



Canadian Standards Association  
Mississauga, Ontario  
**To the Part I Committee**

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Subject No. 3013

Chair: R. Leduc

Date: November 21, 2002

Title: GFCIs for Dwelling Units, Rule 26-702(19)

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**Submitted by:** R. Leduc of Alberta Municipal Affairs, Edmonton, Alberta on November 28, 2000

**Proposal:** Amend Subrule (19) of Rule 26-702 to read as follows:

(19) All receptacles installed outdoors of ~~single dwellings~~ dwelling units and located within 2.5 m of ground or grade level shall be protected by a ground fault circuit interrupter of the Class A type.

**Reasons for Request:** Multi family occupancies such as walk-up or high-rise apartments as well as ground level motel/hotel units do not require GFCI protection on outside receptacle located within 2.5 m of ground level. Presumably occupants of these types of dwellings would be exposed to the same hazards as occupants of single dwellings.

**Subcommittee Deliberations**

Ten of thirteen members responded, all agreeing with the submission, 2 with comments as follows:

1. I'd like to suggest an editorial change by replacing "dwelling units" with "dwellings" to clarify that this requirement is applicable to all residential buildings where outdoor receptacles are located within 2.5 m of grade level regardless if they are located outside dwelling units or other rooms of the building. Perhaps we should consider wording "...buildings of residential occupancy..."
2. If we are considering changing this rule we should also consider exterior receptacles on residential garages as they are used by the same people for the same purpose as those on residence.

**Chair's Comments**

Although both comments have merit, I am inclined to rule them as non-germane. The submission uses the defined term "dwelling units" and by simply referring to them to "dwellings", in my opinion, would not clarify but rather introduce ambiguity. To use the defined term "residential occupancy" would better meet the wishes of the member commenting but would significantly alter the intent of the submitter's proposal. To address the member with concerns with outdoor receptacles on garages, I would suggest that a new proposal be submitted.

**Subcommittee Recommendation**

Having consensus, and to line up with the format change resulting from Subject 2838, the Subcommittee recommends to accept the original proposal re-numbered as follows:

Re-locate paragraph (b) of Rule 26-714 to Rule 26-712 as paragraph (h) as follows:

## 26-712 Receptacles in Dwelling Units.....

(a).....

(b).....

(c).....

.....

(h) All receptacles installed outdoors of dwelling units and located within 2.5 m of ground or grade level shall be protected by a ground fault circuit interrupter of the Class A type.

### Chair's Comments (2<sup>nd</sup> Round)

This subject was presented at the June 2001 Part I meeting held in Newfoundland. It was agreed to return it to subcommittee to deal with some concerns around possible interpretations of the Rule. Some felt that the way the rule is worded would mandate that even the car park receptacles of an apartment unit would require GFCI protection. Others felt that the Subcommittee should consider the use of GFCI for all outdoor facilities. Following are some observations:

The original proposal was to expand the requirement for GFCIs on outdoor receptacles from single dwellings to include dwelling units (such as the ground floor of apartments).

To expand the use of GFCIs outdoors to all types of facilities is not in keeping with the intent of the original proposal. Furthermore, this approach would have broad ramifications that would require detailed risk analysis.

The current Rule [25-714(b)], as written, is interpreted differently in some provinces. This may be due to the use of the term "of" ("...outdoors of single ..."). Some jurisdictions interpret this to include all receptacles on the property of the single dwelling; others interpret it to mean only the receptacles on the single dwelling.

My interpretation of the Rule in the 18<sup>th</sup> Edition would be that the term "of" in the rule does not extend to other buildings (such as sheds or detached garages) since those structures are not dwelling units. If we want outdoor receptacles on these structures to be GFCI protected, I would suggest that this should be a new subject.

My interpretation of the Rule in the 19<sup>th</sup> Edition would be the same as the above since the scope of the rule "This Rule applies to receptacles only in single dwellings..." does not suggest that the rules extend to structures other than dwelling units.

In keeping with the intent of the original submission to include ground level dwelling units as requiring GFCI protection, I propose the following:

1. Delete paragraph (b) of Rule 26-714
2. Add a new paragraph (h) to Rule 26-712 as follows:  
(h) Receptacles installed outdoors within 2.5 m of ground or grade level shall be protected by a ground fault circuit interrupter of the Class A type.
3. Add an Appendix B Note as follows:  
26-712(h) *Although this requirement only applies to receptacles in (or on) dwelling units, it is recommended that outdoor receptacles on structures in the same lot, yard or vicinity of single dwellings be also protected by a GFCI.*

**Rationale:** Since the scope of this Rule "...applies to receptacles in dwelling units (including single dwellings...)", we don't have to repeat it in the paragraph. Since the scope prevents us from applying the rule to other structures not forming part of the dwelling unit, the Appendix B note provides guidance in this matter. Persons operating an electric

lawnmower are exposed to the same risk of shock whether the appliance is plugged into a receptacle on the house or one on the detached garage.

### **Subcommittee Deliberations (2<sup>nd</sup> Round)**

Of 13 members 8 responded as follows:

- 5 agreed with the Chair's proposal (one with comments)
- 3 disagreed with the Chair's proposal

The member agreeing with the Chair commented to the effect the Appendix B Note in the Chair's proposal had no value since it could not be enforced. He also suggested that perhaps we could change the wording in the heading to broaden the word "in" to "in or on".

Following is a summary of the comments in disagreement with the Chair's proposal:

The concern for safety of occupants of residential occupancies using outdoor receptacles is the same whether the receptacle is on a house or a detached garage or a shed.

The headings in the subsection on "Residential Occupancies" should be more general to include not only receptacle in a residential occupancy but also outside of them and even on other structures associated with the residential occupancy

The intent of the rule is not to expand the scope to special use receptacles such as "Automobile Heater Receptacles" nor to commercial or industrial applications.

### **Chair's Comments Toward a 3<sup>rd</sup> round of Subcommittee Deliberations**

To address the negatives and to maintain the intent of the original proposal, the Chair suggests modifying the headings and scopes of a number of Rules in the Subsection on "Residential Occupancies". While this may be seen as going beyond the scope of the original proposal, it is seen as necessary to maintain consistency throughout the Subsection. In addition, the Chair believes that there is a general consensus by the Subcommittee for ensuring that occupants of residential occupancies are afforded the same level of safety regardless of where an outdoor receptacle is located at residential occupancies.

The Chair proposes the following:

1. Change title of Subsection "Receptacles in Residential Occupancies" to "Receptacles for Residential Occupancies".
2. In Rule 26-710, replace "in all" with "for all".
3. In Rule 26-712, replace "in" in both the title and the rule to "for".
4. In Rule 26-714, replace "in" in both the title and the rule to "for".
5. Change title of Subsection "Branch Circuits in Residential Occupancies" to "Branch Circuits for Residential Occupancies".
6. In Rule 26-720, replace "in all" with "for all".
7. In Rule 26-722, replace "in" in both the title and the rule to "for".
8. In Rule 26-724, replace "in" in both the title and the rule to "for".
9. Delete Paragraph (b) of Rule 26-714

10. Add a new Paragraph (o) to Rule 26-710 as follows:
  - (o) Receptacles of configuration 5-15R and 5-20RA located outdoors and within 2.5 m of finished grade level shall be protected with ground fault protection of the Class A type, except for receptacles designated as “automobile heater receptacles” in parking lots.
11. Add and Appendix B note as follows:
  - 26-710(o) *It is the intent of this rule that all receptacles of residential occupancies located outdoors and within 2.5 m of finished grade level be protected by a GFCI. This includes receptacles located on buildings or structures associated with the residential occupancy such as garages, carports, sheds, and receptacles on posts or fences, etc.*

*Without precluding its use in such applications, this rule is not intended to apply to receptacles located in parking lots of apartments installed solely for use as automobile heater receptacles nor to buildings of farms considered of a commercial-type such as shops, machine sheds, barns, etc.*

### **Subcommittee Deliberations (3<sup>rd</sup> Round)**

Of 13 members, 8 responded, all in favour of the Chair’s proposal. One respondent had the following comments:

I support Chair's proposals 1 to 9.

I support the intent of proposal 10 - to relocate this requirement to Rule 26-710 as new Paragraph (o). However, I feel that the reference to 5-15R and 5-20RA configurations is unnecessary as paragraph 26-710(b) deals with it already. Word "All" should be added to this requirement - to clarify that all receptacles located outdoors are subject to a GFCI protection. I also prefer using word “installed” instead of “located” to clarify that this is not intended to be a retroactive requirement. I'm prepared to support this proposal with the following wording

26-710(o) “Except for automobile heater receptacles provided in conformance with Rule 8-400, all receptacles installed outdoors and located within 2.5 m of finished grade level shall be protected by a ground fault circuit interrupter of the Class A Type”.

I support Chair's proposal 11 provided that word "located" is replaced by word "installed" in the 1st paragraph, and provided that the end of the 2<sup>nd</sup> paragraph, beginning with wording "located in parking lots" until the end of this paragraph is deleted and replaced with the following wording:

“...installed in parking lots of apartments, hotels, motels dormitories and buildings of similar occupancy for a sole use as automobile heater receptacles”.

Reference to farms and machine shops is not necessary. It will only confuse Code users as this Appendix B note is intended for a rule dedicated to receptacles "for residential occupancies".

### **Chair’s Comments:**

I agree with the member’s comments and feel that they do not change the intent of the proposal as voted on by the other members. I therefore declare consensus within the Subcommittee and, incorporating the member’s comments, make the following.

### **Subcommittee Recommendation:**

1. Change title of Subsection “Receptacles in Residential Occupancies” to “Receptacles for Residential Occupancies”.
2. In Rule 26-710, replace “in all” with “for all”.
3. In Rule 26-712, replace “in” in both the title and the rule to “for”.

4. In Rule 26-714, replace “in” in both the title and the rule to “for”.
5. Change title of Subsection “Branch Circuits in Residential Occupancies” to “Branch Circuits for Residential Occupancies”.
6. In Rule 26-720, replace “in all” with “for all”.
7. In Rule 26-722, replace “in” in both the title and the rule to “for”.
8. In Rule 26-724, replace “in” in both the title and the rule to “for”.
9. Delete Paragraph (b) of Rule 26-714
10. Add a new Paragraph (o) to Rule 26-710 as follows:
  - (o) Except for automobile heater receptacles provided in conformance with Rule 8-400, all receptacles installed outdoors and within 2.5 m of finished grade shall be protected with ground fault protection of the Class A type.
11. Add and Appendix B note as follows:

26-710(o) *It is the intent of this rule that all receptacles of residential occupancies installed outdoors and within 2.5 m of finished grade be protected by a GFCI. This includes receptacles located on buildings or structures associated with the residential occupancy such as garages, carports, sheds, and receptacles on posts or fences, etc.*

*Without precluding its use in such applications, this rule is not intended to apply to receptacles located in parking lots of apartments installed solely for use as automobile heater receptacles.*