

SAMPLE REPORT

AC running, but not cooling

Lennox condenser · R-454B refrigerant · Two outdoor units on site

**READY FOR
DISPATCH**

WHAT THE CUSTOMER SENT US

In their words	"It turns on but doesn't cool enough. Only some rooms. There's a constant humming outside."
Photos & video	3 photos, 1 short video — thermostat, outdoor unit, equipment label
Thermostat	Set to 71°F · room reading 75°F · showing "Cool On"
Equipment label	Lennox condenser, R-454B refrigerant, compressor rated 18.1A

WHAT COULD BE THE ISSUE

1 Failed run capacitor

MOST LIKELY

The outdoor fan is spinning but the compressor is only humming — it's trying to start and can't. That combination points at the run capacitor: it's one part with two halves, and the half that starts the compressor has failed while the half that runs the fan still works. The unit looks and sounds alive from the driveway, but it isn't pumping any refrigerant, so the house doesn't cool.

HOW THE TECH CONFIRMS IT

- Confirm which of the two outdoor units serves the warm rooms.
- Clamp the compressor — should read about 18.1A if it's actually running.
- Test both halves of the capacitor against the rating printed on it.

2 Restricted airflow — filter or coil

POSSIBLE

A clogged filter or dirty indoor coil chokes the air moving across it. The system runs, but it can't move enough heat, so it never reaches the setpoint. Cheapest thing on this list and worth ruling out before anything gets opened up.

HOW THE TECH CONFIRMS IT

- Pull and inspect the indoor filter.
- Check the indoor coil for dirt or ice.
- Measure the temperature difference between supply and return air — 18–22°F is healthy.

3 Low refrigerant from a leak

POSSIBLE

If the compressor runs fine and airflow is good, the system may be short on refrigerant — which means there's a leak to find, not a charge to top off. This unit uses R-454B, so it needs A2L-rated tools and a liquid charge.

HOW THE TECH CONFIRMS IT

- Only after ruling out the compressor and airflow.
- Take superheat and subcooling readings off the R-454B chart, not R-410A.
- Leak-search with an A2L-rated detector before adding anything.

WHAT TO BRING

PARTS	TOOLS	GOOD TO KNOW
◆ Dual run capacitors, assorted ◆ Universal dual run capacitor ◆ Single run capacitor ◆ Contactor ◆ Pleated air filter	◆ Multimeter with capacitance setting ◆ Amp clamp ◆ A2L-rated manifold gauges ◆ A2L-rated leak detector ◆ Thermometer / psychrometer ◆ Insulated screwdrivers, flashlight	◆ Lennox condenser ◆ R-454B refrigerant — A2L ◆ Compressor rated 18.1A ◆ 208/230V, single phase ◆ Two outdoor units on site ◆ Disconnects on the brick wall

SAFETY NOTES FOR THE TECH

This system uses R-454B

Not R-410A. R-454B is mildly flammable and needs A2L-rated gauges, recovery machine, vacuum pump and leak detector. R-410A equipment will not work on this job — worth knowing before the truck leaves.

The capacitor holds a charge after the power is off

208/230V, and this job means handling a capacitor directly. Pull the disconnect, confirm dead with a meter, discharge the capacitor before touching the terminals.

WE ALREADY TOLD THE CUSTOMER NOT TO

- ✗ Open the outdoor unit's electrical panel.
- ✗ Touch any wiring inside.
- ✗ Add refrigerant themselves.

FIRST 15 MINUTES ON SITE

1	Find the right unit. There are two condensers here. Confirm which one serves the warm rooms before anything else — the label we photographed may belong to the other one.
2	Check the filter and airflow. Free to check, and it explains these symptoms on its own. Rule it out before opening panels or hooking up gauges.
3	Clamp the compressor. The customer heard noise and assumed it was running. Humming isn't running. One amp reading settles this whole diagnosis.

HOW WE GOT THERE

The customer said “the AC isn't working.” Four details in what they sent carry meaning they had no way of knowing.

THE CUSTOMER SAID	WHAT IT TELLS US
“Constant humming outside.”	Humming isn't running. A compressor that hums is trying to start and failing — then shutting itself off on overload. Most calls log this as “it's making noise, so it's on.”
“But the fan is still spinning.”	This narrows it to one part. The run capacitor has two halves — one for the fan, one for the compressor. Fan turning means that half is fine, so the compressor half is the suspect.
“Doesn't cool enough.”	The house is only 4° off the setpoint. A dead compressor in July drifts much further than that — which is why airflow and refrigerant stay on the list instead of being dismissed.
“Only some rooms.”	One failed unit would leave every room it serves warm. With two condensers on the property, the warm rooms may run off the other one. That's why finding the right unit is step one.

Know before you roll.

This report was built from a two-minute text link before a truck left the yard. Your dispatcher reviews and approves every one before a tech ever sees it.

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