

Air Conditioner Freeze-Up

Causes:

- 1, dirty coils and air filters
2. re-circulation of cold air into the return side of the air conditioner
3. using automatic or low fan speeds in higher humidity and ambient temperatures
4. restricted ducting or restriction in air flow
5. air-conditioner empty or low on charge
6. freeze control defective or improperly placed

NOTE: (standard air conditioner, not heat pumps except when used with 5 button CCC)

Testing procedure:

Required- Ambient temperature must be at 70F degrees or higher to perform these checks.

Evaporator coil must not be frozen up

Start by turning the air conditioner on to **HIGH** cool and let run for 15-20 minutes.

TAKE THE FOLLOWING AIR TEMPERATURE READINGS-

- Outside ambient temperature
- Approximate humidity (high or low)
- Inside coach temperature
- Return air temperature
- Discharge (supply) air temperature

Once you have taken these temperatures, use an Amp meter to measure the Amp draw on the **COMPRESSOR COMMON LEAD (run)** wire of the compressor. Refer to the model specific Installation and Operating manual for the rated compressor run amp draw.

Note: This amp reading is accurate at 95f degrees ambient temperature, 80f degrees coach temperature, 50 % relative humidity. **TIP-** For every **10f** degrees under **95** degrees subtract **1** amp. For every **10f** degrees above **95** degrees add **1** amp.

EXAMPLE: model 57915.531 air conditioner. Rated amp draw 12.1 amps @ 95f degrees.

Field condition- Ambient temperature is 80 degrees.

How to figure- $95 - 80 = 15$, $15 / 10 = 1.5$, $12.1 - 1.5 = 11.4$

Actual approximate amp draw at field conditions= 10 - 11.5 amps

If compressor amp reading is less than the calculated figure, and the temperature split between the return air and discharge air is not approximately 18 – 20 degrees the air conditioner has a refrigerant leak or is low on charge.

If the amp reading higher than the calculated figure, and the temperature split is not between 18 – 20 deg the air conditioner has restriction in air flow on the condenser coil. Check number(s) **1, 3, 4**

There should be a difference of approximately 18-20 degrees between the return air temperature and the discharge air temperature. If not, check number(s) **1, 2, 3, 4, 5**, take amp draw on compressor run wire.

There should be little or no difference in temperature between the return air temperature and coach temperature. Check number(s) **2**

This manual has been provided courtesy of
My RV Works, Inc.

www.myrvworks.com



You can find more RV service manuals here:

www.myrvworks.com/manuals

Over the years of running a mobile RV repair service, having a dedicated place to access service manuals for all the different appliances and components found on RVs was something that I always had a desire to create.

I hope this resource makes your RV repairs easier, as it has mine, but please be careful and follow proper safety practices when attempting to repair your own RV.

If in doubt, please consult with a professional RV technician!



DARREN KOEPP - OWNER, MY RV WORKS, INC.

All service manuals provided on www.myrvworks.com are believed to be released for distribution and/or in the public domain.