Broan-NuTone S86322000

Broan-NuTone QT100LH, QT100FL Series Fan Motor Instruction Manual

Model: S86322000

Introduction

This manual provides essential information for the safe and effective installation, operation, and maintenance of your Broan-NuTone QT100LH or QT100FL series fan motor. This motor is designed as a replacement for specific Broan-NuTone exhaust fan models, ensuring proper ventilation in your home. Please read these instructions thoroughly before proceeding with installation or use.

Safety Information

WARNING: To reduce the risk of fire, electric shock, or injury to persons, observe the following:

- Always disconnect power at the service panel before installing or servicing the motor. Lock out the service panel to prevent power from being switched on accidentally.
- All electrical wiring must be performed by a qualified electrician in accordance with all applicable codes and standards, including fire-rated construction.
- Ensure the motor is properly grounded.
- Do not use this motor with any solid-state speed control device unless specifically approved for use with this motor.
- Wear safety glasses and gloves during installation and maintenance.
- Keep hands and loose clothing away from moving parts.

Package Contents

Verify that all components are present before beginning installation:

- Broan-NuTone Replacement Fan Motor (Model S86322000)
- 3.5µF x 250 Volt Capacitor (pre-wired in series)



Image: Broan-NuTone QT100LH, QT100FL Series Fan Motor. This image shows the motor with its attached capacitor and wiring, ready for installation.

Setup and Installation

This motor is a direct replacement for Broan-NuTone models QT100LH and QT100FL, and replaces older part numbers such as 86322, 86322-000, Y4L403A220G, and JA2C394N.

1. **Prepare for Installation:**
    - Ensure power to the fan unit is disconnected at the circuit breaker or fuse box.
    - Remove the fan grille and any housing covers to access the existing motor.
    - Carefully disconnect the wiring from the old motor and remove it from its mounting. Note the orientation of the old motor and wiring for reference.
2. **Mount the New Motor:**
    - The new motor features two mounting studs on the shaft end, spaced 2-7/8 inches center-to-center. Align these studs with the mounting holes in your fan housing.
    - Secure the motor using appropriate fasteners (not included, typically reused from the old motor or provided with the fan unit).
3. **Connect Wiring:**
    - The motor comes with a 2-prong plug and a ground wire. Connect these to the corresponding receptacles in your fan unit's wiring.
    - The 3.5µF x 250 Volt capacitor is pre-wired in series with the motor. Do not alter this wiring.
    - Ensure all connections are secure and properly insulated.
4. **Install Fan Blade (Impeller):**
    - Carefully attach the fan blade (impeller) to the motor shaft. Ensure it is securely fastened and spins freely without obstruction.
5. **Final Assembly:**

- Reinstall any housing covers and the fan grille.
- Restore power at the service panel and test the fan operation.

Operating Instructions

This motor is designed for single-speed operation at 1400 RPM. Once properly installed and powered, the fan will operate at its rated speed when activated by its switch.

- Ensure the fan grille is clean and free of obstructions for optimal airflow.
- Avoid operating the fan in environments with excessive dust or moisture beyond its intended use (e.g., bathroom exhaust).

Maintenance

Regular maintenance helps ensure the longevity and efficient operation of your fan motor.

1. **Power Disconnection:** Always disconnect power at the service panel before performing any maintenance.
2. **Cleaning:**
    - Periodically remove the fan grille and clean it with a mild detergent.
    - Gently wipe down the fan blade (impeller) and accessible motor surfaces to remove dust and debris. Do not use excessive moisture directly on the motor.
3. **Inspection:**
    - Check for any loose wiring connections.
    - Ensure the fan blade is securely attached to the motor shaft and rotates freely.
    - Listen for unusual noises during operation, which may indicate a need for further inspection.

Troubleshooting

If your fan motor is not operating as expected, refer to the following common issues and solutions:

Problem	Possible Cause	Solution
Fan does not turn on.	No power; loose wiring; faulty switch; motor failure.	Check circuit breaker/fuse. Verify all wiring connections. Test the switch. If motor is new and still not working, contact support.
Fan runs slowly or with reduced airflow.	Dirty fan blade/grille; capacitor issue; motor wear.	Clean fan blade and grille. Inspect capacitor for signs of damage (bulging, leakage). If capacitor is faulty, it may need replacement by a qualified technician.
Excessive noise or vibration.	Loose fan blade; debris in housing; worn motor bearings.	Ensure fan blade is securely attached. Remove any debris from the fan housing. If noise persists, the motor bearings may be worn, indicating a need for motor replacement.
Motor overheats and shuts off.	Blocked airflow; motor overload; internal fault.	Ensure fan grille and ducts are clear. Verify the motor is correctly sized for the application. If problem persists, the motor may have an internal fault.

Specifications

Feature	Detail
Model Number	S86322000
Replaces Part Numbers	86322, 86322-000, Y4L403A220G, JA2C394N
Speed	Single Speed, 1400 RPM
Rotation	CW (Clockwise) viewing Shaft End
Voltage	120 Volts
Amperage	0.30 Amps (replaces old shaded pole 0.8 Amps)
Capacitor	3.5µF x 250 Volt (included and wired in series)
Motor Diameter	3-1/3 inches
Mounting Studs	2 studs on shaft end, 2-7/8 inches center to center
Connection	2-prong plug, Ground Wire
Material	Copper
Item Weight	2.2 pounds (approx. 1 Kilogram)
Manufacturer	BROAN-NUTONE HOUSING PRODUCTS

Warranty and Support

Specific warranty details for this replacement motor are typically provided at the point of purchase or through the original equipment manufacturer (Broan-NuTone). Please retain your proof of purchase for warranty claims.
For technical support or further assistance, please refer to the contact information provided by your retailer or the official Broan-NuTone website. When contacting support, please have your motor model number (S86322000) and purchase date available.

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