



ELECTRICAL CURRENTS

Newsletter from the Office of the Chief Electrical Inspector

Ron Fuller, Chief Electrical Inspector

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● Class B Labels --- Easy To Use --- Saves Time And Money

About 3,000 Class B permits are used by contractors each month. Using Class B basic electrical work permits reduces costs, time and money, to the contractor, customer, and the electrical program while maintaining an acceptable level of inspection oversight. Class B labels are used for specific “*Electrical work that requires minimal electrical circuit modifications and has limited exposure hazards.*” The specific rules for using Class B labels are found in [WAC 296-46B-908](#). A single Class B label may be used for different types of Class B work (e.g. extended circuit, motor replacement, etc.) when all the work is done at the same time.

The labels are packaged in books of 20 and can be purchased or ordered, using your contractor deposit account for mail shipment, from any of our service locations for only \$200! If you purchase 100 thermostat permits a year, you save \$2,640 by using Class B permits instead of a normal permit.

Each label has two parts. Each must be filled out before work is begun. You can fill the labels out at the office or jobsite, whatever works best for you! Just remember to completely fill out both parts of the label with accurate legible information. The jobsite portion of the label must be affixed to the electrical panel, control panel, or equipment before starting the installation. The contractor portion of the label must be sent to the address printed on the bottom of the label within 15 working days from the date on the label. The date must be the date the label is affixed.

A Class B label becomes an active permit when it is posted and may be inspected on a random basis. You do not request an inspection for a Class B. L&I will make the arrangements for access for the inspection. If access cannot be arranged with your customer, you will need to assist in getting access.

Class B permits have been a very popular subject in the Electrical Currents Newsletter. Here is the link to a fully searchable compilation that contains every edition of the Electrical Currents ever published: <http://lni.wa.gov/TradesLicensing/Electrical/files/currents/ALLCurrents.pdf>. Just type in the words *Class B* in the find or search box and you will have over 150 hits. There have been some changes over time, so always remember that the most current information always takes precedence.

For more information, send your questions to electricalprogram@lni.wa.gov and one of our program specialists will assist you.

● Portable And Vehicle Mounted Generators: Grounding Electrode Exemptions

Requirements for the use of portable and vehicle mounted generators are often misunderstood. The frame of a portable or vehicle mounted generator is not required to be connected to a grounding electrode for a system supplied by the generator if the conditions of NEC 250.34 are met. Most equipment manufacturer’s instructions refer you to the NEC for grounding requirements and provide specific grounding connection instructions if the NEC requires connection to a grounding electrode.

A connection to a grounding electrode is not required when a portable or vehicle mounted generator only supplies equipment mounted on the generator and/or cord and plug connected loads supplied through the grounded receptacles on the generator. Equipment grounding is accomplished through the frame of the generator. For a vehicle mounted generator, the vehicle frame must be bonded to the generator frame. If the generator manufacturer’s instructions specifically require connection to a grounding electrode, NEC 250.34(A) does not apply and a grounding electrode system must be installed.

Occupational Safety & Health Administration (OSHA) has a publication addressing the generator grounding electrode exemption and potential hazards when generators are connected to a grounding electrode. Parts I and III of their publication provide excellent insight into this topic. This publication can be viewed at:

<http://oshaprofessor.com/Portable%20Generators%20and%20OSHA%20Construction%20Standards%203-05.pdf>

Safety Tip of the Month!

It’s that time of the year again when we all have to be extra vigilant in ensuring we stay hydrated.

When working in the hot sun or in enclosed spaces that are subject to extreme heat make sure you drink plenty of water

When in doubt

Have A Drink!

● Can Specialty Contractors Bid Electrical Jobs That Have Work Out Of Their Allowed Scope Of Work?

Specialty electrical or telecommunication contractors cannot normally bid electrical work outside the scope of work allowed for their electrical contractor license. In very limited situations a specialty electrical or telecommunications contractor may bid on and subcontract an electrical project that contains electrical work outside the scope of work allowed for their specialty electrical license. The electrical project's work that is outside their allowed scope of work must be an insignificant portion of the total project and be directly associated with the portion of work that is within the specialty contractor's allowed scope of work. Consider the following scenario.

A building owner solicits bids for a large project to install a low voltage energy management system in a commercial office building. The bid's proposed installation includes a 120 volt branch circuit that is necessary to power the energy management system's electrical controller. In this example, 98% of the project is within the EC06 limited energy specialty contractor's allowed scope of work.

The 120 volt branch circuit is not in the EC06 contractor's allowed scope of work. However, the EC06 specialty contractor is allowed to bid and subcontract this project because the branch circuit is an insignificant portion of the overall project and is directly associated the electrical work that is with the EC06 contractor's allowed scope of work (i.e. powering the low voltage energy management system). In this example, the EC06 contractor may subcontract the work that is outside the scope of their 06 license (i.e. the branch circuit) to an EC01 general electrical contractor.

If any portion of this electrical project had been not directly associated with the low voltage portion of the work, or if a significant portion of the work had been outside of the scope of work allowed for the specialty contractor, then the EC06 limited energy specialty electrical contractor would not be allowed to bid or subcontract the project.

It is also important to remember that if there are multiple licensed electrical contractors working on the same project, each contractor will have its own permit and electrical crew separate from the other contractor(s).

● HVAC Ductless Split-systems Are Not Appliances

Because of their versatility, efficiency, and energy rebate incentives ductless split systems are becoming more popular in commercial and residential jobs. Equipment manufacturers and NEC 440 also sometimes refers to HVAC equipment as an appliance. However, the WAC 296-46B-100(7) and (33) definitions for an appliance are very limited. Under the WAC definitions, fixed air-conditioning/heat pump equipment is never an appliance. In addition, equipment that either supplies or receives power to/from another piece of equipment is never an appliance. Do not make the mistake of applying the rules of NEC 422 Appliances when installing this equipment.

Because these listed assemblies include a hermetic compressor this equipment falls under the installation rules of NEC 440 Air Conditioning and Refrigeration Equipment.

These systems can be very simple (e.g. one outdoor and one indoor unit), or very sophisticated (e.g. multiple indoor units located in different rooms (zones)). The outdoor and indoor unit may be supplied from separate branch circuits or the indoor unit may be supplied directly from the outdoor unit. A 06A specialty electrical contractor can install the units and all low voltage conductors. A 01 contractor or 02 contractor, for residential, must install all line voltage conductors and equipment including any disconnecting means that is not installed in the equipment by the manufacturer.

Electrical Question of the Month

This Month's Question: How many voting members comprise the Washington State Electrical Board?
A) 13, B) 14, C) 15, D) 16.

Last Month's Question: The conductor intended to be used as the grounded conductor in a flexible cord must have a continuous marker that distinguishes it from other conductors. Which of the following methods is not an approved distinguisher? **A) white or gray colored insulation, B) number or letter, C) tinned conductor, D) white or gray colored braid.** The answer is: **B) [NEC 400.22].**

Previous Month's Question: It was pointed out by several of our observant stakeholders that there actually was no correct answer to choose from for the "Question of the Month" in the month of June. The closest answer was B) 8,800, but the actual answer should have been 8,500. **Good catch!**

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