

## Be aware of rebuilt burner-boiler controls

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### Key Concepts

- Rebuilt controls often don't have the latest technology.
- Rebuilt controls can be a source of continuing problems.
- The practice of remanufacturing controls is being abandoned.
- Rebuilt controls may not be insurable.

An older, restored home can be charming. Old, restored cars are classics. But sometimes new is not only better, it is safer and more cost-effective. That is what burner-boiler experts say about burner-boiler controls.

Safe, reliable burner and boiler operation is critical for industrial plants. Experts agree that new burner-boiler controls, with the latest technology standards, are the best way to keep systems running at peak efficiency. But often, these critical operations are running on rebuilt controls, with the plant engineer unaware of the potential problems.

### Rebuilt controls

What is a rebuilt control? It is any used control that has been cleaned or repaired prior to being resold. The unit may have been cleaned or one of the components replaced. But other critical components on the control could still have years of wear and tear, and it is hard to predict how long the control will last.

Most states require controls to be approved by a nationally recognized testing agency such as Underwriters Laboratories (UL) or the Canadian Standards Association (CSA) (Fig. 1). Rebuilt controls that don't undergo the rigorous safety and operational testing those agencies require for certification should have these labels removed.

Some independent rebuilders comply with those regulations but many do not, instead leaving testing agency labels as well as the original equipment manufacturer's labeling intact. As long as the boiler is functioning, the operator may have no idea it is operating with controls that have years of wear and stress. That puts the plant engineer at risk for a

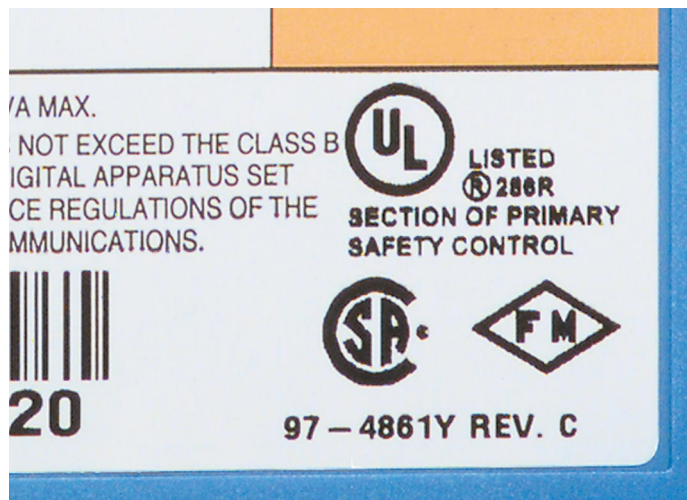


Fig. 1. Rebuilt burner-boiler controls that aren't tested should not have these symbols.

host of problems ranging from reliability to potential safety and liability.

One service manager with over 20 years experience working with burner-boiler controls doesn't use rebuilt controls or sell them. He says it's a question of reliability. "When you buy a rebuilt control, you're not sure how much of it was rebuilt, how old the control was to begin with, and how much time was on it."

### Reliability

Reliability is a critical problem when it comes to rebuilt controls. When the industry changed to electronic controls, their memory clearly recorded how many cycles a control unit experienced. Over time, the numbers added up. Experts say rebuilt controls often have years of use, meaning controls may have hundreds of thousands of cycles, starting and stopping equipment.

Rebuilders may clean the unit, and replace a component. But the rest of the unit will still have hundreds of thousands of cycles. Such controls can never be restored to their full potential for reliability.

It's also unlikely rebuilders would know what the OEM's specifications were for the unit. And they wouldn't know how it was adjusted at the factory for peak operation.

Industry experts say rebuilt controls bring a high risk for continued problems. A 25-year veteran of the industry and an instructor for third class stationary engineering licensing requirements holds seminars for maintenance directors and their staffs on control operations code requirements. He says, "It's like fixing an old car. Even though you fix a part, there's going to be something else that's going to fail, and that's exactly the way controls are."

Rebuilt controls also don't take advantage of technological advances. These controls met the specifications and safety requirements for the time when they were originally manufactured. But new advances in the industry, such as safety-tested microprocessor technology, aren't used when a unit is rebuilt. Changing technology is one of the reasons some OEM's have ended the practice of remanufacturing their own controls (Fig. 2).

In the past, a number of OEM's would remanufacture their burner-boiler controls, which is a dif-

ferent process from rebuilding them. Remanufactured controls were cleaned and the control unit was updated to meet current specifications. Unlike independent rebuilders who may cannibalize used parts to fix the unit, most OEM's used only new, unused parts in repairs. But as replacement parts became harder to find, and technology changed, OEM's stopped remanufacturing altogether.

Companies have focused on improving technology and delivering new controls that will meet higher standards for safety and reliability. Such new controls from OEM's also carry one other valuable component — a full factory warranty. Service companies say that warranty is worth a lot, including higher reliability, and lower risk.



*Fig. 2. New controls contain the latest technology, something rebuilt controls don't have.*

### Liability

Nuisance problems can be costly, with downtime and repairs. Problems with burner-boiler controls can cost even more depending on insurance coverage. Many insurers will only offer liability coverage when controls used carry a seal of approval such as UL or CSA. Others require additional endorsements, such as the CSD-1 code, written by the American Society of Mechanical Engineers.

Failure to get approvals may leave a plant at risk for a substantial loss if the component fails or causes a burner-boiler breakdown. Your insurance agent should outline precisely what a policy will and will not cover in these instances.

### Safety

When it comes to people and safety, the risk of using a rebuilt control may be too great to take. So how do you ensure that the controls are new? First, check that the control carries all appropriate labels from testing agencies and OEM's. Purchase controls from an authorized distributor with a proven record of delivery, service, and maintenance — not from nonauthorized sources.

When you need to depend on a control for reliable burner-boiler operation, quality, cost, and convenience should always be considered up front. For most operators, rebuilt controls don't make the grade.

