

**§ 183.320**

change in direction of the propeller shaft rotation must not interrupt power to any of the loads specified in paragraph (a)(1) of this section.

**§ 183.320 Generators and motors.**

(a) Each generator and motor must be:

(1) In a location that is accessible, adequately ventilated, and as dry as practicable; and

(2) Mounted above the bilges to avoid damage by splash and to avoid contact with low lying vapors.

(b) Each generator and motor must be designed for an ambient temperature of 50° C (122° F) except that:

(1) If the ambient temperature in the space where a generator or motor will be located will not exceed 40° C (104° F) under normal operating conditions, the generator or motor may be designed for an ambient temperature of 40° C (104° F); and

(2) A generator or motor designed for 40° C (104° F) may be used in 50° C (122° F) ambient locations provided the generator or motor is derated to 80 percent of the full load rating, and the rating or setting of the overcurrent devices is reduced accordingly.

(c) A voltmeter and an ammeter, which can be used for measuring voltage and current of a generator that is in operation, must be provided for a generator rated at 50 volts or more. For each alternating current generator, a means for measuring frequency must also be provided.

(d) Each generator must have a nameplate attached to it containing the information required by Article 445 of the National Electric Code (NEC) (National Fire Protection Association (NFPA) 70), and for a generator derated in accordance with paragraph (b)(2) of this section, the derated capacity.

(e) Each motor must have a nameplate attached to it containing the information required by Article 430 of the NEC (NFPA 70), and for a motor derated in accordance with paragraph (b)(2) of this section, the derated capacity.

(f) Each generator must be protected by an overcurrent device set value not exceeding 115 percent of the generator full load rating.

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**§ 183.322 Multiple generators.**

When a vessel is equipped with two or more generators to supply ship's service power, the following requirements must be met:

(a) Each generator must have an independent prime mover; and

(b) The generator circuit breakers must be interlocked to prevent the generators from being simultaneously connected to the switchboard, except for the circuit breakers of a generator operated in parallel with another generator when the installation meets §§ 111.12-11(f) and 111.30-25(d) in subchapter J of this chapter.

**§ 183.324 Dual voltage generators.**

(a) A dual voltage generator installed on a vessel shall be of the grounded type, where:

(1) The neutral of a dual voltage system must be solidly connected at the switchboard's neutral bus; and

(2) The neutral bus shall be connected to ground.

(b) The neutral of a dual voltage system must be accessible for checking the insulation resistance of the generator to ground before the generator is connected to the bus.

(c) Ground detection must be provided that:

(1) For an alternating current system, meets § 111.05-27 in subchapter J of this chapter; and

(2) For a direct current system, meets § 111.05-29 in subchapter J of this chapter.

**§ 183.330 Distribution panels and switchboards.**

(a) Each distribution panel and switchboard must be in as dry a location as practicable, adequately ventilated, and protected from falling debris and dripping or splashing water.

(b) Each distribution panel or switchboard must be totally enclosed and of the dead front type.

(c) Each switchboard must be fitted with a dripshield.

(d) Distribution panels and switchboards that are accessible from the rear must be constructed to prevent a person from accidentally contacting energized parts.

(e) Working space must be provided around all main distribution panels