VANUATU LOGISTICS & ADMINISTRATIVE SERVICES LIMITED
39 BROADWAY, SUITE 2020
NEW YORK, NEW YORK 10006
TEL: 212-425-9600
INFO@REGISTER-VU.COM

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Compliance with Emergency Power Supply Testing CIC

Applicable to: This FLEET SAFETY LETTER should be brought to the attention of ship-owners, ship managers, operators, Masters of Vanuatu-registered ships and Recognized Organizations

In light of the recently issued bulletin by the Tokyo MoU Secretariat, we wish to draw your immediate attention to the Concentrated Inspection Campaign (CIC) announced by the International Association of Classification Societies (IACS).

This CIC aims to ensure compliance with SOLAS Chapter II-1 Regulations 42/43 concerning the emergency power supply systems on board vessels.

This CIC focuses on evaluating how emergency power supplies function and the testing protocols in place. It involves checking the automatic start-up of the emergency electrical power source and its seamless connection to the emergency switchboard. Controlled blackout tests will be prioritized to confirm their real-world effectiveness and compliance with SOLAS standards.

The CIC will be conducted for a 12-month period, starting January 1, 2025, and concluding December 31, 2025. Each vessel under the scope of this campaign will be subject to one inspection during this period.

Numerous cases have been reported where emergency generators passed routine simulated blackout tests but failed during actual blackout scenarios. It is essential that controlled blackout tests are incorporated into Safety Management Systems (SMS) to verify system functionality effectively.
As the Flag State Administration for Vanuatu, we urge all related Vanuatu-flagged vessels to ensure full compliance with the CIC requirements.

The following actions are strongly recommended:

1. **Update SMS Procedures:**
   - Review and revise Safety Management System procedures to include periodically controlled blackout tests.
   - Ensure emergency generator testing adheres to the operational requirements under SOLAS Ch. II-1 Regulations 42/43.

2. Prepare for Inspections

- Conduct internal reviews and audits to verify the functionality of emergency power supply systems.
- Provide necessary training for shipboard personnel to ensure familiarity with testing protocols

3. Communication and Documentation:

- Ensure all relevant documentation is readily available for Port State Control Officers (PSCOs).
- Address any discrepancies identified during routine checks promptly

This circular is to be disseminated to all relevant parties ensuring related Vanuatu flagged vessels maintain the highest standards of safety and regulatory compliance .

Please find the attached IACS CIC for Emergency Power Supply Testing & Tokyo MoU Safety Bulletin 04/24 - Emergency Power Supply Testing for the reference.

Should you have any questions or require further assistance, please do not hesitate to contact info@register.vu.com

Berke Ayazli
by the direction of the
Assistant Commissioner of Maritime Affairs The Republic of Vanuatu

IACS CIC for Emergency Power Supply Testing
Date of Survey :
Inspection Port :
Kind of Ship Type :
Kind of Survey :
Date of Build:

This inspection campaign will be held for 12 months commencing from 1 January 2025 and ending 31 December 2025 and examine the Emergency Power Supply of the ship. A ship will be subject to only one inspection under this CIC during the period of the IACS campaign.

	Items	Yes	No
Q1	Has a risk assessment or similar measures in the Safety Management System (SMS) for the emergency generator test?	☐	☐
Q2	Has the controlled blackout test been successfully performed?	☐	☐
Q3	If “No” is ticked in Q2, select the reason for the same (More than one options may be selected, if applicable).		
a.	Malfunction of control unit/circuit (i.e, Printed Circuit Boards or control relay unit, etc.)	☐	
b.	Malfunctioned Air Circuit Breaker	☐	
c.	Miss-selection of engine starting selection switch mode in emergency generator room	☐	
d.	Closing Quick-closing valve	☐	
e.	Malfunction of starting arrangement	☐	
f.	Malfunction of engine	☐	
g.	No power supply to the services essential for safety in an emergency	☐	
h.	Port restriction/regulation	☐	
i*.	Others (please describe in the below note)	☐	

Note: If “Yes” is selected for item "i" marked with an asterisk “*”, the reason may be described below.

Safety Bulletin 04/2024

July 2024

Emergency Power Supply Testing

This update is issued to raise awareness of the potential risk of testing of automatic start of emergency source of electrical power and connection to the emergency switchboard (SOLAS Ch. II-1, Regulation 42 / 43) using simulated blackout method.

This safety update is for:

- Ship Operators and Shipmasters
- Classification Societies, Maritime Administrations, their officers, investigators and technical advisors

Emergency Power Supply Testing

Attention Ship Operators, shipmasters, and Classification Societies

There have been numerous observations by PSCOs where the “simulated blackout” testing of the Emergency Generator is demonstrated as fully functional, but during an actual power blackout, the system does not meet the requirements of SOLAS Ch. II-1, Reg. 42 / 43.

Emergency Power Supply Testing

Be aware of risk, take precautions and comply with SOLAS requirements

SOLAS Ch. II-1 Reg 42.3.1.2 / 43.3.1.2

The emergency source of electrical power *shall start automatically* upon failure of the electrical supply from the main source of electrical power and *shall be automatically connected to the emergency switchboard*(…).

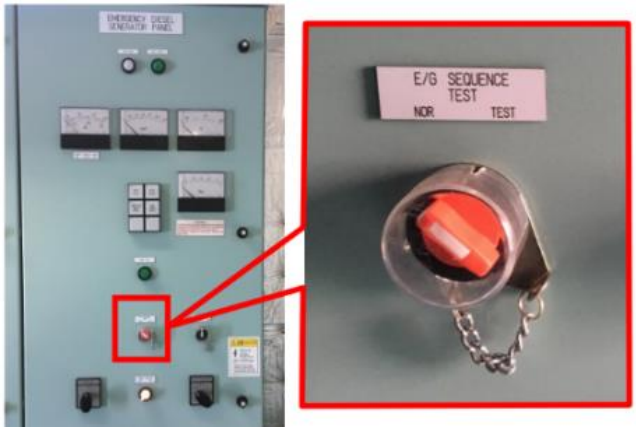
SOLAS Ch. II-1 Reg 42.7 / 43.7

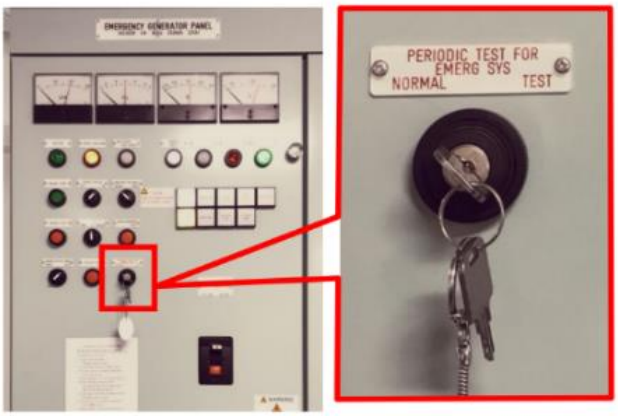
Provision shall be made for the periodic testing of the complete emergency system and shall include the testing of automatic starting arrangements

Common Shipboard Practice

Use of "Sequence Test" or "Routine Test Switch (RTS)" for testing emergency generator

In meeting the requirements of SOLAS Chapter II-1 Regulation 42.7 / 43.7, many if not most ships, in undertaking routine testing in accordance with their preventative maintenance procedures, make use of a "Sequential test" selector and/or "Routine Test Switch" (RTS) for the testing of the emergency generator.
It has been identified these simulated blackouts use a different logic than when a 'controlled' blackout is performed.
Therefore, the actual circuits, relays, and Printed Circuit Boards when used in a real situation are not tested during routine maintenance to demonstrate SOLAS operational requirements.





Emergency Power Supply Testing

What has been observed by Port State Control Officers?

PSCOs have observed an alarming number of ships that were able to demonstrate a satisfactory test of the emergency generator utilizing a Sequence Test or RTS, but when tested by opening the Main Switch Board (MSB) Bus Tie (controlled blackout), the emergency generator was unable to:

1) automatically start; or

2) provide transitional power; or

3) automatically connect to the emergency switchboard.

As such, these simulated blackout tests of the emergency generator may not meet the requirements of SOLAS Ch. II-1, Reg. 43.7, and more importantly, give ships' engineers a false sense of readiness of the ship's emergency systems in the case an emergency. This may endanger life, ship, and the environment.

Recommendations

ISM Management companies should:

1. Ensure that any device such a **"Sequential test"** selector and/or **"Routine Test Switch"** (RTS), fitted to the ship for the purposes of testing the simulation blackout test are designed and wired in such a way as to use the actual circuit paths used to meet the requirements SOLAS is Chapter II-1, Reg 42.3.1.2 / 43.3.1.2, so as to test the system completely;

2. Update Company Safety Management Procedure (SMS) for emergency generator test procedures to include periodic 'Controlled blackout tests' (i.e. not using sequence test) to ensure the actual circuit paths required by SOLAS is Chapter II-1, Reg 42.3.1.2 / 43.3.1.2, can be accomplished a safe and practical manner, while assuring functionality of the system.

   Example: 'Controlled blackout' may be accomplished by opening MCR bus-tie (aka transfer line) circuit breaker, while the switch is in normal mode, and operation switches are in auto such as to be in a sea-going state.

3. Be aware that "Sequential test" selector and/or "Routine Test Switch" (RTS), may not meet the requirements of SOLAS Chapter II-1 Reg. 42.5.4 / 43.5.4 if it sends a signal to disconnect the inter-connector instead of automatically disconnecting on loss of main source of power, and do not meet Chapter II-1 Reg. 42.7 / 43.7 when not testing the complete system.

Emergency Power Supply Testing

Flag State Authorities, Classification Societies, and ISM Recognized Organizations should:

- Taking into account the information above, during routine inspections, surveys, and/or ISM audits, ensure that the emergency generator functionality is tested both by utilizing any "simulated blackout" routine/sequential test switch and a controlled a blackout (as described in (2) above). If a discrepancy is noted – i.e. test is satisfactory during simulated black out during use "test switch" but unsatisfactory during controlled blackout – then appropriate actions should be taken either through amending emergency generator test procedure or assuring test switch circuit paths allow for a full and complete test of the emergency generator.

- If modifications of routine/sequential test switch circuit paths are required to ensure proper functionality, these modifications should be approved by Classification Society / Recognized Organization. Any amendments to the emergency generator testing procedure should be documented through the ship's safety management system and preventative maintenance system.

- Take note that electrical system design and approval is the responsibility of the cognizant Recognized Organization / Classification Society, to ensure that at a minimum the system complies with the requirements of SOLAS.

Tokyo MOU

The memorandum of Understanding on Port State Control in the Asia-Pacific Region, known as the Tokyo MOU, was signed among eighteen maritime Authorities in the region on 1st December 1993 and came into operation on 1st April 1994. Currently, the Memorandum has 22 full members.

Tokyo MOU Secretariat

Ascend Shimbashi 8F, 6-19-19, Shimbashi, Minato-ku, Tokyo Japan 105-0004

Tel: +81-3-3433 0621 **Fax:** +81-3-3433 0624
Email: secretariat@tokyo-mou.org **Website:** www.tokyo-mou.org