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Generator Transfer Switch Install Guide
Models: HTS15-MANv1 & HTS15-MANv2

Recommended Tools Needed for Installation

- Power drill
- Wire stripper and cutter (10 to 14 gauge)
- Screwdrivers (#2 Phillips, ¼" Flat Tip)
- Voltage Meter or non-contact voltage detector
- Backup lighting during installation (optional)
- Tape measure (optional)

Parts List(s)

- Transfer Switch w/ conduit whip & wiring
- 5* - Wire connector nuts (*10 Wire Connector Nuts for HTS15-MAN-2)
- 4 - Sheet metal screws
- 4 - Drywall anchors/screws

Safety Symbols & Notices

Journeyman-Pro (Heezy LLC) are not responsible for any damage or injury caused by the installation of this transfer switch.

⚠ Danger Danger indicates an imminently hazardous situation that, if not avoided, could result in death or serious injury.

⚠ Warning Warning indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

⚠ Caution Caution indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

⚠Warning Improper installation of the transfer switch could cause damage or personal injury by electrocution or fire. Installation must be performed by a qualified electrician, or others knowledgeable of electrical systems, in compliance with all applicable electrical codes.

⚠Warning Transfer switches covered in this manual should not be used for any appliances or systems that may exceed the capacity of the product. All transfer switches meet the NEC (National Electrical Code) for 2011.

Transfer switches are required for use with portable generators by Article 702 of the 2011 National Electrical Code.

Installation Instructions

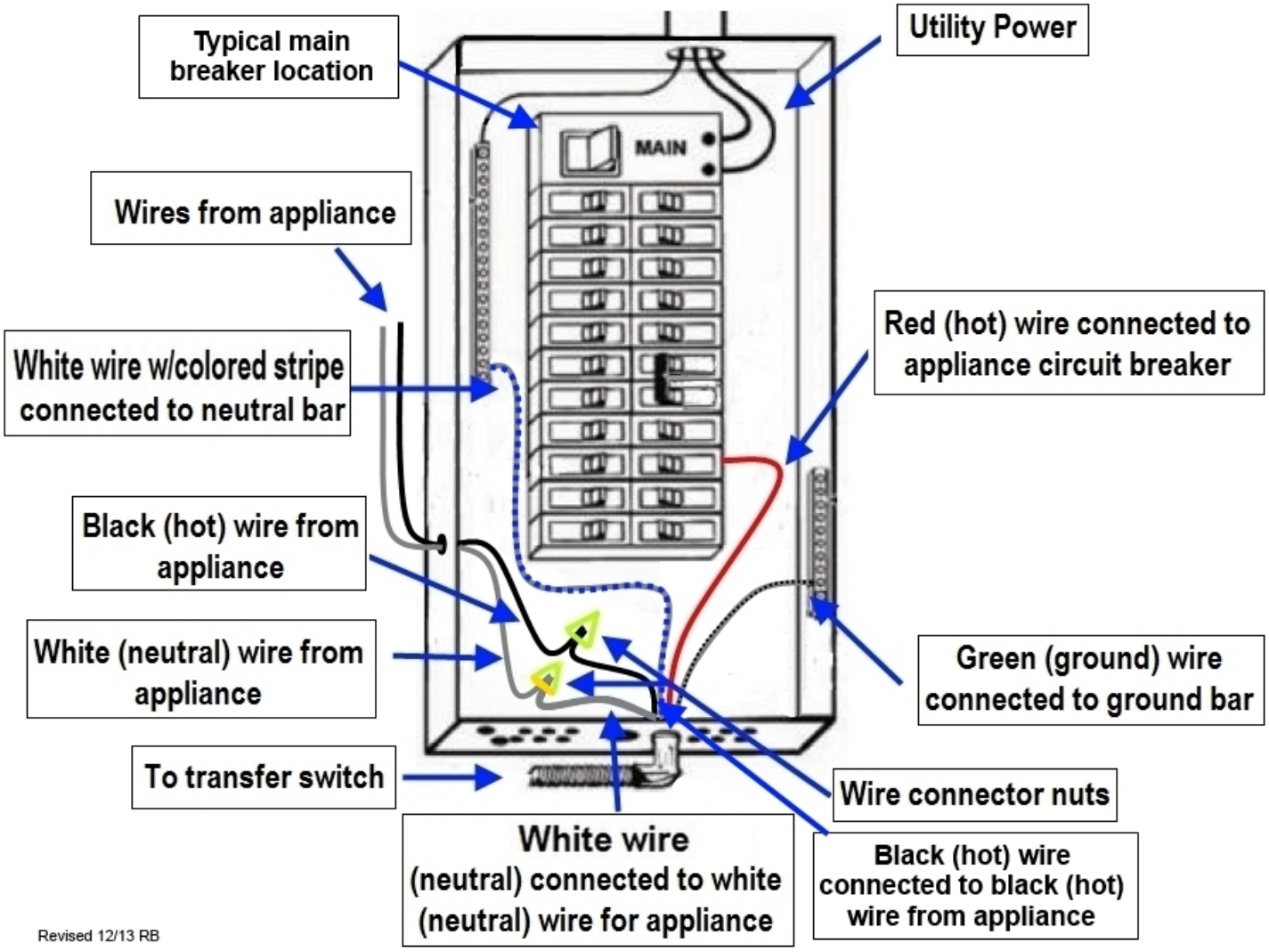
Options for installation, usually the most convenient location for powering the transfer switch is the best option for most installations. We also recommend locating the transfer switch as close to the back-up power source as possible. It's recommended to first wire it as it is received (to switch the neutral) before trying to bypass the neutral switching.

These options are in 3 Sections;

A. Installing at Circuit Breaker Panel/Load Center *(required for HTS15-MANv2)*
B. Installing at System or Appliance
C. Bypassing Neutral Switching (optional)

⚠ Danger If installing at the circuit breaker panel, always turn off "**MAIN BREAKER**" this is usually at the top of the breaker panel. Even with the main power switch turned off, the wires on the utility side of the main breaker are still live and contact with them can cause serious injury or death!

Circuit Breaker Wiring Diagram



⚠ Danger ***HTS15-MANv2** the dual circuit transfer switch should be installed at the circuit breaker panel, the **#1 Circuit** (LEFT side facing switch) will include the **GROUND WIRE** and be wrapped/labeled with **BLUE** tape.

The **#2 Circuit** (RIGHT side facing switch) will be wrapped/labeled with **RED** tape. The #2 circuit has the same color-coded wires so care must be performed to wire only one circuit at a time as to not cross the wires during installation.

If unsure of what wire connects to which circuit you can open the transfer switch and manually trace each wire, in addition another set of Color-Coded tape is wrapped around the circuits inside the transfer switch.

Wiring for the #2 Circuit is the same procedure as the #1, minus the ground connection.

A. Installing at Circuit Breaker Panel/Load Center

Mounting the Transfer Switch

1. Position the transfer switch so that its bottom center is about 18 inches from your circuit breaker load center or to where the flexible conduit whip should be lined up with a 1/2” knockout hole.
2. Anchor the transfer switch to the wall with at least two Powers wall anchors, if mounting to drywall or wood no pre-drilling is necessary, if mounting on masonry, brick etc. pre-drill with a 3/16” bit before using the Powers wall anchors.
3. Mounting directly on sheet metal use at least two self-tapping sheet metal screws.

NOTE: Do not attempt to bend the flexible conduit whip beyond its structural capabilities.

Connecting the Flexible Conduit Whip to Your Circuit Breaker Panel

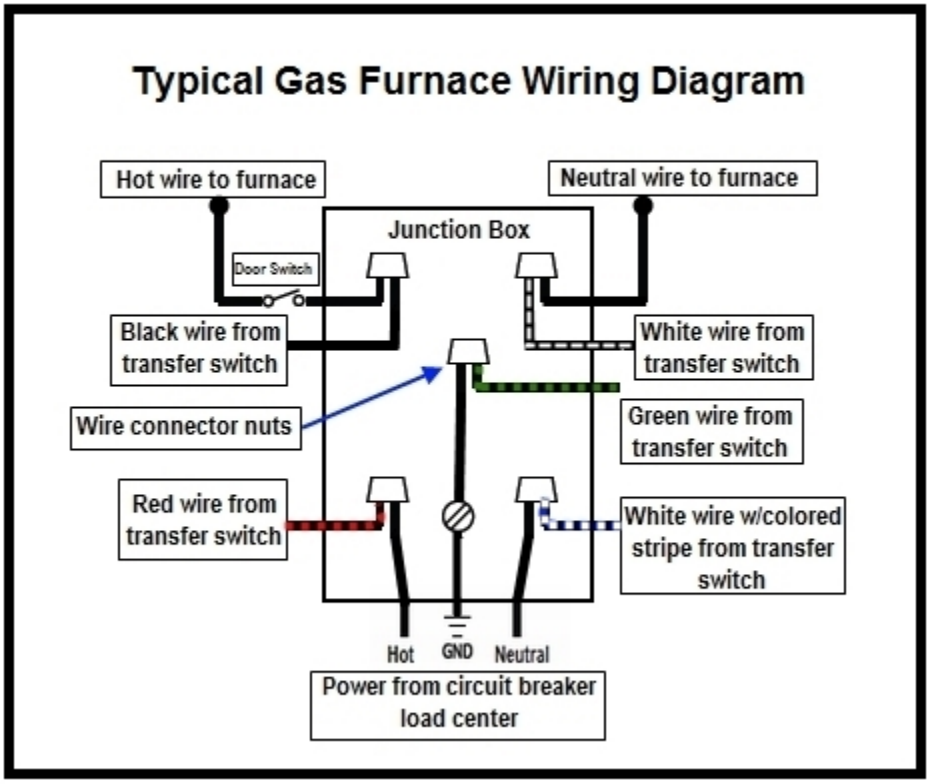
1. Set up battery-powered lighting to clearly illuminate your work area.
2. ***Turn off the main utility breaker***, use **Voltage Meter** to check that the power is **OFF** at the Breaker you are connecting to.
3. Remove the cover of your load center. Keep in mind that the wires on the utility side of the main breaker are still live and if contacted could cause serious injury or death. If available, use a non-contact voltage detector to ensure that the power is off on the non-utility side of the main breaker.
4. Remove the appropriate knockout hole in the bottom or side of your load center.
5. Insert all five of the wires extending from the end of the flexible conduit whip through the knockout hole. Fasten the conduit connector attached to the whip into the knockout hole using the nut provided.

Connecting a 120 Volt 15 Amp Circuit

1. ***Turn off the circuit breaker*** you want to connect to. ***Disconnect*** the wire that is attached to it and leave it off to the side.
2. Find the **RED** wire from the transfer switch
3. Strip 1/2” from the end of the **RED** wire. Connect the **RED** wire to the circuit breaker and tighten the screw on the breaker.
4. Find the **BLACK** wire from the transfer switch. Strip 1/2” from the end of the **BLACK** wire.
5. Insert both wires—the one previously removed from the circuit breaker and the **BLACK** wire from the transfer switch—into a wire nut connector. Tighten the connection until the wires start twisting and push the connected wires back into the wiring compartment of the load center.

Connecting the Neutrals and Ground Wire

1. Find the **ALL WHITE** wire and the **STRIPED WHITE** wire and the **GREEN** wire among the wires from the transfer switch that you have inserted into the load center.
2. Strip approximately 1/2” from the end of the **STRIPED WHITE** wire. Locate the ***neutral bar*** and partially unscrew a terminal screw on the bar. Insert the stripped end of the **STRIPED WHITE** wire into the side of the bar under the screw and tighten the screw.
3. Locate the ***ground bar***. (It should be labeled.)
4. Connect the **GREEN** wire to the ground bar in the same way as in step #2. In service entrance load centers, the ground bar and neutral bar are frequently the same; if this is true and space is limited the ground and neutral wires can be connected to either.
5. Locate the **WHITE** wire (neutral) from the circuit you are powering and ***disconnect that wire from the neutral bar***.
6. Connect the **WHITE** wire (neutral) from step #5 to the **ALL WHITE** wire from the transfer switch. Insert both wires into a wire nut connector. Tighten the connection until the wires start twisting and push the connected wires back into the wiring compartment of the load center.



B. Installing at System or Appliance

Mounting the Transfer Switch

1. Position the transfer switch so that the flexible conduit whip will be lined up with a 1/2” knockout hole.
2. Anchor the transfer switch to the wall/unit with at least two Powers wall anchors, if mounting to drywall or wood no pre-drilling is necessary, if mounting on masonry, brick etc. pre-drill with a 3/16” bit before using the Powers wall anchors.
3. If mounting directly on sheet metal use at least two self-tapping sheet metal screws.

Connect the Flexible Conduit Whip to the appliance

1. Set up battery-powered lighting to clearly illuminate your work area.
2. ***Turn off the circuit breaker servicing the appliance you want to connect to.***
3. Remove the electrical access or panel cover. If available, use a non-contact voltage detector or voltmeter to ensure that the power is off.
4. Remove the appropriate knockout hole in the bottom or side of your appliance.
5. Insert all five of the wires extending from the end of the flexible conduit whip through the knockout hole. Fasten the conduit connector attached to the whip into the knockout hole using the nut provided.

Connecting a 120 Volt 15 Amp Circuit

1. Locate the electrical junction box/wiring compartment in the appliance, double check there is no power present with a voltmeter or non-contact voltage detector.
2. Strip 1/2” from the end of each of the wires coming from the transfer switch.
3. Locate and disconnect the **BLACK** (hot) wires from the appliance.
4. Find the **RED** wire from the transfer switch, and the **BLACK** wire coming from the circuit breaker for the appliance from step #4. Insert both wires into a wire nut connector. Tighten the connection

until the wires start twisting and push the connected wires back into the wiring compartment.

5. Find the **BLACK** wire from the transfer switch and the **BLACK** wire connected to the appliance, Insert both wires into a wire nut connector. Tighten the connection and push the connected wires back into the wiring compartment.

Connecting the Neutrals and Ground Wire

1. Locate and disconnect the **WHITE** (neutral) wires from the appliance.
2. Connect the **WHITE** wire (neutral) coming from the circuit breaker to the **STRIPED WHITE** wire from the transfer switch. Insert both wires into a wire nut connector. Tighten the connection until the wires start twisting and push the connected wires back into the wiring compartment of the load center.
3. Connect the **WHITE** wire (neutral) from the appliance to the **ALL WHITE** wire from the transfer switch. Insert both wires into a wire nut connector. Tighten the connection until the wires start twisting and push the connected wires back into the wiring compartment of the load center.
4. Connect all the **GROUND** wires; Insert all the ground **(green or bare copper)** wires into a wire nut connector. Tighten the connection until the wires start twisting and push the connected wires back into the wiring compartment of the load center.

C. Bypassing Neutral Switching (optional)

We recommend to first wire the transfer switch as it is received (to switch the neutral) before trying to bypass the neutral switching. This may not be needed even if you are using a floating neutral generator. Bypassing the neutral switching will not compromise any safety features.

The HTS15 transfer switch is equipped to switch both the Hot leg and Neutral legs of the power from both the utility line power and the generator power. In some circumstances this feature may need to be bypassed for proper operation for certain types of equipment & generators. Generators with a floating or non-bonded neutral generally require having the neutrals tied together (not-switched) for proper operation.

To check your generator neutral wiring, use a volt/ohm meter and set it to check for continuity, while the generator is turned off and unplugged from anything; place the probes into the neutral and ground terminals of an outlet plug, on a 120V outlet this would be at the 9 –o'clock and 6-o'clock position, if it beeps or shows a connection then you have a bonded neutral and don't need to connect the neutrals.

If it shows, it's open or not connected then it's a floating neutral and may require you to connect them together if the generator or appliance has problems operating. This may become necessary if the appliances being controlled don't operate properly or at all on the generator power. Another problem is GFCI outlets tripping when connected to the transfer switch.

To bypass the neutral switching

1. If already installed, shut off circuit breaker or main breaker serving the transfer switch.
2. All the neutrals need to be connected together, this can simply be done by connecting all the neutral wires to the neutral bar or connecting together with a wire nut in the appliance wiring compartment.
3. We no longer recommend connecting the neutrals together inside the transfer switch. Leave the wiring inside the transfer switch as received (Altering the wiring will void warranty)

After you have completed the steps in Sections A through C, complete the installation by

doing the following:

1. Turn the circuit breaker in your load center/breaker panel back on.
2. Turn on the main breaker.

Warning **You want your generator to be ready when you need it -- so, it is important to perform the following steps at least every 6 months:**

- Start and run generator power through your transfer switch circuits.
- Keep your fuel tank filled with fresh fuel or add stabilizer.

Testing and Operating instructions

- **Testing and operation are done the same way, we recommend using the same generator as you normally would during an emergency.**

1. Make sure that the toggle switch on the Transfer Switch is in the **MAIN/LINE** or **OFF** position.
2. Plug the appropriately sized extension cord into the receptacle/outlet on your generator.
3. Plug the female end of the extension cord into the Transfer Switch.
4. Start your generator outdoors and let it warm to a point where it is running evenly.
5. Turn the toggle switch on the transfer switch to the **GEN/PLUG** position.

Transferring back to utility power when power is restored

1. Move the toggle switch on the Transfer Switch back to the **OFF** or **MAIN/LINE** position.
2. Turn off your generator.
3. Unplug the extension cord.

The No "BS" Lifetime Warranty; The only warranty that covers it all!

Journeyman-Pro is committed to developing outstanding products of superior design, performance and value. We pride ourselves on developing an ongoing, lifelong relationship with you, our consumer. Due to our extreme confidence in our products and our insatiable desire to deliver only the highest level of service, we have created the most consumer-friendly warranty there is.

If one our products is ever broken, damaged or fails to work properly, we will repair or replace it free of charge. Regardless of who broke it. Simple as that! 30 Day No Questions Asked 100% Refund! If you're not 100% satisfied with our product, simply return it in the original box within 30 Days of purchase and receive 100% of your purchase price.

Our "No BS" Lifetime Warranty will cover the repair of all functional aspects of your Journeyman-Pro Product for the life of the product. Naturally, our warranty does not cover labor to install or remove any products, shipping or freight charges, degradable materials components or abusive or negligent use.

Just call or email us with your issue & we will promptly try to resolve the issue. Call our Service Center (M-F) **(360) 930-8059** (9-4 PST) email (sales@journeymanpro.com) to receive prompt friendly service!