Washington State Department of Labor and Industries

ELECTRICAL CURRENTS

Newsletter from the Office of the Chief Electrical Inspector

Ron Fuller, Chief Electrical Inspector **Vol. 10 No. 10** **October 2007**

Safety Tip of the Month!
Always maintain a safe distance away from overhead service drop conductors and the service mast while performing maintenance on your home's roof or gutters.

Upcoming Electrical Stakeholders Meetings

Stakeholder meetings will run from now through June 2008 at locations throughout the state. *Electrical Currents* will list future meeting locations and times. It is important for you to stay up to date with changes that might affect you. Attending stakeholder meetings gives you an opportunity to get your questions answered and give the Electrical Program your valued input. Please join us at 6:00 p.m., at a stakeholder meeting near you. For more information visit us online at:
http://www.lni.wa.gov/tradeslicensing/electrical/whatsnew/calendar/default.asp

Meeting Locations Through 2007			
October 10	2721 West 10th Kennewick	October 24	Snohomish County PUD, 2320 California St. Everett
October 17	L&I Bldg. Auditorium 7273 Linderson Way SW, Tumwater	November 14	The Orcas Room on the 5th floor of 950 Broadway Bldg., Tacoma
October 18	L&I Bldg. 415 W. Wishkah Suite 1B Aberdeen	December 12	Labor and Industries Bldg. 12806 Gateway Dr., Tukwila

What About Appliance Installation And Repair?

This *Electrical Currents* will clarify the Appliance Repair (07D) scope of work, licensing, certification, and permitting for contractors and electricians. There have been many *Electrical Currents* articles written about the Appliance Repair industry. To review past issues, go to: the Labor and Industries Electrical Currents archive site and use the search tool to locate past articles on "appliance repair".
http://www.lni.wa.gov/TradesLicensing/Electrical/WhatsNew/Currents/default.asp

Just What Is An Appliance?

There are many types of appliances found in restaurants, residences, shops, and other buildings. An "appliance" is a single self-contained manufactured machine that is listed and built to a standard size or type. It is installed as a stand-alone unit and designed to perform one or more specific functions. Appliances are connected to a single power source either by cord and plug or hard-wired.

Examples of Residential, Commercial, or Small Industrial Appliances			
Dishwasher	Vehicle Repair Equipment	Towel Warmer	Clothes Dryer/Washer
Refrigerator/Freezer	Portable Space Heater	Grinder/Polisher	Air Conditioner
Hood Fan	Insta-hot Water Heater	Office Equipment	Water Heater
Microwave	Self-contained Hot Tub	Trash Compactor	Vending Machine
Ice Maker	Self-contained Humidifier	Range/Stove	Garbage Disposal

What Is The Difference Between Cord And Plug And Hard-wire?

An appliance is "cord and plug" if the appliance is connected to an existing power outlet by a single "listed" cord and plug unit consisting of a one-piece molded plug and cord unit not exceeding 250 volts, 60 amperes, single phase. If allowed in the manufacturer's instructions, the plug and cord unit may be installed in the field per the product's listing requirements. The appliance must be a single manufactured unit not requiring any electrical field assembly except the installation of the plug and cord unit.

An appliance is "hard-wire if the appliance is connected to the electrical power by any method other than a listed one-piece cord and plug unit (e.g. separate cord and plug, flexible whip, etc.).

When Do You Need An Electrical Contractor And Electrician?

Be careful to make sure that any specialty maintenance contractor you hire is licensed to work on your type of appliance in the occupancy type you have. You can find detailed descriptions of all allowed scopes of work in WAC 296-46B-920. WAC rules are available at any L&I office for $5 each or online at:

http://www.lni.wa.gov/TradesLicensing/Electrical/LawRulePol/default.asp

An appliance connected to an existing electrical outlet by a listed one-piece molded cord and plug is exempt from electrical contracting, and electrician certification.

The new installation of a hard-wire appliance must be done by a licensed 01-general or 02-residential electrical contractor using certified 01 or 02 electricians and supervised trainees.

The replacement, repair, or service of a hard-wire appliance may be done by a licensed 01-general, 02-residential, 07(d) appliance repair, or appropriate maintenance specialty electrical contractor using appropriately certified electricians and supervised trainees.

● What About Permits And Inspection?

No permit or inspection is required for:

- An appliance connected to an existing electrical outlet by a listed one-piece molded cord and plug.
- The replacement of an existing hard-wire (see above for definition) appliance in a residence.
- The replacement of any like-in-kind control component in an existing hard-wire (see above for definition) appliance in any non-residential occupancy.

A permit and inspection is required for:

- New hard-wire (see above for definition) appliance installations.
- The replacement of an existing hard-wire (see above for definition) appliance in any non-residential occupancy.

If a new power outlet is required or an existing outlet needs to be relocated or modified to match the appliance, the outlet work must be done by an appropriately licensed electrical contractor. An electrical permit must be purchased by the installing electrical contractor followed by an inspection to ensure all electrical safety requirements have been met.

● Scope Of Work For The Appliance Repair Specialty (07D)

This specialty is allowed to service, maintain, repair, or replace household appliances, small commercial or industrial appliances, and other types of small electrical utilization equipment. It can perform the in-place like-in-kind replacement of the appliance if the same unmodified electrical circuit is used to supply the appliance being replaced.

This specialty also includes the like-in-kind replacement of all electrical components within the appliance. It can disconnect and reconnect line voltage supply whips not over six feet in length if there are no modifications to the characteristics of the electrical circuit supplying the appliance. The 07D contractor may also change a hard-wire to a plug and cord connection by installing an outlet box and outlet. A detailed description may be found in WAC 296-46B-920(k).

The 07D contractor is not allowed to work on other electrical wiring or any other electrical equipment or components. Under no circumstances are they allowed to perform any type of work in classified locations governed by NEC articles 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, or 516 or do any plumbing work regulated under chapter 18.106 RCW.

● Electrician Certification & Trainees Working On A Hard-wire Appliance

If you work on a hard-wire appliance, you must be a certified electrician or a supervised electrical trainee. To get electrical training experience you must have a valid training certificate.

For more information about qualifying to become an electrician, call (360) 902-5269. Or go to:
http://www.lni.wa.gov/TradesLicensing/Electrical/LicenseExamEd/LicenseCert/default.asp

● Question of the Month

Can a 07D electrician replace a compressor in a residential HVAC heat pump? Yes, or No?

September's Question was: The connection of a low voltage HVAC/R low voltage control system to a building's energy management system may be done by a HVAC/R specialty? **Answer is**: **False** See WAC 296-46B-920(f)(iv)

The Answer to August's Question concerning the calculated load for the service conductors on a 12-unit multifamily dwelling was missed in the September Currents. **The real Answer is: 382 amps**