

ICM2 Replacement Kit For Variable-Speed Fan Coils

Installation Instructions Part No. 321533-751

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

INTRODUCTION

This instruction covers the installation of the ICM2 replacement kit Part No. 321533-751. Kit is required when replacing an ICM1 motor with the ICM2 motor in 40YV, 40QE, and 40QL variable-speed fan coils.

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses and work gloves. Have 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 instructions or manuals, be alert to the potential for personal injury.

Understand the signal word DANGER, WARNING, or CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards that **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **would** result in minor personal injury or product and property damage.

DESCRIPTION AND USAGE

After removing the ICM1 motor, contents of kit 321533-751 must be used to install an ICM2 motor. The contents of the kit are listed in Table 1. A view of the application is illustrated in Fig. 1.

NOTE: Fig. 1 depicts a 40YV fan coil. The 40QE, 40QL fan coils have a different motor mounting assembly.

WARNING

Before installing or servicing system, always turn off main power to system. There may be more than 1 disconnect switch. Turn off accessory heater power if applicable. Electrical shock can cause personal injury or death.

INSTALLATION

Step 1—Check Equipment

Compare the contents of the kit with Table 1. If any items are missing contact your distributor.

Step 2—Remove Blower Access Panel to Access Motor

Remove blower access panel. Cut and discard wire ties from motor control wiring at blower mounting legs. Completely disconnect motor.

Step 3—Remove and Replace ICM1 Motor with ICM2 Replacement Motor

To remove ICM1 motor:

1. Remove 2 outside screws holding blower motor assembly against the blower deck flange and slide assembly out of cabinet.
2. Loosen setscrew holding blower wheel onto motor shaft.

CAUTION

If the motor does not slide out easily, use fine grain sandpaper to remove rust on shaft and apply a lubricant. Do not hammer shaft to loosen motor.

3. Remove 3 bolts holding motor mount to blower housing and slide motor and mount out of housing.
4. Remove motor mounting band and legs.

To install the ICM2 motor:

IMPORTANT: The ICM2 motor must be mounted with connectors facing out of the cabinet. (See Fig. 1.)

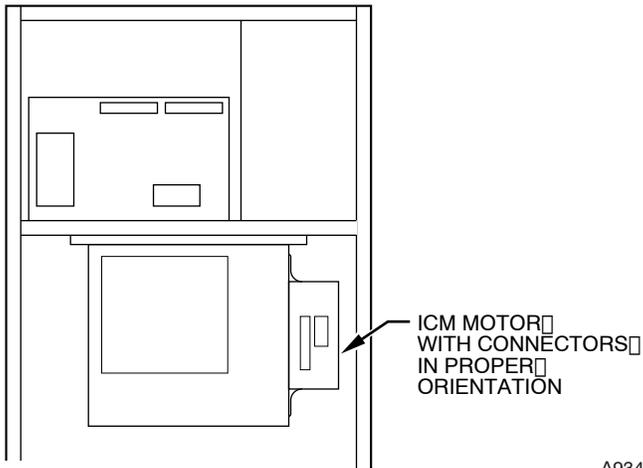
NOTE: Do not cover vent holes in motor shell with the motor mounting band. Do not install motor mounting band over control section of ICM2.

1. Assemble motor mounting bands and legs to motor.

Table 1—Kit Contents

PART NO.	DESCRIPTION	QUANTITY
321531-301	Adapter Harness	1
320050-301	Tap Harness	1
320051-301	Tap Plug	1
319078-301	Blower Adapter Harness	1
HD44AE116	Blower Motor	1
40Q,Y-1SI	Installation Instructions	1

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Fig. 1—ICM2 Motor Orientation

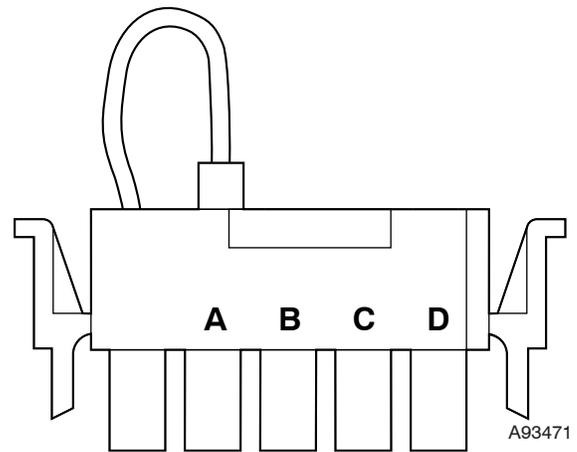
2. Secure motor mount to housing using 3 previously removed bolts.
3. Locate blower wheel setscrew over flat on motor shaft and tighten. Rotate wheel in housing. Blower wheel should not rub housing and should be centered in inlet opening. If blower wheel rubs housing and/or is not centered in inlet opening, loosen setscrew, realign blower wheel, tighten setscrew on shaft, and check rotation again.
4. Slide blower assembly onto blower deck. When blower is within unit envelope, push blower assembly toward control box while sliding assembly into cabinet to ensure blower assembly engages deck properly.
5. Fasten blower motor assembly to blower deck with 2 screws previously removed.

Step 4—Install Motor Wiring Harness

⚠ CAUTION

All connectors are polarized for correct assembly. Do not force connectors.

1. Connect blower adapter harness, Part No. 319078-301, to the motor control input connector.
2. Connect tap harness, Part No. 320050-301, to blower adapter harness, Part No. 319078-301, using 6-pin AMP plug and receptacle.
3. Connect the old blower motor control harness to the blower adapter harness at the 6-pin molex receptacle.



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Fig. 2—Tap Plug

4. Connect tap plug, Part No. 320051-301, into 15-pin receptacle on tap harness, Part No. 320050-301.
5. Set torque taps for red, black, and white leads on the tap plug. Use old motor settings and Table 2 to correctly configure the new motor. (See Fig. 2.)
6. Connect red wire in tap harness to terminal R and blue wire to thermostat terminal connection C. These wires are provided with solderless connectors for connection to screw terminals at terminal connection board. If wires do not reach the terminal connector board, cut terminals off and extend wires using field-supplied wire and wire nuts.
7. Connect adapter harness, Part No. 321531-301, to the motor power input connector. Connector is polarized for correct assembly. Incorrect assembly of this connector will result in immediate blower motor failure.
8. Connect the motor power harness to adapter harness.
9. Bundle and wire tie harnesses to prevent contact with rotating blower wheel. Use field-supplied wire ties.

Step 5—Reassemble

1. Reconnect any wiring previously removed to gain blower access.
2. Reinstall blower access door.
3. Turn on electrical supply to the fan coil.
4. Return the fan coil to service. Check blower for proper operation and rotation. Check for correct speed changes in cooling and heating modes.

Table 2—ICM2 Torque Tap Equivalents

TAP PLUG LEAD	ICM1 TORQUE TAP									
	1	2	3	4	5	6	7	8	9	10 and 11
Red	-	-	-	-	D	C	-	B	-	A
Black	-	-	-	-	-	D	C	B	-	A
White	A	B	C	D	-	-	-	-	-	-