

20299901 Installation Instructions

ECM Module Replacement

Description

This module will replace a failed ECM electronics module. This kit is required when replacing the electronics module on a failed ECM motor.



WARNING

To avoid death, personal injury or property damage due to electrical shock, disconnect the electrical power supply before servicing this unit.

Contents of the ECM Module Replacement Kit:

ECM Replacement Module

Installation Instructions

Mounting Hardware



WARNING

Disconnect all power before servicing unit.

Installations Procedures

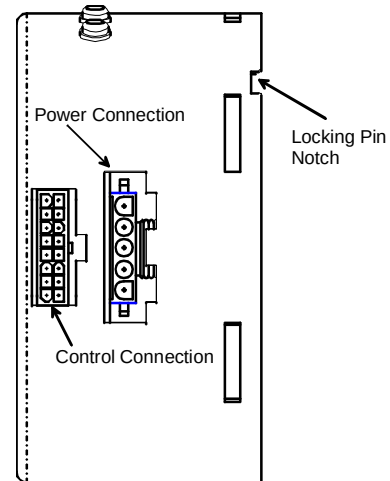
1. You **MUST** have the correct replacement module. The controls are factory programmed for specific operating modes. Even though they look alike, different modules may have completely different functionality.



WARNING

Using the wrong control module voids all product warranties and may produce unexpected results.

2. Remove AC power from the unit being serviced. **DO NOT WORK ON THE MOTOR WITH AC POWER APPLIED.** Wait at least 5 minutes after disconnecting AC power from the equipment before opening the motor.
3. It is usually not necessary to remove the motor from the blower assembly. However it is recommended that the blower assembly, with the motor, be removed from the furnace/airhandler. Follow specified procedures for removing blower assembly. Unplug the two cable connectors to the motor. There are latches on each connector. **DO NOT PULL ON THE WIRES.** The plugs remove easily when properly released.



RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION

ATTENTION SERVICE PERSONNEL

As a professional servicer you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with these instructions. Pay special attention to all safety warnings. Often during installation or repair it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is your responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in these instructions should not supersede existing practices but should be considered as supplemental information.

Control Disassembly

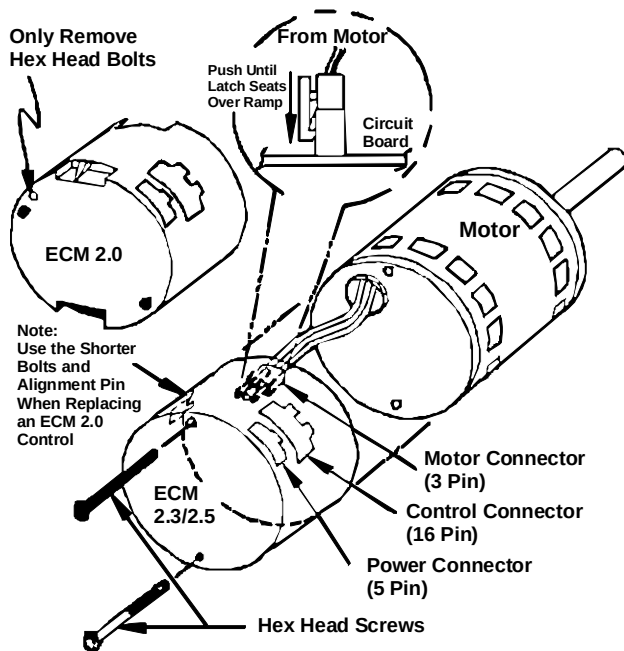


Figure 1

4. Observe the flat end of the motor control module casting and locate the two standard $\frac{1}{4}$ " hex head bolts (See Figure 1). Remove and discard these bolts from the motor while holding the control module. **DO NOT REMOVE THE TWO TORX HEAD SCREWS.**
5. The control module is now free of the motor but still attached by a plug and cable. Carefully rotate the control so as to gain access to the plug on the end of the cable. Squeeze the release latch and gently pull the plug out of the control module. **DO NOT PULL ON THE WIRES. GRIP THE PLUG ONLY.**
6. The control module is now completely detached from the motor. Verify with a standard ohmmeter that the resistance from each motor lead (in the motor plug just removed) to the motor shell is greater than 100K ohms. (Measure resistance to unpainted motor end plate). (See Figure 2)

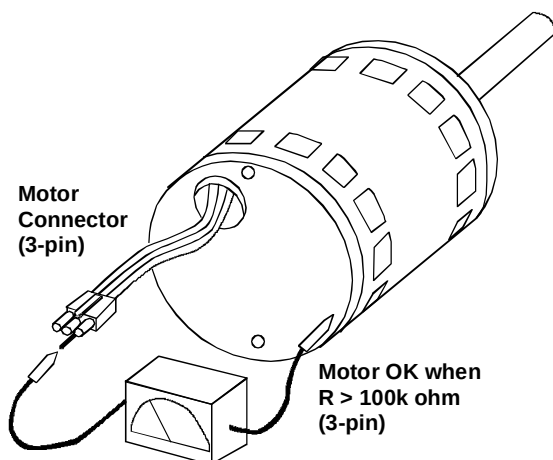


Figure 2

NOTE - If any motor lead fails this test do not proceed to install the control module. **THE MOTOR IS DEFECTIVE AND MUST BE REPLACED.** Installing a new control module on a defective motor will cause it to fail also.

7. Verify that the replacement control module is correct for your application. If so, orient the new module next to the motor and carefully insert the plug removed in step 5. **BE SURE THE PLUG LATCHES. IT WILL CLICK IN PLACE WHEN PROPERLY INSERTED.**
8. Install the new control module back on the motor being careful to engage the locating pin into the appropriate mating motor hole. Locate the two $\frac{1}{4}$ " hex head bolts in the bag of mounting hardware. Insert and tighten the bolts snugly. **DO NOT OVERTIGHTEN.**

NOTE - Before replacing the blower/motor assembly, it is important to look at the installation to see if some application fault has caused the motor module to fail.

- Is there any evidence of water damage to the failed control? (Corrosion on the inside or outside of the casting.)
 - If yes, do **MOISTURE CHECK** (see moisture check procedure in service manual)
9. Re-install the blower/motor assembly into the HVAC equipment. See service manual for suggested procedures.
 10. Plug the 16-pin control plug into the motor. The plug is keyed. Make sure the connector is properly seated and latched.
 11. Plug the 5 pin power connector into the motor Even though the plug is keyed, **OBSERVE THE PROPER ORIENTATION. DO NOT FORCE THE CONNECTOR.** It plugs in very easily when properly oriented. **REVERSING THIS PLUG WILL CAUSE IMMEDIATE FAILURE OF THE CONTROL MODULE.**
 12. Final installation check. Make sure the motor is installed as follows:
 - a. As far **INTO** the blower housing as possible
 - b. Belly bands not covering vent holes or on the control module
 - c. Motor connectors should be straight down (i.e. 6 o'clock)
 - d. Appropriate drip loop in the motor cables
 13. The installation is now complete. Reapply the AC power to the HVAC equipment and verify that the new motor control module is working properly.