

EON Field Replacement Kit

EON Control for Replacing ECM 2.3 or EON motor Control

This control cannot be used on ECM2.0 motors. For ECM2.0 motors replace entire motor with specified Eon Motor/module assembly.

NOTE: Read the entire instruction manual before starting the installation.

SAFETY

Safety is emphasized throughout this user manual. These are safety alert symbols and signal words. They alert the user to potential personal injury hazards. Obey all safety messages to avoid possible injury or death or damage to equipment and other property.

DANGER



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION



CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE




NOTICE identifies potential equipment damage or failure conditions. Also, alerts personnel to potentially dangerous situations.

SAFETY CONSIDERATIONS



GENERAL WARNINGS

Installing and servicing of heating and air conditioning equipment can be hazardous due to gas, system pressures, and electrical components. Only trained personnel should install or service heating and air conditioning equipment. The qualified installer or agency must use factory authorized kits or accessories when modifying this product. Refer to individual instructions packaged with kits or accessories when installing. Follow all safety codes. Wear safety glasses and work gloves. Have a fire extinguisher available. Read these instructions thoroughly and follow all warning or cautions attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements. Recognize safety information.

This is the safety-alert symbol  When you see this symbol on the unit and in the instructions or manuals, be alert to the potential for personal injury.



WARNING ELECTRICAL SHOCK AND NATURAL GAS EXPOSURE

Before installing or servicing unit, always turn off all gas and electrical supplies to unit. There may be more than one disconnect switch. Turn off accessory heater power if applicable. Electrical shock can cause personal injury or death.



WARNING PROPER TOOLS AND SKILLS

The ability to properly perform service on this equipment requires certain expertise, mechanical skills, tools, and equipment. If you do not possess these, do not attempt to perform any service on this equipment other than those procedures recommended in the User's Manual. A failure to follow this warning could result in possible damage to this equipment, serious personal injury, or death.



WARNING ELECTRICAL SHOCK

Wait at least 5 minutes after disconnecting line voltage from equipment before opening motor to prevent electric shock which can cause personal injury or death.



CAUTION FAILURE MAY RESULT

Installing connectors incorrectly may result in immediate failure of control module.

Included: EON Control
Two 2.45-inch Bolts
Two 2.76-inch Bolts
Adapter Ring

Instructions:

Before you begin, verify control is non-functional using unit troubleshooting instructions. See below for instructions.

1. Disconnect main power. Detach 5-pin power cable and 16-pin signal cable from the existing control.
2. Determine motor type by comparison to Figures 1a and 1b.



Figure 1a:
EON connector

Figure 1b:
ECM 2.3 connector



3. Wait at least 5 minutes to remove the installed control. Unscrew and remove 2 bolts from the end of the installed control attaching it to the motor. Separate the

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control and motor enough to reach inside and detach the 3-pin connector between the motor and control by pushing on tab (see Figure 2a and 2b).

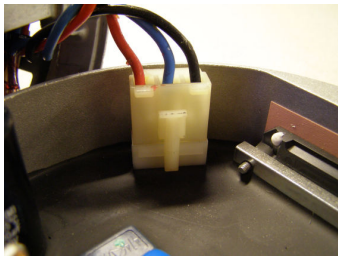


Figure 2a:
3 motor leads to EON control

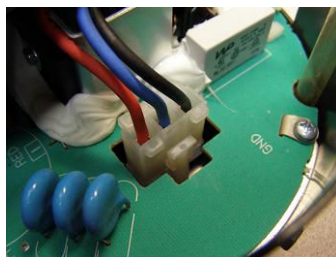
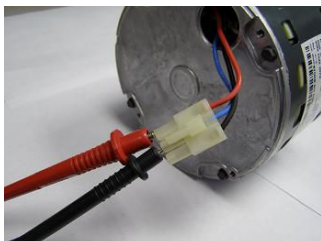
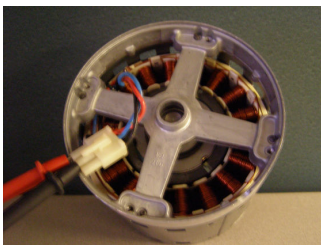


Figure 2b:
3 motor leads to 2.3 control

4. Validate motor is not defective see Figure 3: first measure resistance between each of the 3 motor leads to the unpainted part of the endshield – all should be infinite (at least 100K) ohms. Then measure resistance between each of the 3 leads – resistance across any 2 leads should be less than 20 ohms and each lead to lead resistance should be the same within +/- 10%. If motor fails either test, replace entire motor. If motor passes both tests, continue.



ECM 2.3



EON

Figure 3: Testing motor leads with ohmmeter

Replacing an ECM 2.3 control:

5. For ECM 2.3 (Figure 1b) refer to steps 6 through 12, “Replacing an ECM 2.3 control.”

For EON (Figure 1a) refer to steps 13 through 19, “Replacing an EON control.”

6. Two sets of bolts are included in the kit. When replacing the ECM 2.3, use the 2.76-inch bolts (longer set). The shorter bolts are not used.
7. Place adapter ring on top of new EON control, aligning the adapter ring notch with the tab on the control connector (see Figure 4). Do not use the notch close to weld seam on adapter ring as this may cause interference with control connector flange.

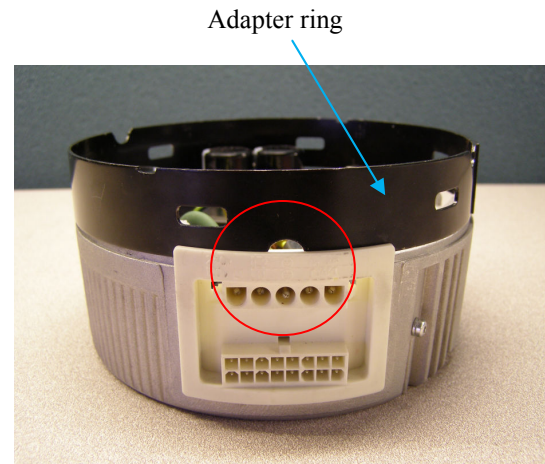


Figure 4: Adapter ring on control

8. Attach the 3-pin connector from motor to corresponding connector on the new EON control (see Figure 2a).
9. Place control with adapter ring onto the existing motor. Assure that the notch in the adapter ring lines up with the tab on the motor endshield (see Figure 5).



Figure 5: Adapter notch lined up with motor tab

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10. Place the two 2.76-inch bolts into the holes at the base of the new EON control and tighten down to a torque measurement of 15-19 inch pounds.
11. Reattach the 5-pin power cable and 16-pin signal cable into the unit connector. **⚠ CAUTION** Installing connectors incorrectly may result in failure of control module. Rotate the motor assembly to insure plug is in correct location to match original location.
12. Discard the shorter set of bolts.

Replacing an EON control:

13. Two sets of bolts are included in the kit. When replacing the EON, use the 2.45-inch bolts (shorter set). The longer bolts and adapter ring are not used
14. Attach the 3-pin connector from motor to corresponding connector on the new EON control (see Figure 2a).
15. Align motor endshield to top of new EON control. Align notch in motor endshield with tab on connector (see Figure 6).

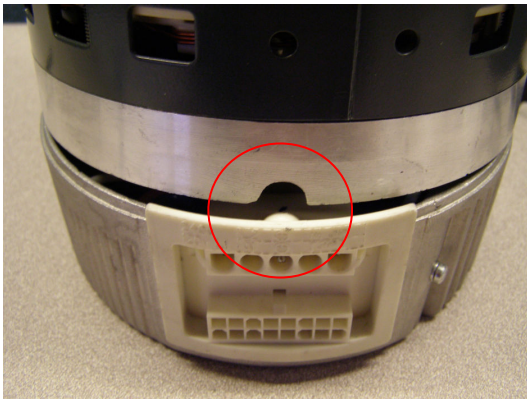


Figure 6: Motor endshield on control

16. Place control onto the existing motor. (see Figure 7).



Figure 7: Motor and control mated

17. Place two 2.45-inch bolts into the holes at the base of the new EON control and tighten down to a torque measurement of 15-19 inch pounds.
18. Reattach the 5-pin power cable and 16-pin signal cable into the unit connector. **⚠ CAUTION** Installing connectors incorrectly may result in failure of control module.
19. Discard the longest set of bolts and adapter ring.