



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**STEERING SIGNET VOLUNTEER**  
Component  
**Starboard Hydraulic System**  
Fluid  
**AW HYDRAULIC OIL ISO 46 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0064104</b>	MW0064061	---
Sample Date		Client Info		<b>11 Apr 2024</b>	14 Dec 2023	---
Machine Age	hrs	Client Info		<b>0</b>	0	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	N/A	---
Filter Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>0</b>	0	---
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m		<b>0</b>	0	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	---
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

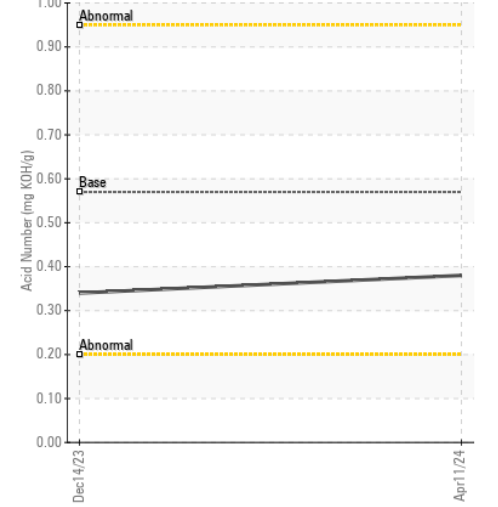
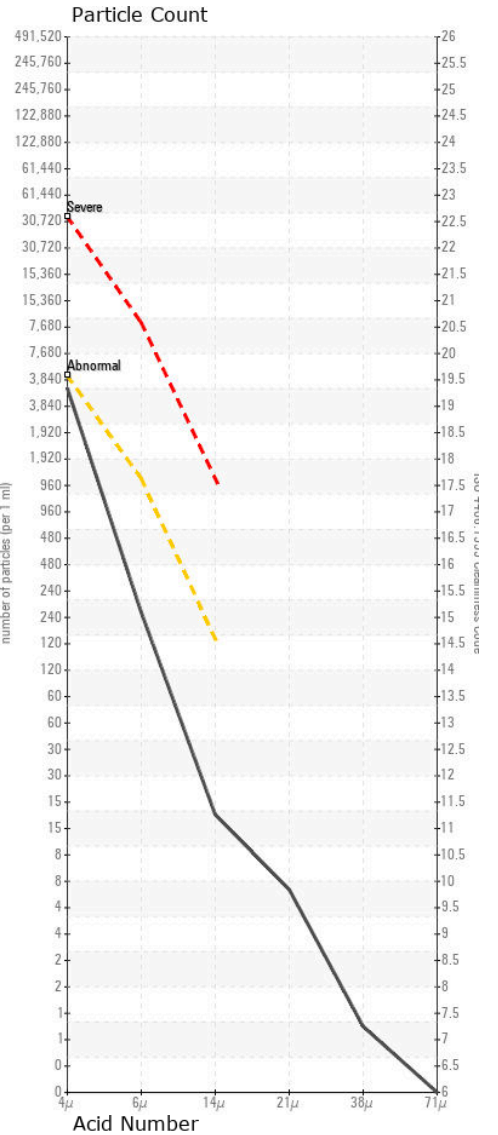
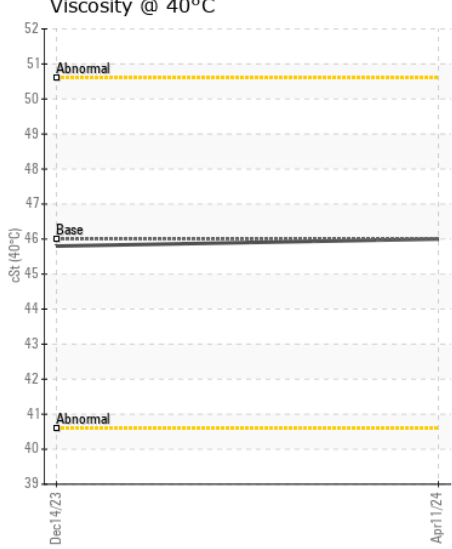
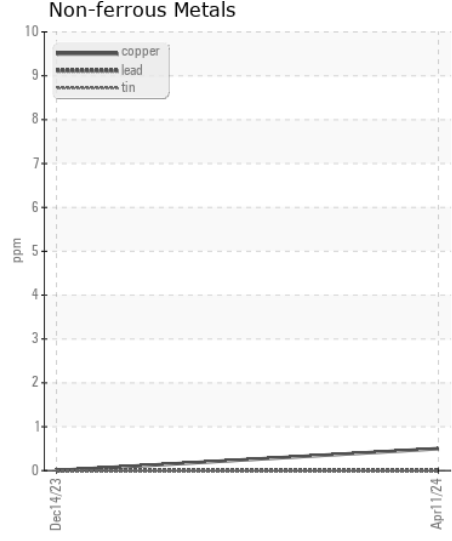
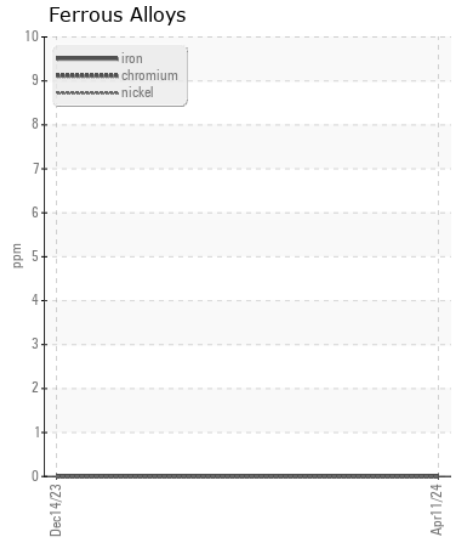
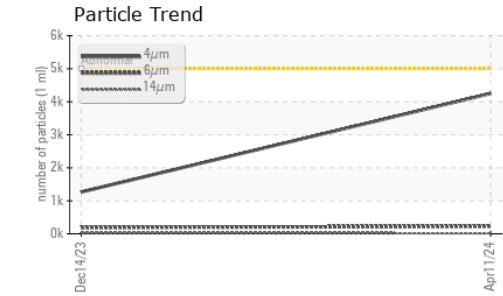
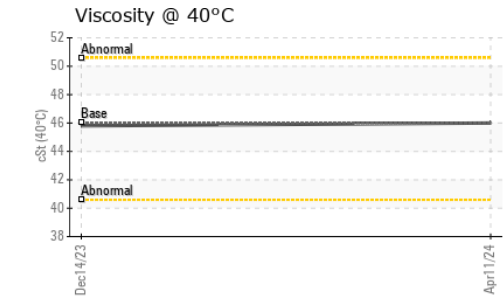
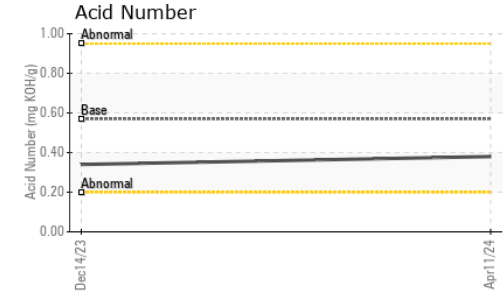
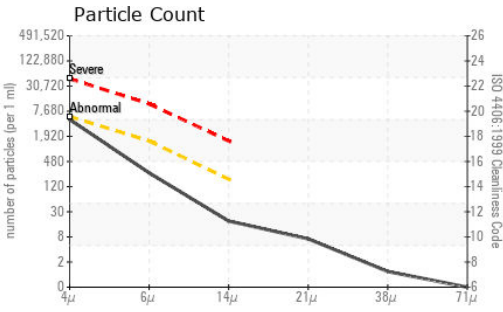
The system cleanliness is acceptable for your target SAE AS4059 (replaces NAS 1638) cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>15	<b>0</b>	0	---
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	---
Water		WC Method	>0.05	<b>NEG</b>	NEG	---
Particles >4µm		ASTM D7647	>5000	<b>4250</b>	1268	---
Particles >6µm		ASTM D7647	>1300	<b>226</b>	190	---
Particles >14µm		ASTM D7647	>160	<b>16</b>	23	---
Particles >21µm		ASTM D7647	>40	<b>6</b>	4	---
Particles >38µm		ASTM D7647	>10	<b>1</b>	1	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>19/15/11</b>	17/15/12	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.05	<b>NEG</b>	NEG	---

**FLUID CONDITION**

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

Sodium	ppm	ASTM D5185m		<b>2</b>	3	---
Boron	ppm	ASTM D5185m	5	<b>0</b>	0	---
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	5	<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	25	<b>0</b>	0	---
Calcium	ppm	ASTM D5185m	200	<b>47</b>	27	---
Phosphorus	ppm	ASTM D5185m	300	<b>301</b>	276	---
Zinc	ppm	ASTM D5185m	370	<b>379</b>	355	---
Sulfur	ppm	ASTM D5185m	2500	<b>806</b>	473	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.38</b>	0.34	---
Visc @ 40°C	cSt	ASTM D445	46	<b>46.0</b>	45.8	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0064104  
**Lab Number** : 06153015  
**Unique Number** : 10983093  
**Test Package** : MAR 2

**Received** : 18 Apr 2024  
**Tested** : 19 Apr 2024  
**Diagnosed** : 19 Apr 2024 - Wes Davis

**MARITIME COMPANY**  
 3802 PORT RIVER RD  
 PASCAGOULA, MS  
 US 39567

Contact: MARK KOPSYWA  
 mark.kopszywa@signetmaritime.com

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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