



OFFICE OF HOUSING

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, DC 20410-8000

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MEMORANDUM FOR: All Primary Inspection Agencies  
All State Administrative Agencies

FROM: Pamela Beck Danner, Administrator, Office of Manufactured  
Housing Programs

SUBJECT: Chassis Bonding Connections

Recently, the Department of Housing and Urban Development (HUD) had an issue raised by a State Administrative Agency (SAA) regarding the adequacy of the methods used by a number of manufacturers to bond the chassis to the ground in the panel box, in particular, the bonding connection of the grounding terminal to the chassis. The issue involves the use of sheet metal screws and self-tapping screws for this application. A review of previous HUD communications to the industry has clarified this issue as follows:

“A self-tapping screw can be considered an approved paint-penetrating fitting in accordance with Section 3280.809(d)(2) provided contact is made between its thread, a grounding terminal and the chassis component to which the connection is being made.”

A further review of the National Electrical Code (2005) (NEC) revealed that “sheet metal screws shall not be used to connect grounding conductors or connections to enclosures.” (NEC section 250.8) The issue raised indicated that sheet metal screws or self-tapping screws were being used to bond a grounding terminal to the frame and therefore not in compliance with the Federal Manufacturing Housing and Construction Safety Standards (FMHC&SS) and the NEC.

Based on this information HUD has determined:

- Self-tapping screws can be used to bond a grounding terminal to the steel chassis.
- Sheet metal screws cannot be used to bond a grounding terminal to the steel chassis.
- Sheet metal screws may continue to be used for bonding metal heat ducts to frame.

Therefore, all Design Approval Primary Inspection Agencies (DAPIAs) are requested to review all approved designs to assure that sheet metal screws are not approved for this purpose and as necessary issue a design deviation report to affected manufacturers as appropriate. In addition, DAPIAs are requested to submit a copy of each deviation report issued to the Institute for Building Safety and Technology (IBTS). All Production Inspection Primary Inspection Agencies (IPIAs) are requested to assure that sheet metal screws are not being used for this bonding connection.

HUD requests that all PIAs inform their manufacturing clients of these requirements. If you have any questions regarding this matter, please contact your local HUD liaison.