X-13 Replacement Control Instructions

Step 1 Check Equipment
Make sure that the compatible motor part number shown on the replacement control module matches the part number on the motor.

Step 2 Disconnect Line Voltage
Disconnect line voltage from the unit being serviced. There may be more than one disconnect switch.
Do not work on motor with line voltage applied. There is risk of electric shock or permanent damage to the replacement control module that can occur if working on the unit with line voltage applied.

> **WARNING**
> 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.

Step 3 Disconnect Existing Control Module
Remove blower assembly from blower compartment to provide easy access to module connectors and mounting bolts. Disconnect power and signal connections from the existing control module. Connections may be terminated with housing, quick connect terminal or both. Note the motor terminal identification shown on the motor connector. Typically the control can be removed without removing the motor from the blower assembly (see Figure 1).

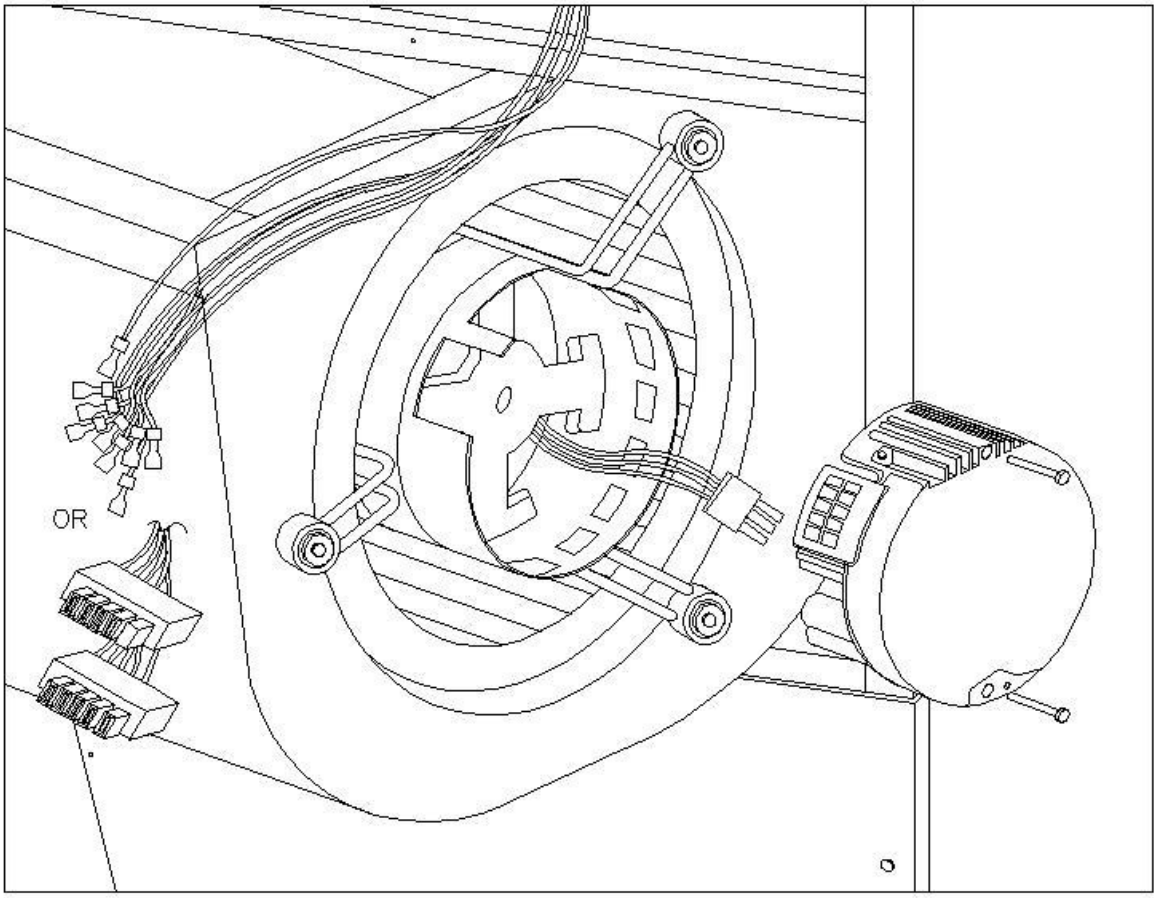

Figure 1

Step 4 Removing the Existing Control Module
Remove the two 2-1/2 in. long 1/4 in. hex head bolts to separate the existing module from the motor. (There may be a green grounding wire with a ring terminal under one of the bolt heads, which also needs to be carefully slid off the bolt). Disconnect the 3-pin motor connector from the existing control being careful to depress the latching mechanism before pulling the connector away from the control. Try to avoid pulling on the wires. See Figure 2

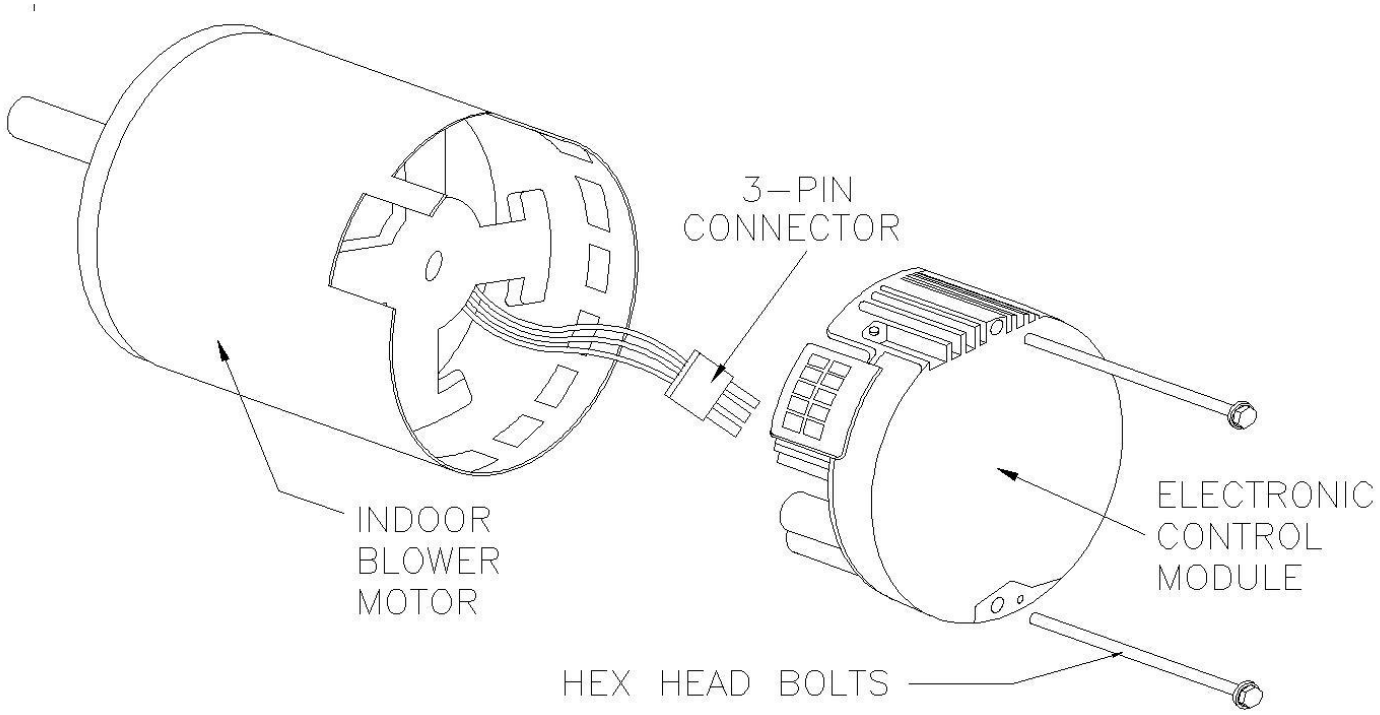

Figure 2

Step 5 Resistance Check
Using an ohmmeter check the resistance from any one of the motor connector pins to the aluminum end plate of the motor. This resistance should be greater than 100k ohms. Also check the resistances between each of the three motor connector pins. These should all read approximately the same resistance within an ohm. Check to see if the blower wheel spins freely. **If any motor fails these tests, do not install the new control module. The motor is defective and it also must be replaced. The new control can fail if placed on a defective motor.**

Step 6 Installing the New Control Module
Remove the new control module from the box. Plug in the 3-pin motor connector to the control making sure that the connector is fully seated and latched. Rotate the control housing to align the connector and aluminum heat sink with the notches in the motor housing. (If the existing assembly has a green grounding wire with a ring terminal, then this terminal must be placed under the head of one of the mounting bolts before it is tightened down). Insert two new 2-1/2 in. long 1/4 in. hex head bolts (included in replacement module kit) and start the bolts by turning a few threads and then finally securing the bolts being careful not to over-tighten the bolts. Bolts should be tightened to 17+/- 2 in.-lbs. Overtightening of the bolts may result in bearing noise and reduced life. Check to see if the blower wheel spins freely. If not, the new control module is defective. See Figure 3

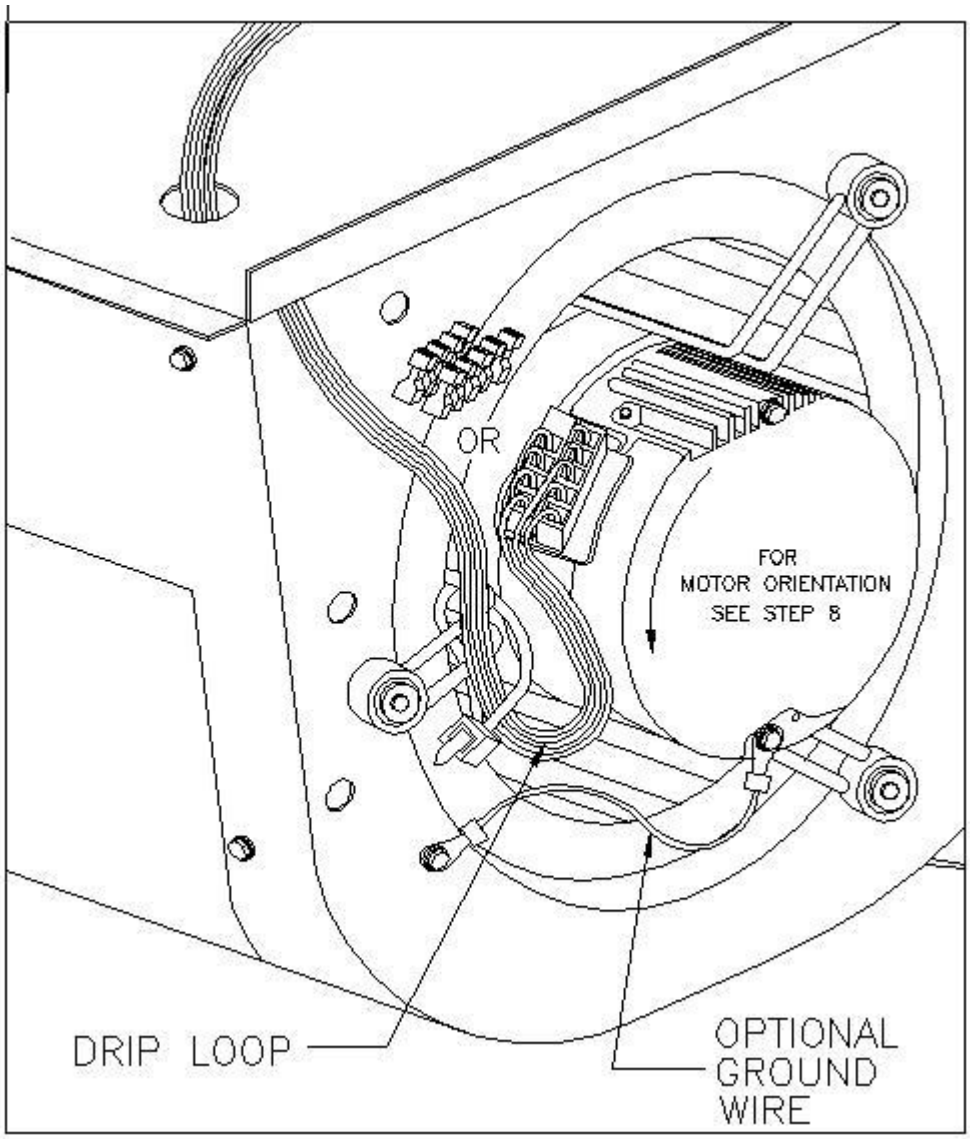

Figure 3

Step 7 Reconnecting the Cables
Reconnect the power and signal connector housing and/or quick connect terminals to the original motor terminal locations.

Step 8 Checking the Installation
Make sure that the connector of the control is facing in a sideways or downward position to prevent moisture from getting into the connector housing; otherwise the motor may have to be rotated.
Also check that tie wraps (if used) are properly holding the connector cables so that a proper drip loop is maintained.

Step 9 Reconnecting Power
Slide the blower housing back into the unit and replace access panel. Reconnect line voltage to unit and verify that the blower is operating properly.