



Tower Crane Electrical Safety Requirements

Crane failure due to mechanical or electrical problems can cause loss of life and significant property damage. Washington state law requires electrical inspections and third-party evaluation and labeling of electrical equipment on all tower cranes operating in the state.

The evaluation and labeling requirement for electrical equipment

When the electrical inspection authority finds that an electrically operated tower crane is not [listed and labeled](#) (WAC 296-46b-100) and has not had the third-party evaluation for the site where the crane is installed, it issues a correction notice to the crane installer requiring a field evaluation to be made. Until the crane has the proper evaluation or the electrical inspection authority has granted temporary approval to operate, the crane must not be used.

In L&I jurisdictions, many crane owners and contractors have found that they can get temporary operating approval in as little as 24-48 hours after receiving the initial electrical correction.

Permitting requirements are similar in L&I and city jurisdictions

Electrical permits must be obtained before the electrical installation begins. The installer doing the electrical work must obtain the electrical permit. L&I permitting applications, fees, and procedures are available on the web at <https://www.lni.wa.gov/ElecInspect>.

A complete list of city electrical inspection jurisdictions and their contact information can be found on the L&I website at: <https://www.lni.wa.gov/CityInspectors>.

Crane certification and electrical inspection

An electrical inspection should not be confused with a crane certification. DOSH requires crane certification for the construction industry. Electrical inspection by the electrical inspector will be a part of the certification process. DOSH crane certification will not be granted until the crane's electrical inspection is completed.

Electrical inspection for tower cranes as described in this information sheet always has been and is currently required. To get electrical inspection approval the crane must be listed and labeled or field evaluated by an L&I accredited testing laboratory before the electrical inspector can grant inspection approval.

Obtaining a field evaluation of an unlisted crane

Using this process gets a crane into operation as quickly as possible:

- The owner of the crane must contact an L&I approved electrical testing laboratory (see information and link below) and make arrangements for the laboratory to field evaluate the crane.
- The laboratory performs the evaluation and affixes a field evaluation label to the crane.
- After the field evaluation label is affixed, the electrical permit holder may request an electrical inspection and the inspector can approve the installation if the wiring supplying the crane meets code requirements.

Accredited electrical product-testing laboratories

Tower crane field evaluations may be site specific. If there is a site specific restriction, an evaluation will be necessary each time the crane is moved.

For a complete list of accredited electrical product testing laboratories, search “electrical testing labs” on the [L&I website](#).

What’s next

If the owner needs to operate the crane before the field evaluation label has been affixed, the owner must request permission to operate in writing to the electrical inspection jurisdiction. In L&I electrical inspection areas, the owner must supply L&I with the preliminary evaluation report in the request to operate. In L&I’s jurisdiction, L&I typically grants approval to operate on a temporary basis based upon the results of a preliminary evaluation and time needed for the laboratory to complete the evaluation.

Cities that do electrical inspections have similar policies and procedures. For procedures within City jurisdictions that administer the electrical code, contact the city jurisdiction for more information about City policy and procedures.

DOSH safety policy on tower cranes

All tower cranes are expected to carry the appropriate electrical certification following third-party evaluation before they are put into operation. If electrical components are not properly evaluated and certified, DOSH will issue citations with possible monetary penalties. In all cases where inspections are performed, if DOSH determines that there exists an imminent danger to workers or the public, immediate correction will be required prior to continuing operation.

More Information

Electrical questions, call an Electrical Technical Specialist at (360) 902-5269 or e-mail ElectricalProgram@Lni.wa.gov.

Crane safety questions, call the Crane Safety Program at (360) 902-4943 or e-mail LNICranes@Lni.wa.gov.