

**M63**

(Jan 2005)  
(Rev.1  
Jan 2023)

# **Alarms and safeguards for emergency diesel reciprocating I.C. engines**

## **1. Field of application**

These requirements apply to ~~diesel~~ reciprocating I.C. engines, which use distillate marine fuels covered by ISO 8217:2017, required to be immediately available in an emergency and capable of being controlled remotely or automatically operated.

## **2. Information to be submitted**

Information demonstrating compliance with these requirements is to be submitted to the relevant Classification Society. The information is to include instructions to test the alarm and safety systems.

## **3. Alarms and safeguards**

- .1 Alarms and safeguards are to be fitted in accordance with Table 1.
- .2 The safety and alarm systems are to be designed to 'fail safe'. The ~~characteristics~~ characteristics of the 'fail safe' operation are to be evaluated on the basis not only of the system and its associated machinery, but also the complete installation, as well as the ship.
- .3 Regardless of the engine output, if shutdowns additional to those specified in Table 1 are provided except for the overspeed shutdown, they are to be automatically overridden when the engine is in automatic or remote control mode during navigation.
- .4 The alarm system is to function in accordance with M29, with additional requirements that grouped alarms are to be arranged on the bridge.
- .5 In addition to the fuel oil control from outside the space, a local means of engine shutdown is to be provided.
- .6 Local indications of at least those parameters listed in Table 1 are to be provided within the same space as the ~~diesel~~ reciprocating I.C. engines and are to remain operational in the event of failure of the alarm and safety systems.

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### Note:

1. Rev.1 of this Unified Requirement is to be uniformly implemented by IACS Societies on ships constructed on or after 1 January 2024.

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(cont)

Table 1

Parameter	<u>≥ 220kW</u> <u>Alarm</u> <u>activation</u>	<220kW	<u>Shutdown</u> <u>with alarm</u>
Fuel oil leakage from <u>high</u> pressure pipes (fuel injection pipes and common rails)	⊖ <u>x</u>	⊖	
Lubricating oil temperature <sup>1</sup>	⊖ <u>high</u>		
Lubricating oil pressure	⊖ <u>low</u>	⊖	
<u>Activation of oil mist detection concentration in crankcase<sup>1</sup> arrangements (or activation of the temperature monitoring systems or equivalent devices of:</u> <u>- the engine main and crank bearing oil outlet; or</u> <u>- the engine main and crank bearing)<sup>2</sup></u>	⊖ <u>x</u>		
Pressure or flow of cooling water <sup>1</sup>	⊖ <u>low</u>		
Temperature of cooling water (or cooling air)	⊖ <u>high</u>	⊖	
Overspeed activated <sup>1</sup>	⊖+⊞		<u>x</u>

Note:

1 for engines having a power of or more than 220 kW.

42 for engines having a power of more than 2250 kW or a cylinder bore of more than 300 mm.

- ⊖ Alarm for low value
- ⊖ Alarm for high value
- ⊖ Alarm activated
- ⊞ Shut down

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