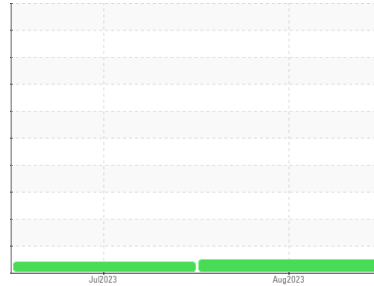




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
OCEAN NAVIGATOR
 Machine Id
[OCEAN NAVIGATOR] OCEAN NAVIGATOR - SHAFT
 Component
Bearing
 Fluid
FUCHS RENOLIN AW ISO 68 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0824512	WC0667217	---
Sample Date	Client Info		16 Aug 2023	25 Jul 2023	---
Machine Age	hrs	Client Info	0	0	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			NORMAL	ABNORMAL	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	13	12	---
Chromium	ppm	ASTM D5185m >5	<1	0	---
Nickel	ppm	ASTM D5185m >5	0	0	---
Titanium	ppm	ASTM D5185m >5	<1	<1	---
Silver	ppm	ASTM D5185m	0	0	---
Aluminum	ppm	ASTM D5185m >25	0	0	---
Lead	ppm	ASTM D5185m >50	0	0	---
Copper	ppm	ASTM D5185m >150	0	<1	---
Tin	ppm	ASTM D5185m >10	<1	0	---
Vanadium	ppm	ASTM D5185m	<1	0	---
Cadmium	ppm	ASTM D5185m	<1	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	0	0	---
Manganese	ppm	ASTM D5185m	<1	<1	---
Magnesium	ppm	ASTM D5185m	1	0	---
Calcium	ppm	ASTM D5185m	89	106	---
Phosphorus	ppm	ASTM D5185m	580	667	---
Zinc	ppm	ASTM D5185m	3	0	---
Sulfur	ppm	ASTM D5185m	556	985	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	2	<1	---
Sodium	ppm	ASTM D5185m	1	1	---
Potassium	ppm	ASTM D5185m >20	2	0	---

FLUID DEGRADATION

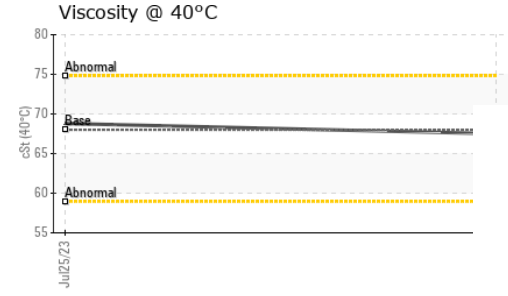
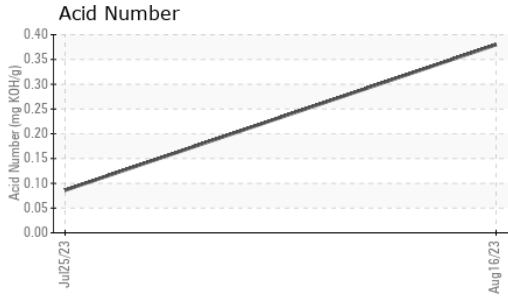
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.38	0.086	---

VISUAL

	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	NONE	NONE	---
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 >0.1	NEG	NEG	---
Free Water	scalar	*Visual	NEG	NEG	---



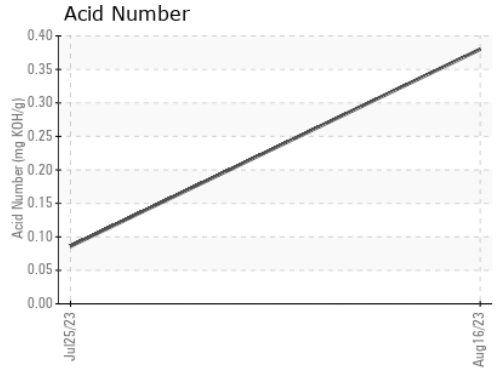
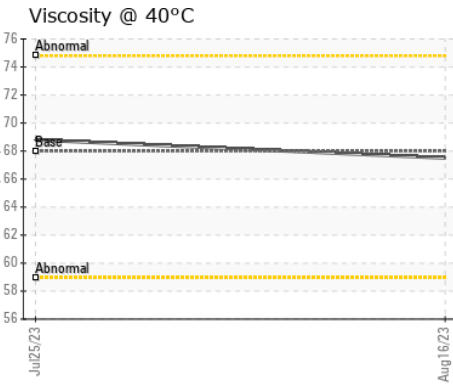
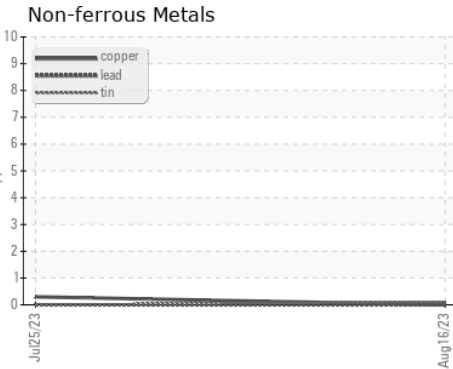
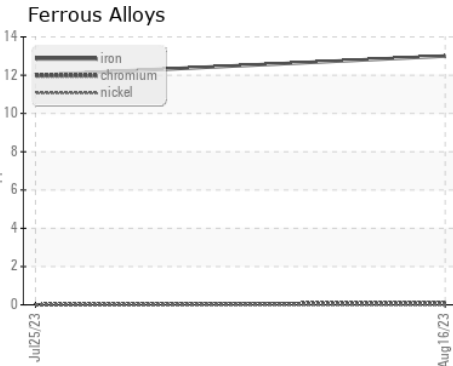
OIL ANALYSIS REPORT



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68	67.5	68.8	---

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0824512 **Received** : 16 Aug 2023
Lab Number : 05926808 **Diagnosed** : 18 Aug 2023
Unique Number : 10606755 **Diagnostician** : Don Baldrige
Test Package : MAR 2

American Queen Voyages - Oceans
 1201 Bridgeport Drive
 Jeffersonville, IN
 US 47130
 Contact: Dietrich Giles
 DIETRICH.GILES@AQVOYAGES.COM
 T: (228)591-6239
 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)