

RV Air Conditioner Service & Inspection Checklist

This list is designed to help you verify the mechanical and electrical health of your unit, including the specific technical tests you requested. It is recommended to photograph often during this inspection.

1. Pre Inspection

- ☐ **Delta-T (Temperature Drop):** Measure the air temperature at the intake vs. the discharge.
 - *Target:* A healthy unit should show a drop of **16°F to 22°F** after running for 15 minutes.

2. Safety & Preparation

- ☐ **Disconnect Power:** Ensure both 120V AC and 12V DC (if applicable) are turned off before opening the unit.
- ☐ **Visual Inspection:** Check the exterior shroud for cracks or damage.
- ☐ **Debris Removal:** Clear out any leaves, bird nests, or dirt from the condenser and evaporator areas.

3. Electrical Component Testing

Note: Use a multimeter with a capacitance setting μF and an Ohms Ω setting for these tests. Discharge capacitors with a resistor before touching terminals.

Capacitors (Start & Run)

Component	Rated Specs (on component label)	Actual Result	Status (Pass/Fail)
Fan Motor Capacitor	e.g., $5\mu\text{F} \pm 5\%$		



Compressor Run Capacitor	e.g., 30 μ F $\pm$ 5%		
Hard Start Kit (if present)	e.g., 88-108 μ F		

- Check for: Physical bulging, leaking fluid, or readings outside the $\pm$ 5-10% tolerance.

Compressor Windings (Continuity/Resistance)

Measure the resistance between the three terminals: **C** (Common), **S** (Start), and **R** (Run).

- ☐ **Common to Start (C to S):** _____ Ω
- ☐ **Common to Run (C to R):** _____ Ω
- ☐ **Start to Run (S to R):** _____ Ω (Should equal the sum of C to S + C to R)
- ☐ **Ground Check:** Check continuity between each terminal and the compressor housing. (Should be "O.L." or infinite resistance; any continuity to ground indicates a shorted motor).

4. Mechanical & Airflow Inspection

- ☐ **Evaporator & Condenser Fins:** Straighten any bent fins using a fin comb and clean with a non-acidic coil cleaner.
- ☐ **Fan Blade & Motor:** Ensure the fan spins freely. Check for shaft play or oil leaks on the motor.
- ☐ **Base Pan Gasket:** Inspect the seal between the AC and the roof for signs of compression or leaks.
- ☐ **Mounting Bolts:** Ensure bolts are snug (usually 40-50 inch-lbs) but do not over-tighten and crush the gasket.

5. Operational Performance

- ☐ **Delta-T (Temperature Drop):** Measure the air temperature at the intake vs. the discharge.
 - *Target:* A healthy unit should show a drop of **16°F to 22°F** after running for 15 minutes.
- ☐ **Amp Draw:** Use a clamp meter to verify the compressor is running within its **RLA** (Rated Load Amps) listed on the data plate.

