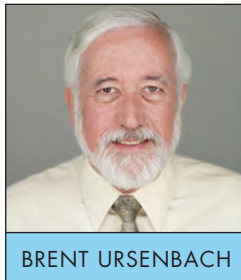


MECHANICAL CODE DISCUSSION

Energy & Mechanical Code Failure — Access to HVAC Systems in Attics



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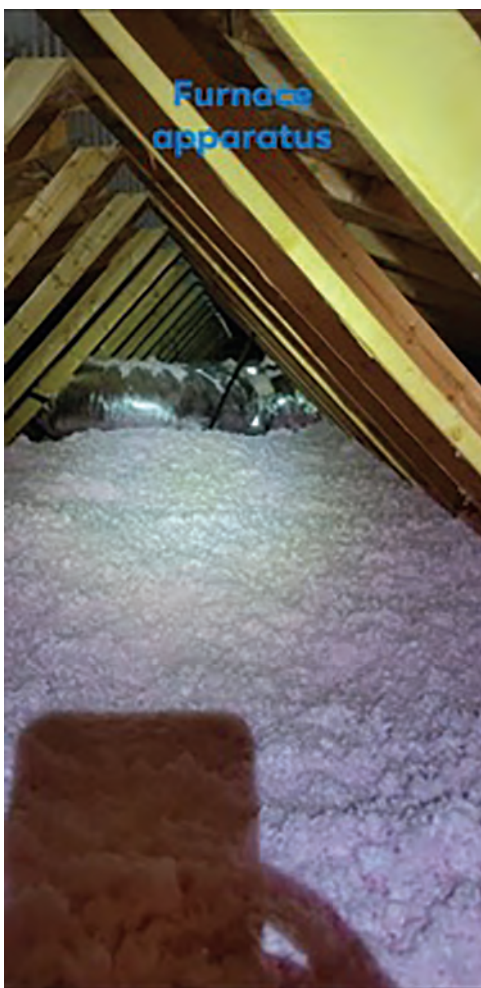
Please Reply to These Questions!

Is there anyone out there who loves crawling through knee deep insulation in a 140+ degree attic, digging around with your foot for trusses to step on, carry a tool bag and/or parts, to service or repair a heating and cooling system? Have you discovered the attic insulation ‘black hole’ which captures for the eternities, any dropped screws, small parts, or small tools? Do you love the trek back out, then back in to get another tool or part?

Let’s not forget the flashlight experiencing battery failure partway through your adventure, or the ducts you must cross. Anyone ever slipped or failed to find the truss, putting your foot through the ceiling? I had an employee finding ‘solid’ footing on a ceiling light box supporting a chandelier. He weighed in at about 240 pounds, more than the box could support.

I recently received a call from good friends who purchased a getaway home in Southern Utah, with questions including several on their HVAC system. As we discussed their questions over the course of several weeks, I asked if they could provide a few photos of the HVAC system in the attic, specifically the furnace, coil, and duct, expecting they could easily access the service platform in front of the furnace. Hmmm . . . no, this is what I received

from their son-in-law who lives close by:



Yes, that’s the furnace, 24’ from the access. I will not quote my exact comments uttered when I received this as some might be offended.

We find in the **2000 IRC**, Section M1305.1.3, requirements including access size, a distance not more than 20’ from appliance to access, a continuous

24” wide floor/catwalk above the insulation, a level service platform minimum 30” deep in front of sides requiring access, a light at the appliance controlled at the access, and a service receptacle near the appliance. Isn’t 22 years long enough for the design professionals, code officials, contractors, and sub-contractors to get up to speed?

In the **2006 IRC**, an exception was added allowing a 22” wide catwalk, 50’ long if there is 6’ high clearance from the access to the appliance. This section remains unchanged in the **2009, 2012, 2015, 2018, and 2021 IRC**. If the height is less than 6’, the distance from access to appliance is limited to 20’.

Why am I addressing this in the RMGA Pipeline? Because it’s in the mechanical and energy codes and you are required by your license to comply with the adopted codes. No, I don’t expect you to build the platforms and catwalks, but you can surely educate builders to this requirement. Please don’t be shy in asking inspectors, “doesn’t the code require the builder to provide a light, receptacle, platform, and catwalk?” Further, I’m going to share this with each of the four ICC Code Chapters in Utah, on the **www.utahenergycode.com** website, and in upcoming classes.

In my opinion, this is an important

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issue, desperately needing attention. Please consider:

1. Where access is poor, maintenance is rarely performed, failures more common and require greater time and expense. I appreciate how many of you install filter grills; however, the appliance needs more than a simply filter change. Don't you sell service plans, performing much more?
2. This home is in Climate Zone 3, in an area where virtually all the furnaces are installed in attics. Logically, this area should be the most proactive in compliance with this section?
3. Crawling through the insulation disturbs and packs down the insulation, reducing the effective R-value of the attic insulation. Referring the photo above, is it

possible to return the insulation to this fluffed up effective condition, after multiple trips to and from the appliance? Also, notice the return plenum does not appear to be insulated.

4. Ducts in attics are damaged, crushed, and pulled apart by individuals traversing the attic.
5. Catwalks and platforms minimize disturbing the insulation and reduces the respiratory hazards of breathing the particles suspended in the air.
6. Improved access reduces the time required in extreme unhealthy high temperatures.
7. Why is the access so far from the appliance location?
8. The intent of the code includes safeguarding the public safety,

health, and general welfare through affordability.... light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment. **This includes safeguarding the HVAC tech.**

9. Lastly, a reminder, IRC N1102.2.4 requires full depth insulation to be permanently attached to the access panel, baffles to prevent insulation spilling, a weather strip on the panel and access to appliance which prevents damaging or compressing the insulation.

Maybe the best solution is getting the furnace out of the . . . attic.

Please reply to my opening questions, or with other comments. I welcome you input on jurisdictions who fail to recognize the importance of these requirements. Best Regards, Brent ■



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Contact Amy at Amy@utrmga.com to make corrections or to get additional county referrals.

Check out the New RMGA Website!

Same location: www.utrmga.org
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