



Remanufactured Equipment in the 2020 National Electrical Code



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Changes

Discussion

- Proposed Changes
- What you can do
- When you can do it

90.4 Enforcement

... The authority having jurisdiction for enforcement of the *Code* has the responsibility for making interpretations of the rules, for deciding on the approval of equipment and materials, and for granting the special permission contemplated in a number of the rules.

Definition of Reconditioned

Reconditioned. Electromechanical systems, equipment, apparatus, or components that are restored to operating conditions. This process differs from normal servicing of equipment that remains within a facility, or replacement of listed equipment on a one-to-one basis. (CMP-10)

Informational Note: The term *reconditioned* is frequently referred to as *rebuilt, refurbished, or remanufactured*.

Reconditioned Equipment Labeling

- **110.21(A)(2)** Reconditioned Equipment.
- Reconditioned equipment shall be marked with ... name of who reconditioned and date
- Reconditioned equipment shall be identified as “reconditioned” and ~~approval~~ **the original listing mark removed.** Approval ... not based solely on original listing.
- *Exception: In industrial occupancies, where conditions of maintenance and supervision ensure that only qualified persons service the equipment, the markings indicated in 110.21(A)(2) shall not be required for equipment that is **reconditioned by the owner or operator as part of a regular equipment maintenance program.***

Reconditioned Equipment Labeling

- **110.21(A)(2)** Reconditioned Equipment. (continued)
- Informational Note No. 1: Industry standards are available for application of reconditioned and refurbished equipment. Normal servicing of equipment that remains within a facility should not be considered reconditioning or refurbishing.
- Informational Note No. 2: The term “reconditioned” may be interchangeable with the terms “rebuilt,” “refurbished,” or “remanufactured.”
- Informational Note No. 3: The original listing mark may include the mark of the certifying body and not the entire equipment label.

Equipment with GFPE

- **210.15** Reconditioned Equipment.
- The following shall not be reconditioned: Equipment that provides ground-fault circuit-interrupter protection for personnel
- Equipment that provides arc-fault circuit-interrupter protection
- **Equipment that provides ground-fault protection of equipment**

Panelboards, Switchboards, Switchgear

- 408.8 Reconditioning of Equipment.
- Reconditioning of equipment within the scope of this article shall be limited as described in 408.8(A) and (B). The reconditioning process shall use design qualified parts verified under applicable standards and be performed in accordance with any instructions provided by the manufacturer. If equipment has been damaged by fire, products of combustion, or water, it shall be specifically evaluated by its manufacturer or a qualified testing laboratory prior to being returned to service.

Panelboards, Switchboards, Switchgear

- (A) Panelboards.
- Panelboards shall not be permitted to be reconditioned. This shall not prevent the replacement of a panelboard within an enclosure. In the event the replacement has not been listed for the specific enclosure and the available fault current is greater than 10,000 amperes, the completed work shall be field labeled, and any previously applied listing marks on the cabinet that pertain to the panelboard shall be removed.

Panelboards, Switchboards, Switchgear

- (B) Switchboards and Switchgear.
- Switchboards and switchgear, or sections of switchboards or switchgear, shall be permitted to be reconditioned.
Reconditioned switchgear shall be listed or field labeled as *reconditioned*, and previously applied listing marks, if any, within the portions reconditioned shall be removed.

Reconditioned Switchgear over 1000 Volts

- 490.49 Reconditioned Switchgear.
- Switchgear, or sections of switchgear, within the scope of this article shall be permitted to be reconditioned. The reconditioning process shall use **design qualified parts verified under applicable standards and be performed in accordance with any instructions provided by the manufacturer.** Reconditioned switchgear **shall be listed or field labeled as *reconditioned***, and **previously applied listing marks, if any, within the portions reconditioned shall be removed** . If equipment has been damaged by fire, products of combustion, or water, it shall be specifically evaluated by its manufacturer or a qualified testing laboratory prior to being returned to service.

Other Equipment – **Not** to be Reconditioned

- 240.62 Low voltage fuseholders and low-voltage non-renewable fuses
- 240.102 Medium voltage fuseholders and medium-voltage non-renewable fuses
- 406.3(A) Receptacles
- 406.7 Attachment plugs, cord connectors and flanged surface devices
- 410.7 Luminaires, lampholders, retrofit kits

Other Equipment – **Not** to be Reconditioned

- 411.4 Listed low voltage lighting systems or lighting system assembled from listed parts
- 695.10 Fire pump controllers and transfer switches
- 700.5(C) Automatic transfer switches (emergency systems)
- 701.5(C) Automatic transfer switches (legally required standby)
- 702.5(A) Automatic transfer switches (optional standby)
- 708.24(A) Automatic transfer switches (COPS)

What can you do?

- File a Notice of Intent to Make a Motion to reject changes
 - Due April 26, 2019 (yesterday)
- If you are a voting member of NFPA, attend the Technical Association meeting in San Antonio on **June 20** and vote for any Certified Amending Motions
- If the Motions to reject fail, file an appeal with the NFPA Standards Council by **July 10, 2019**
- Standards Council meets in Quincy, MA **August 5-7, 2019**

If the 2020 changes are adopted...

- Local adoption will occur on state, county and municipal level over several years
- Some jurisdictions amend the NEC
- May conflict with Right to Repair legislation, if it includes electrical equipment

Changes

Discussion

- Impact to US Manufacturing
- Impact to Reconditioning Companies

Impact to US Manufacturing

- Increased equipment costs
- Potential for increased downtime
- Probable enforcement variability across country

Impact to Reconditioning Companies

- Restricted business opportunities
- Increased business costs
- Probable enforcement variability across country

Questions?

Thank you!