

Installing GFCI/AFCI breakers in a Reliance Protran Xfer Switch

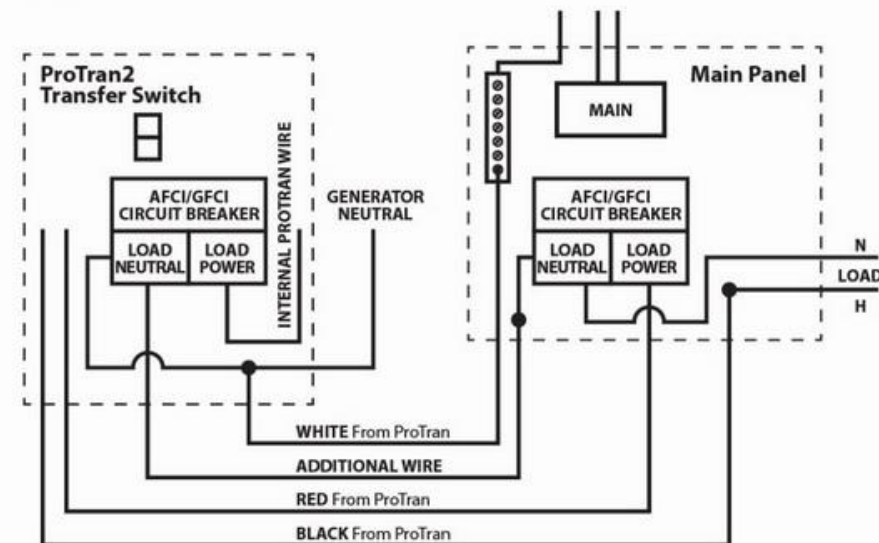
The manual for the Reliance Protran switch says this:

Installing AFCI or GFCI Circuit Breakers

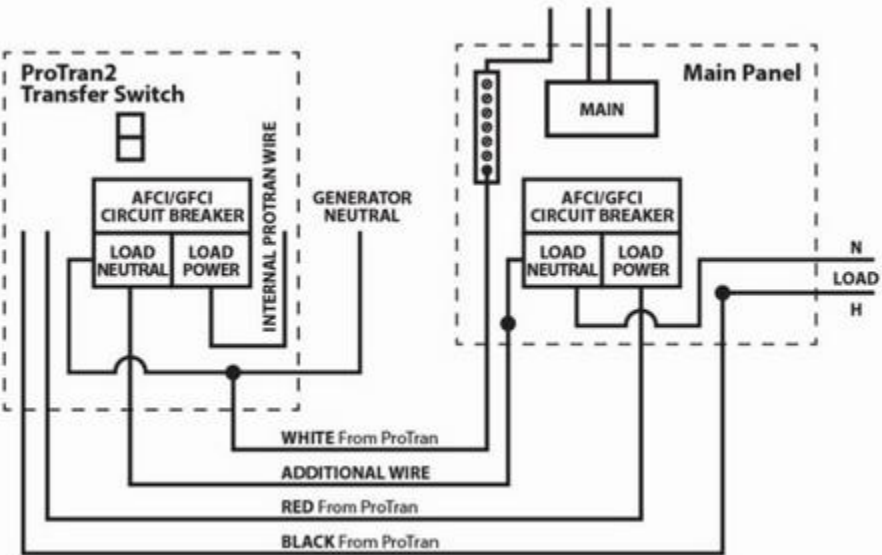
Proper installation of AFCI or GFCI circuit breakers in a Protran2 requires additional steps:

1. Replace the desired circuit breaker in the Protran 2 with an AFCI/GFCI circuit breaker of the same value as the corresponding breaker in your main panel. Connect the internal wire in the Protran to the LOAD or POWER terminal on the AFCI/GFCI circuit breaker. Suitable circuit breakers are listed on the side of the Protran cabinet.
2. Remove the white pigtail wire on the main panel AFCI/GFCI from the neutral bus on the main panel.
3. Connect a white wire of the proper gauge to this pigtail and route it into the Protran cabinet (ADDITIONAL WIRE in Figure 6).
4. Connect this new white wire to the NEUTRAL terminal on the AFCI/GFCI breaker in the Protran (see Figure 6).
5. Connect the white pigtail wire on the Protran AFCI/GFCI breaker to the main neutral wire in the Protran. This is the same white wire that the generator neutral is connected to.
6. Attach the corresponding red wire from the Protran to the LOAD or POWER terminal on the AFCI/GFCI circuit breaker in the main panel, similar to connection of a standard circuit breaker described in previous instructions.
7. Attach the corresponding black wire from the Protran to the load or branch circuit wire that was in the LOAD terminal on the main panel circuit breaker, similar to the connection of a standard circuit breaker in previous instructions.
8. Repeat the above steps for each AFCI/GFCI circuit breaker added to the Protran2.

Figure 6:

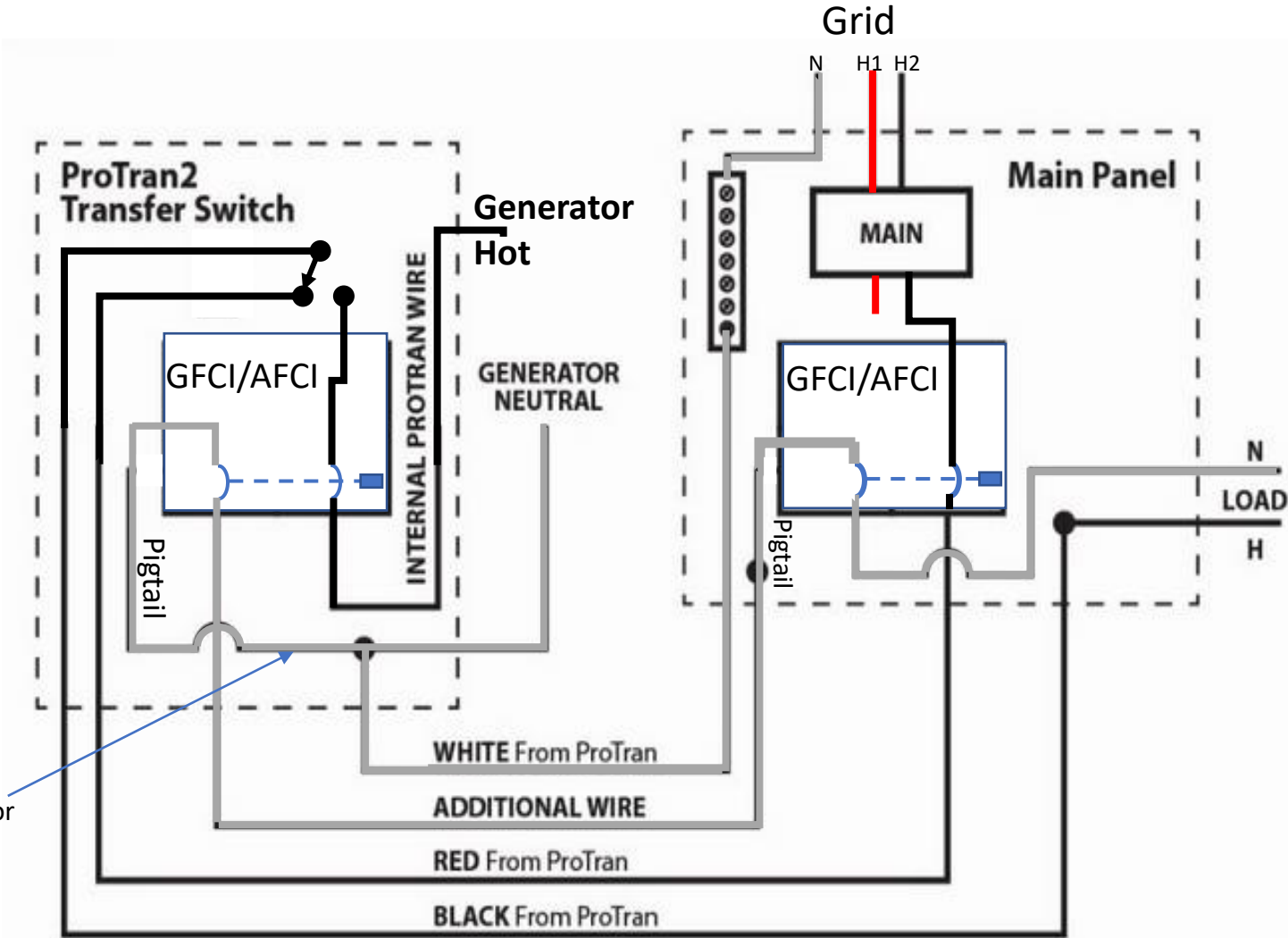


To better understand the wiring, lets update their drawing with some technical details of the breakers and switch.



Notice that the neutral side of the A/GFCI breakers are in series with each other. This is necessary to assure the neutral is opened if either GFCI trips

Combined Generator and Grid Neutral



This is an example of how it might be done with an EG4 6500 EX with the Common Neutral Firmware (No bonding screw installed)

Note that the neutral side of the two GFCI breakers are in series with each other

