

NEW HAMPSHIRE STATE BUILDING CODE
PROPOSED AMENDMENT FORM

EL-17-06-20

Proposed amendment submitted by:

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Company /Organization: Self

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Applicable code: NEC-17 (NFPA 70) Applicable code section: 250.140

Select only one code: *IEBC-15 IBC-15 IRC-15 IPC-15 IMC-15 IECC-15 IEBC-15 NEC-17 (NFPA 70)*

Current language (including section numbers and include prior adopted amendments):

250.140 Frames of Ranges and Clothes Dryers. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be connected to the equipment grounding conductor in the manner specified by 250.134 or 250.138.

Exception: For existing branch-circuit installations only where an equipment grounding conductor is not present in the outlet or junction box, the frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be permitted to be connected to the grounded circuit conductor if all the following conditions are met.

- (1) The supply circuit is 120/240-volt, single-phase, 3-wire; or 208Y/120-volt derived from a 3-phase, 4-wire, wye-connected system.*
- (2) The grounded conductor is not smaller than 10 AWG copper or 8 AWG aluminum.*
- (3) The grounded conductor is insulated, or the grounded conductor is uninsulated and part of a Type SE service-entrance cable and the branch circuit originates at the service equipment.*
- (4) Grounding contacts of receptacles furnished as part of the equipment are bonded to the equipment.*

Check one: Delete without substitution: Add new section to read as follows:
 Delete section and substitute the following: Revise section to read as follows:
~~Show Line through material to be deleted.~~ Underline material to be added.

Proposed code language: Number the current exception as Exception No. 1 and a new Exception No. 2 as follows:

Exception No. 2: For existing branch-circuit installations only where the equipment supplies a dwelling unit(s) and there is no equipment grounding conductor present in the outlet or junction box, the frames of the appliances specified in Exception No. 1 shall be permitted to be connected to the grounded conductor provided all the conditions specified in (1), (2) and (4) of Exception No. 1 are met, the grounded conductor of the circuit supplying the appliance(s) is part of a nonmetallic sheathed cable and it is insulated or covered within the supply enclosure so it does not make contact with any normally non-current-carrying metal parts.

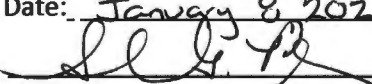
Reason / Justification:

The proposed new exception is intended to address situations where a whole house, service rated, transfer switch is installed between the meter enclosure and the existing panelboard enclosure. Because the existing load center (formally the service equipment) is now feeder supplied equipment, which is on the load side of the service disconnecting means (the service rated transfer switch), the grounded conductor is not permitted to be used part of the effective ground-fault current pathway. Therefore, any existing 3-wire range and dryer circuits must be replaced with 4-wire circuits. The hazard addressed by 250.142(B), having neutral current flowing on the metal normally non-current-carrying parts, is addressed by the requirement to insulate or cover an uninsulated grounded conductor within the supply enclosure so it does not contact metal parts that are now normally non-current-carrying. By stating the uninsulated conductor can be "covered" it will be clear that methods such as taping or using shrink tubing as means of preventing contact with normally non-current-carrying metal parts is permitted. Having to replace these nonmetallic sheathed cables, receptacles and appliance cords can present significant hardships for the dwelling unit owners which often result in a limited optional standby system. The proposed new exception provides a safe alternative to having to replace the existing 3-wire nonmetallic sheathed cables and equipment or install a limited standby system.

Financial Analysis/Fiscal Impact of proposed amendment:

The proposed exception can reduce expenses for dwelling unit owners without compromising safety.

For Building Code Review Board Use:

Not approved: _____ Approved: X Approved with modifications: _____
Scheduled Hearing Date: January 8, 2021 Exhibit #: EL-17-06-20
Chair's Signature:  Date: January 8, 2021
Printed Name: Shawn G. Bergeron