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GAS FURNACE
KITS AND ACCESSORIES

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BLOWER MOTOR & CONTROL MODULE REPLACEMENT KITS

INSTALLATION INSTRUCTION FOR BLOWER MOTOR REPLACEMENT KITS (73W01 - 73W03) AND CONTROL MODULE REPLACEMENT KITS (84W85 - 84W87) USED WITH UNITS EQUIPPED WITH GENTEQ (REGAL BELOIT) 3.0 BLOWER MOTORS AND CONTROL MODULES

RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause personal injury, loss of life, or damage to property.

Installation and service must be performed by a licensed professional installer (or equivalent) or a service agency.

⚠ CAUTION

Physical contact with metal edges and corners while applying excessive force or rapid motion can result in personal injury. Be aware of, and use caution when working near, these areas during installation or while servicing this equipment.

⚠WARNING

Electric Shock Hazard.

Can cause injury or death.

Foil-faced insulation has conductive characteristics similar to metal. Be sure there are no electrical connections within ½" of any foil-faced insulation. If the foil-faced insulation comes in contact with electrical voltage, the foil could provide a path for current to pass through to the outer metal cabinet. While the current produced may not be enough to trip existing electrical safety devices (e.g. fuses or circuit breakers), the current can be enough to cause an electric shock hazard that could cause personal injury or death.

Shipping and Packing List

73W01 - 73W03 package 1 of 1 contains:

1 - Replacement blower motor

84W85 - 84W87 package 1 of 1 contains:

1 - Replacement control module

Application

These blower motor replacement kits and control module replacement kits are used with units with a 3.0 Genteq (Regal Beloit) blower motor and control module.

All replacement control modules look alike; however, each module is factory-programmed to be used with a specific motor. It is very important to make sure that you use the correct replacement module. **USE OF THE WRONG CONTROL MODULE MAY RESULT IN UNEXPECTED UNIT OPERATION.** Refer to table 1 to ensure that you are matching the correct replacement module with the blower motor in your unit.

Table 1

Blower Motor Size	Blower Motor Repl. Kit	Cont. Module Repl. Kit
1/2 HP	73W01	84W85
3/4 HP	73W02	84W86
1 HP	73W03	84W87

Control Module Removal

1 - Disconnect electrical power to unit. Wait five minutes before continuing service procedures to avoid electrical shock. This will allow internal capacitors time to fully discharge.

2 - Remove blower access panel.

3 - Slide blower assembly forward to access blower motor wiring. It is not necessary to remove blower motor from blower assembly.

4 - Unplug the 5-pin power cable and 4-pin signal cable from the control module. See Figure 1 for location.

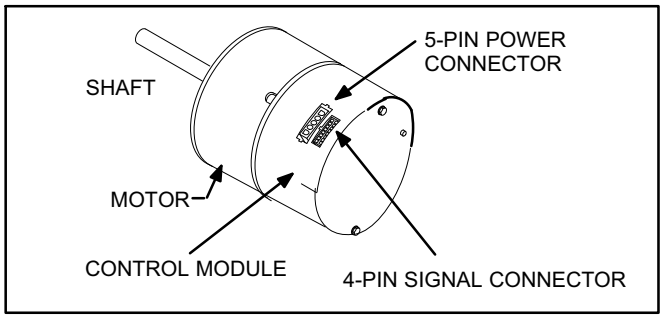


Figure 1. Module Connectors

5 - Locate and loosen the two hex-head bolts on the flat end of the motor control module casing as illustrated in Figure 2. Hold the control module while you remove these two bolts.

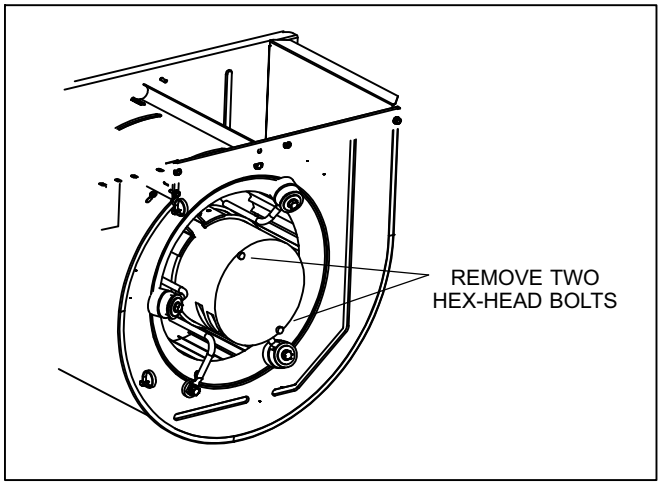


Figure 2. Fasteners

6 - Carefully rotate the control module to gain access to the 3-pin plug. Squeeze the plug release latch and gently pull the plug out of the control module. **Do not pull on the wires.**

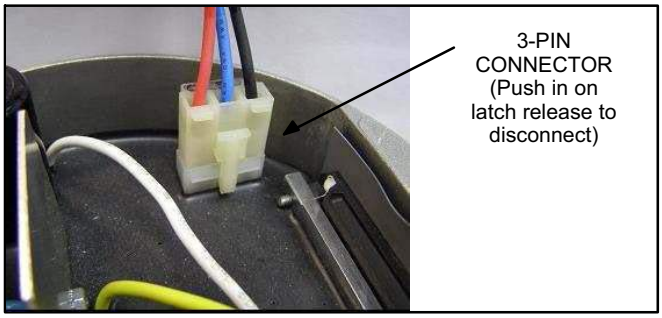


Figure 3. 3-Pin Connector

Motor Testing

Ensure that motor windings are not damaged by performing the following tests:

***NOTE** - If your ohm meter is not an auto-ranging type, set it to the highest ohm scale (100k ohms or greater) before performing tests.*

Scale	Measurement Range	
	in words	ohms
2M	two megohm -- two million ohms	0-2,000,000
200k	two hundred kilohm -- two hundred thousand ohms	0-200,000
20k	twenty kilohm -- twenty thousand ohms	0-20,000
2k	two kilohm -- two thousand ohms	0-2,000
200	two hundred ohm	0-200

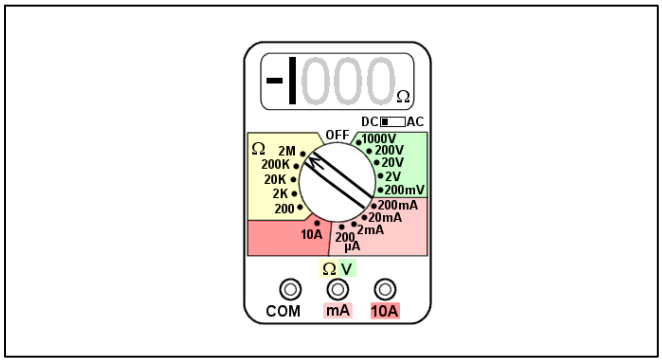


Figure 4. Typical Digital Multimeter

Blower Motor Test A

Measure the resistance between each of the three motor leads (3-pin plug) and the unpainted part of the end shield.

If the winding resistance to ground is <100k ohms, replace the blower motor.

If the resistance to ground is >100k, the motor windings are fine. Proceed to Test B.

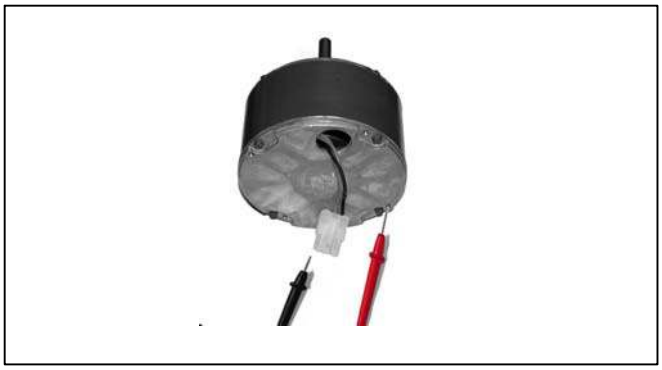


Figure 5. Blower Motor Test A

Blower Motor Test B

Use an ohmmeter to measure the motor phase-to-phase resistance by checking these combinations of the the 3-pin motor plug. For the purpose of this test, start at either end of the connector as lead 1.

1 - The lead-to-lead resistance across any two leads should be less than 20 ohms.

2 - Each lead-to-lead resistance should be the same.

If the measured resistance is greater than 20 ohms, replace the blower motor.

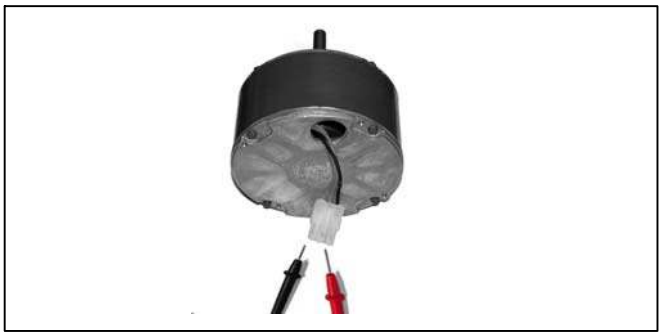


Figure 6. Blower Motor Test B

Continue with testing to check control module.

Control Module Testing

To verify control module operation, see steps below:

1 - Remove J48 (5-pin power plug) from P48 on the control module.

2 - With the power on at the furnace and door switch pressed in, use a meter to verify 120V between pins 4 and 5 on J48.

3 - Reconnect J48 to P48 to the control module.

4 - Remove J49 (4-pin signal connector) from P49 on the motor.

5 - Using test jumpers, apply 24V to pins 3 and 4 on P49 on the control module.

NOTE - *Do not apply 24V to pins 2 and 4 on P49. Doing so will cause permanent damage to the motor.*

6 - Motor should run at 75%. If so, control module is operating properly. If not, replace control module.

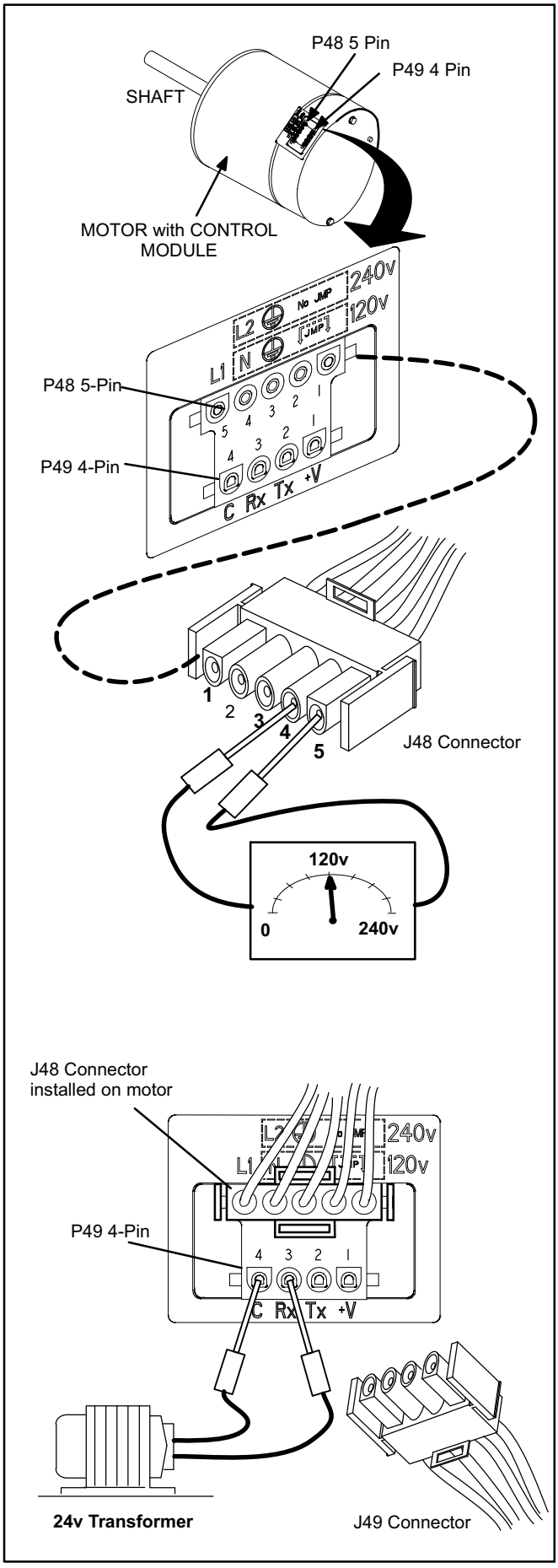


Figure 7. Control Module Test

Blower Motor Installation

NOTE - *It is not necessary to remove blower assembly from unit if blower motor is not replaced.*

1 - If blower motor must be replaced, remove screws which secure blower assembly in unit and carefully slide blower assembly forward.

2 - Remove the bolts that secure the blower motor mounting bracket to the blower housing. Gently ease blower motor out of housing.

3 - Remove screw from motor mounting bracket and ease four-legged bracket from existing motor.

4 - See figure 8 for proper orientation and slide motor mounting bracket onto replacement blower motor. Check dimensions given in figure 8 before securing bracket to motor using existing screw.

5 - Continue with installation of replacement or existing control module.

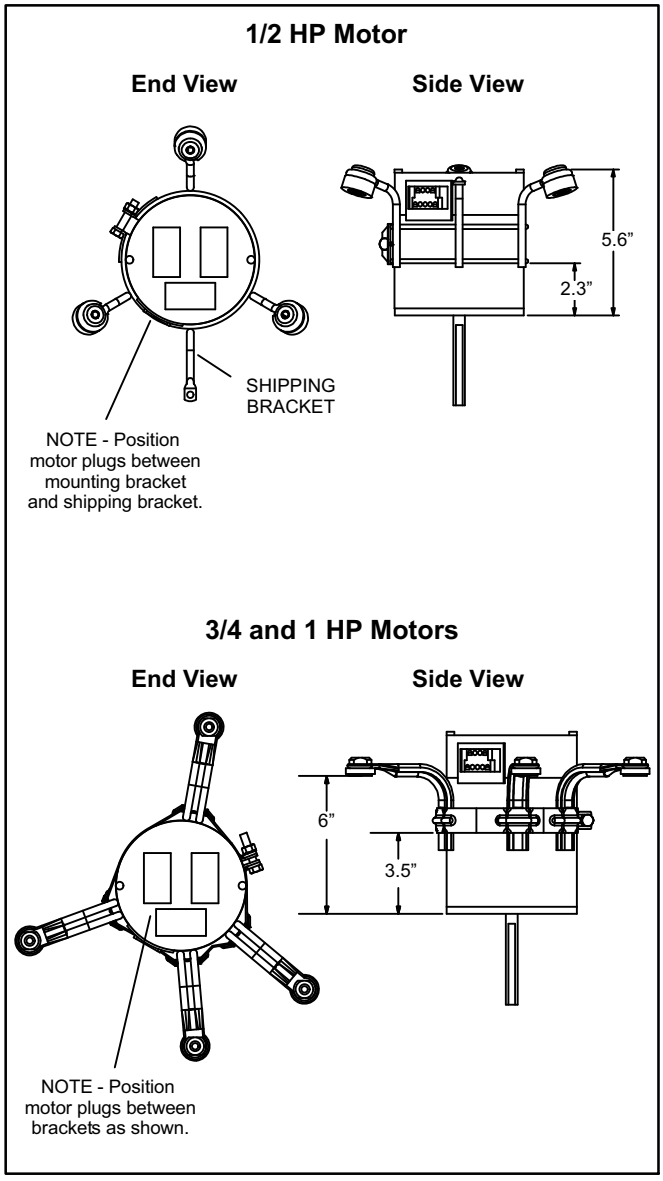


Figure 8. Motor Mounting Bracket Installation

Control Module Installation

NOTE - *It is not necessary to remove blower assembly from unit if blower motor is not replaced.*

1 - Examine the equipment to see if there is an obvious reason for the failure. Is there any sign of corrosion on the inside or outside of the casing? If so, this is evidence of possible water damage. Make sure the unit is properly leveled and that drains are unplugged.

2 - Carefully insert the motor 3-pin plug into the receptacle on the replacement module until it latches. The 3-pin plug will click when it latches properly. Verify that the wires will not back out of the plug.

3 - Align the tab on the control module connector with the notch in the motor casing. See figure 9.Slide the control module onto the blower motor casing.

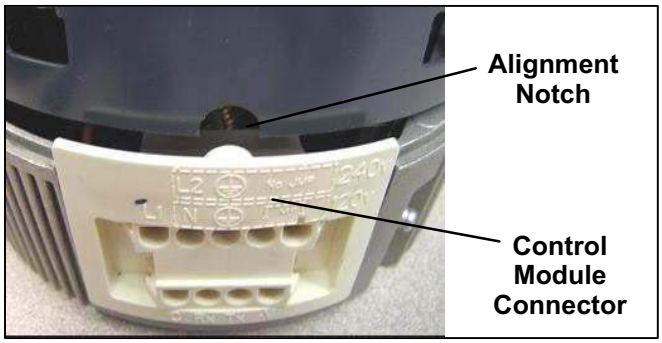


Figure 9. Align Control Module with Motor

4 - Use the existing bolts to secure the replacement module to the motor housing.

5 - Use the provided bolts to secure the replacement module to the motor housing.

6 - Reconnect the 4-pin and 5-pin harnesses to the connectors in the control module.

7 - Replace access panel(s) and restore electrical power to the unit.

8 - Verify that the new control module is operating properly in all modes.