



Service Manual

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**Power
Generation**

Controller

PowerCommand 3.3

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1 Important Safety Instructions

SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during installation and maintenance of the generator set and batteries.

Safe and efficient operation can be achieved only if the equipment is properly operated and maintained. Many accidents are caused by failure to follow fundamental rules and precautions.

1.1 Warning, Caution and Note Styles Used In This Manual

The following safety styles and symbols found throughout this manual indicate potentially hazardous conditions to the operator, service personnel or the equipment.



DANGER: Warns of a hazard that will result in severe personal injury or death.



WARNING: Warns of a hazard that may result in severe personal injury or death.



CAUTION: Warns of a hazard or an unsafe practice that can result in product or property damage.



NOTE: A short piece of text giving information that augments the current text.

1.2 General Information

This manual should form part of the documentation package supplied by Cummins Power Generation with specific generator sets. In the event that this manual has been supplied in isolation please contact your authorized distributor.



NOTE: It is in the Operator's interest to read and understand all Warnings and Cautions contained within the documentation relevant to the generator set, its operation and daily maintenance.

1.2.1 General Safety Precautions



WARNING: Coolants under pressure have a higher boiling point than water. **DO NOT** open a radiator or heat exchanger pressure cap while the engine is running. Allow the generator set to cool and bleed the system pressure first. To prevent severe scalding, let the engine cool down before removing the coolant pressure cap. Turn the cap slowly, and do not open it fully until the pressure has been relieved.



WARNING: Benzene and lead, found in some fuels, have been identified by some state and federal agencies as causing cancer or reproductive toxicity. When checking, draining or adding gasoline (if applicable to your product), take care not to ingest, breathe the fumes, or contact gasoline.



WARNING: Used engine oils have been identified by some state or federal agencies as causing cancer or reproductive toxicity. When checking or changing engine oil, take care not to ingest, breathe the fumes, or contact used oil.



NOTE: Keep multi-class ABC fire extinguishers handy. Class A fires involve ordinary combustible materials such as wood and cloth; Class B fires involve combustible and flammable liquid fuels and gaseous fuels; Class C fires involve live electrical equipment. (ref. NFPA No. 10)



CAUTION: Make sure that rags are not left on or near the engine.



CAUTION: Make sure the generator set is mounted in a manner to prevent combustible materials from accumulating under the unit.



CAUTION: Remove all unnecessary grease and oil from the unit. Accumulated grease and oil can cause overheating and engine damage which present a potential fire hazard.



CAUTION: Keep the generator set and the surrounding area clean and free from obstructions. Remove any debris from the set and keep the floor clean and dry.



WARNING: Do not work on this equipment when mentally or physically fatigued, or after consuming any alcohol or drug that makes the operation of equipment unsafe.



WARNING: Substances in exhaust gases have been identified by some state or federal agencies as causing cancer or reproductive toxicity. Take care not to breathe, ingest, or come into contact with exhaust gases.



WARNING: Do not store any flammable liquids, such as fuel, cleaners, oil, etc., near the generator set. A fire or explosion could result.



WARNING: Wear hearing protection when going near an operating generator set.



WARNING: To prevent serious burns, avoid contact with hot metal parts such as the radiator, the turbo charger, and the exhaust system.



WARNING: Use personal protective equipment when maintaining or installing the generator set. Examples of personal protective equipment include but are not limited to: safety glasses, protective gloves, hard hats, steel-toed boots, and protective clothing.



WARNING: Do not use starting fluids that evaporate. They are highly explosive.



CAUTION: Do not step on the generator set when entering or leaving the generator room. Parts can bend or break leading to electrical shorts, or to fuel, coolant, or exhaust leaks.



CAUTION: To prevent accidental or remote starting while working on the generator set, disconnect the negative (-) battery cable at the battery.



WARNING: Ethylene glycol, used as engine coolant, is toxic to humans and animals. Clean up spills and dispose of used engine coolant in accordance with local environmental regulations.



WARNING: Moving parts can cause severe personal injury or death. Hot exhaust parts can cause severe burns. Make sure all protective guards are properly in place before starting the generator set.

1.3 Generator Set Safety Code

Before operating the generator set, read the manuals and become familiar with them and the equipment. **Safe and efficient operation can be achieved only if the equipment is properly operated and maintained.** Many accidents are caused by failure to follow fundamental rules and precautions.

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