

# ***FAN-TASTIC VENT***

## **\*WARNING\***

**TO ENSURE PROPER OPERATION:  
12VDC POWER SUPPLY MUST BE FILTERED OR  
BATTERY DIRECT CIRCUIT ONLY!**

**HOOK-UPS MUST BE POLARITY PROPER.**

**POSITIVE + TO POSITIVE + & NEGATIVE - TO NEGATIVE -**

**PROPER CARE MUST BE TAKEN DURING  
INSTALLATION TO ENSURE POLARITY  
CORRECT CONNECTIONS!**

**REVERSE POLARITY HOOK-UPS AND/OR  
UNFILTERED SUPPLY CURRENT MAY DESTROY  
THE PRIMARY CIRCUIT BOARD IN YOUR  
VENT OR UPGRADE KIT.**

**IT WILL NOT WORK, FAIL TO WORK  
PROPERLY OR MAY FAIL SHORTLY AFTER HOOK-UP.**

**IF YOU HAVE ANY QUESTIONS REGARDING  
INSTALLATION PLEASE, CONTACT  
FAN-TASTIC VENT AT 1-800-521-0298  
MONDAY thru FRIDAY 8:00am - 5:00pm EST.**

# **FAN-TASTIC VENT**

## **SAFETY INFORMATION**

FOR YOUR SAFETY READ ALL INSTRUCTIONS BEFORE INSTALLING OR OPERATING FAN  
REFER TO LABEL UNDER POP N' LOCK SCREEN FOR MODEL NUMBER

**ELECTROCUTION WARNING: Disconnect power supply prior to installation.**

## **INSTALLATION**

A gasket or sealant is required between mounting flange bottom & top of roof. Apply sealant over screw heads and to the perimeter of flange where it meets roof. Clamp fans; use a double bead of compatible sealant only between the mounting flange and roof (No putty tape, butyl or gaskets to be used with Clamp Fans). For rubber roofs use EPDM compatible roof sealant, e.g. Dicor 551 LSW or 502 LSW.

## **RECOMMENDED WIRE FROM 12 VDC POWER SUPPLY**

A minimum of 16-gauge stranded copper must be used. Insulated connectors must be used.

WIRE COLOR CODE:

Black - Positive or Fused

White - Negative or Ground

## **RECOMMENDED WIRE FROM WALL CONTROLS**

RJ11: 4 Conductor Telephone Cable Except Models 4100, 4150, 4175, 4201, 4251, 4301 and 4351 that use a minimum of 16-gauge stranded copper.

## **RECOMMENDED TOOLS**

Utility Knife  
Measuring Tape  
Plastic Putty Knife  
#2 Phillips Screw Driver  
Power Drill/Driver with #2 Phillips Bit  
Caulking Gun  
Multimeter  
Wire Strippers  
Connector Crimping Tool  
Pliers

# FAN-TASTIC VENT

## TERMINOLOGY

- **Lid:** Lids are either flat or domed and when opened provide necessary ventilation to rid your RV of stale air and humidity.
- **Lift Arm:** Raises or lowers lid when rotated by manual crank knob or lift motor available for either flat or domed lids whether automatic or manual operation
- **Lift Motor:** A 12vdc motor that rotates the lift arm to raise or lower the lid
- **Safety Switch/Dome Switch:** Activates when lid is opened 3" to 4" to engage fan motor at preset speed.
- **Garnish:** Conceals interior roof cutout and vent wires.
- **Clamp Garnish:** Conceals interior roof cutout and vent wires while securing rooftop base
- **Base Assembly:** Rooftop housing consisting of fan motor assembly, safety switch, dome seal, lift arm, wart, lid and rain sensor when equipped
- **Control Panel/Screen Assembly:** Interior housing containing circuit board when equipped, switches, wiring, fuse, thermostat, lift motor when equipped and screen; for models 7300/7350; IR sensor & temperature sensor.
- **Upgrade Kit/Screen Assembly:** Provides additional features to an existing Fan-Tastic Vent
- **Service Kit/Screen Assembly:** Restores function to existing non-functional same model
- **Fan Motor Assembly:** Consists of bowtie, 12vdc fan motor, fan blade and fan blade screw
- **Built-in Speed Switch:** Vent mounted switch providing 3 speed operation of fan motor and its accessory terminal "C" provides power to circuit board when equipped
- **Built-in Reversing Switch:** Vent mounted switch that allows fan motor to intake or exhaust air through an opened vent lid
- **Built-in Thermostat:** Vent mounted temperature control that regulates fan motor operation when lid is open
- **Rain Sensor:** Detects rain and closes an open dome when activated and vent power is on
- **Wireless Remote:** Provides control of vent functions by handheld IR control for models 7300 & 7350
- **Wall control:** Provides control of vent functions from wired wall mounted remote
- **Can motor:** Fan motor used in older vent models; no longer used in production
- **Pancake Motor:** Flat fan motor that can be used with both flat and domed lids
- **Bowtie:** Fan motor mounting bracket that attaches to base
- **Base:** Rooftop component that is available in high profile, low profile and clamp type
- **Direct Current:** Term used for 12VDC from an RV's battery, regulated power supply or filtered converter circuit.
- **Continuity:** When an electrical circuit such as a wire or switch is capable of conducting current
- **Filtered 12 volt direct current:** Direct current without the presence of AC ripple that is harmful to vent circuit boards and controllers.
- **PCB:** Vent's circuit board

# **FAN-TASTIC VENT**

## **CONDENSATION**

Modern coaches are built very tight. Current insulation and construction packages utilized by manufacturers keep warm air in but also trap inside moisture that becomes visible as condensation (sweat) on windows, ceiling vents and even walls in cold temperatures. Fan-Tastic Vent offers insulated domes to minimize or eliminate sweat but they cannot address the real problem, too much moisture inside the coach.

Let's analyze this issue and hopefully supply you with a Fan-Tastic fix as well.

"Heating and Ventilating" magazine provides data on sources of water vapor. For instance, cooking for a family of four adds 4.5 lbs. of moisture a day to a house. Each shower contributes half a pound; a weekly laundry, 30 lbs; human occupancy, 6 to 8 lbs. per day; dish washing 1.2 lbs., etc., etc. Basically, a modern family of four can easily release 150 lbs., or more than 18 gallons of water per week, into the air of a home!

"In fact, sweating windows can be a godsend. They serve as a danger signal, showing when indoor moisture is trying to get out..." Excerpt from a column by David Bareuther, Building Editor, The Associated Press.

Don't worry so much about the moisture on your windows or vents, this is a symptom of excess humidity throughout your rig. You should worry more about what this moisture may be doing elsewhere in your coach. It may be freezing in the insulation, melting, and then damaging your ceiling and walls exactly like a roof leak in warmer weather. The villain is invisible, its water vapor...too much water vapor. The guaranteed way to prevent this trouble is by way of eliminating the excess water vapor. HOW, YOU ASK? Slightly open a window and turn on your FAN-TASTIC VENT. Because outside air usually contains less water vapor, it will dilute the humidity of inside air, normally in as little as a few minutes. This takes place automatically in older coaches through constant infiltration of outside air (also known as a cold draft).

Your Fan-tastic Vent or Create-a-Breeze (by FTVC) exchanges all the breathable air in a 30' coach every minute on high speed, 5 min., 5 air exchanges. Moist wet air out, fresh (yes, and cooler), drier air, in. Next, your furnace quickly re-heats the drier air.

The above practice, slightly modified for your lifestyle, eliminates the moisture problem.

# FAN-TASTIC VENT

## TROUBLE SHOOTING GUIDE

Please refer to operator's manual before proceeding!

### Symptom

**Fan motor does not start:** All models

**Lid must be open 3" to 4" for fan motor to run.**

**Fan motor does not start:** safety/dome switch repaired or replaced

**Fan motor does not start:** 12vdc not present at motor leads. Inspect for loose wire connections

**Fuse blows when changing blade direction with fan mounted reversing switch**

### Solution

- Verify that there is 12vdc present to vent and fuse is not blown: refer to model's wire diagram
- **With lid opened, check safety/dome switch for corrosion; the switch is located nearest the lid's hinge. This is a ground, if connection is bad it will not function properly; use a 7/16" wrench to remove.**
- Clean bolt and ring connector with emery cloth; there must be continuity between switch's female bullet connection and bolt. If no continuity; replace switch.
- Using a multimeter, check for voltage between ring connector at safety/dome switch and motor's red wire or bench test motor. If 12vdc +/- is present or doesn't run on bench; replace fan motor.
- **Remove screen assembly mounting screws; manual fans have 5 screws/auto fans have 3 plus 2 securing lift motor. Allow assembly to hang by wires to perform the following:**
- Using a multimeter check for continuity at fan mounted ON/OFF switch if equipped: models; **3300, 4201 & 4301**. Replace if no continuity
- Check for 12vdc at fan mounted speed switch terminal labeled "M" when equipped: models; **1200, 1250, 2200, 2250, 3300, 3350, 4100, 4150, 4175, 4201, 4251, 4301 & 4351**. If there is 12vdc present at terminal "B" but no voltage at terminal "M" when set to speed 1, 2 or 3; replace speed switch.
- Using a multimeter check for voltage between 7:00 & 5:00 terminals on fan mounted reversing switch if equipped as well as between 9:00 and 3:00 positions in both directions: models; **1250, 2250, 3350, 4150, 4175, 4251 & 4351**. Replace if 12v is present at 7:00 & 5:00 but fails in either direction.
- Check for continuity on fan mounted thermostat when equipped: models; **2200, 2250, 3300, 3350 & 4175**. Replace if no continuity.
- Place switch in neutral position until blade stops before changing direction: models; **1250, 2250, 3350, 4150, 4175, 4251 & 4351**.

# FAN-TASTIC VENT

## TROUBLE SHOOTING GUIDE

### Symptom

**Fan motor does not start:** Models **4200, 5200, 5250, 5300, 5350, 6300, 6350, 7300 & 7350**. Models have an audible beep when pressing buttons; no beep then replace batteries in remote. 12vdc not present at motor leads. Inspect for loose wire connections.

**Knob spins but doesn't raise lid or Lift motor opens/closes lid but doesn't shut off:**

**Lift motor doesn't run when activated from fan mounted switch, wired or wireless remote control:.**

**Lid doesn't rise when rain sensor equipped:** If LED on PCB is blinking the rain sensor has closed lid. Disable rain sensor from remote or manually raise lid until sensor dries; restart from remote control or speed switch to resume normal functions

**Lid does not close when raining and sensor equipped**

**Lid pops or sticks when opening:**

### Solution

- **Remove screen assembly mounting screws; auto fans have 3 screws plus 2 screws securing lift motor. Allow assembly to hang by wires to perform the following: **always refer to wiring diagram for vent model.****
- Using a multimeter check for voltage between terminals identified as 12v+ IN and 12v- IN as well as fan motor 12v+ and 12v-.
- Inspect lid and lift arm for damage; replace as needed. If arm and lid check as good then replace lift motor for all automatic models
- Remove 2 screws from motor cap to access wires then check for 12vdc. If power is present, replace lift motor. If no power, check for 12vdc at terminals identified as dome motor +/- [P14 = +; P9 = -] on circuit board [**3300, 3350, 4200, 4301, 4351, 5200, 5250, 5300, 5350, 6300, 6350, 7300 & 7350**] or at wall control [**4100, 4150, 4175, 4201 & 4251**].
- Clean sensor with warm water and mild detergent, rinse and dry. If lid does not rise, unplug rain sensor or disable sensor by remote control and try lifting function again. If this does not restore lifting function; replace circuit board. If function is restored; replace rain sensor [**3300, 3350, 4301, 4351, 5300, 5350, 6300, 6350, 7300 & 7350**]. Make sure lift motor wires are on correct terminals; red on P14 and black on P9.
- Make sure rain sensor is not in override mode and fan is on. Clean sensor with warm water and mild detergent, rinse and dry. Place wet paper towel on sensor or spray with clean water. If dome doesn't close then replace rain sensor
- Clean dome seal with alcohol, clean dome with a household cleaner. Apply silicone fluid to dome seal and 303 to lid surface. Never use petroleum based cleaners or any other harsh chemical for cleaning

# FAN-TASTIC VENT

## WARRANTY POLICY OVERVIEW

### FAN-TASTIC VENT PRODUCT

The Following Guidelines Apply To All Work Done on our Fan-Tastic Vent Products

Effective January 1, 2014 Parts and Labor - 2 Years

Additional part only warranty - another 5 years. But freight charges would apply.

Lifetime on Dome, but after 4 years then freight charges would apply.

### ULTRA BREEZE COVER

Effective January 1, 2014 Parts and Labor – 3 Years

1. Refer any warranty claim directly to Fan-Tastic Vent (FTV) at 1-800-521-0298, 8:00 a.m. to 5:00 p.m. EST, Monday through Friday or fax directly to our warranty team at 574-206-9713.
  - a. All claims must be accompanied by model number, date of purchase or retail sale and location in coach of defective vent/fan. FTV requires a clear, concise description of defect.
2. FTV will determine parts necessary to repair defective claim and ship them prepaid UPS ground.  
NOTE: IF PROJECTED REPAIR TIME EXCEEDS .7/HRS. SHOP TIME, FTV MAY ELECT TO SHIP ENTIRE REPLACEMENT VENT/FAN. The decision to replace entire vent/fan rests with FTV. Vent/fan replaced without proper authorization deemed mechanically and electronically sound by FTV will generate labor claims reductions, denials and/or charges for non-salvageable parts.
3. A return authorization (RMA) number must be acquired from FTV prior to returning any parts.
4. FTV will issue credit on the account or a check for warranty claim parts and/or labor at current published prices upon receipt of:
  - a. Defective parts, when requested.
  - b. Satisfactory completion of repairs signed by customer.
  - c. Invoice for authorized shop time at reasonable, published rate per hour
  - d. FTV will pay/credit at currency exchange rates in effect at time of service.
5. Customer will be advised of discrepancies in parts received (in writing upon request) and hold for 60 days from date of receipt. Upon resolution of discrepancy, credit/check will be issued within 30 days.
6. Parts are not required to be returned from Canada.

**Warranty claims must be filed within six months of the date of repair. Claims received beyond that period will not be considered for warranty payment.**