

Installation Manual



COOLCUBE 10

UCP

Universal Condensate Pump

Patent Number: US 6,592,233 B1



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Maintenance & Troubleshooting

WARNING: When performing any maintenance and/or troubleshooting, make sure that all electrical power is off. Unplug the unit from the wall or turn the circuit breaker in the OFF position.

Maintenance

- 1.) Remove any dirt or debris which may have collected in the bottom of the reservoir tank.
- 2.) On a monthly basis, inspect the discharge and drain tubing for kinks, blockage, or any other damage that may obstruct the condensate pump from draining properly.

Troubleshooting

PUMP DOES NOT RUN

- Check to see that the unit is powered on to allow production of condensate.
- Check the level of water in the reservoir; the level must be within 0.5 inch of the reservoir top to activate the switch.
- If there is a proper amount of water in the reservoir, the float may be stuck due to the drain tubing, dirt, or algae formation. If the reservoir needs to be cleaned, use warm water and a mild soap.

PUMP MOTOR RUNS WITH NO DISCHARGE

- Inspect the discharge tubing for its full length to make sure it is clear: make sure the tubing end is not plugged.
- Confirm that the check valve is not clogged. If clogged, use warm water and a mild soap.
- Verify that the discharge port of the impeller chamber is not clogged due to an accumulation of debris.

TESTING THE SAFETY SWITCH

- The air conditioner needs to be running.
- Divert the air conditioner drain tubing into a tank to hold condensate.
- Block off the discharge tubing by blocking the end or pinching it.
- Pour water into the pump reservoir until it is almost full.
- As the water level rises in the reservoir, the safety switch will engage and shut off the compressor.
- After testing is complete unblock or release the discharge tubing, and the condensate pump will empty the reservoir.
- Confirm that the drain tubing is inserted into the condensate pump's inlet hole.

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Tube Installation

COOLCUBE 10

After mounting the pump assembly into the CoolCube 10, proceed with the following tubing installation steps. See Figure A.

- 1.) Connect the **3/8-Inch Corrugated Tubing** (finished end) to the drain stem. Attach tubing clamp, and insert the tube (cut end) into the pump's inlet hole.
- 2.) Connect the **3/8-Inch Tubing** to the pump's discharge check valve, and route tubing as seen in figure A. Attach tubing clamp. Secure tube to middle panel with the tube tie attachment as seen figure A, or route tubing directly out knock-out hole in side panel using side panel **Grommet**.

CAUTION:

Confirm discharge tubing is not kinked and/or bent. Tubing that is kinked and/or bent will cause the CoolCube 10 to not operate properly, and may cause water to leak.

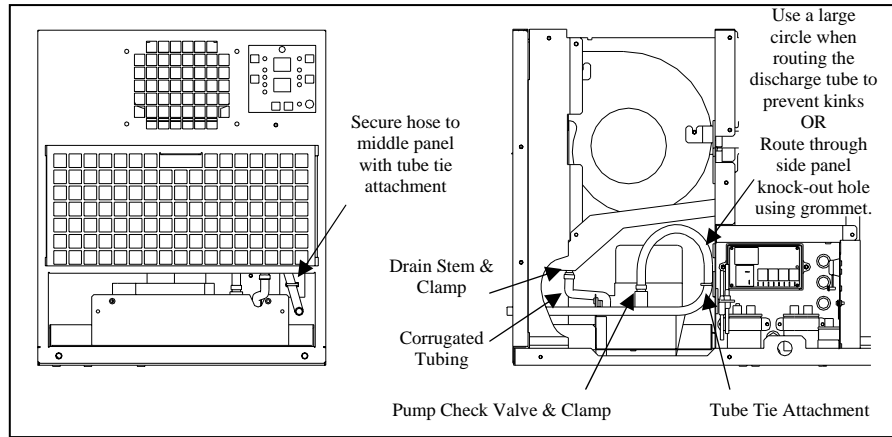


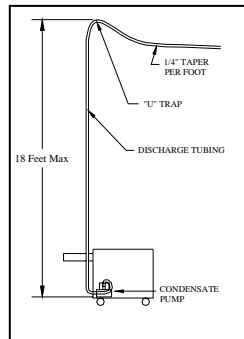
Figure A

DISCHARGE TUBING GUIDELINES

NOTE: Do not use more than 18 feet of discharge tubing vertically. This is the maximum lift of the pump.

Follow these guidelines to maximize the pump's performance:

- From the maximum height, slope the tubing slightly downwards.
 - Slope downward at a rate minimum of 1/4 inch per foot.
- Make an inverted "U" trap at the point to create a siphon.

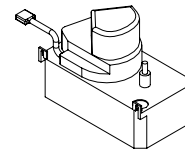


General Warnings & Cautions

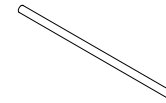
- The pump installation should only be performed by qualified electrical personnel.
- Do not handle the pump with wet hands, when standing on a damp surface, or in water.
- Disconnect all power from the air conditioning unit before servicing the unit.
- Protect all wire harnesses from coming in contact with sharp objects or hot surfaces.
- To reduce risk of electrical shock, connect the A/C Unit to a properly grounded terminal.
- **Do not use more than 18 feet of discharge tubing vertically for the Universal Condensate Pump.**

Inventory

Confirm that all parts listed below are present after unpacking the pump box.



(1) Condensate Pump



(1) 3/8" Tubing – 20 Ft



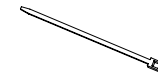
(1) Wire Harness



(1) Split Grommet



(2) Machine Screws



(2) Wire/Tube Tie
(1) Attachment Plate



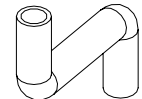
(2) Tube Clamp



(1) Grommet (knock-out hole)



(1) Pump Ground Screw



(1) Six-Inch Corrugated Tubing

CoolCube 10 - Preparation

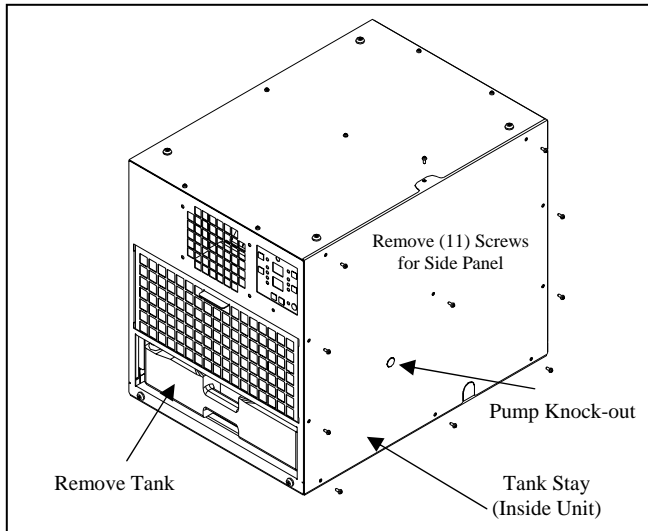


Figure 1

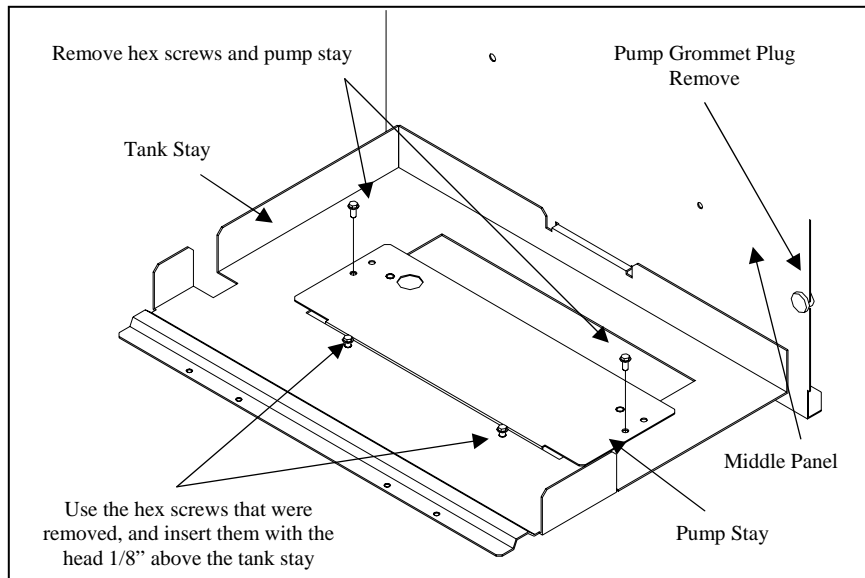


Figure 2

Pump Installation – CoolCube 10

Instructions

- 4) Connect the **Wire Harness** inside the **Control Box**. See **Figure 5 & 6**.
 - Green “G” wire to the Ground Screw. Attach the ground ring terminal to the **Control Box** using the **Pump Ground Screw**
 - White “R” wire to the “R” terminal on the **Terminal Block**
 - Black “T” wire to the “T” terminal on the **Terminal Block**
 - Cut the Wire Tie securing the DS1 & DS2 Wires, and disconnect the existing wires
 - Blue “DS1” wire to the “DS1” main wire harness
 - Orange “DS2” wire to the “DS2” main wire harness wire
 - Secure the DS1 & DS2 wires using the enclosed **Wire Tie**

WIRE HARNESS

G
T
R
DS1
DS2

COOLCUBE 10

G (Ground Screw)
T (Terminal Block)
R (Terminal Block)
DS1 (Main Wire)
DS1 (Main Wire)

- 5) Install Drain and Inlet Tubing to the Condensate Pump. See **Tubing Installation on page 8**.

Pump Installation – CoolCube 10

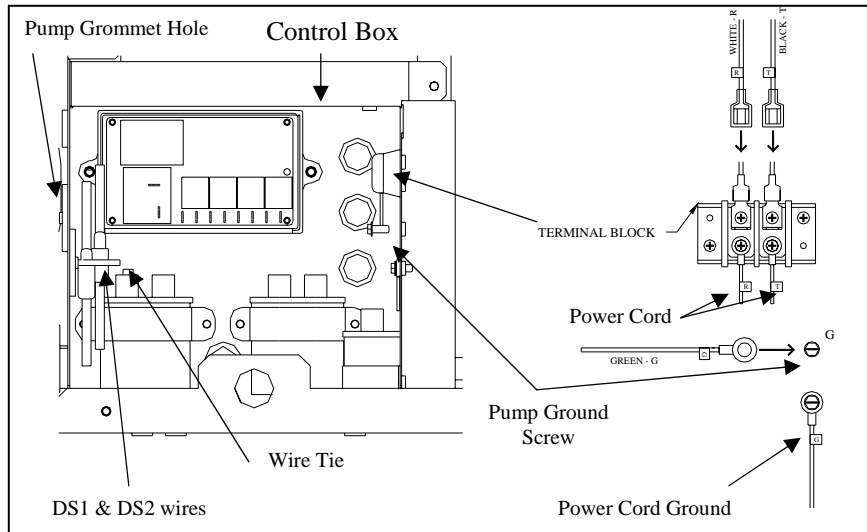


Figure 5

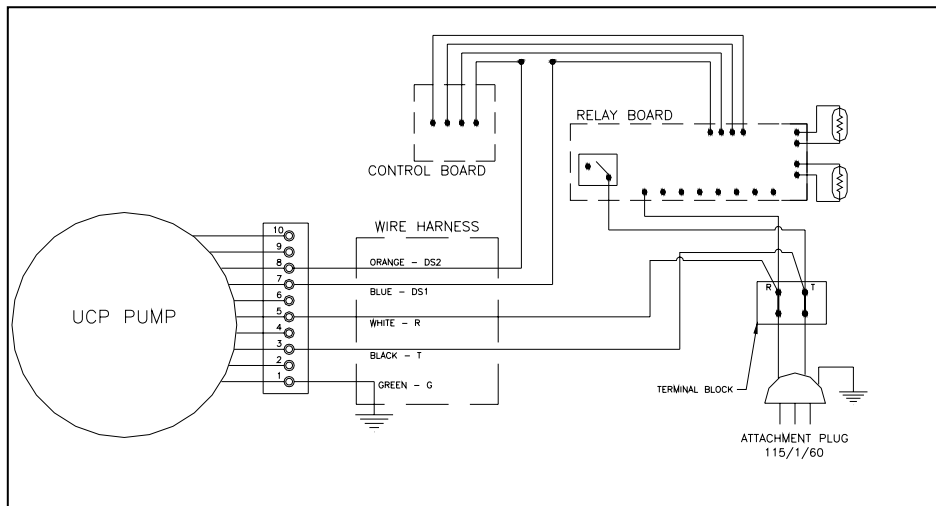


Figure 6

CoolCube 10 - Preparation

WARNING:

DISCONNECT POWER BEFORE SERVICING!

WARNING:

The CoolCube 10 unit with an installed pump must be on flat level ground. If the unit is installed on a slope, the pump may not operate properly and may leak water.

Instructions

- 1) Prepare the CoolCube 10 Unit. See Figure 1 & 2.
 - Remove the **Drain Tank**
 - Remove the **Side Panel**
 - Remove the **Pump Stay**
 - Insert the hex screws (removed from the **Pump Stay**) into the **Tank Stay**
 - Remove the **Pump Grommet Plug** in the middle panel

Pump Installation – CoolCube 10

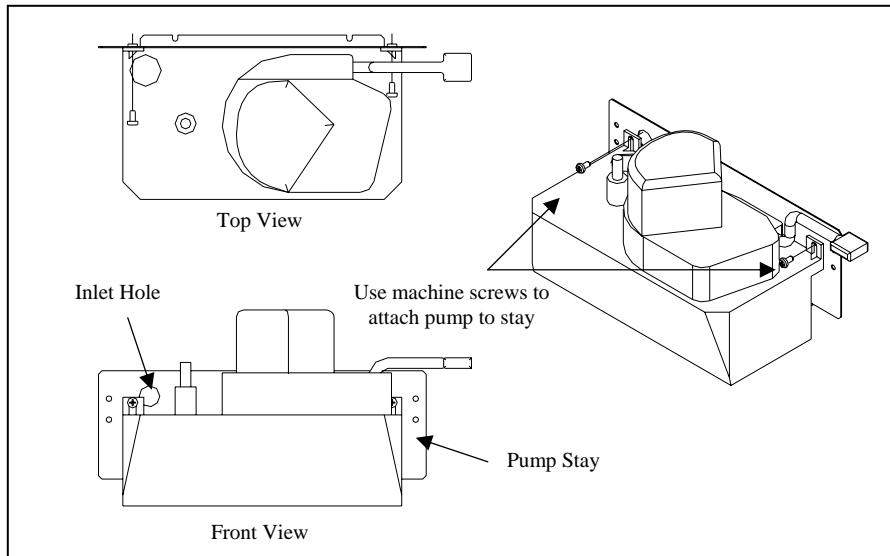


Figure 3

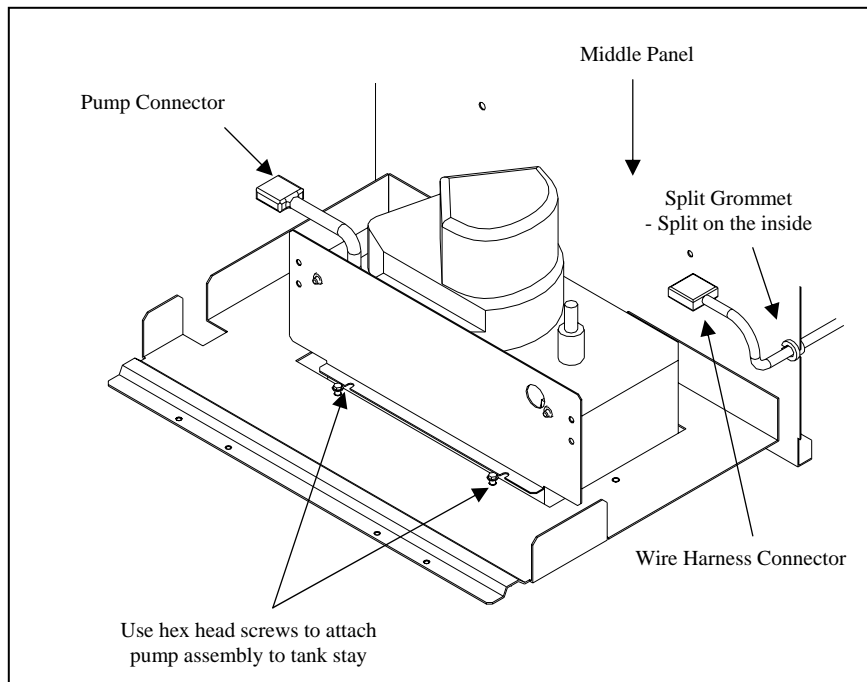


Figure 4

Pump Installation – CoolCube 10

Instructions

- 1) Connect the **Pump** to the **Pump Stay**. See **Figure 3**.
 - Use the (2) Machine Screws
- 2) Install the **Pump Assembly** to the **Tank Stay**. See **Figure 4**.
 - Tighten the (2) hex screws on the **Tank Stay**
- 3) Connect the **Pump's Connector** and **Wire Harness Connector**. See **Figure 4 & 5**.
 - Slide the **Split Grommet** over the **Wire Harness**, and route it through the **Middle Panel** into the **Control Box**. Ensure the opening of the **Split Grommet** is toward the center of the unit.