

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
1202 Mail Service Center, Raleigh, NC 27699-1202
919-661-5880**

Water Heaters In Garages

Code: 2012 Plumbing Code
Section: 502.5

Date: September 1, 2011

Question:

Are water heaters installed in garages required to be elevated?

Answer:

Yes, unless the appliance is listed as flammable vapor ignition resistant. Section 502.5 states "water heaters having an ignition source shall be elevated such that the source of ignition is not less than 18 inches above the garage floor". The ignition source would apply to both electric and gas water heaters. The ignition source (not the bottom of the water heater) shall be elevated to minimum of 18 inches above the garage floor. As per the exception "elevation of the ignition source" is not required for appliances that are listed as flammable vapor ignition resistant.

Required Pans For Water Heaters

Code: 2012 Plumbing Code
Section: 504.7

Date: September 1, 2011

Question:

Where are water heater pans required?

Answer:

Section 504.7 states "where water heaters or hot water storage tanks are installed in:

- (a) remote locations such as a suspended ceiling,
- (b) attics,
- (c) above occupied spaces, or
- (d) unventilated crawl spaces,

the tank or water heater shall be in a galvanized steel pan ...".

Above occupied spaces shall include finished basements (does not include unfinished basements), first floor, second floor and third floors of dwelling units and one and two family dwellings.

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Water Heater Relief Valve Discharge

Code: 2012 Plumbing Code
Section: 504.7.2

Date: September 1, 2011

Question:

May a water heater pan drain and/or the discharge from a water heater relief valve terminate into a crawl space?

Answer:

No, Section 504.7.2 states the relief valve shall discharge full size to a safe place of disposal such as within 6 inches of the ground surface outside the building, or an indirect waste receptor. The 1996 Plumbing Code was the last code which allowed the discharge into the crawl space.

Code Reference:

504.7.2 Pan drain termination. The pan drain shall extend full-size and terminate over suitable located indirect waste receptor or floor drain or extend to the exterior of the building and terminate not less than 6 inches and not more than 24 inches above the adjacent ground surface.

PVC Pipe for Water Heater Pan Discharge

Code: 2012 Plumbing Code
Section: 504.7.1

Date: September 1, 2011

Question:

May PVC piping material be used for the water heater pan discharge?

Answer:

No. Section 504.7.1 states "piping from safety pan drains shall be of those materials listed in Table 605.4". Table 605.4 is water distribution pipe which does not include PVC.