

Coleman-Mach 1497-3601

Coleman-Mach Soft Start Kit User Manual

Model: 1497-3601

For Coleman-Mach Air Conditioners and Heat Pumps (Series 45000, 47000, 48000)

1. INTRODUCTION

The Coleman-Mach Soft Start Kit (Model 1497-3601) is designed to enhance the performance and longevity of your RV's air conditioning or heat pump unit. This device significantly reduces the initial inrush amperage required to start the compressor, allowing your unit to operate more efficiently and with less strain on your power source. This manual provides comprehensive instructions for the safe and correct installation and maintenance of your Soft Start Kit.

Key Benefits:

- Reduces start-up amperage by up to 75%.
- Enables operation of your AC unit with smaller generators or limited shore power.
- Extends the lifespan of your air conditioner's compressor by providing a smooth, ramped-up power draw.
- Features short-cycle protection.

2. COMPATIBILITY

This Soft Start Kit is specifically designed for use with the following Coleman-Mach air conditioner and heat pump series:

- Coleman-Mach Series 45000
- Coleman-Mach Series 47000
- Coleman-Mach Series 48000

Installation of this kit will not adversely impact the existing Coleman-Mach warranty.

3. SAFETY INFORMATION

WARNING: ELECTRICAL SHOCK HAZARD. ALWAYS DISCONNECT POWER SUPPLY BEFORE OPENING OR INSTALLING.

- Ensure all power to the RV and the air conditioning unit is disconnected at the circuit breaker before beginning installation.
- If you are not comfortable working with electrical components, seek assistance from a qualified technician.
- Wear appropriate personal protective equipment, including safety glasses and insulated gloves.
- Verify all connections are secure and correctly wired according to the provided diagrams to prevent damage to the unit or electrical hazards.
- Remove all other external starters (PTCR, Relay) and do not use an external start capacitor with this unit.

4. PACKAGE CONTENTS

Verify that all items are present in your Soft Start Kit package:

- Coleman-Mach Soft Start Unit (Model 1497-3601)
- Mounting bracket
- Wiring harness with connectors
- Screws for mounting
- Zip ties for cable management
- Instruction manual with wiring diagrams



Image: The Coleman-Mach Soft Start Kit, showing the main unit, wiring harness with connectors, and a mounting bracket.

5. SETUP

Before beginning the installation, ensure you have the necessary tools and have prepared your RV and AC unit.

5.1 Tools Required

- Screwdriver (Phillips head and/or flathead, as needed for AC shroud)
- Wire strippers/crimpers
- Multimeter (optional, for verifying power disconnection)
- Pliers
- Wasp spray (recommended by users for potential nests in AC units)

5.2 Pre-Installation Steps

1. **Disconnect Power:** Turn off all power to your RV at the shore power pedestal or generator, and switch off the circuit breaker for your AC unit. Verify power is off using a multimeter if available.
2. **Access AC Unit:** Climb onto your RV roof and locate your Coleman-Mach air conditioner unit. Carefully remove the outer shroud by unscrewing the retaining screws.
3. **Inspect for Hazards:** Before proceeding, inspect the interior of the AC unit for any debris, pests (e.g., wasp nests), or damaged components. Clean as necessary.

6. INSTALLATION

Follow these steps carefully to install your Coleman-Mach Soft Start Kit.

6.1 Mounting the Soft Start Unit

1. Identify a suitable, secure location within the AC unit's electrical compartment for mounting the Soft Start unit. Ensure it is away from moving parts and heat sources.
2. Attach the provided mounting bracket to the Soft Start unit using the included screws.
3. Secure the Soft Start unit (with bracket) to the chosen location within the AC unit using the remaining screws.

6.2 Wiring the Soft Start Kit

Refer to the wiring diagram provided with your Soft Start Kit and the diagram on your AC unit. The Soft Start unit typically connects inline with the compressor's Run, Start, and Common wires.

1. **Identify Compressor Wires:** Locate the wires connected to your AC compressor. These are typically labeled as Run (R), Start (S), and Common (C). Note their colors.
2. **Disconnect Existing Start Components:** Carefully disconnect and remove any existing start capacitor or PTCR (Positive Temperature Coefficient Resistor) from the compressor wiring. This Soft Start Kit replaces these components.
3. **Connect Soft Start Wires:** Connect the wires from the Soft Start Kit to the corresponding compressor wires using the provided crimp connectors. Match the wire colors as indicated in the Soft Start's wiring diagram (e.g., Yellow, Red, Black, White). Ensure all connections are tight and secure.
4. **Secure Wiring:** Use the provided zip ties to neatly bundle and secure all wiring, preventing it from interfering with moving parts or becoming damaged.

6.3 Reassembly

1. Carefully replace the AC unit's outer shroud, ensuring all screws are tightened.
2. Restore power to your RV and AC unit.
3. Test the AC unit's operation.

6.4 Installation Video Reference

For a visual guide on the installation process, please refer to the following video:

Video: Coleman-Mach Soft Start Kit Installation RV Air Conditioner. This video demonstrates the steps for installing the Soft Start Kit on a Coleman-Mach RV air conditioner, including accessing the unit and connecting the wiring.

7. OPERATING YOUR AC UNIT WITH SOFT START

After successful installation, your Coleman-Mach air conditioner or heat pump will operate as usual. The Soft Start Kit works automatically in the background to manage the compressor's start-up current. You should notice a smoother, quieter start-up and reduced power draw, especially when operating on generators or limited power sources.

8. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your AC unit and Soft Start Kit.

- **Filter Cleaning:** Regularly check and clean the air filters of your AC unit. Dirty filters can restrict airflow and reduce efficiency.
- **Visual Inspection:** Periodically inspect the Soft Start unit and its wiring for any signs of wear, damage, or loose connections.
- **Unit Cleanliness:** Keep the exterior of your AC unit and the Soft Start clean from debris.

8.1 AC Filter Cleaning Reference

For a demonstration on how to access and clean your AC unit's filters, please refer to the following video:

Video: Low Profile and Easy to Clean. This video shows how to remove and clean the filters from an RV air conditioning unit, highlighting the importance of regular maintenance for optimal performance.

9. TROUBLESHOOTING

If you encounter issues after installing your Soft Start Kit, consult the following common troubleshooting tips:

- **Generator Overload:** If your generator still overloads during AC start-up, double-check all wiring connections. Ensure the generator's capacity is sufficient for the AC unit's running amperage (after the soft start effect).
- **AC Not Starting:** Verify that all power connections are secure and that the Soft Start unit is receiving power. Check the AC unit's thermostat settings. Ensure no other external start components are still connected.
- **Unusual Noises:** If you hear unusual noises, immediately disconnect power and inspect the AC unit and Soft Start wiring for any loose components or obstructions.

For further assistance, refer to your main Coleman-Mach AC unit's instruction manual or contact customer support.

10. SPECIFICATIONS

Feature	Specification
Model Number	1497-3601

Voltage	115 VAC / 60 Hz
Maximum Full Load Amperage (FLA)	23 FLA MAX
Ingress Protection (IP) Rating	IP65
Product Dimensions	12 x 6 x 4 inches
Item Weight	1 pound
Compatible AC Series	45000, 47000, 48000

11. WARRANTY AND SUPPORT

The Coleman-Mach Soft Start Kit (Model 1497-3601) comes with a 2-year limited warranty. Please retain your proof of purchase for warranty claims.

Installation of this Soft Start Kit will not adversely impact the existing Coleman-Mach warranty for your air conditioning or heat pump unit.

For technical support or warranty inquiries, please refer to the contact information provided with your product packaging or visit the official Coleman-Mach website.

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