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GAS UNITS KITS & ACCESSORIES

507947-01 INDOOR BLOWER MOTOR AND CONTROL
07/ 2019 MODULE REPLACEMENT KIT

INSTALLATION INSTRUCTIONS FOR NIDEC INDOOR BLOWER MOTOR & CONTROL MODULE REPLACEMENT KITS 19A90, 19A91, 19A92 & 19A96 USED ON ML180UHV MODEL UNITS

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional HVAC installer or equivalent, service agency, or the gas supplier

⚠ CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

Shipping and Packing List

Package 1 of 1 contains:

- 1 - Replacement motor and control module

Application

Use the kit specified in the table below to replace the motor or control module in ML180UHV units.

TABLE 1

ML180UHV Model	Replacement Kit	Indoor Blower Cat.
030V36A	19A90	104758-15
045V36A, 070V36A 070V36B 070V48B	19A91	104758-16
090V48B	19A92	104758-17
110V60C	19A96	104758-18

NOTE - 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 are using the correct replacement module. USE OF THE WRONG CONTROL MODULE MAY RESULT IN UNEXPECTED UNIT OPERATION.

⚠ WARNING

Electric Shock Hazard! Disconnect all power supplies before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

Motor Control Module Removal and Check

- 1 - Disconnect all electrical power to unit. Wait at least five minutes before beginning service procedures. This will allow internal capacitors to fully discharge, avoiding possible electrical shock.
- 2 - Remove the blower access panel.
- 3 - Unplug the 5-pin (J48) connector from the control module and the 16-pin (J49) connector from the 16X4W black box (see Figure 1).
- 4 - Remove the two screws securing the blower housing and slide blower assembly forward to access the blower-motor wiring. It is not necessary to remove the blower motor from the blower assembly.
- 5 - Remove the three screws securing the motor to the control module (see Figure 2). The control module will separate from the motor. Set the screws aside.

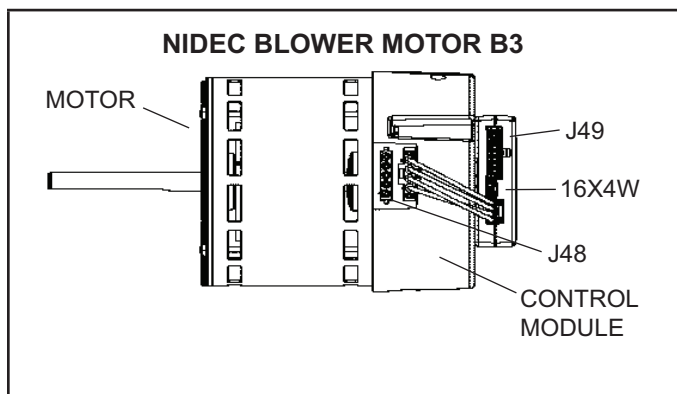


Figure 1



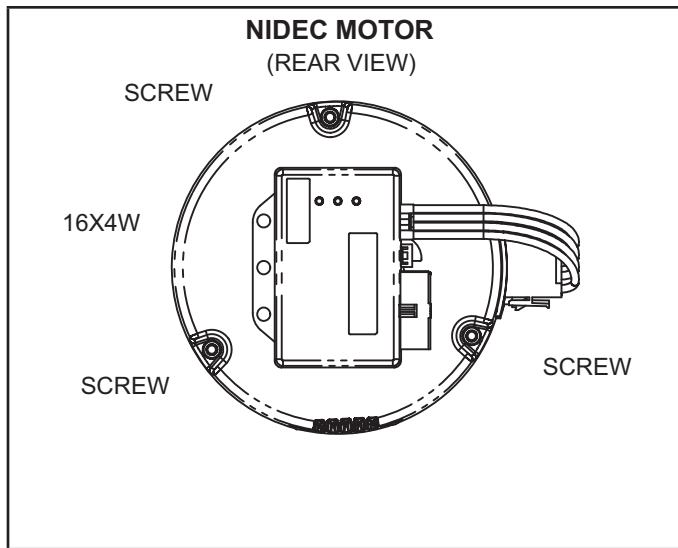


Figure 2

- 6 - Disconnect the three-wire motor-to-control-module harness (see Figure 3). If control module side terminals are damaged, replace the control module. If terminals are not damaged, move to Step 7.
- 7 - Check the NTC thermistor for any damage. Replace the control module if damaged. If no damage is present, move to Step 8.
- 8 - Check the capacitors for any damage. Look for bulging or swelling caps. If caps are bulging or swollen, replace the control module. If capacitors are not damaged, move to Step 9.

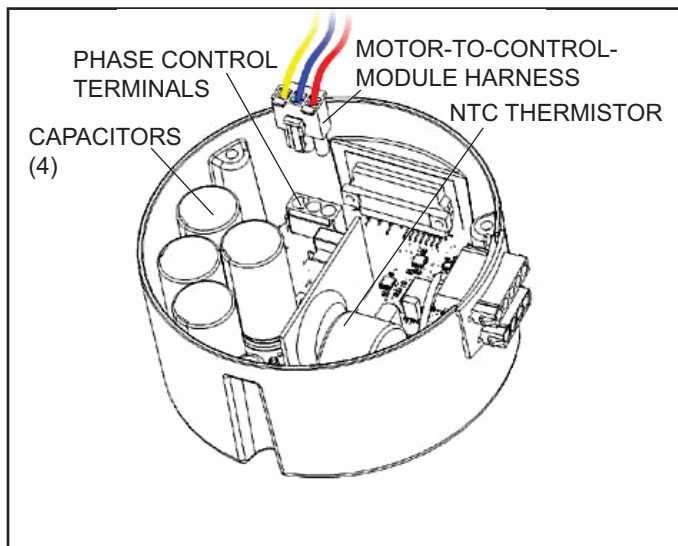


Figure 3

- 9 - Check resistance between each of the three phase-control terminals. Resistance between any two terminals should be greater than 100K ohms. If resistance is less than 100K, replace the control module. If resistance is correct, control module is working properly. Move to Step 10.

Motor Check

- 10 - If motor shaft spins freely in both directions, proceed to Step 11. If not, replace motor.
- 11 - Check the motor-to-control-module harness for any damage. If the harness or terminals are damaged, replace the motor. If there is no damage, move to Step 12.
- 12 - Check the resistance between each of the three phase-control terminals in the motor-to-control-module harness. Resistance between any two contacts should be equal. If resistance between any two contacts is not equal or if any resistance shows as open or short circuited, replace motor.

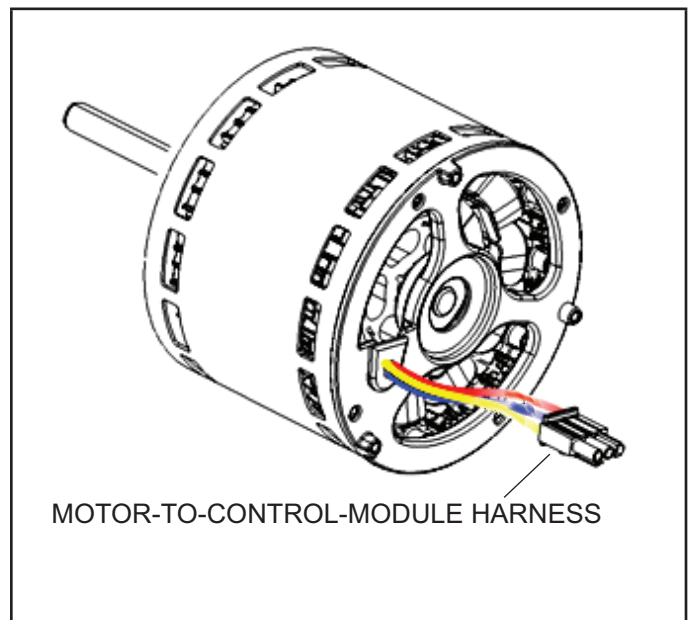


Figure 4

Control Module Installation

IMPORTANT

The Replacement Motor Control Module Only Kits for the 1.5 to 3 ton units come in one box with two separate components (control module and black box). Refer to appropriate procedure below to properly position black box on control module.

Kits with Black Box Factory-Installed on Control Module

- 1 - Install control module onto motor using existing screws removed in Step 5.
- 2 - Plug the 5-pin connector (J48) into the control module and the 16-pin connector (J49) into the black box.
- 3 - Re-position the blower assembly back in the cabinet and secure with the two screws removed earlier in step 4.
- 4 - Restore power to the unit.

Kits with Control Module and Black Box as Separate Components

- 1 - Install control module onto motor using existing screws removed in Step 5.
- 2 - Slide the blower assembly into the cabinet and confirm that the black box has clearance from all components and wiring
- 3 - Withdraw the blower assembly from the cabinet and plug the 5-pin connector (J48) into the control module and the 16-pin connector (J49) into the black box.
- 4 - Re-position the blower assembly back in the cabinet and secure with the two screws removed earlier in step 4
- 5 - Restore power to the unit..