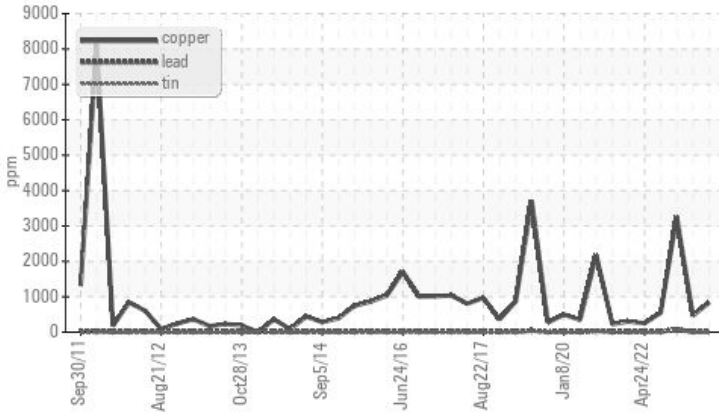
Area
UTL
Machine Id
UTL - PRI CLAR LEFT WORM GEAR (S/N 79031933)
Component
Gearbox
Fluid
SHELL OMALA 680 (--- GAL)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

Non-ferrous Metals



RECOMMENDATION

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to metal particles present in this sample.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	SEVERE
Copper	ppm	ASTM D5185m	>200	835	467	3261
White Metal	scalar	*Visual	NONE	MODER	NONE	NONE

Customer Id: KIMMOBUTL
Sample No.: RP0023535
Lab Number: 05937841
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldrige +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	We were unable to perform a particle count due to metal particles present in this sample.

HISTORICAL DIAGNOSIS

04 Jun 2023 Diag: Don Baldrige

VISUAL METAL



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to metal particles present in this sample. The copper level has decreased, but is still abnormal. Moderate concentration of visible metal present. All other component wear rates are normal. No other contaminants were detected in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report



02 Mar 2023 Diag: Angela Borella

WEAR



Please confirm the lubricant listed in this report is the correct lubricant for replenishment of this system and is suggested by the OEM or overhaul facility. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. Bearing wear is indicated. Moderate concentration of visible metal present. Possible source is the EP additives chemically attacking the gears. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report



25 Jan 2023 Diag: Don Baldrige

VISUAL METAL



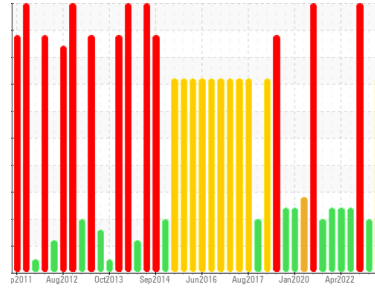
Please confirm the lubricant listed in this report is the correct lubricant for replenishment of this system and is suggested by the OEM or overhaul facility. Resample at the next service interval to monitor. Visible metal present. The copper level is abnormal. Possible source of copper is the EP additive chemically reacting to the yellow metal. All other component wear rates are normal. No other contaminants were detected in the oil. The oil viscosity is lower than normal. The AN level is acceptable for this fluid.

view report



OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
UTL
Machine Id
UTL - PRI CLAR LEFT WORM GEAR (S/N 79031933)
Component
Gearbox
Fluid
SHELL OMALA 680 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to metal particles present in this sample.

Wear

Bearing and/or bushing wear is indicated. Moderate concentration of visible metal present.

Contamination

No other contaminants were detected in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		RP0023535	RP0023561	RP0006308
Sample Date	Client Info		28 Aug 2023	04 Jun 2023	02 Mar 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	ABNORMAL	SEVERE

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		69	84	313
Iron	ppm	ASTM D5185m >200	50	54	245
Chromium	ppm	ASTM D5185m >15	<1	<1	2
Nickel	ppm	ASTM D5185m >15	<1	<1	2
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	24	11	84
Lead	ppm	ASTM D5185m >100	12	8	76
Copper	ppm	ASTM D5185m >200	835	467	3261
Tin	ppm	ASTM D5185m >25	10	6	42
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	<1
Manganese	ppm	ASTM D5185m	8	5	27
Magnesium	ppm	ASTM D5185m	2	<1	4
Calcium	ppm	ASTM D5185m	<1	<1	0
Phosphorus	ppm	ASTM D5185m 512	231	280	137
Zinc	ppm	ASTM D5185m 3.8	600	367	1853

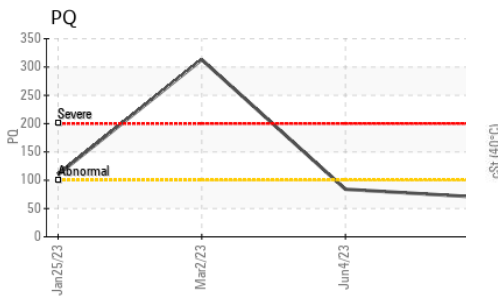
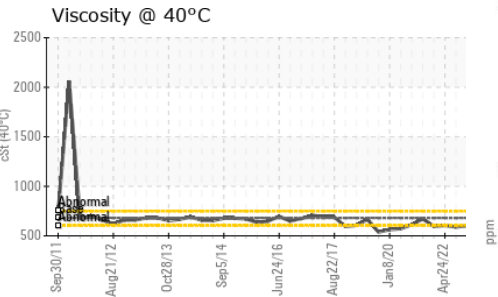
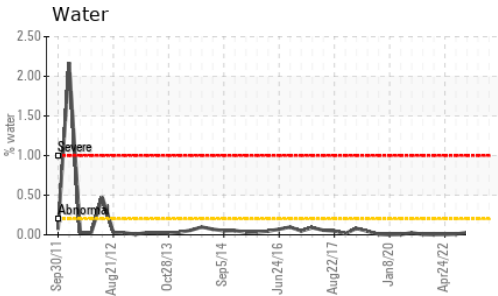
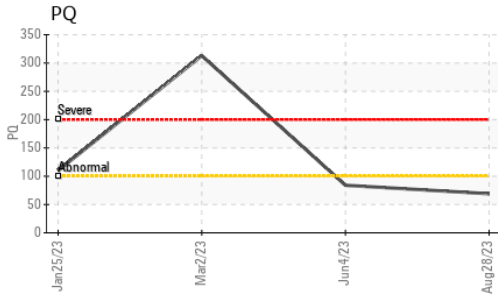
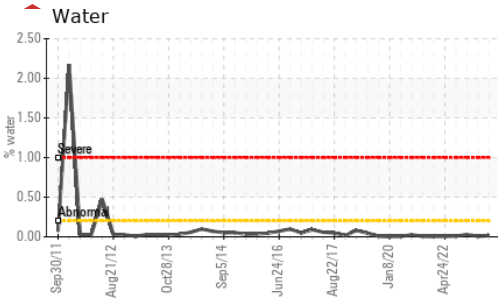
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	8	8	43
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	0	1	0
Water	%	ASTM D6304 >0.2	0.015	0.007	0.028
ppm Water	ppm	ASTM D6304 >2000	152.1	72.4	280.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.29	0.53	0.13

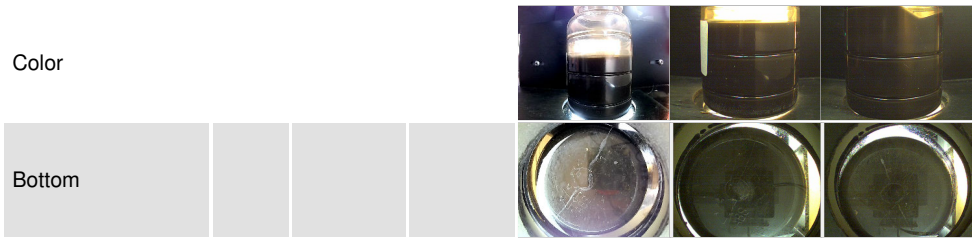
OIL ANALYSIS REPORT



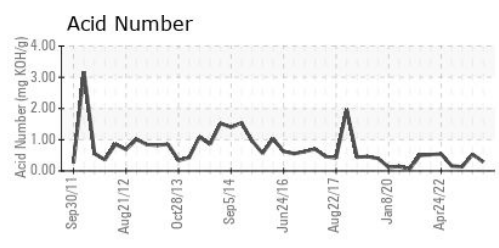
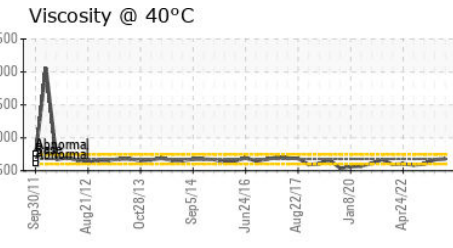
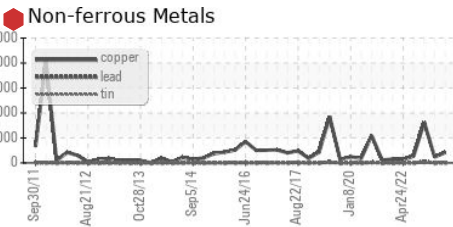
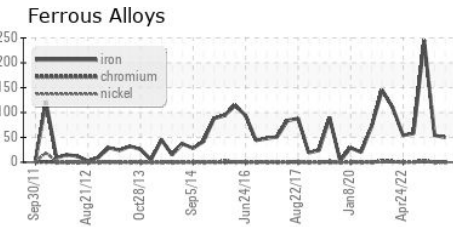
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	▲ MODER	NONE
Yellow Metal	scalar	*Visual	NONE	▲ MODER	▲ MODER
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	▲ MODER	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
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	680	682	669 ▲ 601

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0023535 **Received** : 29 Aug 2023
Lab Number : 05937841 **Diagnosed** : 31 Aug 2023
Unique Number : 10628453 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: PQ, PrtCount)

Kimberly-Clark - Mobile - UTL
 200 BAYBRIDGE RD
 MOBILE, AL
 US 36610
 Contact: RALPH EVANS
 ralph.h.evans@kcc.com
 T: (251)330-2250
 F: (251)452-6335

Certificate L2367
 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)