

Leeson 119422.00

Leeson Electric Motor User Manual

Model: **119422.00**

Brand: **Leeson**

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1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Leeson Electric 119422.00 motor. This motor is a 1HP, 3450 RPM, 3-phase unit, designed for 230V/460V applications, featuring a 56C Frame, C-Face Flange, footless design, TEFC (Totally Enclosed Fan Cooled) enclosure, and explosion-proof certification. Please read this manual thoroughly before any installation or operation to ensure proper usage and to prevent potential hazards.



Figure 1: A general representation of various Leeson Electric motors, similar to the 119422.00 model. This image illustrates the typical robust construction and design of Leeson industrial motors.

2. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions can result in serious injury, death, or property damage. This motor is explosion-proof and must be installed and maintained by qualified personnel in accordance with all local and national electrical codes, including the National Electrical Code (NEC) and any applicable local regulations for hazardous locations.

- Always disconnect power before performing any installation, maintenance, or inspection.
- Ensure proper grounding of the motor and associated equipment.
- Verify that the motor's voltage and frequency ratings match the power supply.
- Do not operate the motor in environments exceeding its specified temperature limits.
- Protect the motor from moisture and corrosive substances unless specifically designed for such conditions.
- Ensure adequate ventilation around the motor to prevent overheating.
- Use only approved wiring methods and components for hazardous locations.
- Do not modify the motor in any way. Unauthorized modifications can compromise its explosion-proof integrity.

3. SETUP AND INSTALLATION

Proper installation is critical for the performance and longevity of your Leeson motor. Due to its footless design and C-Face flange, this motor is typically mounted directly to the driven equipment or a gearbox.

3.1. Unpacking and Inspection

- Carefully remove the motor from its packaging.
- Inspect the motor for any signs of shipping damage. Report any damage to the carrier immediately.
- Verify that the motor nameplate data matches your order specifications.

3.2. Mounting

- The 56C frame with C-Face flange allows for direct mounting to pumps, gearboxes, or other machinery.
- Ensure the mounting surface is clean, flat, and rigid enough to support the motor's weight (approximately 39 pounds) and operational forces.
- Use appropriate bolts and torque specifications to secure the motor firmly.
- Ensure proper shaft alignment with the driven equipment to prevent premature bearing failure and vibration.

3.3. Electrical Connections

- All wiring must be performed by a licensed electrician in accordance with local and national electrical codes for hazardous locations.
- Refer to the motor's nameplate and wiring diagram (typically found inside the conduit box cover) for correct connection procedures for 230V or 460V, 3-phase operation.
- Ensure all connections are tight and insulated.
- Properly ground the motor frame.
- Verify correct motor rotation before connecting to the load. If rotation is incorrect, interchange any two of the three power leads.

4. OPERATING INSTRUCTIONS

Once installed and wired correctly, the Leeson 119422.00 motor is ready for operation. This motor is designed for continuous duty within its specified ratings.

- **Pre-Operation Check:** Before starting, ensure all safety guards are in place, connections are secure, and there are no obstructions around the motor or driven equipment.
- **Starting:** Apply power to the motor. The motor should start smoothly and reach its rated speed (3450 RPM) quickly.
- **Monitoring:** During operation, periodically check for unusual noises, excessive vibration, or overheating. The TEFC enclosure provides excellent protection, but proper airflow around the motor is still important.
- **Stopping:** Disconnect power to stop the motor.

- **Load:** Do not exceed the motor's rated 1HP load. Overloading can lead to overheating and premature failure.

5. MAINTENANCE

Regular maintenance ensures the longevity and reliable performance of your Leeson motor. Always disconnect power before performing any maintenance.

5.1. Routine Checks (Weekly/Monthly)

- **Cleanliness:** Keep the motor's exterior, especially the fan and cooling fins, free from dust, dirt, and debris to ensure efficient cooling.
- **Vibration:** Check for excessive vibration, which can indicate misalignment, bearing wear, or an unbalanced load.
- **Noise:** Listen for unusual noises from bearings or other components.
- **Temperature:** Monitor the motor's operating temperature. Excessive heat can indicate overloading, poor ventilation, or internal issues.

5.2. Bearing Lubrication

Leeson motors are often equipped with sealed bearings that are lubricated for life and require no maintenance. However, some models may have regreaseable bearings. Consult the motor's specific documentation or nameplate for lubrication requirements. If regreaseable, use only the recommended type and amount of grease.

5.3. Electrical Connections

Periodically inspect electrical connections for tightness and signs of corrosion or overheating. Ensure the grounding connection remains secure.

6. TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, contact a qualified technician or Leeson support.

Problem	Possible Cause	Solution
Motor does not start	No power; incorrect wiring; tripped breaker/fuse; open circuit; seized bearings.	Check power supply; verify wiring per diagram; reset breaker/replace fuse; check for continuity; inspect bearings.
Motor overheats	Overload; low voltage; poor ventilation; high ambient temperature; bearing failure.	Reduce load; check supply voltage; clear obstructions; ensure proper airflow; inspect/replace bearings.
Excessive vibration	Misalignment; unbalanced load; worn bearings; loose mounting.	Check and correct alignment; balance load; replace bearings; tighten mounting bolts.
Unusual noise	Worn bearings; foreign object; loose components.	Inspect/replace bearings; remove foreign objects; tighten loose parts.

7. SPECIFICATIONS

Key technical specifications for the Leeson Electric 119422.00 motor:

- **Model Number:** 119422.00
- **Horsepower (HP):** 1 HP

- **Revolutions Per Minute (RPM):** 3450 RPM
- **Phase:** 3 Phase (3PH)
- **Voltage:** 230V / 460V
- **Frame Size:** 56C Frame
- **Mounting:** C-Face Flange, Footless
- **Enclosure Type:** TEFC (Totally Enclosed Fan Cooled)
- **Special Feature:** Explosion Proof
- **Item Weight:** Approximately 39 Pounds
- **Manufacturer:** Leeson Electric
- **ASIN:** B0773TBM2N
- **First Available:** November 2, 2017

8. WARRANTY AND SUPPORT

For specific warranty terms and conditions, please refer to the documentation provided with your purchase or visit the official Leeson Electric website. Leeson Electric typically offers a manufacturer's warranty against defects in materials and workmanship.

8.1. Technical Support

If you encounter issues not covered in the troubleshooting section or require technical assistance, please contact Leeson Electric customer support or an authorized Leeson service center. Have your motor's model number (119422.00) and serial number (if applicable) ready when contacting support.

Note: Contact information for Leeson Electric can typically be found on their official website or on the motor's nameplate.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question