



Bard Manufacturing Company, Inc.  
Bryan, Ohio 43506

# KIT NO. 8620-135

## Electronic Blower Control Conversion Kit



### WARNING

Disconnect power to unit before performing this control conversion. Failure to do so could result in injury or death from electrical shock.

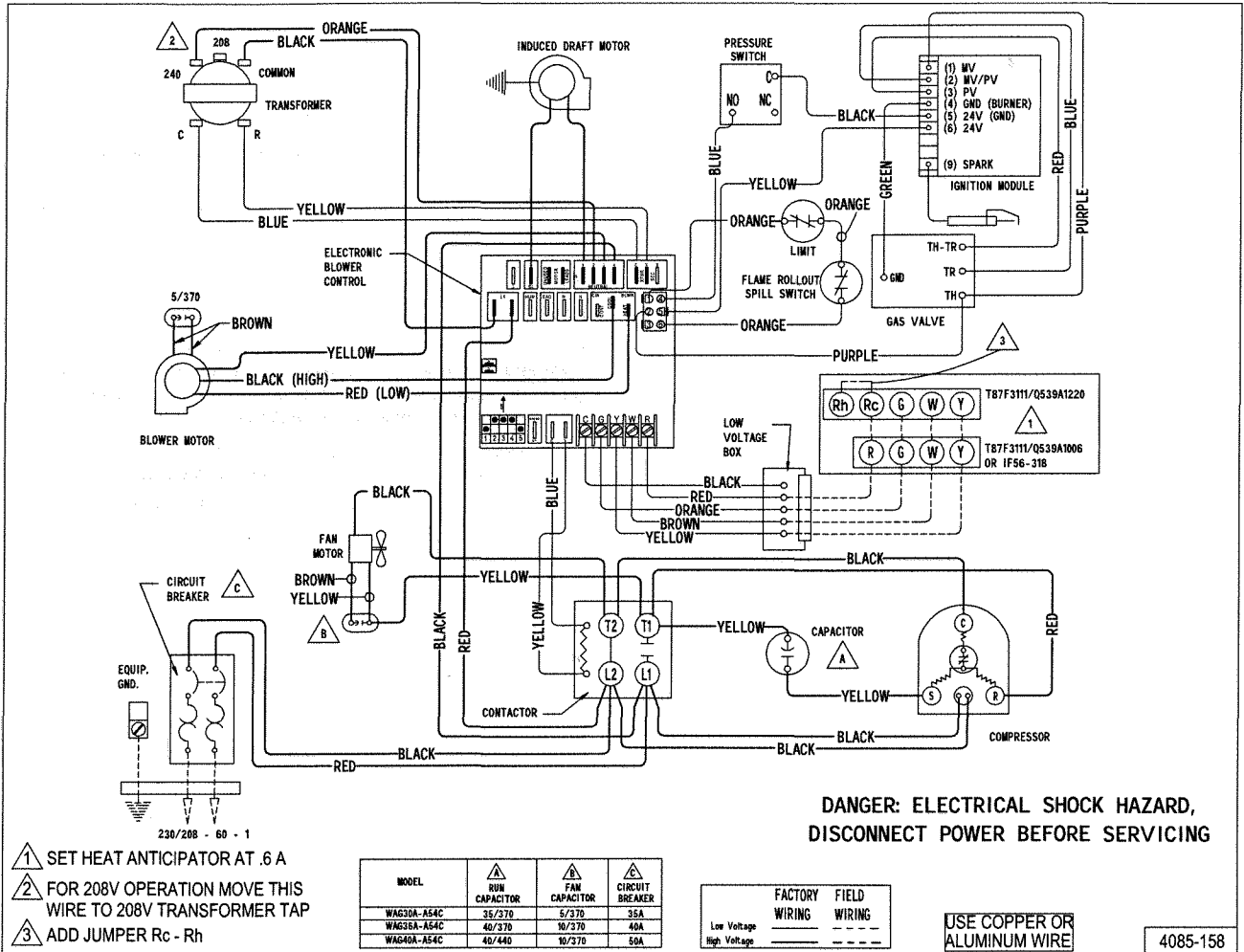
This Kit is designed to allow for the field conversion of the Electronic Blower Control (EBC) on all models listed below.

The control being replaced will be marked with part number 45200-00. The Replacement Control included with this Kit is a Honeywell Control part number ST9120. There are several modifications to the wiring required for a successful conversion. Please follow each step outlined in these instructions carefully.

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<b>CH &amp; CC Series</b>	<b>Page 10</b>

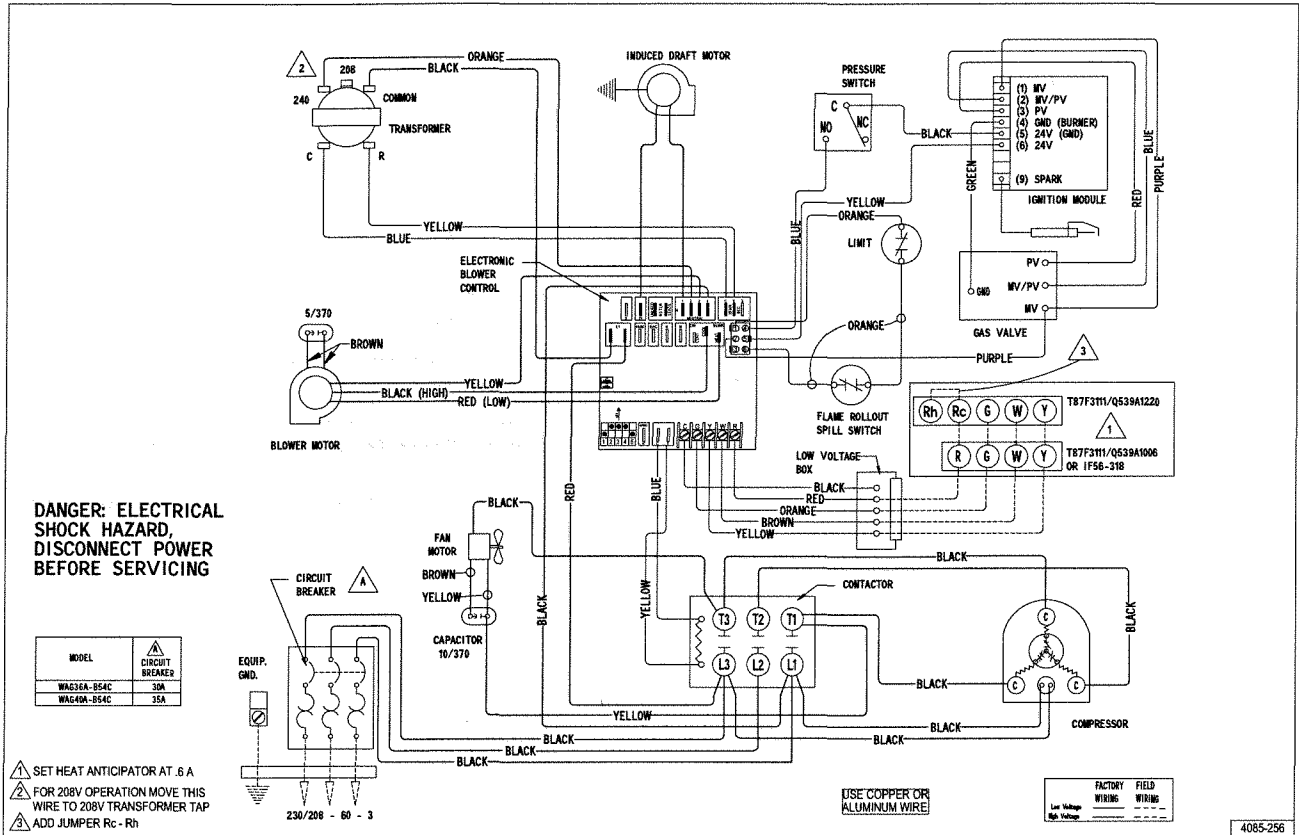
## WAG Revision A — C 230 Volt / Single Phase

1. Disconnect all power supply from unit. Remove unit disconnect or turn off breakers at unit to ensure safety.
2. Remove outer and inner control panel doors. Remove burner compartment door.
3. Remove wires from EBC one by one and mark them with the terminal designations they were removed from. This will help with replacement on new board. Wire tag labels are provided for convenience. Cut and use accordingly.
4. Remove EBC and replace with new board that is included with the kit. Make sure thermostat connection is located on the right side.
5. **Follow these wiring instructions carefully.** These are the wires that need cut and discarded. Refer to Figure 1 for Control Panel layout. **NOTE:** Cut and discard ¼ spade terminal and replace with ¼ spade terminal provided as needed.
6. Disconnect Blue wire from 24 volt coil on the contactor.
7. Cut the other end of the same Blue wire (disconnect in #6 above) at the terminal on the 24V side of the transformer. Discard this wire.
8. The Yellow wire that has been marked "X" gets connected to the "X" on new EBC.
9. Disconnect Yellow wire from low voltage side of contactor. Install a new Blue ten inch (10") wire included with the kit, from the low voltage side of the contactor to terminal "C" next to the "PRSW" terminal on the new EBC.
10. The Yellow wire that was disconnected from the low voltage side of the contactor in the above is to be cut off at the terminal that attaches to the "Y" thermostat connection. Discard this part of the wire.  
Install new Yellow ten inch (10") wire included from the other low voltage terminal on the contactor to the "Y" terminal next to the "PRSW" and "C" terminals.
11. Remove Brown wire from the "NC" terminal on the pressure switch in the burner compartment and tape off the exposed end of wire.  
Remove Red wire from "NO" terminal on pressure switch and 24V terminal on ignition module and discard.  
Remove Blue wire from the "C" terminal on pressure switch and reconnect it to the "NO" terminal.
12. The Black wire from the draft inducer marked "N2" is to be extended using one of the Black five inch (5") wire extensions provided and then reconnected to one of the Neutral terminals on new EBC.
13. The Orange wire marked "S3" is to be connected to one of the neutral terminals on new EBC. The Black wire marked "N3" is to be connected to one of the "L1" terminals on new EBC.
14. The Black wire labeled "D1" is to be connected to the "IND" terminal on new EBC.
15. Extend the Yellow wire marked "N1" with five inch (5") yellow wire extension provided and connect to one of the Neutral terminals on new EBC.  
Extend the Red wire marked "Heat" with a five inch (5") red wire extension and connect to the "Heat" terminal on new EBC.  
Extend the Black wire marked "Cool" with a five inch (5") black wire extension and connect to the "Cool" terminal on the new EBC.
16. Connect the Red wire marked "S4" to one of the "L1" terminals on new EBC.
17. Connect the Black wire marked "S5" to terminal "T2" of the compressor contactor.
18. Add Black wire twelve inches (12") long between "C" terminal on pressure switch and the 24V terminal on ignition module.
19. Plug six pin connector with Yellow, Purple, Black and two (2) Orange wires into new EBC and connect as follows:
  - The Orange wire from the primary limit that is marked "X" is to be connected to one of the orange wires from six pin plug.
  - The Orange wire from the flame rollout switch marked "HL" is to be connected to the second orange wire from six pin plug.
  - Cut spade terminal off of Purple wire in six pin plug and wire nut to the Purple wire marked "W2" from gas valve.
  - The Yellow wire marked "C" is to be connected to the Yellow wire in six pin plug
  - Cut tab terminal off the black wire in six pin plug and wire nut to the blue wire that has previously been moved from the "C" terminal on the pressure switch to the "NO" which is marked "PS2".
20. Use electrical tape to insulate where extension wires have been added to ensure no contact with other parts.
21. Set "S1" Delay dip switch settings as follows, (1,5) "ON" and (2,3,4) "OFF".
22. Replace current wiring diagram with appropriate wiring diagram provided.



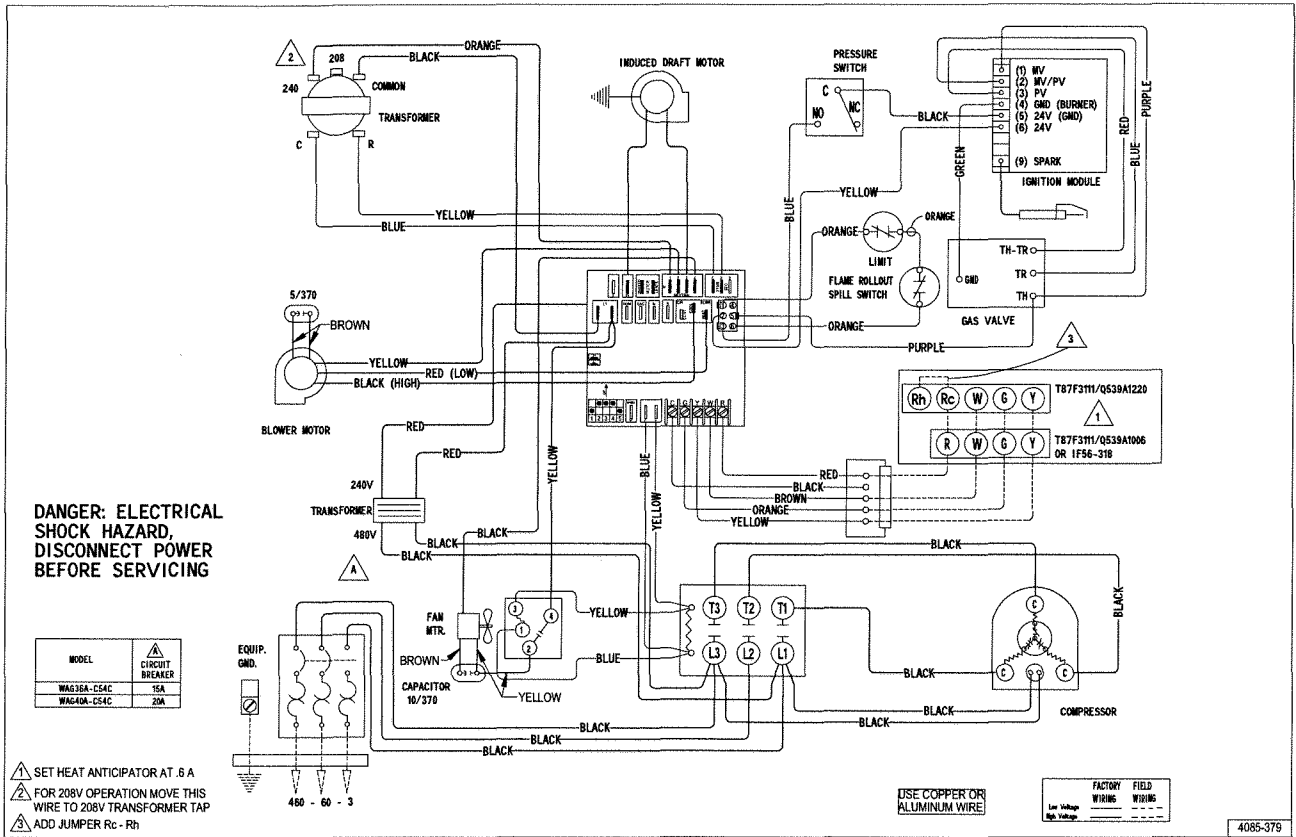
## WAG Revision A — C 230 Volt / 3-Phase

1. Disconnect all power supply from unit. Remove unit disconnect or turn off breakers at unit to ensure safety.
2. Remove outer and inner control panel doors. Remove burner compartment door.
3. Remove wires from EBC one by one and mark them with the terminal designations they were removed from. This will help with replacement on new board. Wire tag labels are provided for convenience. Cut and use accordingly.
4. Remove EBC and replace with new board that is included with the kit. Make sure thermostat connection is located on the right side.
5. **Follow these wiring instructions carefully.** These are the wires that need cut and discarded. Refer to Figure 1 for Control Panel layout. **NOTE:** Cut and discard ¼ spade terminal and replace with ¼ spade terminal provided as needed.
6. Disconnect Blue wire from 24 volt coil on the contactor.
7. Cut the other end of the same Blue wire (disconnect in #6 above) at the terminal on the 24V side of the transformer. Discard this wire.
8. The Yellow wire that has been marked "X" gets connected to the "X" on new EBC.
9. Disconnect Yellow wire from low voltage side of contactor. Install a new Blue ten inch (10") wire included with the kit, from the low voltage side of the contactor to terminal "C" next to the "PRSW" terminal on the new EBC.
10. The Yellow wire that was disconnected from the low voltage side of the contactor in the above is to be cut off at the terminal that attaches to the "Y" thermostat connection. Discard this part of the wire.  
Install new Yellow ten inch (10") wire included. Connect one end to the other low voltage terminal on the contactor just vacated in Step #10 (above), and the other end to the "Y" terminal next to the "PRSW" and "C" terminals on the new EBC.
11. Remove Brown wire from the "NC" terminal on the pressure switch in the burner compartment and tape off the exposed end of wire.  
Remove Red wire from "NO" terminal on pressure switch and 24V terminal on ignition module and discard.  
Remove Blue wire from the "C" terminal on pressure switch and reconnect it to the "NO" terminal.
12. The Black wire that is marked "N2" is to be extended using one of the Black five inch (5") wire extensions provided and then reconnected to one of the Neutral terminals on new EBC.
13. The Orange wire marked "S3" is to be connected to one of the neutral terminals on new EBC. The Black wire marked "N3" is to be connected to one of the "L1" terminals on new EBC.
14. The Black wire labeled "D1" is to be connected to the "IND" terminal on new EBC.
15. Extend the Yellow wire marked "N1" with five inch (5") yellow wire extension provided and connect to the "Cool" terminal on the new EBC.  
Extend the Red wire marked "Heat" with a five inch (5") red wire extension and connect to the "Heat" terminal on new EBC.  
Extend the Black wire marked "Cool" with a five inch (5") black wire extension and connect to the "Cool" terminal on the new EBC.
16. Connect the Red wire marked "S4" to one of the "L1" terminals on new EBC.
17. Connect the Black wire marked "S5" to terminal "T3" of the compressor contactor.
18. Add Black wire twelve inches (12") long provided between "C" terminal on pressure switch and the 24V terminal on ignition module.
19. Clip off the "Forked" spade connectors from the Red, Orange, Brown and Yellow wires that were connected to the thermostat connection strip. Strip the ends of these wires and reconnect to their appropriate thermostat connections.
20. Plug six pin connector with Yellow, Purple, Black and two (2) Orange wires into new EBC and connect as follows:
  - The Orange wire from the primary limit that is marked "X" is to be connected to one of the orange wires from six pin plug.
  - The Orange wire from the flame rollout switch marked "HL" is to be connected to the second orange wire from six pin plug.
  - Cut spade terminal off of Purple wire in six pin plug and wire nut to the Purple wire marked "W2" from gas valve.
  - The Yellow wire marked "C" is to be connected to the Yellow wire in six pin plug
  - Cut tab terminal off the black wire in six pin plug and wire nut to the blue wire that has previously been moved from the "C" terminal on the pressure switch to the "NO" which is marked "PS2".
21. Use electrical tape to insulate where extension wires have been added to ensure no contact with other parts.
22. Set "S1" Delay dip switch settings as follows, (1,5) "ON" and (2,3,4) "OFF".
23. Replace current wiring diagram with appropriate wiring diagram provided.



## WAG Revision A — C 460 Volt / 3-Phase

1. Disconnect all power supply from unit. Remove unit disconnect or turn off breakers at unit to ensure safety.
2. Remove outer and inner control panel doors. Remove burner compartment door.
3. Remove wires from EBC one by one and mark them with the terminal designations they were removed from. This will help with replacement on new board. Wire tag labels are provided for convenience. Cut and use accordingly.
4. Remove EBC and replace with new board that is included with the kit. Make sure thermostat connection is located on the right side.
5. **Follow these wiring instructions carefully.** These are the wires that need cut and discarded. Refer to Figure 1 for Control Panel layout. **NOTE:** Cut and discard ¼ spade terminal and replace with ¼ spade terminal provided as needed.
6. Disconnect Blue wire from 24 volt coil on the contactor.
7. Cut the other end of the same Blue wire (disconnect in #6 above) at the terminal on the 24V side of the transformer. Discard this wire.
8. The Yellow wire that has been marked "X" gets connected to the "X" on new EBC.
9. Remove Black wire from terminal #1 on outdoor motor relay and low voltage side of compressor contactor and discard wire. Replace with new wire set (two Blue wires connected). Connect the two wires common connector to the low voltage side of compressor contactor, one end to terminal #1 on outdoor motor relay, and other end to the "C" terminal on new EBC next to the "PRSW" terminal.
10. Disconnect Yellow wire from low voltage side of compressor contactor. The Yellow wire that was disconnected from the low voltage side of the contactor is to be cut off at the terminal that attaches to the "Y" thermostat connection. Discard this part of the wire.  
Remove Black wire from terminal #3 on outdoor motor relay and low voltage side on compressor contactor and discard wire. Replace with Yellow wire set (two Yellow wires). The two wire terminal gets connected to the low voltage side on the compressor contactor that was just vacated, one end connects to terminal #3 on outdoor motor relay and the other terminal connects to the "Y" terminal next to the "PRSW" and "C" terminals on new EBC.
11. Remove Brown wire from the "NC" terminal on the pressure switch in the burner compartment and tape off the exposed end of wire.
12. The Black wire that is marked "N2" is to be extended using one of the Black five inch (5") wire extensions provided and then reconnected to one of the Neutral terminals on new EBC.
13. The Orange wire marked "S3" is to be connected to one of the neutral terminals on new EBC. The Black wire marked "N3" is to be connected to one of the "L1" terminals on new EBC.
14. The Black wire labeled "D1" is to be connected to the "IND" terminal on new EBC.
15. Extend the Yellow wire marked "N1" with five inch (5") yellow wire extension provided and connect to one of the Neutral terminals on new EBC.  
Extend the Red wire marked "Heat" with a five inch (5") red wire extension provided and connect to the "Heat" terminal on new EBC.  
Extend the Black wire marked "Cool" with a five inch (5") black wire extension and connect to the "Cool" terminal on the new EBC.  
Remove Red wire from "NO" terminal on pressure switch and 24V terminal on ignition module and discard.  
Remove Blue wire from "C" terminal on pressure switch and reconnect it to the "NO" terminal.
16. **NOTE:** There is a terminal multiplier included with kit, attached to the Red wire marked "S4" prior to connecting Red wire to the "L1" terminal on new EBC  
Connect the Red wire marked "S4" to one of the "L1" terminals on new EBC.
17. Connect the Yellow wire marked "N4" to terminal multiplier with Red wire in Step #16 to the "L1" terminal on new EBC.
18. Connect the Black wire marked "S5" to one of the neutral terminals on new EBC.
19. Add Black wire twelve inches (12") long provided between "C" terminal on pressure switch and the 24V terminal on ignition module.
20. Clip off the "Forked" spade connectors from the Red, Orange, Brown and Yellow wires that were connected to the thermostat connection strip. Strip the ends of these wires and reconnect to their appropriate thermostat connections.
21. Plug six pin connector with Yellow, Purple, Black and two (2) Orange wires into new EBC and connect as follows:
  - The Orange wire from the primary limit that is marked "X" is to be connected to one of the orange wires from six pin plug.
  - The Orange wire from the flame rollout switch marked "HL" is to be connected to the second orange wire from six pin plug.
  - Cut spade terminal off of Purple wire in six pin plug and wire nut to the Purple wire marked "W2" from gas valve.
  - The Yellow wire marked "C" is to be connected to the Yellow wire in six pin plug
  - Cut tab terminal off the black wire in six pin plug and wire nut to the blue wire that has previously been moved from the "C" terminal on the pressure switch to the "NO" which is marked "PS2".
22. Use electrical tape to insulate where extension wires have been added to ensure no contact with other parts.
23. Set "S1" Delay dip switch settings as follows, (1,5) "ON" and (2,3,4) "OFF".
24. Replace current wiring diagram with appropriate wiring diagram provided.

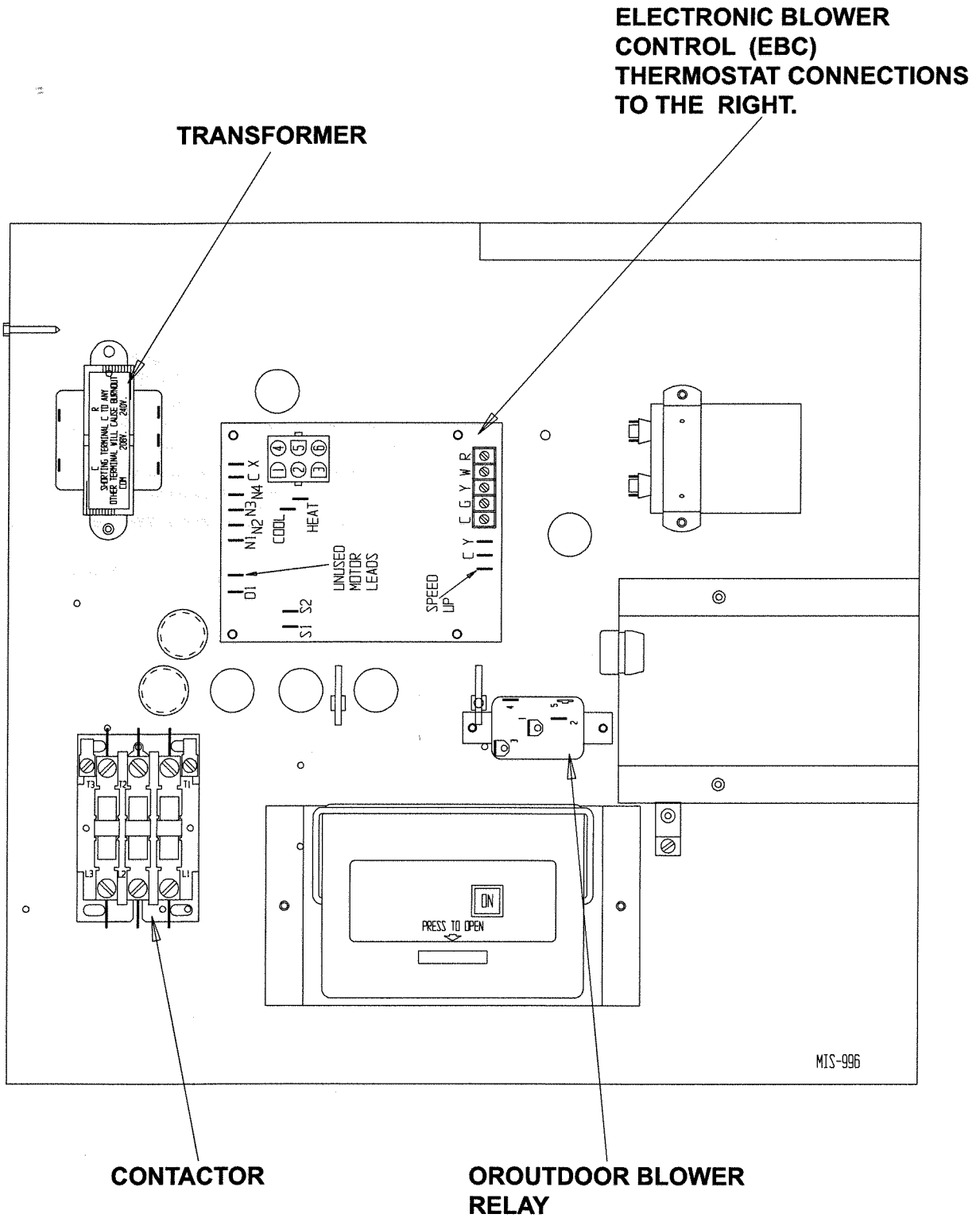


## WAG Revision D

1. Disconnect all power supply from unit. Remove unit disconnect or turn off breakers at unit to ensure safety.
2. Remove outer and inner control panel doors. Remove burner compartment door.
3. Remove wires from EBC one by one and mark them with the terminal designations they were removed from. This will help with replacement on new board. Wire tag labels are provided for convenience. Cut and use accordingly.
4. Remove EBC and replace with new board that is included with the kit. Make sure thermostat connection is located on the right side.
5. **Follow these wiring instructions carefully.** These are the wires that need cut and discarded. Refer to Figure 1 for Control Panel layout. **NOTE:** Cut and discard ¼ spade terminal and replace with ¼ spade terminal provided as needed.
6. Reconnect labeled wires to corresponding terminals on new EBC; a few terminal designations have changed.
7. Connect the wire labeled "D1" to the "IND" terminal.
8. Connect the wires labeled "S1" to one of the "L1" terminals.
9. Connect the wires labeled "S2" to the other "L1" terminals.
10. Connect the wires labeled "N1", "N2", "N3", "N4" to the "NEUTRAL" terminals.
11. Use electrical tape to insulate where extension wires have been added to ensure no contact with other parts.
12. Set "S1" Delay dip switch settings as follows, (1,5) "ON" and (2,3,4) "OFF".
13. Replace current wiring diagram with appropriate wiring diagram provided.



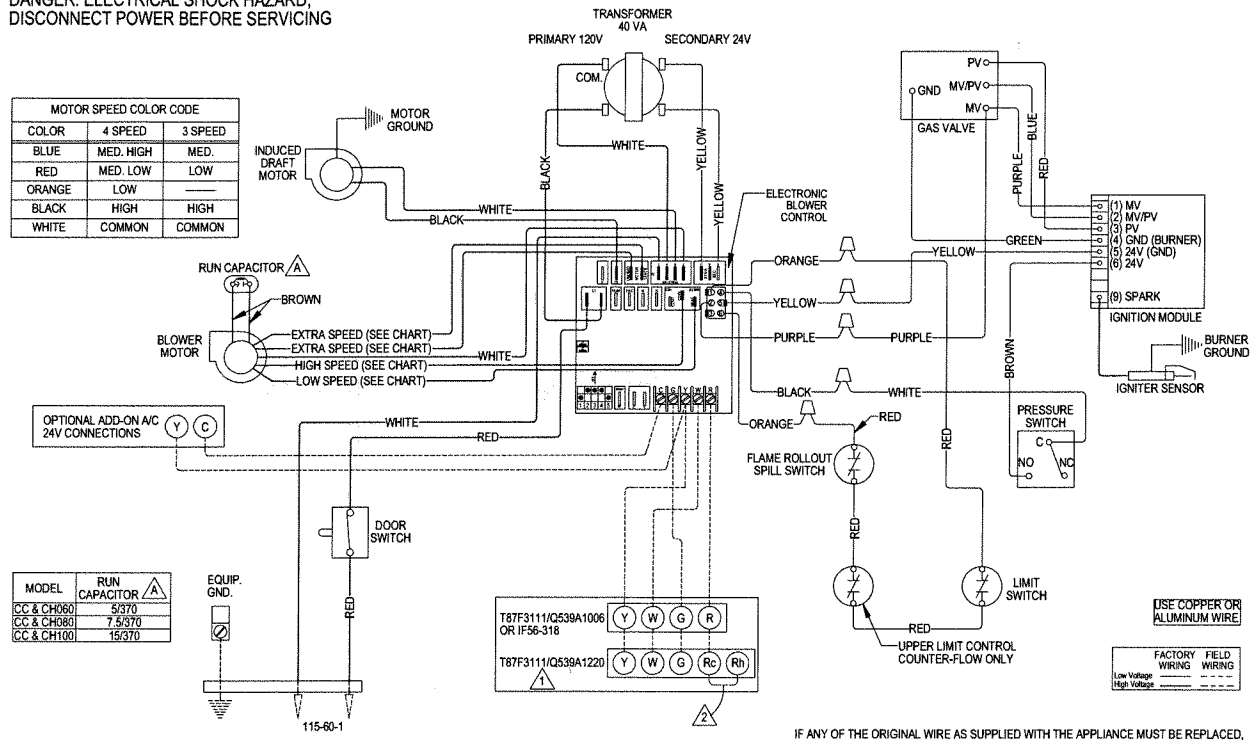
**Figure 1**  
**WAG Models**



## CH & CC Series Models

1. Remove power to unit.
2. Disconnect and tag all wires from the existing Electronic Blower Control (EBC). Wire tag labels are provided for convenience. Cut and use accordingly.
3. Replace existing EBC with new EBC included with the kit. Make sure Thermostat connections are located at the bottom.
4. **Follow these wiring instructions carefully.** Refer to Figure 2 for Component & Location Identification. When converting a CH/CC Model, the six pin wire harness provided with this kit is required. **NOTE:** Cut and discard ¼ spade terminal and replace with ¼ spade terminal provided as needed.
5. The Red wire marked "S4" is to be connected to terminal "L1" on new EBC.
6. The White wire marked "N4" is to be connected to one of the "Neutral" terminals on new EBC.
7. The White wire marked "N3" is to be connected to one of the "Neutral" terminals on new EBC.
8. The Black wire marked "S5" is to be connected to the other "L1" terminal on new EBC.
9. The White wire marked "N2" is to be connected to one of the "Neutral" terminals on new EBC.
10. The Black wire marked "D1" is to be connected to the "IND" on new EBC.
11. The two wires marked "Cool" and "Heat" are to be connected to the "Cool" and "Heat" terminals accordingly on new EBC.
12. The White wire marked "N1" is to be connected to one of the "Neutral" terminals on the new EBC.
13. The wires marked "M1" and "M2" are to be connected to the terminals marked "Unused" on new EBC.
14. The Purple wire marked "W2" is to be connected to the Purple wire in the six pin plug. Cut spade terminals and wire nut wires.
15. The Yellow wire marked "X" is to be connected to the "X" terminal marked "SEC" on new EBC.
16. The Yellow wire marked "C" from secondary side of transformer is to be connected to the "C" terminal marked "XFMR" on new EBC.
17. The Red wire marked "X" is to be connected to one of the Orange wires in the six pin plug.
18. The Red wire marked "HL" is to be connected to the other Orange wire in the six pin plug.
19. The Yellow wire marked "C" from ignition module is to be connected to the Yellow wire in the six pin plug.
20. The White wire marked "PS2" that is connected to the "C" terminal on pressure switch should be connected to the Black wire in the six pin plug. Cut tab terminal and wire nuts.
21. The Gray wire from the pressure switch "NC" and marked "PS1" should be removed and discarded.
22. Reconnect all thermostat wires on their appropriate terminals on new EBC.
23. Replace current wiring diagram with appropriate wiring diagram.

**DANGER: ELECTRICAL SHOCK HAZARD,  
DISCONNECT POWER BEFORE SERVICING**



⚠️ SET HEAT ANTICIPATOR AT .8 A FOR ALL THERMOSTATS.  
 ⚠️ ADD JUMPER Rc - Rh

IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105° C. EXCEPT THE IGNITION CABLE WHICH IS 250° C. HIGH VOLTAGE CABLE.

4046-163

**Figure 2**  
**CH & CC Series Models**

