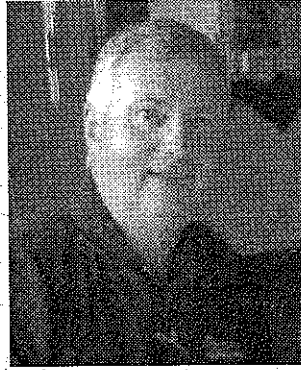


# Mis-Matched Systems: Still Unethical...and Now *Illegal* !



by Bob Cochell

*What's new in the mismatch outdoor unit situation?* Glad you asked! The Energy Technical Advisory Committee (TAC), and subsequently the Florida Building Commission (FBC), ruled on a Declaratory (DEC) statement in October determining when changing the outdoor unit only without a change of the air handler, the installing contractor *must prove* compatibility with an ARI rating, ARI tested combination (or any reputable laboratory), manufacturer's letter or a P.E. certifying that this system will operate correctly.

I am particularly pleased to see this action as I view mismatching as unethical...and now *illegal*. Many contractors say that they install outdoor units only as change outs all the time and they

work great! I say: you must know something Trane, Carrier, Lennox...etc. and the folks from the Alabama Power test lab don't! They aren't able to make a 10-SEER AHU operate correctly with a 13-SEER or greater outdoor unit, and adding a TXV doesn't work either. If you know the secret and can get a P.E. to agree with you and seal an affidavit as to capacity, efficiency and the amount of refrigerant to use, etc., you will "scoop the market."

In retrospect, this ruling is good news for all legitimate contractors, building officials, manufacturers and consumers. It "levels the playing field" making the unethical contractor do what is correct or face the consequences when caught. The manufacturers will have less incorrectly installed equipment and thereby less blame for excess service calls and poor performance. Building officials will finally have some direction as to what to advise their inspectors to look for on a changeout. The consumer will be less tempted to try to change the outdoor unit only, as that has demonstrated time and again it is a "loser" and will most likely require multiple service calls – in the spring to add refrigerant and winter to remove refrigerant to achieve any capacity at all. They will face reality and replace the indoor unit with a match to their outdoor AHU, which is typically installed after significant effort and expense with service calls. High electric bills can no longer be tolerated.

There is a substantial difference between "mismatching" and "mixmatching." In the context of our discussion a "*mixmatch*" is a Carrier (Carrier as example...any brand) 3-ton outdoor unit matched with a Carrier 3 ½-ton indoor AHU. This combination appears in the ARI guide; manufacturer's installation instructions for this system are available and a refrigerant changing method is clearly established. There is no confusion that this system has a complete U/L listing and the capacity and efficiency are listed in ARI. You know how the machines will perform and the consumer has purchased something that should have good longevity with minimal service required. A "*mismatch*" is any two different manufacturers units together that do not yield a source for capacity, efficiency, charging information or U/L, etc. The most egregious mismatches are the 10-SEER indoor vs. 13-SEER outdoor combinations.

One last thought: it behooves us to pull permits and have inspections made on all our contracting activities. Particularly changeouts! When a question about an installation arises some years from now, you will be real happy you spent a couple of bucks for that inspection that you can use in court to prove you did a compliant job. I recently had a situation where an architect "didn't like it" that I used the "100 square inch exemption on metal duct through a firewall. My installation is correct and code compliant, both the mechanical inspector and the fire marshal examined it and concurred. Mr. Architect will have to chew on someone else. I guess if you don't pull permits you can always mark your calendar and wait for the 10-year statute of repose (just kidding...no letters please).

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