

# Emergency electrical power supply for buildings

Extract from CSA C282: 24

## **SECTION 6 EMERGENCY ELECTRICAL POWER SUPPLY PLANT**

### **6.11 EMERGENCY LIGHTING**

#### **6.11.1 UNIT EQUIPMENT FOR EMERGENCY LIGHTING IN SERVICE ROOMS AND ENCLOSURES**

The service room or enclosure containing the emergency electrical power supply and the service room containing the automatic transfer switch(es), shall be equipped with unit equipment for emergency lighting that complies with CSA C22.2 No. 141. Sufficient lamps shall be provided to ensure that a minimum lighting level of 50 lx for 2 h is available at all equipment locations requiring adjustment or service.

Note: This illumination level is significantly greater than that specified in the NBCC, which requires 10 lx for egress route emergency lighting.

#### **6.11.2 TESTING OF EMERGENCY LIGHTING UNITS**

Emergency lighting units shall be tested in accordance with Table 2 and CSA C22.2 No. 141.

#### **6.11.3 REQUIREMENTS FOR THE EMERGENCY LIGHTING UNITS**

The emergency lighting unit shall include

- a) automatic self-diagnostic circuitry; and
- b) a transient voltage surge suppressor on the supply side of power to the unit.

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**Table 2**

**Weekly inspection, test, and maintenance requirements**

(See Clauses [6.7](#), [6.8.1](#), [6.11.2](#), [7.3.1](#), [7.6.1](#), [10.7](#), [11.1.2](#), [11.4](#), [11.5.1](#), and [11.5.2](#) and Tables [3 to 5](#).)

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1. Consumables:
    - a) Inspect auxiliary supply tank fuel level (gas pressure) and main tank level (gas pressure) (if applicable). There shall be a minimum supply of 2 h (see Clause 7.3.1).
    - b) Inspect lubricating oil level.
    - c) Inspect engine coolant level.
    - d) Inspect engine, alternator, fuel tank(s), and cooling systems for leakage.
    - e) Inspect for proper operation of fuel transfer pump (if applicable).
    - f) Inspect fuel filter for contamination if filter is equipped with a transparent bowl.
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2. Starter system:
    - a) Inspect electric starter for cleanliness, mounting, and terminal security.
    - b) Air starter:
      - i) Inspect air tanks for pressure.
      - ii) Inspect valves for leakage.
      - iii) Test auxiliary engine and compressor for proper operation.
      - iv) Bleed off any condensation.
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3. Batteries and charging equipment:
    - a) Inspect electrical connections for tightness and evidence of corrosion.
    - b) Inspect battery for cleanliness and dryness between terminals.
    - c) Inspect charger electrical connections for cleanliness and tightness.
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4. Engine:
    - a) Test lubricant and/or coolant heaters for proper operation.
    - b) Inspect governor control linkages and oil level (if applicable).
    - c) Inspect fuel pump oil sump (if applicable).
    - d) Inspect fan belts for correct tension and wear.
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5. Control panel:
    - a) Inspect control panel covers for security.
    - b) Test annunciator lamps to confirm that they are operational.
    - c) Inspect control panel settings (ensure that the unit is ready for automatic start-up).
    - d) Test remote visual and audible trouble signals at the building fire alarm panel.

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6. Inspect air control louvre settings to ensure proper operation.

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  7. Test emergency lighting unit(s).

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  8. Verify whether room temperature is above 10 °C.

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  9. Inspect generator set and transfer switch room(s) for cleanliness and accessibility to all components of the emergency system.

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  10. Correct all defects found during inspections and tests.

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  11. Record all inspections, tests, and corrective actions in the log (see Clause 11.5.3).
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Note: The work described in this table shall be carried out by a competent person or individuals trained by the system manufacturer.

(Source: Table 2, CSA C282:24, Emergency electrical power supply for buildings. © 2024 Canadian Standards Association. Please visit [store.csagroup.org](http://store.csagroup.org))

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