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> ACROTOR DA31-00287B Refrigerator Evaporator Fan Motor Instruction Manual for Samsung Refrigerators

ACROTOR DA31-00287B

ACROTOR DA31-00287B Refrigerator Evaporator Fan Motor Instruction Manual

Model: DA31-00287B | Brand: ACROTOR

INTRODUCTION

This manual provides instructions for the installation, operation, and maintenance of the ACROTOR DA31-00287B Refrigerator Evaporator Fan Motor. This component is designed to replace the original evaporator fan motor in compatible Samsung refrigerator models, addressing common issues such as insufficient cooling, excessive noise, or frost accumulation. Please read these instructions carefully before proceeding with installation or maintenance.

SAFETY INFORMATION

Always prioritize safety when working with electrical appliances. Failure to follow these safety guidelines may result in electric shock, injury, or damage to the appliance.

- **Disconnect Power:** Always unplug the refrigerator from the electrical outlet or turn off the circuit breaker before attempting any repairs or installation.
- **Wear Protective Gear:** Wear appropriate personal protective equipment (PPE) such as work gloves and eye protection to prevent injury.
- **Handle with Care:** The fan blade may have sharp edges. Handle the motor and fan assembly carefully.
- **Professional Assistance:** If you are unsure about any step or uncomfortable performing the repair, consult a qualified appliance technician.
- **Electrical Connections:** Ensure all electrical connections are secure and correctly matched to prevent short circuits or malfunction.

PRODUCT OVERVIEW

The ACROTOR DA31-00287B is a replacement evaporator fan motor designed for specific Samsung refrigerator models. Its primary function is to circulate cold air from the evaporator coils throughout the freezer and fresh food compartments, ensuring consistent temperature and efficient cooling.

This part is intended to resolve common refrigerator issues such as:

- Refrigerator overheating or not cooling adequately.
- Excessive noise originating from the freezer compartment.
- Frost buildup in the freezer or on the evaporator coils.

- The original fan motor aging or being damaged.

It replaces the following part numbers: DA31-00334A, DA96-00968A, 3954921, AP5948644, PS9494284, EAP9494284.



Figure 1: Front view of the DA31-00287B Evaporator Fan Motor, showing the fan blades and electrical connector.

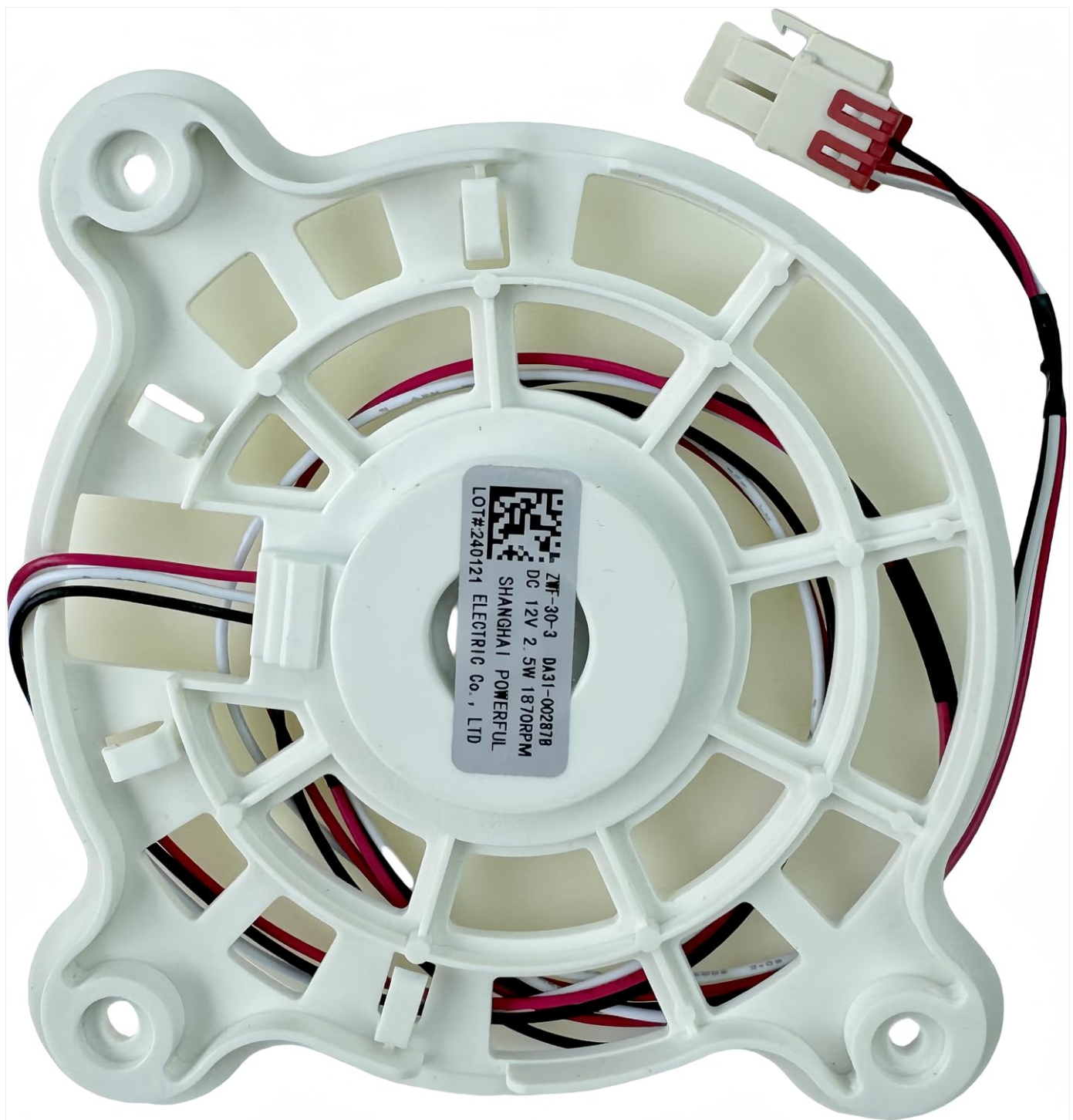


Figure 2: Back view of the DA31-00287B Evaporator Fan Motor, displaying the motor housing and product label.

INSTALLATION INSTRUCTIONS

The following steps outline a general procedure for replacing the evaporator fan motor. Specific refrigerator models may vary. Refer to your refrigerator's service manual or online resources for detailed model-specific instructions if needed.

Tools Required:

- Phillips head screwdriver
- Flathead screwdriver
- Nut drivers (various sizes, typically 1/4" or 5/16")
- Work gloves

Procedure:

1. **Disconnect Power:** Unplug the refrigerator from the wall outlet or turn off the circuit breaker supplying power to the unit. This is a critical safety step.
2. **Empty Freezer Compartment:** Remove all food items, shelves, and the ice maker (if applicable) from the freezer to gain clear access to the back panel.
3. **Access Evaporator Cover:** Locate the back panel inside the freezer compartment. This panel typically covers the evaporator coils and the fan motor. It is usually secured by screws or clips. Carefully remove these fasteners.
4. **Remove Evaporator Cover:** Gently pull the evaporator cover away from the back wall. Be mindful of any wires connected to it (e.g., for the fan motor or thermistor). You may need to disconnect these wires to fully remove the cover.
5. **Disconnect Old Motor:** Once the fan motor is exposed, disconnect its electrical connector. Note the orientation of the wires if they are not color-coded or keyed.
6. **Remove Old Motor:** Unscrew any mounting screws holding the old fan motor in place. Carefully remove the old motor and fan blade assembly.
7. **Install New Motor:** Position the new ACROTOR DA31-00287B fan motor in the same location as the old one. Secure it with the mounting screws. Ensure the fan blade is properly seated and spins freely without touching any surrounding components.
8. **Connect New Motor:** Connect the electrical connector of the new motor. Ensure a snug and correct fit.
9. **Reassemble:** Carefully replace the evaporator cover, ensuring all wires are tucked away and not pinched. Secure the cover with its screws or clips. Reinstall the ice maker, shelves, and food items.
10. **Restore Power:** Plug the refrigerator back into the electrical outlet or turn on the circuit breaker.
11. **Test Operation:** Listen for the fan motor to start running. Allow several hours for the refrigerator to reach its set temperature and confirm proper cooling.

OPERATING INSTRUCTIONS

Once correctly installed, the ACROTOR DA31-00287B Evaporator Fan Motor operates automatically as an integral part of your refrigerator's cooling system. No manual intervention is required for its operation.

- The fan motor will activate when the refrigerator's compressor runs to circulate cold air.
- It will cycle on and off as needed to maintain the set temperatures in both the freezer and fresh food compartments.
- A properly functioning fan motor should operate quietly, producing a consistent hum or airflow sound.

MAINTENANCE

The ACROTOR DA31-00287B Evaporator Fan Motor is designed for long-term, maintenance-free operation. However, regular checks of your refrigerator's overall condition can help ensure its longevity and efficient performance.

- **Clear Air Vents:** Ensure that the air vents inside the freezer and refrigerator compartments are not blocked by food items or ice buildup. Blocked vents can restrict airflow, causing the fan motor to work harder and potentially leading to premature wear.
- **Listen for Unusual Noises:** Periodically listen for any new or unusual noises coming from the freezer compartment. A grinding, squealing, or rattling sound could indicate an issue with the fan motor or an obstruction.
- **Keep Coils Clean:** While not directly related to the fan motor, keeping the condenser coils (usually at the back or bottom of the refrigerator) clean helps the entire cooling system operate more efficiently, reducing strain on all components.

TROUBLESHOOTING

If you experience issues after installing the new evaporator fan motor, refer to the following troubleshooting guide. Always disconnect power before inspecting internal components.

Symptom	Possible Cause	Action
Refrigerator not cooling / Freezer frosting up	Fan motor not running or running slowly; obstructed fan blade; ice buildup on evaporator coils.	Disconnect power. Inspect fan blade for obstructions (ice, debris). Check electrical connections to the motor for looseness. If fan blade is clear and connections are secure, the motor may be faulty.
Loud noise from freezer (grinding, squealing, rattling)	Fan motor bearing failure; fan blade hitting ice buildup or internal components; foreign object in fan assembly.	Disconnect power. Remove evaporator cover and inspect fan blade and motor for obstructions or damage. Manually spin the fan blade to check for resistance or unusual sounds. If no obstruction is found and noise persists, the motor bearings may be worn.
Fan not spinning at all	No power to the motor; faulty motor; seized motor bearing.	Disconnect power. Verify electrical connections. Manually check if the fan blade spins freely. If it's seized, the motor is likely faulty. (Advanced) Use a multimeter to test for continuity or voltage at the motor connector (only if experienced with electrical testing).

SPECIFICATIONS

Key technical specifications for the ACROTOR DA31-00287B Refrigerator Evaporator Fan Motor:

- **Part Number:** DA31-00287B
- **Voltage:** DC 12V
- **Power:** 2.5W
- **Current:** 0.21A
- **Material:** Metal (motor housing), Plastic (fan blade)
- **Item Weight:** Approximately 8 Ounces
- **Dimensions:** Approximately 4.7 inches in diameter (fan blade assembly)



Figure 3: Diameter measurement of the DA31-00287B Evaporator Fan Motor.

Compatible Samsung Refrigerator Models (Partial List):

This fan motor is compatible with a wide range of Samsung refrigerator models. A partial list includes:

- RF220NCTASR/AA-01, RF220NCTASR/AA-02
- RF23J9011SR/AA-00, RF23J9011SR/AA-01, RF23J9011SR/AA-02, RF23J9011SR/AA-03, RF23J9011SR/AA-04, RF23J9011SR/AA-05, RF23J9011SR/AA-06, RF23J9011SR/AA-07, RF23J9011SR/AA-08
- RS25H5111BC/AA-02, RS25H5111SG/AA-01, RS25H5111SR/AA-02, RS25H5111WW/AA-02
- RS25H5121SR/AA-02, RS25J500DSG/AA-01, RS25J500DSR/AA-01, RS25J500DWW/AA-01
- RF34H9960S4/AA-00, RF34H9960S4/AA-01, RF34H9960S4/AA-02, RF34H9960S4/AA-03, RF34H9960S4/AA-04, RF34H9960S4/AA-05
- RF28K9380SG/AA-00, RF28K9380SG/AA-01, RF28K9380SG/AA-02, RF28K9380SR/AA-00, RF28K9380SR/AA-01,

RF28K9380SR/AA-02

- RF28N9780SG/AA-00, RF22K9381SG/AA-00, RF22K9381SG/AA-01, RF22K9381SG/AA-02
- RF34H9950S4/AA-00, RF34H9950S4/AA-01, RF34H9950S4/AA-02, RF34H9950S4/AA-03, RF34H9950S4/AA-04, RF34H9950S4/AA-05
- RF28K9070SG/AA-00, RF28K9070SG/AA-01, RF28K9070SG/AA-02
- RF32FMQDBSR/AA-01, RF32FMQDBSR/AA-02, RF32FMQDBSR/AA-03, RF32FMQDBSR/AA-04, RF32FMQDBSR/AA-05, RF32FMQDBSR/AA-11
- RF221NCTASR/AA-01, RH25H5611SG/AA-00, RH25H5611SG/AA-01
- RF23J9011SG/AA-00, RF23J9011SG/AA-01, RF23J9011SG/AA-02, RF23J9011SG/AA-03, RF23J9011SG/AA-04, RF23J9011SG/AA-05, RF23J9011SG/AA-06
- RF28K9580SG/AA-00, RF28K9580SG/AA-01, RF28K9580SG/AA-02
- RB12J8896S4/AA-00, RB12J8896S4/AA-01
- RF220NCTABC/AA-01, RF220NCTASG/AA-00, RF220NCTASP/AA-00, RF220NCTASP/AA-01, RF220NCTAWW/AA-01, RF220NCTAWW/AA-02
- RF221NCTABC/AA-01, RF221NCTASP/AA-00, RF221NCTAWW/AA-01
- RF22K9381SR/AA-00, RF22K9581SG/AA-00, RF22K9581SG/AA-01, RF22K9581SG/AA-02, RF22K9581SR/AA-00, RF22K9581SR/AA-01, RF22K9581SR/AA-02
- RF22M9581SG/AA-00, RF22M9581SR/AA-00, RF22N9781SG/AA-00, RF22N9781SR/AA-00
- RF24J9960S4/AA-00, RF24J9960S4/AA-01, RF24J9960S4/AA-02, RF24J9960S4/AA-03, RF24J9960S4/AA-04
- RF28K9070SR/AA-00

For a complete list of compatible models, please refer to the product listing or contact customer support.

WARRANTY AND SUPPORT

Warranty: This ACROTOR DA31-00287B Refrigerator Evaporator Fan Motor comes with an unlimited return and refund service for 1 year from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

Customer Support: For any questions, concerns, or assistance regarding the installation, operation, or warranty of your product, please feel free to contact ACROTOR customer support. We are committed to providing timely assistance and aim to reply to all inquiries within 12 hours on working days.

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