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> Samsung NC1MV90ALP/ASH Refrigerator Compressor: Instruction Manual

## Samsung NC1MV90ALP/ASH

# Samsung NC1MV90ALP/ASH Refrigerator Compressor: Instruction Manual

Model: NC1MV90ALP/ASH

## 1. PRODUCT OVERVIEW

The Samsung NC1MV90ALP/ASH Refrigerator Compressor, R-134A, is an authentic Original Equipment Manufacturer (OEM) part designed for various Samsung refrigerator models. This component is essential for the refrigeration cycle, circulating refrigerant throughout the system and compressing it to facilitate heat exchange. This compressor replaces previous part numbers including NC1MV90ALP/E01, NC1MV90ALP/SM1, and NC1MV90ALP/SM3. While its appearance may vary slightly from older versions, it is functionally equivalent and meets Samsung's quality standards.

## 2. SAFETY INFORMATION

**WARNING: Installation of this refrigerator compressor involves working with refrigerants and electrical components. Improper installation can lead to serious injury, property damage, or death. This part should only be installed by a qualified service technician.**

- Always disconnect power to the refrigerator before attempting any service or installation.
- Refrigerants must be handled by certified professionals in accordance with local and national regulations.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Refer to your appliance's service manual or contact the manufacturer for specific safety procedures related to your refrigerator model.

## 3. WHAT'S IN THE BOX

Your package should contain the following item:

- One (1) Samsung NC1MV90ALP/ASH Refrigerator Compressor, R-134A



Image 1: The Samsung NC1MV90ALP/ASH Refrigerator Compressor. This image displays the compressor unit, which is a key component in a refrigerator's cooling system.

## 4. SETUP AND INSTALLATION

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**Due to the complexity and safety requirements associated with refrigerant systems and electrical connections, installation of the Samsung NC1MV90ALP/ASH Refrigerator Compressor must be performed by a qualified and certified appliance service technician.**

Attempting to install this component without proper training, tools, and certification can result in:

- Personal injury from electrical shock or refrigerant exposure.
- Damage to the refrigerator or the new compressor.
- Voiding of appliance warranties.
- Environmental harm due to improper refrigerant handling.

Consult your refrigerator's service manual or contact Samsung customer support for assistance in locating a qualified service professional.

## 5. OPERATING PRINCIPLES

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The compressor is often referred to as the "heart" of the refrigeration system. Its primary function is to circulate refrigerant and increase its pressure and temperature. Here's a simplified overview of its role:

1. **Compression:** The compressor draws in low-pressure, low-temperature gaseous refrigerant from the evaporator. It then compresses this gas, significantly increasing its pressure and temperature.
2. **Circulation:** The high-pressure, high-temperature gaseous refrigerant is then pushed into the condenser coils, typically located on the back or bottom of the refrigerator.
3. **Heat Rejection:** In the condenser, the hot refrigerant releases its heat to the cooler ambient air, causing it to condense into a high-pressure liquid.
4. **Expansion:** The liquid refrigerant then passes through an expansion device (e.g., capillary tube or expansion valve), which reduces its pressure and temperature.
5. **Evaporation:** Finally, the cold, low-pressure liquid refrigerant enters the evaporator coils inside the refrigerator, where it absorbs heat from the food compartment, turning back into a low-pressure gas. This cycle then repeats.

The compressor continuously performs this cycle to maintain the desired low temperature inside the refrigerator.

## 6. MAINTENANCE

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The Samsung NC1MV90ALP/ASH Refrigerator Compressor is a sealed unit and generally does not require routine user maintenance. Any issues related to the compressor's performance or the refrigeration system should be addressed by a qualified service technician.

To ensure the longevity and efficiency of your refrigerator, it is recommended to:

- Keep the condenser coils clean. Dust and debris can accumulate on the coils, reducing the refrigerator's efficiency and making the compressor work harder. Refer to your refrigerator's user manual for instructions on cleaning condenser coils.
- Ensure adequate ventilation around the refrigerator, especially near the compressor and condenser coils.

## 7. TROUBLESHOOTING

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If your refrigerator is not cooling properly, making unusual noises, or exhibiting other performance issues, it may indicate a problem with the compressor or another component of the refrigeration system. Troubleshooting a compressor issue requires specialized knowledge and tools.

**Do not attempt to diagnose or repair compressor-related problems yourself. Contact a qualified appliance service technician immediately if you suspect a compressor malfunction.**

A technician will be able to:

- Accurately diagnose the root cause of the problem.
- Safely handle refrigerants and electrical components.
- Perform necessary repairs or replacements using appropriate tools and procedures.

## 8. SPECIFICATIONS

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| Feature | Detail  |
|---------|---------|
| Brand   | Samsung |

|                              |   |
|------------------------------|---|
| <b>Model Number</b>          | NC1MV90ALP/ASH  |
| <b>Refrigerant Type</b>      | R-134A  |
| <b>Part Type</b>             | Refrigerator Compressor                                       |
| <b>Replaces Part Numbers</b> | NC1MV90ALP/E01, NC1MV90ALP/SM1, NC1MV90ALP/SM3                |
| <b>Recommended Use</b>       | Refrigerator Repair   |
| <b>Included Components</b>   | Single Samsung NC1MV90ALP/ASH Refrigerator Compressor, R-134A |

## 9. WARRANTY INFORMATION

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This Samsung NC1MV90ALP/ASH Refrigerator Compressor is an authorized, brand new, genuine Samsung part. Specific warranty terms and conditions for replacement parts are typically provided at the point of purchase or can be obtained directly from Samsung or your authorized dealer.

Please retain your proof of purchase for any warranty claims. Warranty coverage generally applies to defects in materials and workmanship under normal use and service.

## 10. SUPPORT

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For technical assistance, service inquiries, or to locate a qualified service technician, please contact Samsung Customer Service or visit the official Samsung support website.

When contacting support, please have your refrigerator's model and serial number, as well as the part number (NC1MV90ALP/ASH) of the compressor, readily available.

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