



Safety Tip of the Month!

Do not allow a game of hide-n-seek to become deadly. CPSC has received reports of numerous suffocation deaths involving children who crawled inside [old cedar chests](#), [latch-type freezers and refrigerators](#), [iceboxes in campers, clothes dryers and picnic coolers](#). Childproof old appliances, warn children not to play inside them.

Question of the Month

You are installing branch circuit conductors in liquidtight flexible metal conduit between a non-fusible disconnect and an HVAC unit with the nameplate shown in the image to the left. There is no auxiliary electric heat installed. A 30-ampere circuit breaker protects the circuit. What are the minimum size THHN copper conductors you must use for this installation?

Note From The Chief

It continues to be very important that you communicate essential requirements with our inspection staff when planning your inspections. RCW 19.28.101(4) requires electrical wiring and equipment to be accessible for inspection. This includes access to ceiling spaces and elevated areas inside buildings. The permit holder must provide a means of accessing all electrical equipment for inspection.

Providing access may require the permit holder to supply the inspector with a bucket or ladder truck, scaffolding, ladder, or other equipment. Avoid unnecessary additional inspection trips and trip fees by making prior arrangements with the electrical inspector to provide access to conduct these inspections. If you need us to contact your customer prior to going to the inspection, let us know in advance, preferably by sending a comment in your online inspection request.

Your best method to communicate access arrangements or other special needs to the inspector is to use the comments section when making your online inspection request. The department's inspectors will make every possible effort to accommodate your request to be there when the access equipment is in place and safe. Inspectors have appropriate personal protective equipment (PPE) and training to identify potential exposure to hazards and know when it is safe to utilize the contractor's safety system.

Renew Online – Don't Waste Your Money and Time

The Electrical Program has made online licensing renewals available for several years. Renewing online saves you and the program time and money. Almost 60% of all electrical contractors, administrators, electricians, and trainees renew online.

Our online renewal process takes only a few minutes. The department will process your renewal immediately if it is complete (i.e. education classes completed and fees paid by valid credit card).

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If you complete the renewal online by 6 p.m. on Tuesday, the department's mailing contractor will mail your new certificate on Friday.

Online renewal will save you:

• Electrical Contractor - \$36	• Master Electrician/Electrical Administrator - \$20
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Do not wait until the last minute, you can renew up to 90 days before your expiration date. [RCW 19.28.161](#) and [271](#) require you to have a valid electrician certificate in your possession while working in the trade.

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HVAC Equipment Nameplates

NEC 424.28 and 440.4 give the requirements for marking of Fixed Electric Space-Heating Equipment and Air-Conditioning and Refrigerating Equipment. Nameplates must be located so they are visible or easily accessible after the installation is complete. The nameplate contains vital information that the electrician installing the branch circuit must have to select the proper wire size and overcurrent protection for the unit. Inspectors refer to the nameplate when performing their inspection of the installation.

The installer must accurately complete the optional heating package label provided with most electric furnaces. The person installing the auxiliary heater must mark the label showing the ratings of the installed package. Sometimes a supplementary label showing the ratings is included in the box with the heating package that the installer must affix to the furnace.

Failure to complete the equipment nameplate information will result in electrical corrections to the contractor who installed the auxiliary heater package for not meeting the marking requirements of NEC 424.28 or 440.4 and for not following the equipment manufacturer's instructions, NEC 110.3(B). The inspector may issue other corrections if the electrical installer uses inappropriately sized and protected wiring.

The person installing the furnace equipment is responsible for marking the label accurately. However, the electrician connecting power to the furnace has the responsibility to ensure the branch circuit conductor size and overcurrent protection meets the code and the manufacturer's requirements for the unit. The inspector may not be able to verify your installation is correct if the label is not posted and complete.

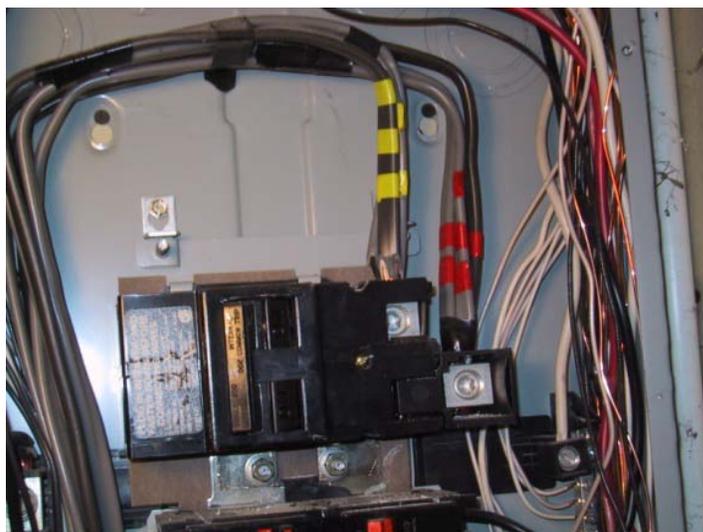
Avoid delaying your jobs by completely and accurately supplying the information required on the nameplate. Electricians should only connect wiring to equipment that has a completed and accurate nameplate installed.

Ugly Installations

If viewing this document online, you may click on the picture to open a larger image in another window.

Major violations: NEC 110.3(B) - Lugs not listed for terminating multiple small conductors; NEC 240.4 - Improper overcurrent protection of conductors; NEC 300.3(B) - If cable is used, all conductors of the same circuit shall be contained within the same cable.

Answer to Question of the Month: 14 AWG - NEC 440.35; Table 310.16; Nameplate minimum circuit ampacity - 19.4



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