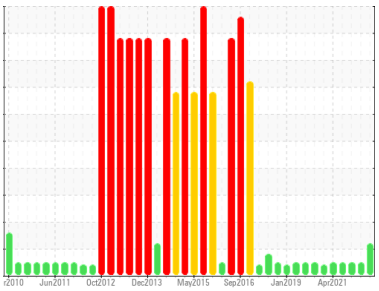
PROBLEM SUMMARY

Sample Rating Trend

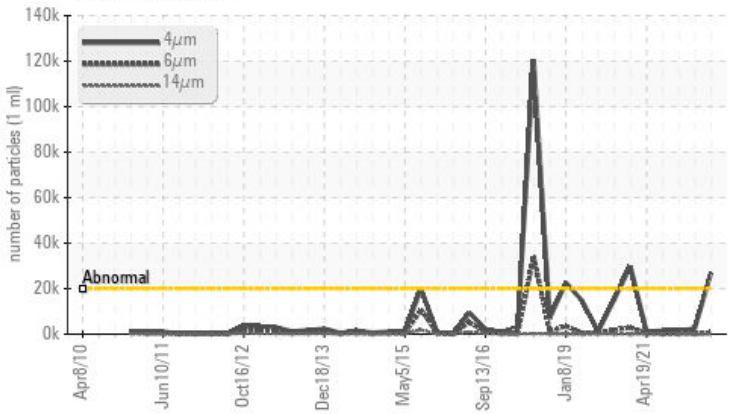


VISCOSITY

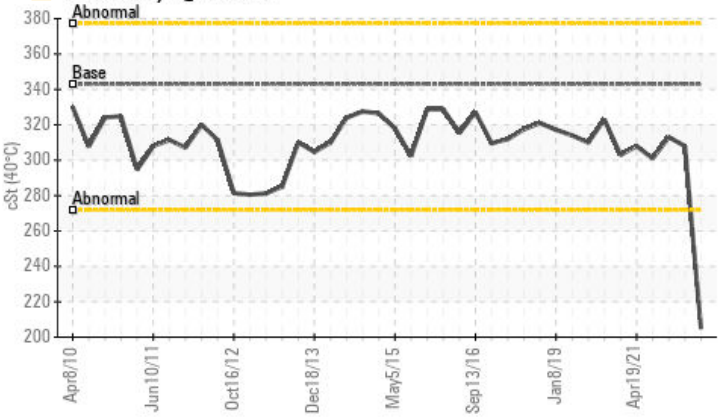
Area
TM 11
Machine Id
TM 11 YANKEE REDUCER
Component
Gearbox
Fluid
ROYAL PURPLE SYNERGY 140/320 (--- GAL)

COMPONENT CONDITION SUMMARY

Particle Trend



Viscosity @ 40°C



RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Particles >4µm		ASTM D7647	>20000	▲ **26895**	2537	1437
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **22/17/12**	19/15/10	18/16/13
Visc @ 40°C	cSt	ASTM D445	343	▲ **204.9**	308	313

Customer Id: KIMMOBTM11
Sample No.: RP0034366
Lab Number: 05994350
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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

05 May 2023 Diag: Don Baldridge

NORMAL

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

view report

30 Mar 2022 Diag: Doug Bogart

NORMAL

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

view report

08 Oct 2021 Diag: Doug Bogart

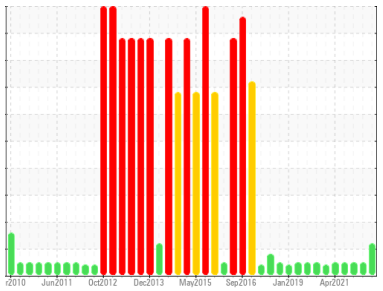
NORMAL

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



VISCOSITY

Area
TM 11
Machine Id
TM 11 YANKEE REDUCER
Component
Gearbox
Fluid
ROYAL PURPLE SYNERGY 140/320 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of silt (particulates < 6 microns in size) present in the oil. The water content is negligible.

Fluid Condition
Viscosity of sample indicates oil is within ISO 220 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**RP0034366**	RP0023579	RP0016697
Sample Date		Client Info		**07 Aug 2023**	05 May 2023	30 Mar 2022
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				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**22**	11	---
Iron	ppm	ASTM D5185m	>200	**21**	3	5
Chromium	ppm	ASTM D5185m	>15	**<1**	0	0
Nickel	ppm	ASTM D5185m	>15	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**<1**	1	2
Lead	ppm	ASTM D5185m	>100	**0**	0	<1
Copper	ppm	ASTM D5185m	>200	**<1**	0	<1
Tin	ppm	ASTM D5185m	>25	**<1**	0	<1
Antimony	ppm	ASTM D5185m	>5	**---**	---	---
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		**27**	22	21
Barium	ppm	ASTM D5185m		**20**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	0	<1
Magnesium	ppm	ASTM D5185m		**0**	0	0
Calcium	ppm	ASTM D5185m		**15**	<1	2
Phosphorus	ppm	ASTM D5185m	200	**380**	453	428
Zinc	ppm	ASTM D5185m		**64**	0	5

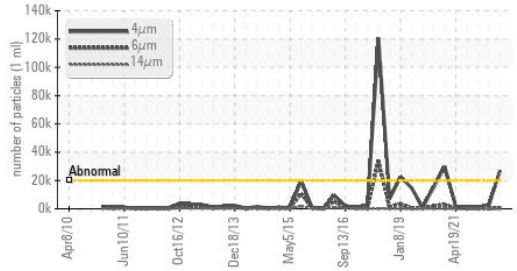
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**28**	4	2
Sodium	ppm	ASTM D5185m		**6**	0	<1
Potassium	ppm	ASTM D5185m	>20	**2**	0	0
Water	%	ASTM D6304	>0.2	**0.014**	0.016	0.013
ppm Water	ppm	ASTM D6304	>2000	**143.2**	161.2	139.7

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **26895**	2537	1437
Particles >6µm		ASTM D7647	>5000	**757**	177	374
Particles >14µm		ASTM D7647	>640	**26**	8	53
Particles >21µm		ASTM D7647	>160	**7**	2	11
Particles >38µm		ASTM D7647	>40	**1**	0	1
Particles >71µm		ASTM D7647	>10	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **22/17/12**	19/15/10	18/16/13

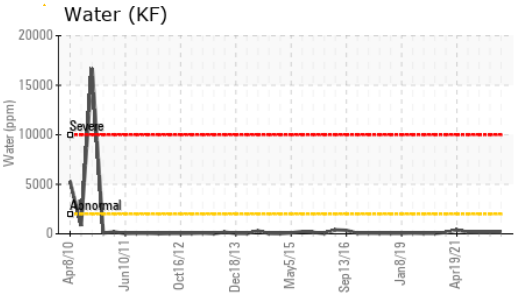
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	**1.41**	1.37	1.14

OIL ANALYSIS REPORT

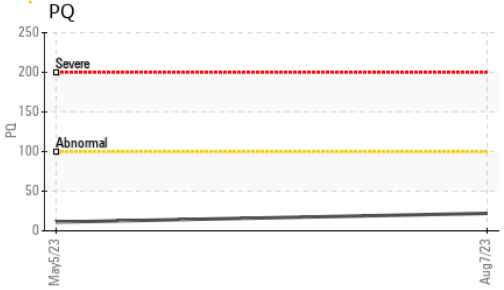
Particle Trend



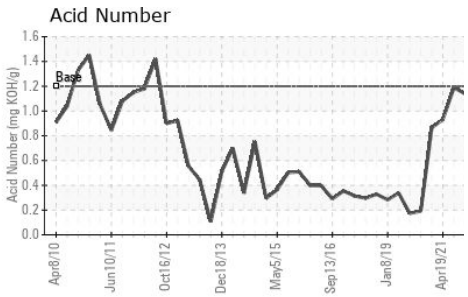
Water (KF)



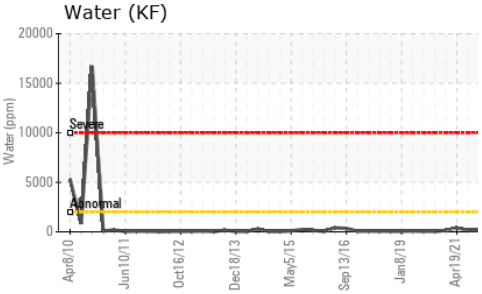
PQ



Acid Number



Water (KF)



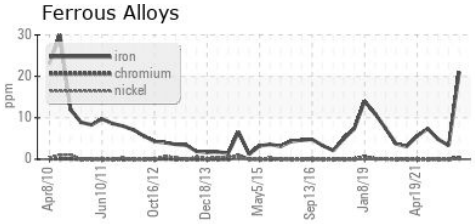
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	343	▲ **204.9**	308	313

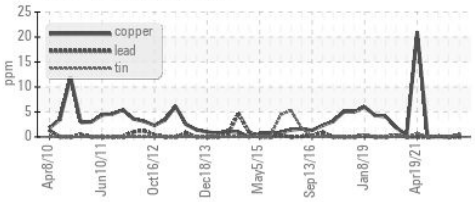
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

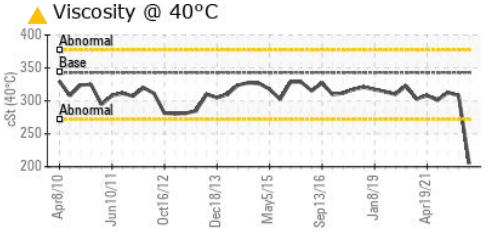
Ferrous Alloys



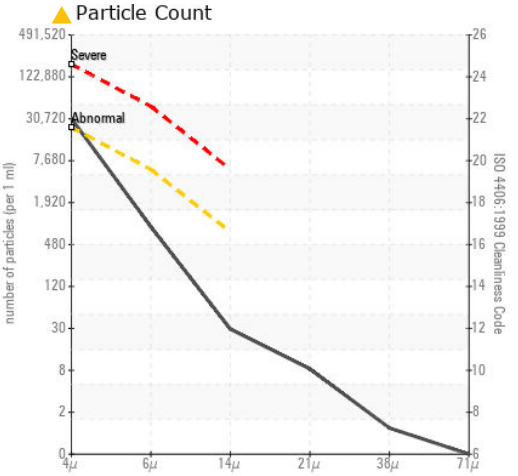
Non-ferrous Metals



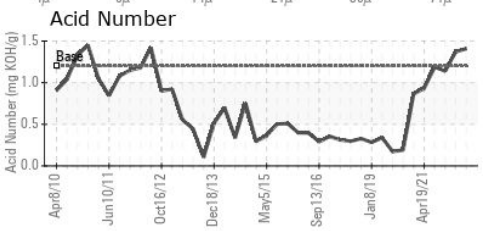
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0034366 **Received** : 31 Oct 2023
Lab Number : 05994350 **Diagnosed** : 08 Nov 2023
Unique Number : 10722710 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: PQ, PrtCount)

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)

Kimberly-Clark - Mobile - TM 11
200 BAYBRIDGE RD
MOBILE, AL
US 36610
Contact: LARRY WEAVER
Larry.D.Weaver@kcc.com
T:
F: (251)452-6335