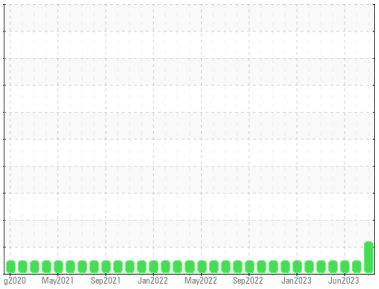
PROBLEM SUMMARY

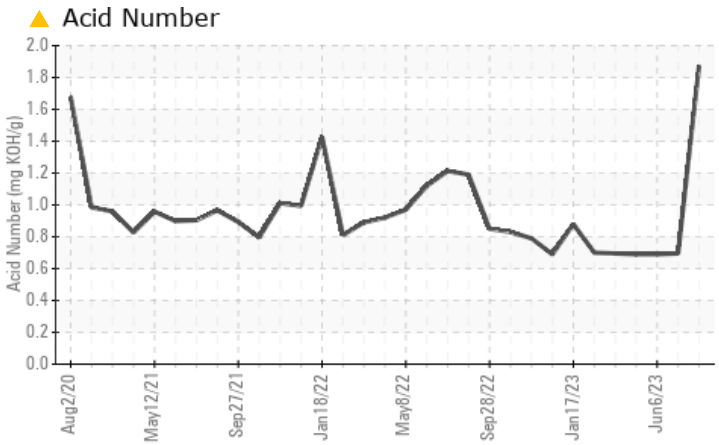
Sample Rating Trend



DEGRADATION

Area
Kenova
Machine Id
[Kenova] Oil - Starboard Reduction Gear
Component
Starboard Reduction Gear
Fluid
Reduction Gear Oil (35 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor. (Customer Sample Comment: Adam Fields)

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ **1.872**	0.695	0.69

Customer Id: MARCAT
Sample No.: WC0719054
Lab Number: 05960712
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
Service/change Fluid	---	---	?	The oil is near the end of it's useful service life, recommend schedule an oil change.

HISTORICAL DIAGNOSIS

30 Jul 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

06 Jun 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

11 Apr 2023 Diag: Don Baldridge

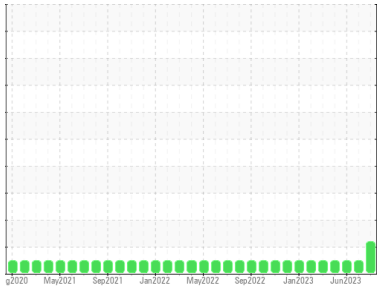
NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the 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



DEGRADATION

Area
Kenova
Machine Id
[Kenova] Oil - Starboard Reduction Gear
Component
Starboard Reduction Gear
Fluid
Reduction Gear Oil (35 GAL)

DIAGNOSIS

Recommendation

The oil is near the end of it`s useful service life, recommend schedule an oil change. Resample at the next service interval to monitor. (Customer Sample Comment: Adam Fields)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The AN level is at the top-end of the recommended limit.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0719054**	WC0719058	WC0735169
Sample Date		Client Info		**30 Aug 2023**	30 Jul 2023	06 Jun 2023
Machine Age	hrs	Client Info		**36527**	35936	34985
Oil Age	hrs	Client Info		**10708**	10118	9168
Oil Changed		Client Info		**N/A**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	NORMAL	NORMAL

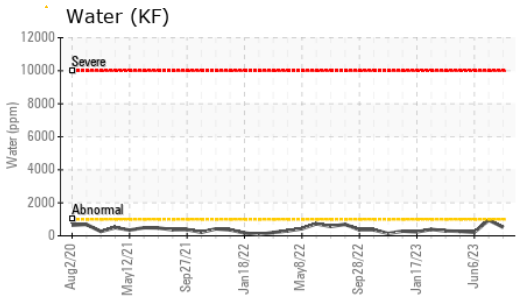
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	**22**	17	18
Chromium	ppm	ASTM D5185m	>10	**<1**	0	0
Nickel	ppm	ASTM D5185m	>10	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m		**<1**	<1	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	2	<1
Lead	ppm	ASTM D5185m	>100	**0**	<1	<1
Copper	ppm	ASTM D5185m	>50	**4**	4	2
Tin	ppm	ASTM D5185m	>10	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

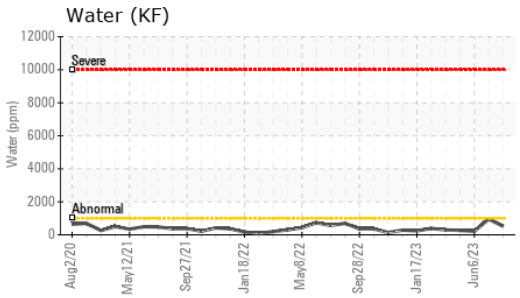
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**14**	14	12
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**22**	23	21
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m		**221**	216	224
Calcium	ppm	ASTM D5185m		**3570**	3672	3518
Phosphorus	ppm	ASTM D5185m		**923**	936	900
Zinc	ppm	ASTM D5185m		**1019**	1070	1033
Sulfur	ppm	ASTM D5185m		**10522**	9586	10297

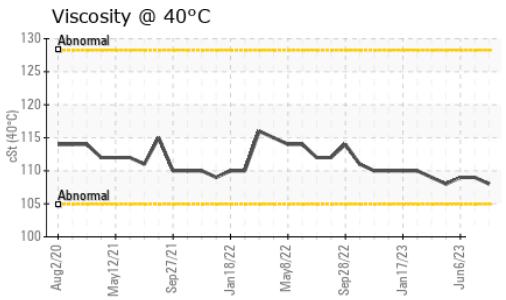
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**5**	4	4
Sodium	ppm	ASTM D5185m		**6**	0	3
Potassium	ppm	ASTM D5185m	>20	**1**	1	<1
Water	%	ASTM D6304	>0.1	**0.051**	0.095	0.021
ppm Water	ppm	ASTM D6304	>1000	**519.0**	952.8	218.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.872**	0.695	0.69

OIL ANALYSIS REPORT

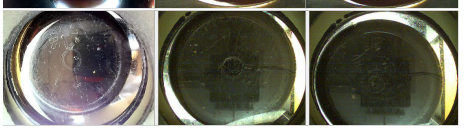




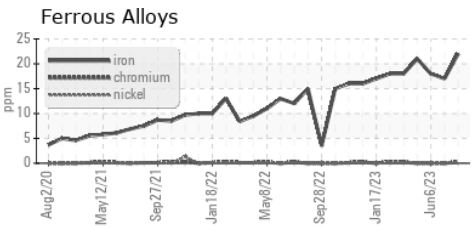


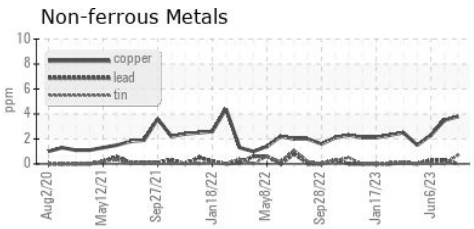
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

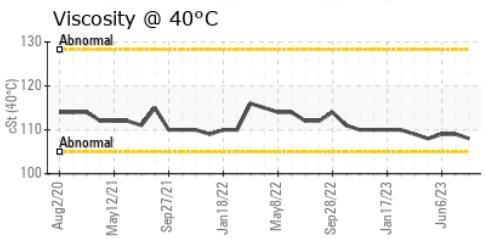
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**108**	109	109

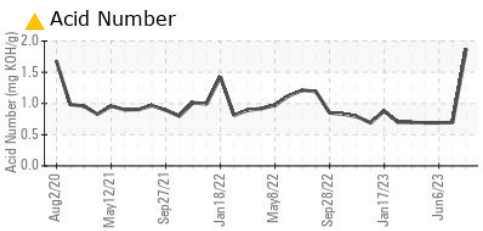
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0719054 **Received** : 25 Sep 2023
Lab Number : 05960712 **Diagnosed** : 29 Sep 2023
Unique Number : 10661925 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF)

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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Report Id: MARCAT [WUSCAR] 05960712 (Generated: 09/29/2023 10:52:21) Rev: 1

Submitted By: M/V KENOVA