

NRGmax Furnace Board Conversion Instructions

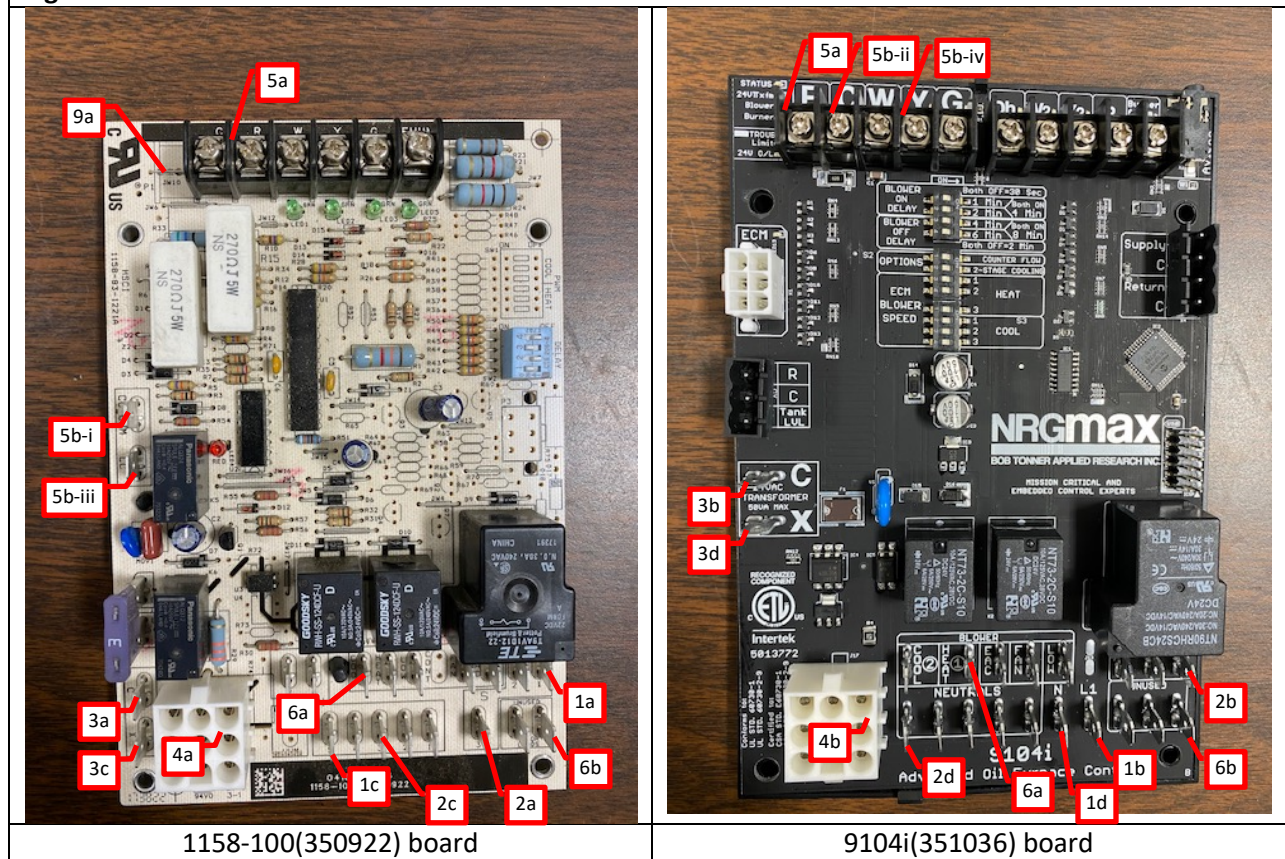
WARNING: Risk of Electric Shock. Turn power OFF to furnace prior to making modifications.

Board Mounting Instructions

- Remove board from mounting
 - For single screw/3-Tab mounting style remove screw and gently tap feet of board out of tab securement dimples. Retain board for future use if needed.
 - For two screw mount style remove screws. Retain board for future use if needed.
- Align board with mounting hole(s) and secure with provided hardware
 - For single screw/3-Tab mounting style shift the board $\sim 1/4"$ to the left or right to avoid raised embossed tab so that the board sits flush on the panel and using the self-drilling/taping screws provided secure to panel.
 - For two screw mount style reuse existing holes and secure to panel.
- Proceed to the PSC Conversion (page 1) or ECM Conversion (page 4) based on blower motor type

PSC Conversion [Furnace Board 1158-100(350922)]

Figure 1 – PSC Furnace Board Conversion



Transfer Wiring: **Refer to Figure 1 for pictorial reference**

1. Main Power Wiring
 - a. Disconnect the Supply 120V lead wire from spade terminal [S1] on the 1158-100(350922) board
 - b. Connect the Supply 120V lead wire to spade terminal [L1] on the 9104i(351036) board
 - c. Disconnect the Supply Neutral lead wire from spade terminal [N1] on the 1158-100(350922) board
 - d. Connect the Supply Neutral lead wire to spade terminal [N] on the 9104i(351036) board
2. Transformer Primary Wiring
 - a. Disconnect the transformer 120VAC “Hot” input wire from spade terminal [S3] on the 1158-100(350922) board
 - b. Connect the transformer 120VAC “Hot” input wire to one of the [120VAC] spade terminals on the 9104i(351036) board
 - c. Disconnect the transformer 120VAC Neutral input wire from spade terminal [N3] on the 1158-100(350922) board
 - d. Connect the transformer 120VAC Neutral input wire to one of the [NEUTRALS] spade terminals on the 9104i(351036) board
3. Transformer Secondary Wiring
 - a. Disconnect the transformer 24VAC output wire from spade terminal [C] on the 1158-100(350922) board
 - b. Connect the transformer 24VAC output wire to spade terminal [C] on the 9104i(351036) board
 - c. Disconnect the transformer 24VAC output wire from spade terminal [X] on the 1158-100(350922) board
 - d. Connect the transformer 24VAC output wires to spade terminal [X] on the 9104i(351036) board
4. Burner/Limit Wiring
 - a. Disconnect the 9-pin connector from 1158-100(350922) board
 - b. Connect the 9-pin connector to the mating receptacle on the 9104i(351036) board
5. Thermostat Wiring
 - a. Transfer the thermostat wires from the 1158-100(350922) board to the 9104i(351036) board.
 - i. Note: terminal C & R are in reverse order between boards, take care to locate correct screw terminal.
 - b. A/C unit wiring (Note: compressor time delay function is not a part of 9104i control)
 - i. Disconnect wire from spade terminal [CC_COM] on the 1158-100(350922) board
 1. Cut spade terminal off and strip wire
 - ii. Connect the wire to thermostat screw terminal {C} on the 9104i(351036) board
 - iii. Disconnect wire from spade terminal [CC] on the 1158-100(350922) board
 1. Cut spade terminal off and strip wire
 - iv. Connect the wire to thermostat screw terminal {Y} on the 9104i(351036) board

6. Blower Motor Wiring

- a. Transfer the blower motor wires from the spade terminals on the 1158-100(350922) board to the corresponding spade terminals on the 9104i(351036) board.
 - i. Note: Spade terminals are not in identical order between boards, take care to locate correct spade terminals.
- b. Transfer any of the blower motor wires that are landed on the [UNUSED MOTOR LEAD] spade terminals on the 1158-100(350922) board to the [UNUSED] spade terminals on the 9104i(351036) board.

Dip Switch Settings: **Refer to Figure 2 & 6 for pictorial reference**

7. Blower ON Delay

- a. Set Timings on the 9104i(351036) board to match those that are currently set on the 1158-100(350922) board.
- b. Refer to Wiring Diagram in the Appendix of the Installation and Operation Manual for timings based on the current dip switch settings. **Reference Figure 2 & 6 for reference.**

8. Blower OFF Delay

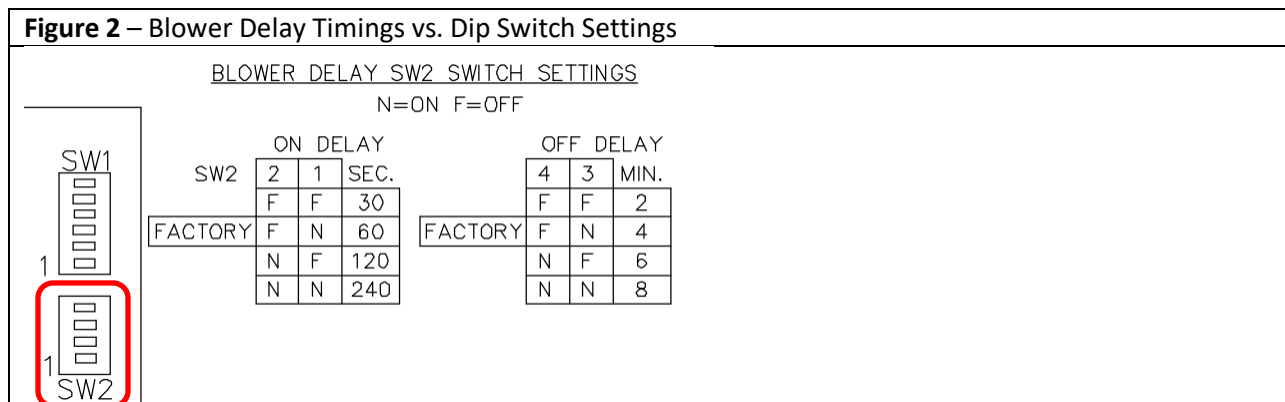
- a. Set Timings on the 9104i(351036) board to match those that are currently set on the 1158-100(350922) board.
- b. Refer to Wiring Diagram in the Appendix of the Installation and Operation Manual for timings based on the current dip switch settings. **Reference Figure 2 & 6 for reference.**

9. OPTIONS

- a. Counter Flow
 - i. If Furnace is counter flow [Jumper JW10 is cut on 1158-100(350922) board] set the 9104i(351036) board counter flow dip switch to "ON".
- b. 2-Stage cooling
 - ii. Option is disabled. Do not change dip switch, leave in "OFF" position.

10. ECM BLOWER SPEED

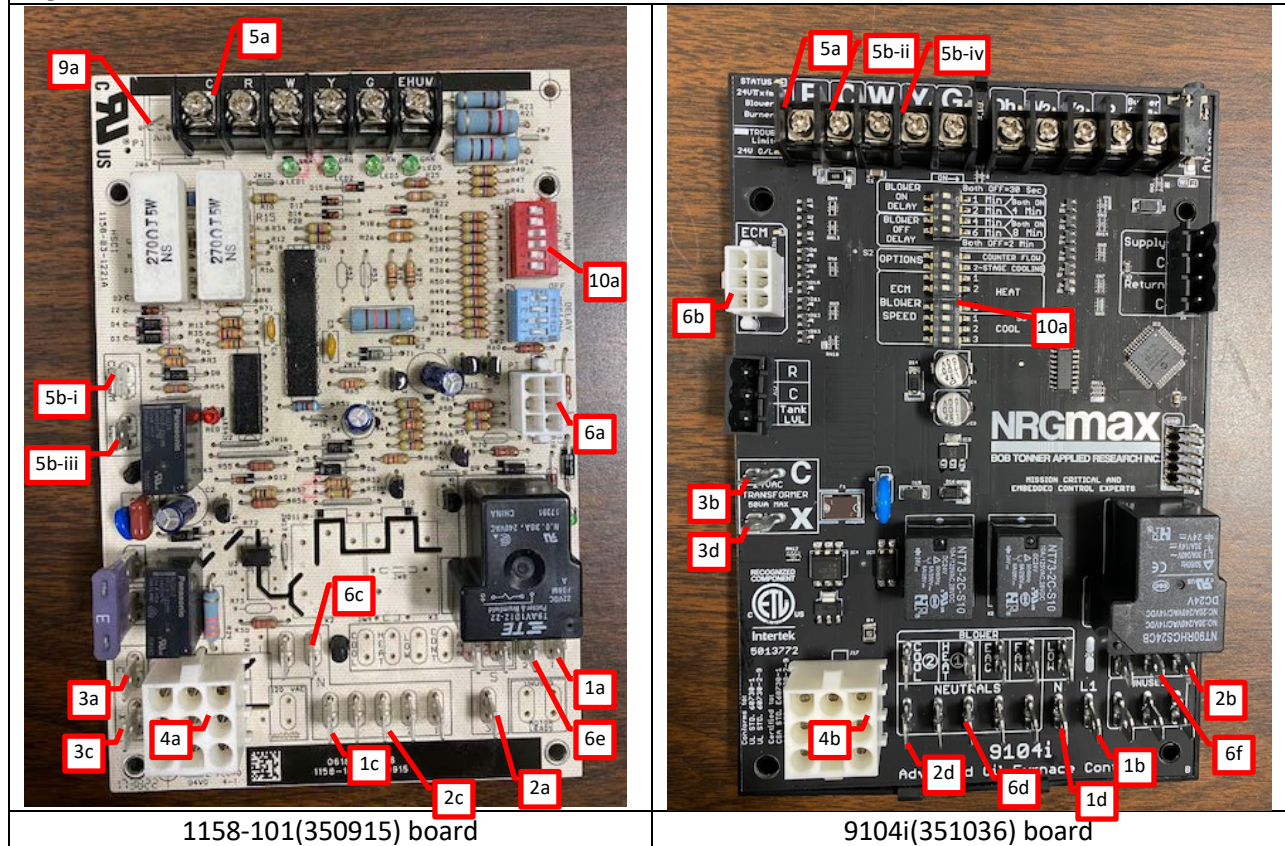
- a. For PSC motor operation all ECM BLOWER SPEED dip switches on the 9104i(351036) board are to be in the "OFF" position



Replace all access panels and reapply power. Place furnace back into operation and confirm proper operation of furnace.

ECM Motor Conversion [Furnace Board 1158-101(350915)]

Figure 3 – ECM Furnace Board Conversion



Transfer Wiring: Refer to Figure 3 for pictorial reference

1. Main Power Wiring

- a. Disconnect the Supply 120V lead wire from spade terminal [S1] on the 1158-101(350915) board
- b. Connect the Supply 120V lead wire to spade terminal [L1] on the 9104i(351036) board
- c. Disconnect the Supply Neutral lead wire from spade terminal [N1] on the 1158-101(350915) board
- d. Connect the Supply Neutral lead wire to spade terminal [N] on the 9104i(351036) board

2. Transformer Primary Wiring

- a. Disconnect the transformer 120VAC “Hot” input wire from spade terminal [S3] on the 1158-101(350915) board
- b. Connect the transformer 120VAC “Hot” input wire to one of the [120VAC] spade terminals on the 9104i(351036) board
- c. Disconnect the transformer 120VAC Neutral input wire from spade terminal [N3] on the 1158-101(350915) board

- d. Connect the transformer 120VAC Neutral input wire to one of the [NEUTRALS] spade terminals on the 9104i(351036) board
- 3. Transformer Secondary Wiring
 - a. Disconnect the transformer 24VAC output wire from spade terminal [C] on the 1158-101(350915) board
 - b. Connect the transformer 24VAC output wire to spade terminal [C] on the 9104i(351036) board
 - c. Disconnect the transformer 24VAC output wire from spade terminal [X] on the 1158-101(350915) board
 - d. Connect the transformer 24VAC output wires to spade terminal [X] on the 9104i(351036) board
- 4. Burner/Limit Wiring
 - a. Disconnect the 9-pin connector from 1158-101(350915) board
 - b. Connect the 9-pin connector to the mating receptacle on the 9104i(351036) board
- 5. Thermostat Wiring
 - a. Transfer the thermostat wires from the 1158-101(350915) board to the 9104i(351036) board.
 - i. Note: terminal C & R are in reverse order between boards, take care to locate correct screw terminal.
 - b. A/C unit wiring(Note: compressor time delay function is not a part of 9104i control)
 - i. Disconnect wire from spade terminal [CC_COM] on the 1158-100(350922) board
 - 1. Cut spade terminal off and strip wire
 - ii. Connect the wire to thermostat screw terminal {C} on the 9104i(351036) board
 - iii. Disconnect wire from spade terminal [CC] on the 1158-100(350922) board
 - 1. Cut spade terminal off and strip wire
 - iv. Connect the wire to thermostat screw terminal {Y} on the 9104i(351036) board
- 6. Blower Motor Wiring
 - a. Disconnect the 6-pin connector from 1158-101(350915) board
 - b. Connect the 6-pin connector to the mating receptacle on the 9104i(351036) board
 - c. Disconnect the motor wire harness neutral wire from spade terminal [N2] on the 1158-101(350915) board
 - d. Connect the motor wire harness neutral wire to spade terminal [NEUTRAL] on the 9104i(351036) board
 - e. Disconnect the CHOKE wire from spade terminal [S2] on the 1158-101(350915) board
 - f. Connect the CHOKE wire to spade terminal [120VAC] on the 9104i(351036) board

Dip Switch Settings: **Refer to Figure 4 & 6 for pictorial reference**

- 7. Blower ON Delay
 - a. Set Timings on the 9104i(351036) board to match those that are currently set on the 1158-101(350915) board.

iii. Refer to Wiring Diagram in the Appendix of the Installation and Operation Manual for timings based on the current dip switch settings. **Reference Figure 4 & 6 for reference.**

8. Blower OFF Delay

a. Set Timings on the 9104i(351036) board to match those that are currently set on the 1158-101(350915) board.

i. Refer to Wiring Diagram in the Appendix of the Installation and Operation Manual for timings based on the current dip switch settings. **Reference Figure 4 & 6 for reference.**

9. OPTIONS

a. Counter Flow

i. If Furnace is counter flow [Jumper JW10 is cut on 1158-101(350915) board] set the 9104i(351036) board counter flow dip switch to “ON”.

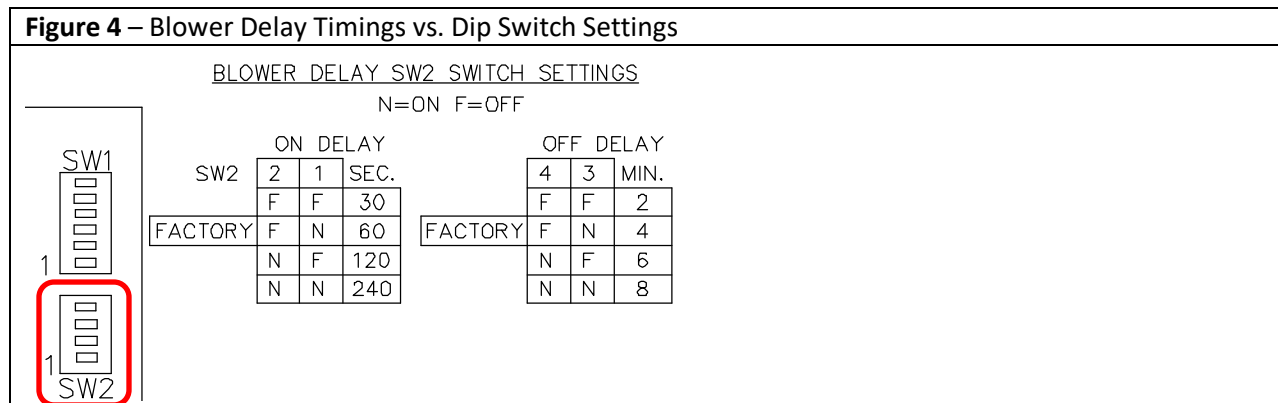
b. 2-Stage cooling

iv. Option is disabled. Do not change dip switch, leave in “OFF” position.

10. ECM BLOWER SPEED **Reference Figure 5 for reference.**

a. Set Dip Switches on the 9104i(351036) board to match those that are currently set on the 1158-101(350915) board.

i. Note: COOL & HEAT are in reverse order between boards.



Replace all access panels and reapply power. Place furnace back into operation and confirm proper operation of furnace.

Annex A – Dip Switch Location Reference

Figure 5 – ECM BLOWER SPEED Dip Switch Locations

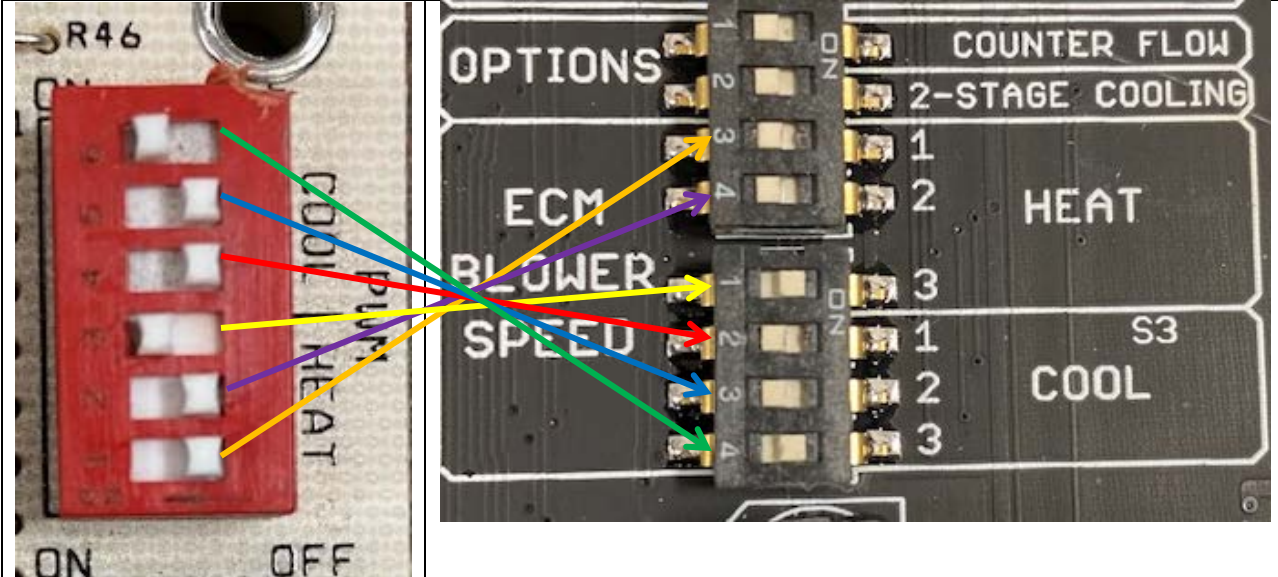


Figure 6 – DELAY TIMER Dip Switch Locations

