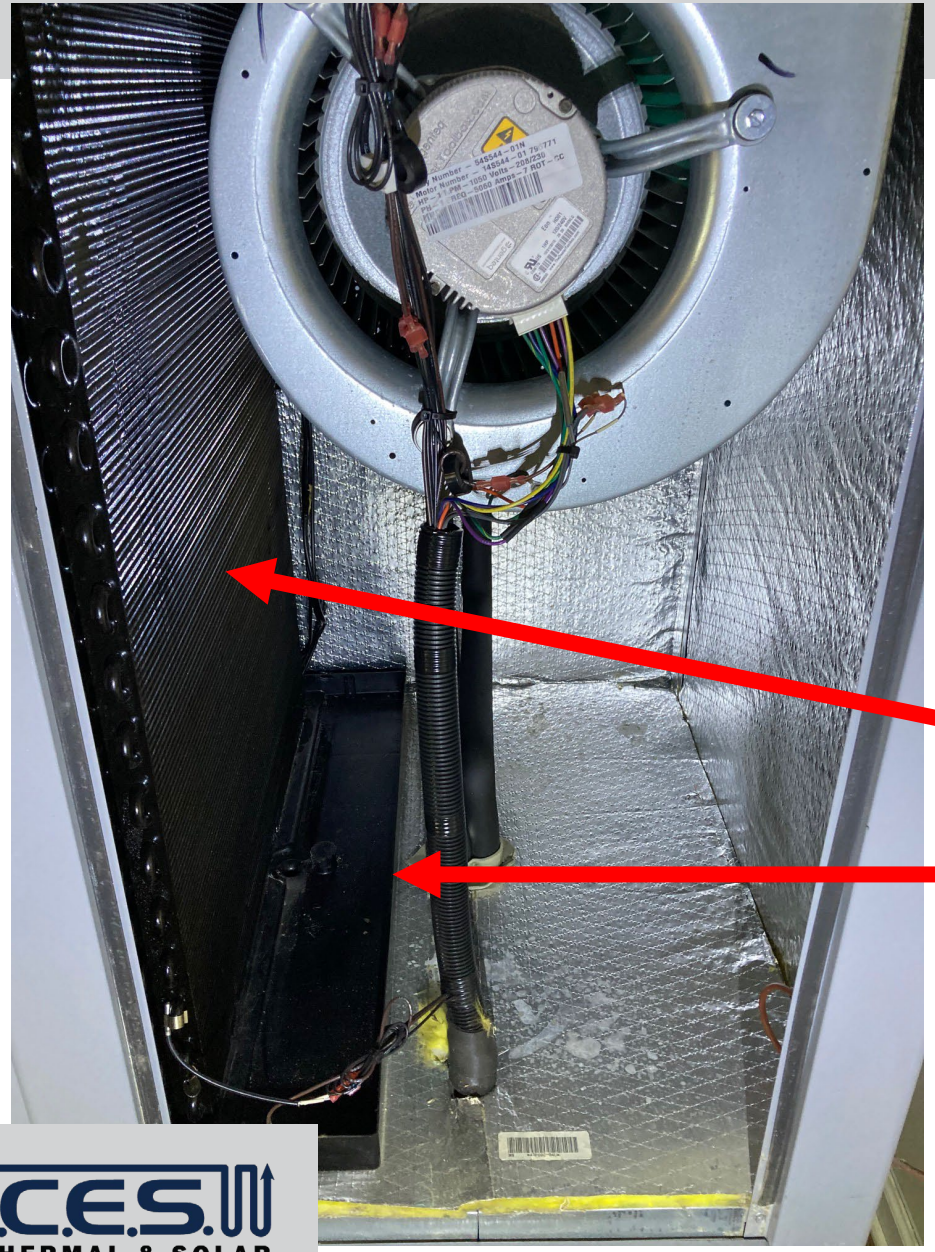
A.C.E.S.

GEOTHERMAL & SOLAR

WaterFurnace E7 Condensate Overflow Remedy

WHAT IS THE E7 ERROR?

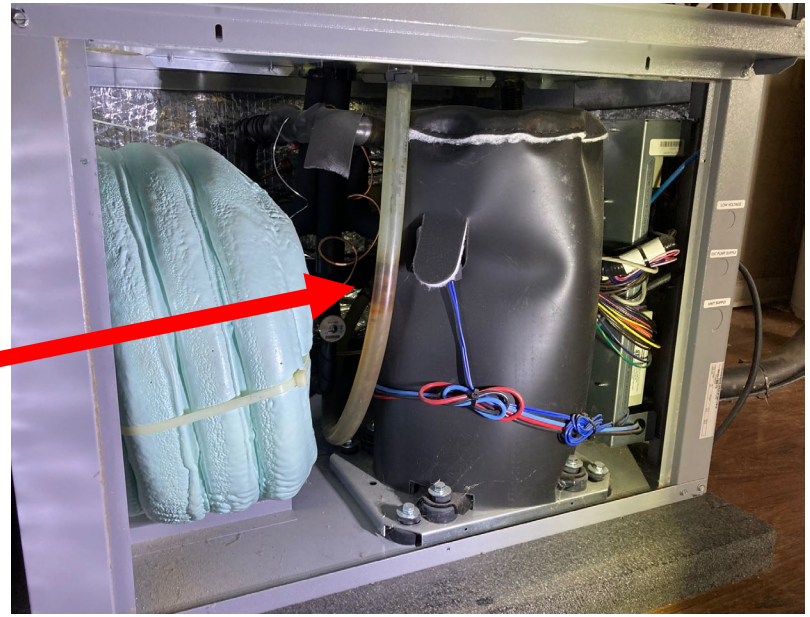
When your geothermal heat pump is run in cooling mode, moisture from the air condenses on the cold air coil inside the unit. This moisture is collected in a pan beneath the air coil and drains through a flexible vinyl hose in the bottom of the cabinet. The drain hose creates a trap that remains filled with water. Without this trap, the negative pressure in the cabinet would prevent the moisture from draining. Microbe colonies can grow in the standing water of the trap and form a blockage, causing water to back up into the pan. To prevent water damage to the equipment, this condition will trigger an **E7: Condensate Overflow** fault and the heat pump will shut itself off. Follow the instructions in the following slides to correct this fault.



AIR COIL

CONDENSATE PAN

CONDENSATE TRAP W/ BLOCKAGE



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STEP 1: TURN OFF POWER TO THE UNIT

Your heat pump may have a dedicated sub panel, or pull-out disconnects near or on the unit.

DISCONNECT

IF YOU HAVE DISCONNECTS:

1. Locate the disconnect boxes either on or near the geothermal equipment.
2. Open the covers. Some open up, some open to the side.
3. Pull on the handles to remove the disconnects from their enclosure. Appearance may vary. There may be 2 or 3 disconnects depending on equipment installed – be sure to remove all of them. Note the “on” and “off” labels for proper orientation when reinstalling.

SUB PANEL

IF YOU HAVE A SUBPANEL:

1. Locate the double-pole circuit breakers labeled GEO and AUX HEAT in the sub panel near the geothermal equipment. There may be one or two double breakers for AUX HEAT depending on equipment installed
2. Turn all of these breakers off, and proceed the next page

CAUTION

Risk of electric shock if power not shut down before proceeding – if you are unsure call ACES for help (585)935-7186

STEP 2: OPEN THE UNIT

1. **Ensure the unit is completely shut off before opening the cabinet**
2. Remove the 5/16” hex-head screw at the top of the upper panel on the heat pump cabinet using a socket, nut driver or flat-head screwdriver.
3. Lift the cover from the handle, then pull outwards to remove

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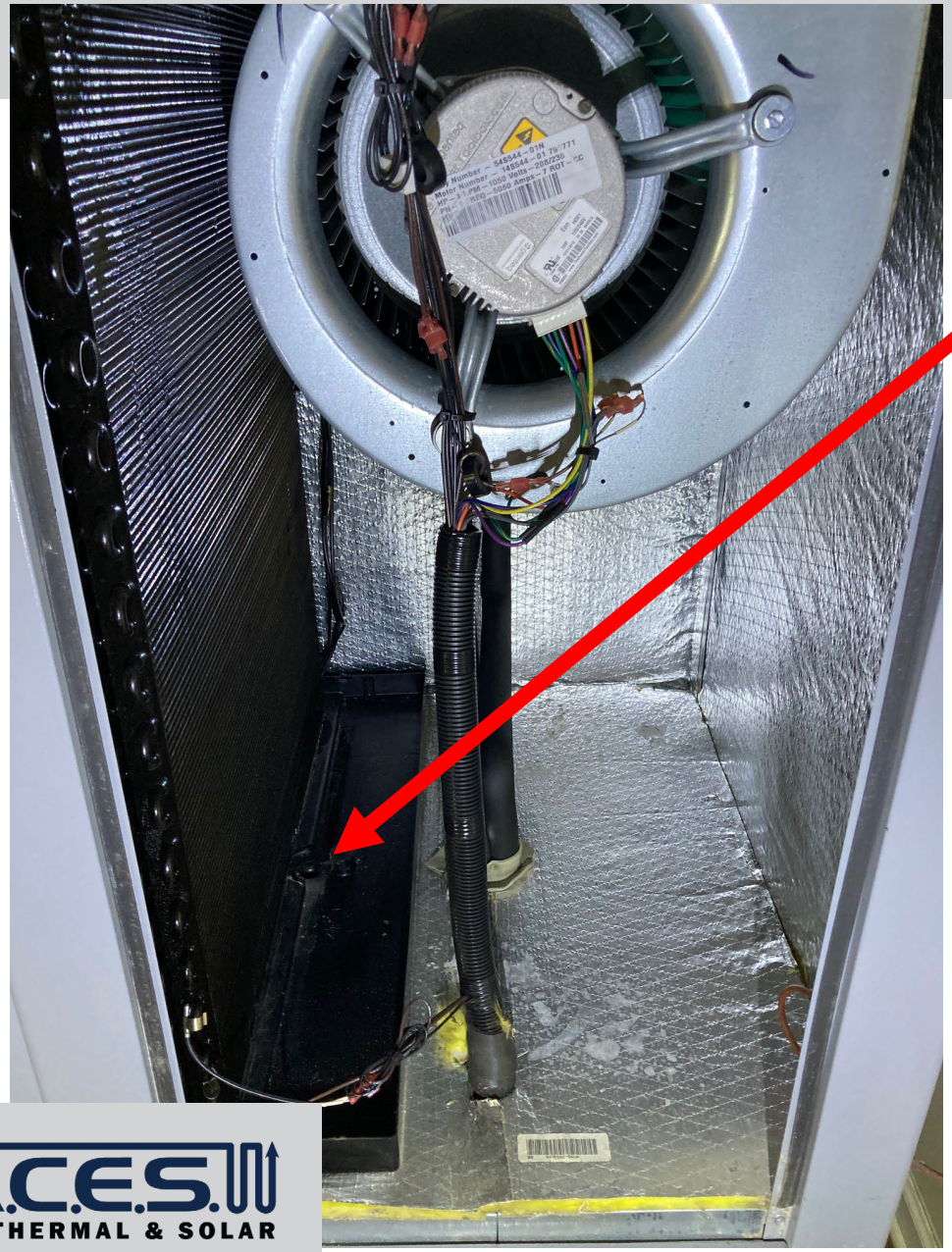
STEP 3: REMOVE DEBRIS



1. Locate the condensate drain in the center of the black pan underneath the air coil
2. Use a shop-vac to suck out the blockage from the drain. A wet rag can help to create a seal around the vacuum hose. Be careful not to damage the fins on the air coil.
3. Pour clean water into the pan to refill the trap and test the drain. If the pan drains quickly, replace the cover on the unit, restore power and resume normal operation.

*****Always reinstall the cover on the heat pump cabinet before turning the power back on*****

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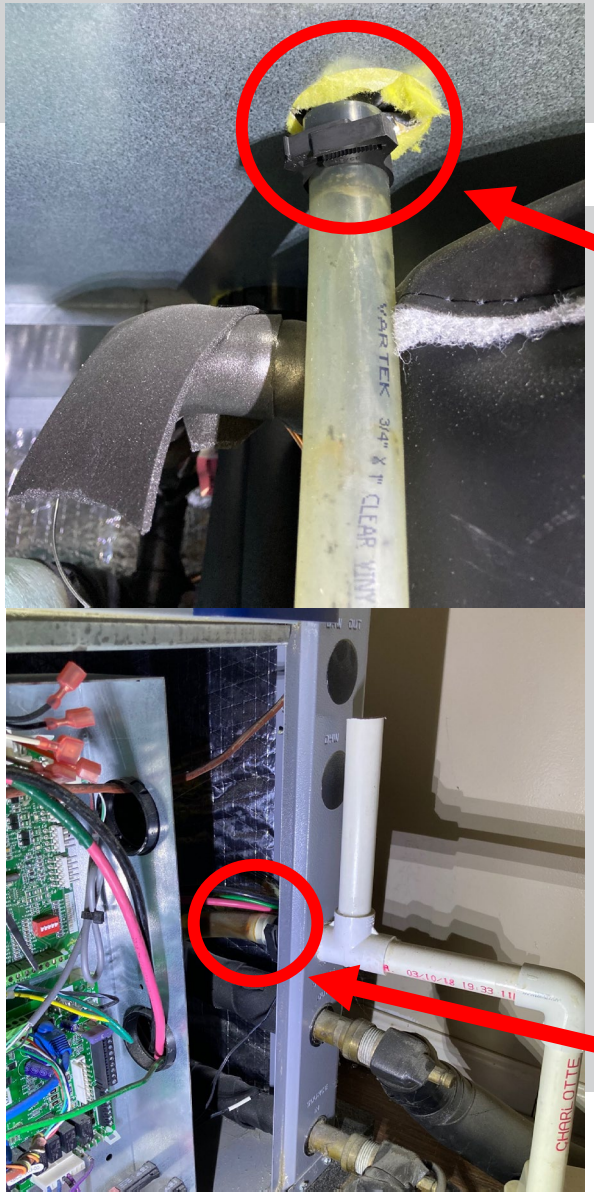
STEP 3: REMOVE DEBRIS



- If the clog is severe, a shop vac may not be able to remove the blockage.

- If this is the case, the clear vinyl trap must be removed from the bottom compartment of the heat pump and cleaned manually. This can be accessed by removing the lower covers. The trap is fastened at either end with reusable plastic clamps as shown. Once removed, the tube can be cleaned with water pressure or a tubing brush (click here for Amazon link).

Note: this is part of ACES Routine Maintenance Service Procedure

If you have any questions, or to schedule a service visit, please call ACES at **585-935-7186**

STEP 4: CHECK CONDENSATE PUMP (IF APPLICABLE)

- If your system includes a condensate pump, it is also a good idea to check and clean the pump reservoir as needed during cooling season.

CONDENSATE PUMP

- Condensate treatment products are available that slow the growth of microbes in the trap. These are available at your local hardware store or online, and can be added to the condensate pan periodically as a preventative measure.

Condensate Treatment Link

CONDENSATE TREATMENT

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