ELECTRICAL INSPECTION BULLETIN
B-26-724
Requirements for Arc-Fault Circuit Interrupters (AFCI's)

(Effective 12/15/2015)

The purpose of this bulletin is to provide clarity when AFCI's are required to be installed as required by CE Code Rule 26-724.

A Dwelling unit means one or more rooms for the use of one or more persons as a housekeeping unit with cooking, eating, living, and sleeping facilities. Examples would include; single-dwellings, condominiums, cottages, cabins, apartment units and motel/ hotel/ student dormitory units that are equipped with cooking facilities within the individual dwelling unit. Institutional facilities such as hospitals, nursing homes, long term care facilities and prisons are not considered as dwelling units.

For the application of AFCI requirements, a cooking facility is defined as one that contains a range (electric or gas) or counter top stove and/or oven. Microwaves and hotplates do not constitute a cooking facility.

In single occupancy rooms or bachelor suites that have cooking facilities, AFCI protection is required.

AFCI's are not required for receptacles which are to be added to an existing branch circuit. In cases where a new area is added to an existing dwelling unit, and receptacles are supplied from an existing branch circuit, AFCI protection is required. Installation of a new branch circuit in an existing dwelling unit would require AFCI protection.

AFCI's are not required to be installed on existing branch circuits when completing a service upgrade unless a new branch circuit is added to supply receptacles that are not exempted in accordance with 26-724 (f). A simple replacement of receptacles would not require AFCI protection. For additional information regarding service upgrades see NSPI Bulletin B-02-022.

For clarity of Rule 26-724(f), each branch circuit supplying 125 V receptacles rated 20 A or less shall be protected by a <u>combination-type arc-fault circuit interrupter</u>, except for branch circuits supplying,

- Receptacles installed in a bathroom within 1m of the sink (26-710(f))
- Receptacles installed in a kitchen for a refrigerator (26-712(i))
- Receptacles installed along kitchen counter work surfaces (26-712(iii))
- Receptacles installed for island counter work surfaces (26-712(iv))
- Receptacles installed for peninsular counter work surfaces (26-712(v))
- Receptacles installed for sump pumps

Where a receptacle is installed specifically to supply power to an electro-medical piece of equipment, and the equipment is such that loss of power may jeopardize the health and safety of an individual that is dependent upon this device, the Inspection Department shall be contacted to discuss the installation prior to wiring of this branch circuit. Wiring of electro-medical equipment falls under the provisions of Section 24 and shall be installed accordingly.

Where a branch circuit originates from a panelboard within a dwelling unit and feeds receptacles rated 125 volt, 20 amps or less, that are located away from the dwelling (like an out building or detached garage), the branch circuit is required to be supplied by an AFCI protected circuit.

Where a feeder is installed between a panelboard within a dwelling unit, and feeds a subpanel located away from the dwelling (like in an out building or detached garage), the branch circuits connected to the subpanel are not required to have AFCI protection.

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It may be necessary when installing AFCI's in existing dwelling units having fused type panelboards, the panelboard may need to be replaced with a breaker type or a sub-panel may need to be installed to accommodate the AFCI breaker.

 Notes:

1. Care should be taken to ensure AFCI are not subjected to high pot or meggering test. They should be removed from the panel prior to meggering.

2. AFCI's are similar to GFCI's in that they should not be connected to a three wire circuit that contains a shared neutral unless the breaker is approved for that application.