

Bulletin 26-29-5
Electrical replacement and/or alterations in dwelling units
Rules 26-656, 26-658, 26-704, 26-706, and 26-708

Issued October 2022
Supersedes Bulletin 26-29-4

Scope

- 1) Introduction
- 2) Arc-Fault Protection (AFCI – arc-fault circuit interrupter)
- 3) Tamper-Resistant (TR) Receptacles
- 4) Ground Fault Circuit Interrupters (GFCI)
- 5) Outdoor receptacle covers
- 6) Subdivision of a dwelling unit supplied by one meter

1) Introduction

Questions about compliance with current code requirements have been identified where alterations and/or replacements are being made to existing installations in dwelling units. This bulletin has been developed for clarification and direction as to the appropriate installation methods to meet inspection requirements.

2) Arc-Fault Protection (AFCI)

Although ESA strongly recommends improving safety by adding arc-fault circuit protection for existing wiring, the following questions and answers have been provided for direction to meet inspection requirements. For more information on arc-fault circuit interrupters please see Bulletin 26-18-*

Question 1

When replacing knob and tube wiring or other ungrounded circuits to existing receptacle locations, are you required to install arc-fault circuit protection?

Answer 1

Yes, when replacing branch circuit wiring to existing receptacles in a dwelling unit, the installation shall meet the minimum requirements of Rule 26-658 (protected by an AFCI).

Question 2

If one or more receptacles are added to an existing circuit and the existing branch circuit ahead of the new receptacles is not altered, are you required to install arc-fault circuit protection on the extension of the branch circuit?

Answer 2

Yes arc-fault protection is required for the extension of the branch circuit. An AFCI receptacle (or a dead front) is required to be installed at the first added receptacle on

the extension of the circuit. Metal raceway, armoured cable, or non-metallic conduit or tubing shall not be required between the panel and the AFCI device.

This is also applicable to the addition of a new receptacle at the furnace (on an existing branch circuit) to plug in associated equipment (such as condensate pumps, humidifiers, etc.).

Note

ESA recommends that an AFCI breaker be installed on the circuit, or replace the existing first receptacle in the circuit with an AFCI receptacle.

Question 3

If a service or panel is replaced, relocated, or upgraded and there are no receptacles added to the existing branch circuit wiring, is arc-fault circuit protection required to be installed for the existing branch circuits?

Answer 3

No, when the service or panel is replaced, relocated, or upgraded, arc-fault protection is not required to be installed. The current Code requirement for arc-fault protection does not retroactively apply to the existing branch circuit wiring unless the branch circuit is being extended with additional receptacles. See Question 2 of this Bulletin for direction when adding receptacles to existing branch circuits.

ESA recommends that arc-fault protection be provided for existing wiring.

Rationale 3

Notwithstanding the requirements of Rule 26-658, the existing circuits are not extended with receptacles as part of the installation.

Question 4

If a small renovation is performed in a dwelling unit, complete with new branch circuit wiring, does the Code require arc-fault circuit protection to be installed for the existing circuits, which have not been altered in any way?

Answer 4

No, the current Code requirement for arc-fault protection is applied to the new branch circuits in the new additions only; arc-fault protection is not required to be added to the existing wiring.

Question 5

For older style panels where Combination AFCI (CAFCI) breakers are not available, and only parallel branch/feeder type AFCI breakers are available, Is it permitted to use a branch/feeder AFCI Breaker and an OBC-AFCI receptacle at the first outlet of a circuit, to achieve branch circuit arc-fault protection?

Answer 5

Yes, notwithstanding Rule 26-658, it can be permitted to provide the required arc-fault protection.

Note:

The existing wiring method between the breaker and the first receptacle (OBC-AFCI) does not have to consist of metal raceway, armoured cable, or non-metallic conduit or tubing

Rationale 5

The branch/feeder AFCI breaker will provide the parallel arc-fault protection and the OBC-AFCI will provide series protection; therefore, the whole branch circuit is protected.

3) Tamper-Resistant (TR) Receptacles

ESA recommends the installation of TR receptacles on existing installations especially in houses with children. Receptacles installed on new branch circuits shall comply with the current OESC requirements regarding tamper-resistant feature. The following questions and answers have been provided for clarification and direction as to appropriate application of Rule 26-706 when renovations and/or additions are being made to existing installations in dwelling units.

For more information on TR receptacle requirements, please see Bulletin 26-25-*

Question 6

When existing receptacles are replaced (i.e. like for like replacement), are the replacements required to be TR?

Answer 6

Yes, in accordance with Rule 26-706.

Rationale 6

Receptacles of CSA configuration 5-15R and 5-20R are readily available in the market with TR features and they shall be used when replacing existing 5-15R and 5-20R receptacles.

Note:

For receptacle replacement supplied by aluminum wiring, please refer to Bulletin 26-25-*

Question 7

When replacing knob and tube wiring or other ungrounded circuits to existing receptacle locations, are you required to replace existing receptacles with new TR receptacles?

Answer 7

Yes, when replacing the existing branch circuit wiring, receptacles shall be replaced with grounded 3 pin type and meet the requirements of Rule 26-706 (be Tamper Resistance and so marked).

Question 8

If one or more receptacles are added to an existing circuit, are new receptacles required to be TR?

Answer 8

Yes, added receptacles are required to be tamper resistant and so marked. Note: Existing receptacles are recommended to be replaced to TR; however, it is not mandatory.

Question 9

If a small room/area is added to a dwelling unit, complete with new branch circuit wiring, does the Code require TR receptacles to replace the existing receptacles?

Answer 9

No, the current OESC's requirement for receptacles with the tamper-resistant feature does not apply to the existing rooms wiring. Only the added receptacles are required to be TR.

4) Ground Fault Circuit Interrupters (GFCI)

Questions about GFCI requirements have been identified when replacing existing receptacles that were installed prior to the current GFCI requirements. The following questions & answers have been provided for clarification and direction as to when GFCI is required.

Question 10

When replacing an existing non-GFCI outdoor 5-15R or 5-20R receptacle, is a GFCI protected receptacle required to be installed as the replacement?

Answer 10

Yes, Rule 26-704 requires receptacles having CSA configuration 5-15R or 5-20R installed outdoors and within 2.5 m of finished grade be protected with a ground fault circuit interrupter of the Class A type.

Question 11

When replacing an existing non-GFCI receptacle located in a bathroom or washroom, is a GFCI protected receptacle required to be installed as the replacement?

Answer 11

Yes, Rule 26-704 requires receptacles having CSA configuration 5-15R or 5-20R installed within 1.5 m of sinks (wash basins complete with drain pipe), bathtubs, or shower stalls to be protected by a GFCI of the Class A type.

Question 12

When replacing an existing non-GFCI split receptacle located in a kitchen, is a GFCI protected receptacle required to be installed as a replacement?

Answer 12

No. Notwithstanding Rule 26-704, GFCI protection shall not be required, as Split receptacles are not available with GFCI protection. However, it is recommended that split receptacles be replaced with GFCI protected receptacles, as per the Flash notice 22-28-FL. <https://esasafe.com/electrical-products/flash-notices/>

5) Outdoor receptacle covers

Question 13

When replacing an existing cover for an outdoor receptacle, is the new cover required to meet requirements of Rule 26-708?

Answer 13

Yes, when replacing an existing cover for an outdoor receptacle, requirement of Rule 26-708 needs to be met.

6) Subdivision of a dwelling unit supplied by one meter

Question 14

Does Rule 26-656 c) permit an additional panelboard adjacent to the original panelboard in the dwelling unit supplied by one meter for new branch circuits for the second dwelling?

Answer 14

No. However, notwithstanding Rule 26-656 c), it shall be permitted to install an additional panelboard (Diagram B1) supplied from the original/existing service panelboard to accommodate additional AFCI breakers and circuits.

Rationale

The additional panelboard may serve as an extension of the existing panelboard.

Diagram B1- Additional Panelboard

