

UAC KT 3900

UAC KT 3900 A/C Compressor and Component Kit Instruction Manual

Model: KT 3900 | Brand: UAC

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your UAC KT 3900 A/C Compressor and Component Kit. This kit is designed as an OE replacement for automotive air conditioning systems. Adherence to these instructions is crucial for optimal performance and longevity of the components.

2. PRODUCT OVERVIEW AND INCLUDED COMPONENTS

The UAC KT 3900 kit includes all necessary components for a comprehensive A/C compressor replacement. Each part is manufactured and tested to meet or exceed original equipment (OE) specifications.



Figure 1: Contents of the UAC KT 3900 A/C Compressor and Component Kit. This image displays the main compressor unit, a bottle of PAG 46 oil, an accumulator with a hose assembly, a purple orifice tube, and various O-rings and gaskets for sealing connections.

Kit Contents:

- **Compressor:** The primary component responsible for circulating refrigerant.
- **Accumulator with Hose Assembly:** Filters moisture and debris from the refrigerant and stores excess refrigerant.
- **Purple Orifice Tube:** A metering device that regulates refrigerant flow into the evaporator.
- **Rapid Seal O-Ring Kit:** Various O-rings and gaskets for ensuring leak-free connections.
- **Oil:** PAG 46 lubricant specifically formulated for R-134a A/C systems.

3. SETUP AND INSTALLATION

Installation of A/C system components requires specialized tools and knowledge. It is highly recommended that installation be performed by a certified automotive technician.

Important Considerations Before Installation:

- **Compatibility Check:** Verify that the KT 3900 kit is compatible with your specific vehicle's year,

make, and model. Refer to your vehicle's service manual or a reputable parts catalog.

- **System Flush:** A complete A/C system flush is mandatory before installing new components. This removes contaminants, metal shavings, and old oil that can damage the new compressor. Failure to flush the system will void the warranty.
- **Refrigerant Type:** This kit is designed for R-134a refrigerant systems. Ensure your vehicle uses R-134a.
- **Proper Lubrication:** Ensure the correct amount and type of PAG 46 oil is used as specified by the vehicle manufacturer and the compressor's requirements.
- **O-Ring Replacement:** Always replace all O-rings and gaskets with the new ones provided in the kit to prevent leaks.
- **Vacuum and Recharge:** After installation, the system must be evacuated to remove air and moisture, then recharged with the correct amount of R-134a refrigerant.

4. OPERATING PRINCIPLES

The A/C compressor is the heart of your vehicle's air conditioning system. It compresses low-pressure, low-temperature gaseous refrigerant from the evaporator into high-pressure, high-temperature gas. This high-pressure gas then flows to the condenser, where it releases heat and condenses into a liquid. The liquid refrigerant then passes through the orifice tube, which reduces its pressure, causing it to expand and cool rapidly in the evaporator, thereby cooling the air inside the vehicle cabin.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and efficiency of your A/C system.

- **Annual Inspection:** Have your A/C system inspected annually by a qualified technician for leaks, proper refrigerant levels, and component wear.
- **Cabin Air Filter:** Replace your vehicle's cabin air filter regularly as per your vehicle manufacturer's recommendations to maintain airflow and system efficiency.
- **Run A/C Periodically:** Even during colder months, run your A/C system for a few minutes once a week to keep seals lubricated and prevent refrigerant leaks.
- **Condenser Cleaning:** Keep the condenser fins clean from debris (leaves, dirt, bugs) to ensure efficient heat exchange.

6. TROUBLESHOOTING

This section addresses common issues that may arise with an A/C system. For complex problems, consult a professional technician.

Symptom	Possible Cause	Action
No cold air	Low refrigerant, faulty compressor clutch, electrical issue, clogged orifice tube.	Check refrigerant levels, inspect compressor clutch engagement, verify electrical connections, professional diagnosis recommended.
Unusual noises (e.g., grinding, squealing)	Compressor bearing failure, loose belt, improper lubrication, internal compressor damage.	Inspect belt tension, check for proper oil levels, professional inspection required to identify source of noise.

Symptom	Possible Cause	Action
A/C cycles on and off frequently	Low refrigerant, overcharged system, faulty pressure switch.	Verify refrigerant charge, check pressure switch operation.
Visible leaks	Damaged O-rings, cracked hoses, faulty seals.	Locate leak source using UV dye or electronic leak detector, replace affected components.

7. SPECIFICATIONS

Brand: UAC

Model Name: KT 3900

Item Model Number: KT 3900

Manufacturer Part Number: KT 3900

Item Weight: 19.33 Pounds

Product Dimensions: 19 x 16 x 13 inches

UPC: 711307398515

ASIN: B077BDVTS9

Date First Available: November 10, 2017

8. WARRANTY AND SUPPORT

For specific warranty information regarding your UAC KT 3900 A/C Compressor and Component Kit, please refer to the documentation included with your purchase or contact UAC customer support directly. Ensure all installation guidelines, particularly system flushing, are followed to maintain warranty validity. For technical assistance or inquiries, please visit the official UAC website or contact their customer service department.