

## Generator Placement

Before installing generator, consult with home owner and convey the following requirements, which must be satisfied before the installation is complete.

There are two equally important safety concerns in regards to carbon monoxide poisoning and fire. There are also several general location guidelines that must be met before the installation is considered complete.

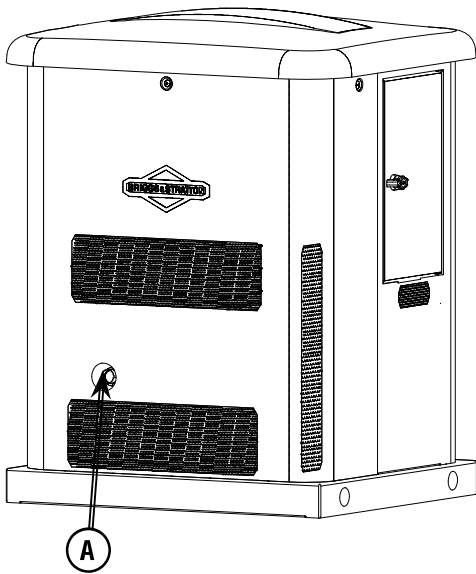
**▲ WARNING** Running engine gives off carbon monoxide, an odorless, colorless, poison gas.



Breathing carbon monoxide could result in death serious injury, headache, fatigue, dizziness, vomiting, confusion, seizures, nausea or fainting.

- Operate this product **ONLY** outdoors in an area that will not accumulate deadly exhaust gas.
- Keep exhaust gas away from any windows, doors, ventilation intakes, soffit vents, crawl spaces, open garage doors or other openings that can allow exhaust gas to enter inside or be drawn into a potentially occupied building or structure.
- Carbon monoxide detector(s) **MUST** be installed and maintained indoors according to the manufacturer's instructions/recommendations. Smoke alarms cannot detect carbon monoxide gas.

## Exhaust Side of the Generator

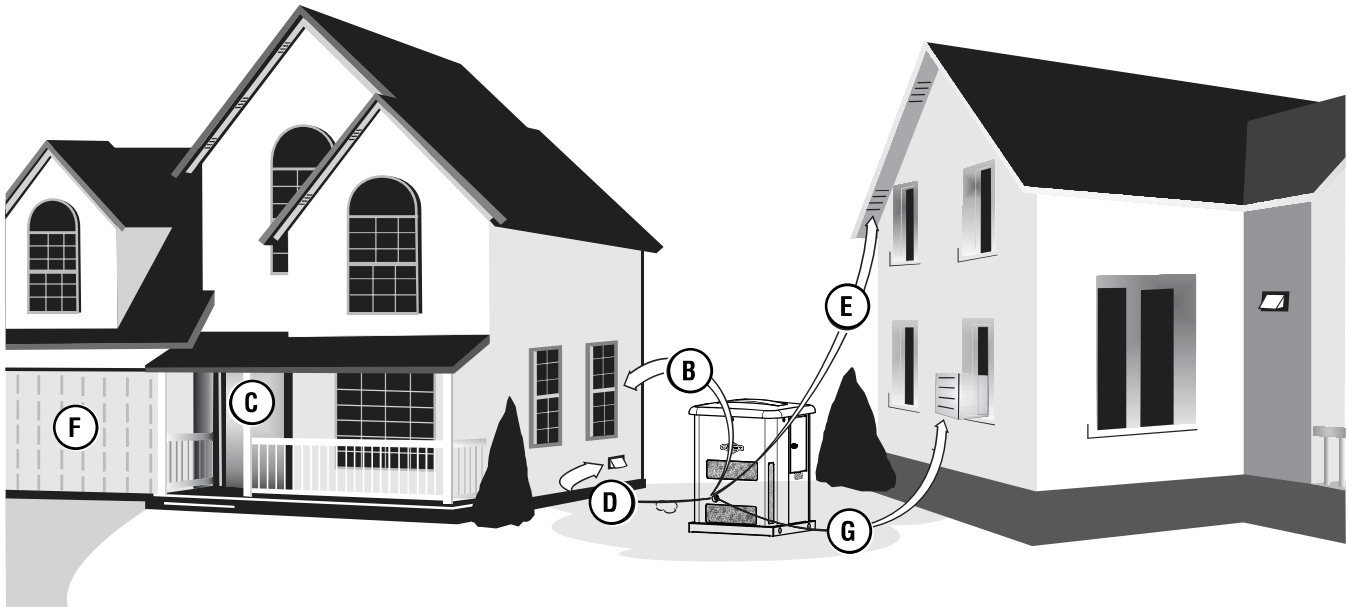


**A** - Exhaust outlet side of weatherproof enclosure

## Placement of Standby Generator to REDUCE THE RISK OF CARBON MONOXIDE POISONING

The arrows in the figure below point to **POTENTIAL** points of entry for Carbon Monoxide Gas.

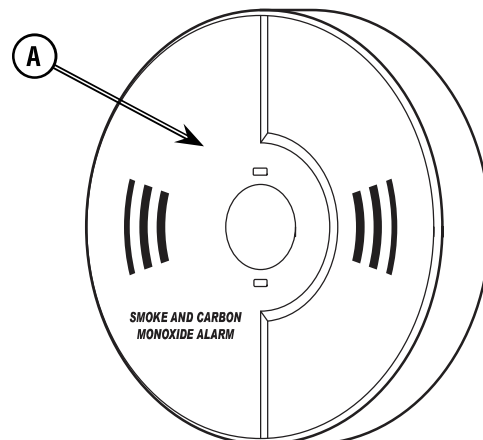
**NOTICE** This Section is for Carbon Monoxide Hazard Safety Placement Only. Satisfying the standby generator placement, for the Carbon Monoxide hazard, does not guarantee that Fire Safety Placement requirements are met. Please refer to Page 14 for Fire Hazard Safety Placement requirements.



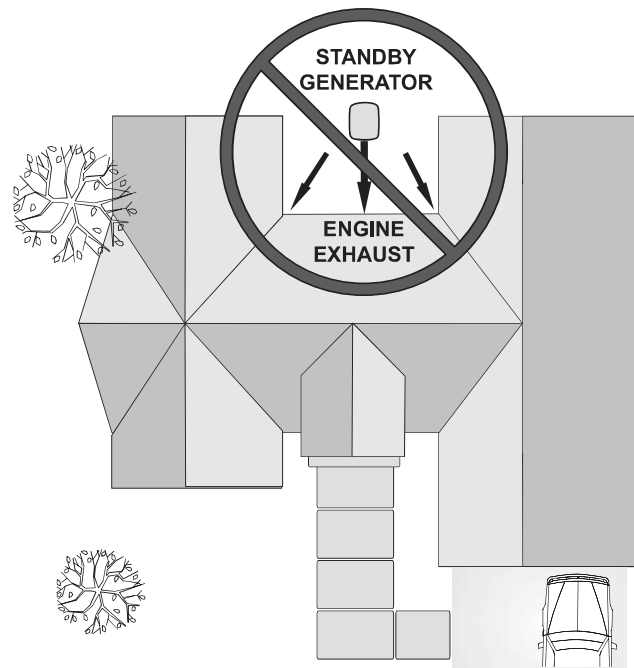
All fossil fuel burning equipment, such as standby generators, contains carbon monoxide (CO) gas in the engine exhaust. CO gas is odorless, colorless and tasteless and is unlikely to be noticed until a person is overcome. CO gas can kill you so it is required that the following is included as part of the installation:

- Install generator outdoors in an area that will not accumulate deadly exhaust gas.
- DO NOT install generator where exhaust gas could accumulate and enter inside or be drawn into a potentially occupied building or structure.
- By law it is required in many states to have a Carbon Monoxide (CO) detector in operating condition in your home. Carbon monoxide detector(s) (A) MUST be installed and maintained indoors according to the manufacturer's instructions / recommendations. A CO monitor is an electric device that detects hazardous levels of CO. When there is a buildup of CO, the monitor will alert the occupants by flashing visual indicator light and alarm. Smoke alarms cannot detect CO gas.
- Your neighbor(s) home may be exposed to the engine exhaust from your standby generator and must be considered when installing your standby generator.

- Ensure exhaust gas is kept away from:
  - B** - windows
  - C** - doors
  - D** - ventilation intakes
  - E** - soffit vents
  - F** - garage doors
  - G** - crawl spaces or other openings that can allow exhaust gas to enter inside or be drawn into a potentially occupied building or structure.



- Direct the standby generator exhaust away from or parallel to the building or structure. DO NOT direct the generator exhaust towards a potentially occupied building, structure, windows, doors, ventilation intakes, soffit vents, crawl spaces, open garage doors or other openings where exhaust gas could accumulate and enter inside or be drawn into potentially occupied building or structure.
- DO NOT place standby generator in any area where leaves or debris normally accumulates. Position standby generator in an area where winds will carry the exhaust gas away from any potentially occupied building or structure.



### Other General Location Guidelines

- Place the standby generator in a prepared location that is flat and has provisions for water drainage.
- Install the standby generator in a location where sump pump discharge, rain gutter downspouts, roof run-off, landscape irrigation, or water sprinklers will not flood the unit or spray the enclosure and enter any air inlet or outlet openings.
- Install the standby generator where it will not affect or obstruct services including covered, concealed and underground, such as telephone, electric, fuel (natural gas/ LPG vapor), irrigation, air conditioning, cable, septic, sewer, well and so forth.
- Install the standby generator where leaves, grass, snow, etc. will not obstruct air inlet and outlet openings. If prevailing winds will cause blowing or drifting, you may need to construct a windbreak to protect the unit.

## Placement of Standby Generator to REDUCE THE RISK OF FIRE

**NOTICE** This Section is for Fire Hazard Safety Placement Only. Satisfying the standby generator placement, for the Fire Safety Hazard, does not guarantee that the Carbon Monoxide Hazard Safety Placement requirements are met. Please refer to Page 12 for Carbon Monoxide Hazard Safety Placement requirements.

### Requirements:

NFPA 37 2010, section 4. 1. 4, Engines Located Outdoors. Engines, and their weatherproof housings if provided, that are installed outdoors shall be located at least 1.5m (5 ft) from openings in walls and at least 1.5 m (5 ft) from structures having combustible walls. A minimum separation shall not be required where either of the following conditions exist:

1. The adjacent wall of the structure has a fire resistance rating of at least 1 hour.
2. The weatherproof enclosure is constructed of noncombustible materials and it has been demonstrated that a fire within the enclosure will not ignite combustible materials outside the enclosure. \*

### Annex A Explanatory Material

A.4.1.4 (2) Means of demonstrating compliance are by means of full-scale fire tests or by calculation procedures, such as those given in NFPA 555, Guide on Methods for Evaluating Potential for Room Flashover.

To comply with condition 2 above the weatherproof enclosure has been constructed completely of non-combustible materials and full-scale fire tests have been conducted to demonstrate that a fire within the enclosure will not ignite combustible materials outside the enclosure.

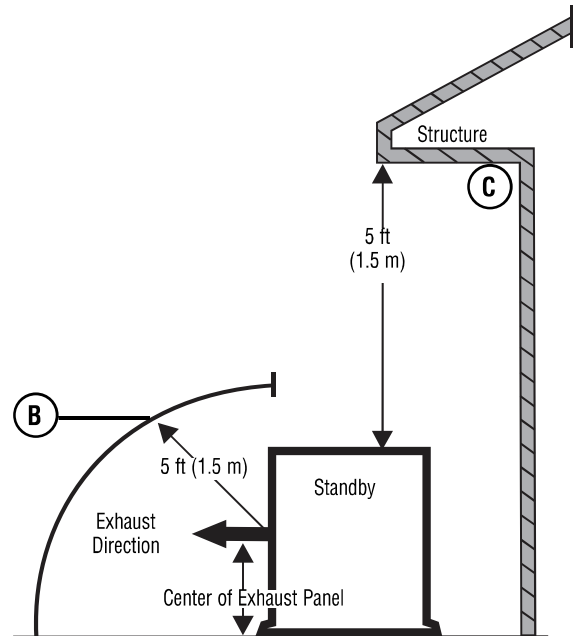
**⚠ WARNING** Exhaust heat/gases could ignite combustibles or structures resulting in death or serious injury.



- Exhaust outlet side of weatherproof enclosure must have at least 5 ft. (1.5 m) minimum clearance from any structure, shrubs, trees or any kind of vegetation.
- Standby generator weatherproof enclosure must be at least 5 ft. (1.5 m) from windows, doors, any wall opening, shrubs or vegetation over 12 inches (30.5 cm) in height.
- Standby generator weatherproof enclosure must have a minimum of 5 ft. (1.5 m) overhead clearance from any structure, overhang or trees.
- DO NOT place weatherproof enclosure under a deck or other type of structure that may confine airflow.
- Use only flexible fuel line provided. Connect provided fuel line to generator, DO NOT use with or substitute any other flexible fuel line.
- Smoke detector(s) MUST be installed and maintained indoors according to the manufacturer's instructions/recommendations. Carbon monoxide alarms cannot detect smoke.
- DO NOT place weatherproof enclosure in manner other than shown in illustrations.

Examples of standby generator locations to reduce the risk of fire:

### Vertical Clearances



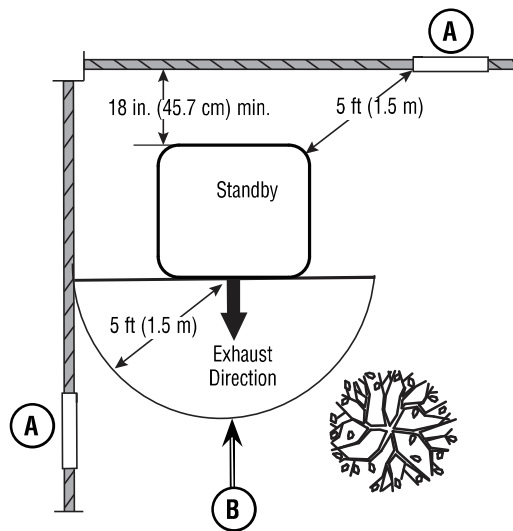
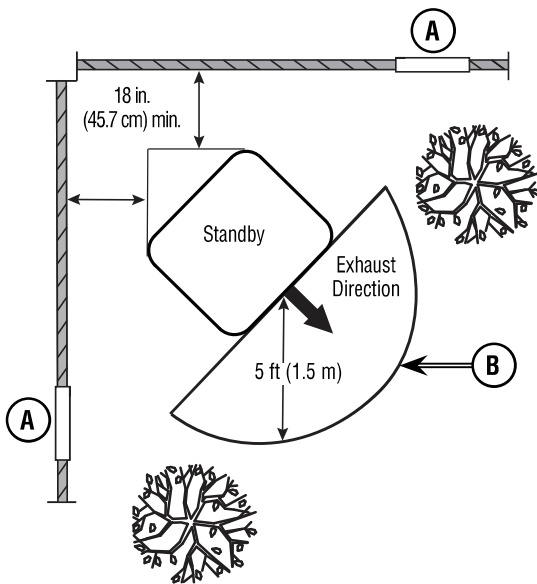
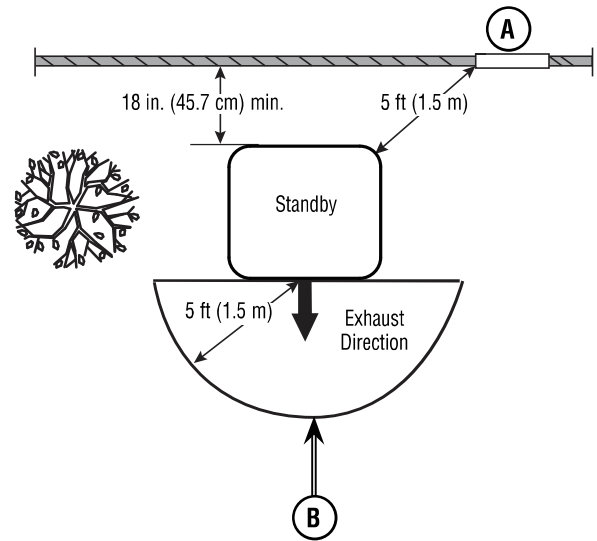
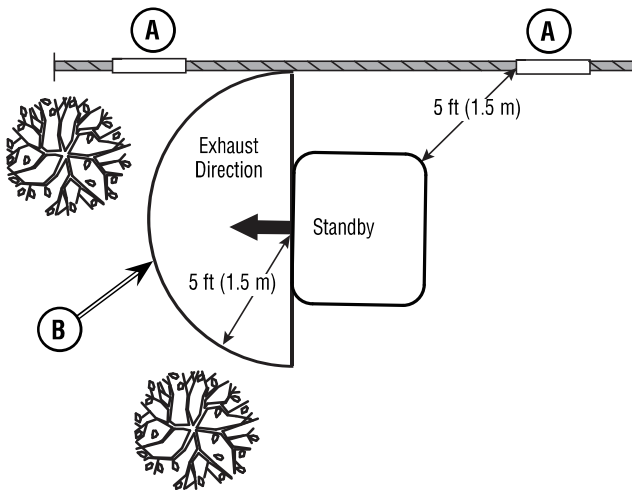
### Legend for Generator Locations to reduce the risk of fire.

- A** Standby weatherproof enclosure must be at least 5 ft (1.5 m) from windows, doors, any wall opening, shrubs or vegetation over 12 inches (30.5 cm) in height.
- B** Exhaust outlet side of weatherproof enclosure must have at least 5 ft (1.5 m) minimum clearance from any structure, shrubs, trees or any kind of vegetation.
- C** Standby weatherproof enclosure must have a minimum of 5 feet (1.5 m) overhead clearance from any structure, overhang or trees.

**NOTICE** DO NOT place weatherproof enclosure under a deck or other type of covered structure that may confine airflow.

## Generator Installations

**NOTICE** The figures below show the minimum installation distances allowed to structures and items listed in the legend.



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