Nidec 9664

Nidec 9664 Motor Instruction Manual

Model: 9664

Brand: Nidec

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Nidec 9664 Permanent Split Capacitor (PSC) Motor. This motor is specifically designed for refrigeration evaporator blower applications. Please read this manual thoroughly before proceeding with installation or operation.

2. Safety Information

Improper installation, operation, or maintenance can lead to electric shock, fire, or serious injury. Always adhere to the following safety guidelines:

- Disconnect all power to the motor and connected equipment before installation, maintenance, or servicing.
- All electrical work should be performed by a qualified electrician in accordance with local and national electrical codes.
- Ensure the motor is properly grounded.
- Do not operate the motor in environments exceeding its specified ambient temperature (40°C).
- Keep hands, tools, and clothing clear of moving parts during operation.
- Verify that the power supply voltage matches the motor's voltage rating (115V/230V).
- Protect the motor from moisture and corrosive environments unless specifically designed for such conditions.

3. Product Overview

The Nidec 9664 is a robust Permanent Split Capacitor (PSC) motor featuring automatic overload protection. It is designed for continuous duty in open air over enclosure applications, utilizing Class B insulation. This motor operates at 60 Hertz and is suitable for ambient temperatures up to 40°C. Its primary application is as a refrigeration evaporator blower motor.

Figure 1: Nidec 9664 Permanent Split Capacitor Motor. This image displays the motor unit, highlighting its compact design, visible wiring leads, and stud mount for installation.

Key Features:

- **Horsepower:** 1/20 - 1/12 hp
- **Speed:** 1550 RPM
- **Speed Settings:** 1-Speed
- **Voltage:** 115/230V
- **Amperage:** 1.2-0.95 amps
- **Shaft Dimensions:** 5/16" diameter x 2 1/2" length
- **Rotation:** Reversible
- **Diameter:** 3.3"
- **Motor Case Length:** 4.17"
- **Leads:** 12"
- **Bearings:** Ball Bearings
- **Mounting:** Stud Mount

4. Specifications

Feature	Specification
Brand	Nidec
Model Number	9664
Type	Permanent Split Capacitor (PSC)
Horsepower	1/20 - 1/12 hp
Speed	1550 RPM
Voltage	115/230V
Amperage	1.2 - 0.95 amps
Frequency	60 Hertz
Shaft Dimensions	5/16" diameter x 2 1/2" length

Motor Diameter	3.3"
Motor Case Length	4.17"
Leads	12"
Bearings	Ball Bearings
Mounting	Stud Mount
Enclosure	Open Air Over
Insulation Class	Class B
Ambient Temperature	40°C (Maximum)
Duty Cycle	Continuous
Item Weight	16 Pounds
UPC	663001635659
ASIN	B000LEW46I

5. Setup and Installation

Important: Ensure all power is disconnected before beginning installation. Installation should only be performed by qualified personnel.

5.1. Mounting:

1. Identify the appropriate mounting location for the motor, ensuring adequate clearance for airflow and shaft rotation.
2. The Nidec 9664 motor features a stud mount. Securely fasten the motor using the integrated studs to a stable and vibration-free surface.
3. Ensure the motor shaft is properly aligned with the driven component (e.g., blower fan) to prevent premature wear and vibration.

5.2. Electrical Connection:

1. Verify that the incoming power supply voltage (115V or 230V) matches the motor's requirements.
2. Connect the 12-inch leads from the motor to the power supply according to the wiring diagram provided with your equipment or by a qualified electrician.
3. Ensure all connections are secure and properly insulated.
4. Confirm proper grounding of the motor and associated equipment.

5.3. Rotation Direction:

The motor's rotation is reversible. Consult your equipment's requirements for the correct rotation direction. The direction of rotation is typically changed by reversing specific wiring connections; refer to the motor's wiring diagram for details.

6. Operating Instructions

Once the motor is securely mounted and electrically connected, it is ready for operation.

1. Before applying power, perform a final check of all connections and ensure no obstructions are present around the motor or fan.
2. Apply power to the motor. The motor should start smoothly and reach its operating speed of 1550 RPM.
3. Monitor the motor for any unusual noises, vibrations, or excessive heat during the initial operation.

4. This motor is designed for continuous duty, meaning it can operate for extended periods without requiring rest.

7. Maintenance

The Nidec 9664 motor is designed for reliability and requires minimal maintenance.

- **Cleaning:** Periodically inspect the motor for dust, dirt, or debris accumulation. Clean the exterior of the motor using a dry cloth or compressed air to ensure proper heat dissipation. Do not use liquids directly on the motor.
- **Bearings:** This motor is equipped with ball bearings, which are typically lubricated for the life of the motor and do not require additional lubrication under normal operating conditions.
- **Inspection:** Regularly check for loose connections, damaged wiring, or signs of wear. Address any issues promptly.
- **Airflow:** Ensure that the motor's open air over enclosure design allows for adequate airflow to prevent overheating. Do not obstruct ventilation openings.

8. Troubleshooting

This section provides guidance for common issues. For problems not listed or if solutions do not resolve the issue, contact a qualified service technician.

Problem	Possible Cause	Solution
Motor does not start	No power supply; Incorrect wiring; Overload protection tripped; Seized shaft/bearings	Check power source and circuit breaker; Verify wiring connections; Allow motor to cool and reset; Inspect shaft for obstructions, check bearings
Motor overheats	Insufficient airflow; Overload condition; High ambient temperature; Incorrect voltage	Clear obstructions around motor; Reduce load; Ensure ambient temperature is within limits; Verify correct voltage supply
Excessive noise or vibration	Loose mounting; Unbalanced fan/load; Worn bearings	Tighten mounting studs; Inspect and balance fan; Consult service technician for bearing replacement

9. Warranty and Support

Warranty: The Nidec 9664 motor comes with a 1-year manufacturer's warranty from the date of purchase. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

Support: For technical assistance, warranty claims, or service inquiries, please contact Nidec customer support or your authorized Nidec dealer.

Note: Unauthorized repairs or modifications may void the warranty.