

Replacement of existing kitchen counter split receptacle with Ground Fault Circuit Interrupter (GFCI) type receptacle

Background:

Questions have been asked about the replacement of split receptacles located in a kitchen and Ontario Electrical Safety Code (OESC) requirements for GFCI protection.

Issue:

Split receptacles are not available as GFCI type.

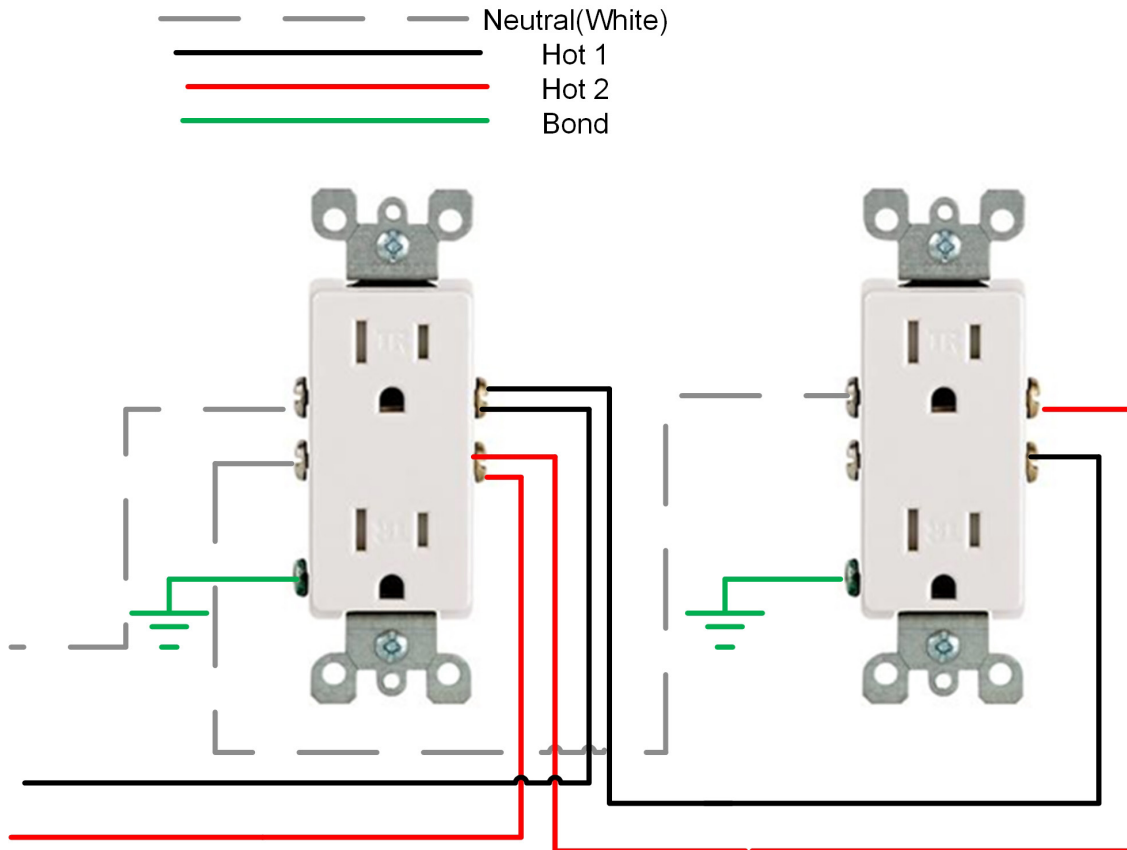
Resolution:

When choosing to upgrade existing kitchen counter split receptacles to the GFCI type for the added safety value, there are two options:

- A. To meet the requirements of the OESC, an existing 2-pole circuit breaker feeding kitchen counter split receptacle can be replaced with 2-pole GFCI breaker of Class A type to provide the required protection; or
- B. As an acceptable alternative, it will be permitted to replace existing receptacles of CSA configuration 5-15R split with 5-15R receptacles protected by a GFCI with the following methods:
 1. **For installations where an existing three wire branch circuit feeds two 5-15R split receptacles (Figure F1):**

Each 5-15R split receptacle shall be replaced with a 5-15R GFCI Tamper Resistant (TR) type receptacle fed by a separate line of the existing three wire branch circuit feed (Figure F3). The neutral conductor shall be installed in such a manner that any neutral conductor may be disconnected without disconnecting any other neutral in compliance with Rule 4-022 d).

Figure F1 – Typical installation-two 5-15R Split Receptacles connected to a three wire branch circuit



2. For installations where an existing three wire branch circuit feeds a single 5-15R split receptacle (Figure F2):

In addition to replacing the existing receptacle with a 5-15R GFCI TR type receptacle, an additional 5-15R GFCI TR type receptacle shall be added to the counter top and connected as per Figure F3.

Since the standard for GFCI receptacles requires both the Line and the neutral to be disconnected under ground fault conditions, the requirement to have the neutral in compliance with OESC Rule 4-022 d) will still allow the second GFCI to operate if the first one is tripped or disconnected.

Figure F2 – Typical installation single Split Receptacle connected to three wire branch circuit

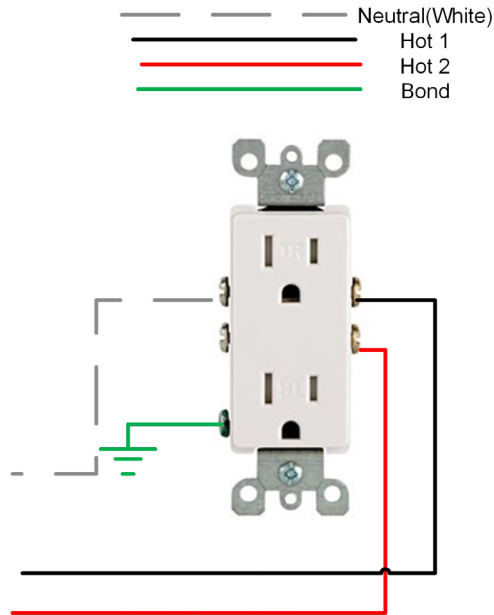
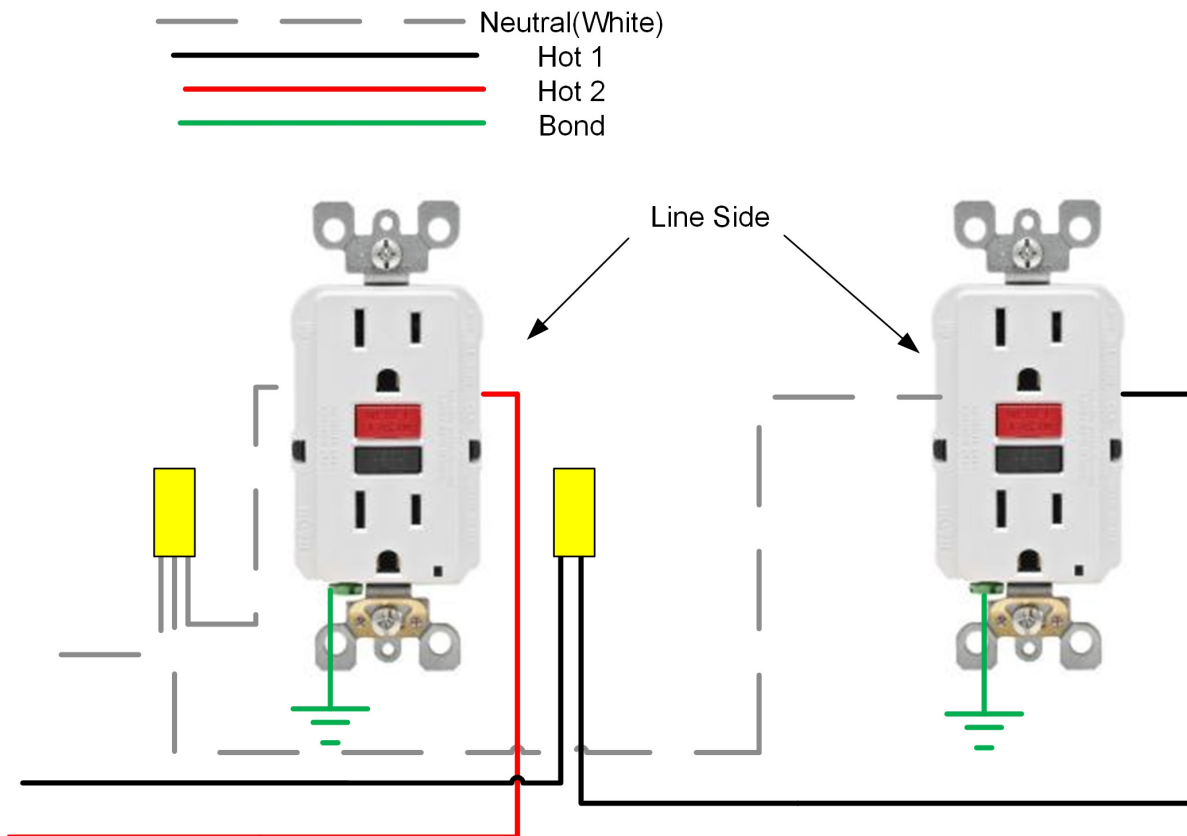


Figure F3 – GFCI Replacement Method



Electrical wiring is complicated and can present safety hazards if not properly installed and maintained.

When planning to do electrical work, think about the risks associated with unsafe electrical installations. Contact a Licensed Electrical Contractor (LEC), and make sure they arrange for an electrical inspection. You may use the following link to find an LEC in your area <https://findacontractor.esasafe.com/>

The OESC requires a "Notification of work" to be filed with the ESA before or within 48 hours after the commencement of work*. Electrical wiring and equipment must not be covered prior to being authorized by an inspector.

(*) Note:

*If the work is performed by the home owner, notification of work is required to be filed. If **the work is performed by an LEC**, although the replacement is not considered as a like for like application as stated in OESC Subrule 2-005 a) iii), notification is not required. Branch wiring extensions require notification of work to be filed. See Bulletin 2-3-* for additional information.*