

Quality Assurance of Electrical Products



During projects, when a contractor or end user is working with electrical products, most of their materials have gone through some sort of quality assurance process. Quality assurance tests different aspects of a product through audits and other forms of assessment to detect problems that need to be corrected in order to meet proper standards or requirements. This ensures the best possible quality of a product. However, there are instances when customers purchase products that have not been through a quality assurance process. Electrical equipment that is counterfeit or salvaged has a higher chance of foregoing this step. In these cases, these electrical products are capable of causing undue harm to people and property.

COUNTERFEIT PRODUCTS

In Canada, more and more electrical products are being imitated and sold to unsuspecting customers. A counterfeit product is one that uses, without authorization, the trademark, service mark, or copyright of another product, with the intention of deceiving prospective customers so they believe the product is genuine. Counterfeit products are often less expensive than legitimate products because the manufacturers cut corners. The World Intellectual Property Organization estimates counterfeit goods account for hundreds of billions of dollars worldwide. These products present long-term economic risks related to safety and have a negative impact on legitimate manufacturers. Whether an end user is purchasing the product, or a contractor is, it is always important to check its quality before using it. Counterfeiting of electrical products is a serious and growing issue, not just in Canada, but around the world too.

It is always important to review the quality assurance of all electrical equipment being used on a project. Unfortunately, there are some instances when this step is passed over. They may include:

- Counterfeit products tend to be cheaper, so contractors or end users may think they are getting a deal instead of a scam.
- Time also plays a key role. Some end users are increasingly demanding work be performed within a tight timeframe, yet contractors have no control over the delivery of parts sourced by the end user.

Another serious and growing problem is the use of salvaged or refurbished electrical equipment. Each year, electrical equipment is exposed to millions of dollars in damage from hazards including water, fire/heat, and earthquakes. Water damage, which is one of most serious factors in the breakdown of electrical equipment, can result from severe storms, flooding and contaminated flood waters, fire-fighting activities, and damaged piping systems.

In most instances, electrical products that are damaged by water must be taken out of service and scrapped. However, many items have the potential to be re-used or salvaged. Controlled re-purposing of such equipment can be both cost effective and environmentally friendly. However, the refurbished or salvaged electrical equipment can be potentially volatile. When a contractor or end user chooses to use a salvaged electrical product, there could be several factors behind their reasoning.

- There can be industry pressure for cost containment. Increased overseas competition has influenced the surge in purchasing and use of salvaged electrical equipment.
- These products are also available for the general public to purchase from facilities such as scrap yards, used building material outlets, equipment supply companies, and even on-line resources.

Buyers of salvaged, remanufactured, or new excess electrical equipment must exercise caution when using them. Regardless of the source, purchasers of used or refurbished electrical components need to understand the serious implications of re-using these products. Electrical distribution and control equipment, such as panelboards, load centers, circuit breakers, enclosed switches, wiring, motor control, and other similar devices should be removed from service. Although the equipment may appear to be undamaged, contamination and deterioration of parts and materials may have occurred.

The dangers of using lower quality electrical products affects everyone involved—from the manufacturer designing or refurbishing the product, to the government body inspecting it, to the distributor selling products and the contractors installing them. Using any sort of faulty electrical system has the potential to cause harm.

- Counterfeit electrical products can overheat or cause short circuits.
- Using salvaged electrical products can reduce the integrity of the electrical equipment and can affect its ability to perform its intended function.

Such damage can result in a fire or shocks and explosions which can cost people their lives and produce considerable property damage. It is crucial to work together in assuring the quality of all products being used, to prevent unsafe counterfeit or salvaged electrical products from causing harm to people and property.

HOW TO ENSURE QUALITY ASSURANCE

- Set up a reporting process to protect the company and enhance document retention programs. This ensures the company knows where it is getting its electrical materials from.
- Establish a company-wide process for reporting counterfeit electrical products. This provides a collaborative outlet for alerting fellow workers and protecting your property.
- When using salvaged equipment, ensure to follow regulated controls where applicable.

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OTHER RESOURCES

Counterfeit Electrical Products

If you need to report a counterfeit product, there are several options available to you.

The Canadian Anti-Counterfeiting Network represents a coalition of businesses and associations that have united in the fight against product counterfeiting, fraud, and copyright piracy in Canada and abroad. To report a counterfeit product, call them toll free at **(888) 495-8501** or visit their [website](#).

You can also make use of the following resources:

- Reach out to the local [Crime Stoppers](#).
- Contact the nearest detachment of the RCMP.

Salvaged Electrical Products

You can find more information on salvaged goods from a number of industry related organizations.

- The Canadian Standards Association (CSA) has several programs for certifying rebuilt, refurbished, and remanufactured electrical products. You can find more about these programs on their [website](#).
- Refer to the National Electrical Code (NEC) steps to address the increased use of refurbished electrical products.

- Underwriters Laboratories (UL) has established a reconditioned (rebuilt) certification program for eligible products which continue to meet the requirements of the applicable safety standard.
- UL can provide field evaluation services for permitted types of electrical equipment that has been reconditioned in the field.
- The National Electrical Manufacturer's Association (NEMA) has published several documents containing important information on industry positions relative to the suitability and safety of reconditioned equipment in electrical infrastructure. These documents also expand on processes for accomplishing the reconditioning of suitable equipment. You can find these documents on their [website](#).

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