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## Code Changes

### Refrigerant Lock Proposed for 2010 Title 24 Code

By Peter Landau, Editor,  
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Mona Casey discovered the dangers of refrigerant in the most tragic way when her 15-year-old son, Charles Ian Gray, died in Sept. 2006 from inhalation of refrigerant. She then began what started as a one-woman crusade to learn everything she could about refrigerant to prevent other families from suffering as she has.

"The Environmental Protection Agency (EPA) states that technicians that work with refrigerant must be licensed," she said from her home in Florida. "But a lot of air conditioning units are in easy reach of children. It's a hazardous chemical that needs to be treated like any other poison."

She brought her concerns to the county commissioner's office, but no one would take responsibility to resolve the issue. Casey went to the state and then nationwide with the launch of the nonprofit United Parents to Restrict Open Access to Refrigerant (UPROAR) in 2007. "I figured there is power in numbers," she said.

Casey contacted the International Code Council (ICC). Jay Peters, executive director, plumbing, mechanical and fuel gas (PMG), ICC, learned of her tragic story and consulted her on the proper method to submit her proposal for a refrigerant lock code amendment. "We assigned a staff member to assist her in making sure the information she was proposing was accurate and met code language," he said.

Casey convinced ICC's membership that lives were at stake because of easy access to refrigerant and its membership overwhelmingly supported her proposal with their vote at the final action hearings. "It is now a requirement in the 2009 International Mechanical Code (IMC) and 2009 International Residential Code (IRC) mechanical provisions," Peters said.

Calif., however, does not adopt ICC's mechanical code, but rather the codes published by the International Association of Plumbing

and Mechanical Officials (IAPMO). ICC presented a brief update pertaining to the technical aspects of the residential code mechanical provisions to the California Building Standards Commission (CBSC) in Jan. 22, 2009. Mona Casey was there to testify.

"People in the audience from UPROAR gave very emotional testimonials," remembers Dwight Perkins, director of IAPMO field operations. "One commissioner suggested changing California's code. IAPMO wasn't familiar with the issue at the time, but immediately understood its importance and acted to amend current code."

"We initiated a Tentative Interim Amendment (TIA) addressing the issue," said Lynne Simnick, director of code development, IAPMO. "This issue was brought to our attention and as soon as we found out we moved forward with a TIA. This issue is addressed in both commercial and residential applications."

Language of that code change will be reflected in the new cycle of Title 24 energy standards. The changes will be submitted by June 2009, finalized by Jan. 1, 2010 and effective on July 1, 2010, if everything stays on schedule.

Southern California Edison already requires locking valve caps for refrigerant in its A/C Quality program. "One reason is safety and environmental issues," states Paul Kyllö, senior program manager at Southern California Edison. "Another is that it will, hopefully, prevent the all too common assumption that some technicians make by needlessly adjusting the refrigerant charge during a normal service call."

The A/C Quality program works with technicians to ensure that the refrigerant charge is set correctly so the unit is operating efficiently. Once the charge is set it shouldn't need to be adjusted again unless there is a leak in the system (or the need to evacuate the system in order to replace the compressor, etc.).

"Thus, the locking caps can be used as a deterrent from needless corrections," Kyllö adds.



L-R: Joseph Byrne and Gerry Spanger of refrigerant-lock manufacturer Novent.

"Through our program we will be providing the locking tool and a starter set of caps for R-22 and R-410A systems. This should help get contractors used to the idea of using locking caps as part of the standard service call."

La Palma, Calif.-based engineering company Novent developed a simple tamper resistant cap that prevents easy access to refrigerant. The Novent Tamper Resistant Refrigerant Cap requires a special tool to apply and remove the product, making it virtually impossible for a thief to access the refrigerant.

"We came up with the idea for the Novent cap after visiting a job site where refrigerant was being stolen," said Joe Byrne of Novent. "There was vomit around the units from people getting sick from the chemicals. We built several sets and gave them to a church, a school district and a contractor who had a problem with a large hotel in the San Francisco area."

The Novent caps also protect refrigerant cylinders. The caps are anodized to match refrigerant color codes and stamped with the chemical codes. "This prevents mixing of different refrigerants," Byrne said. "These caps are a must for any refrigerant management program."

The caps are not available to the general public, and only for sale at HVAC distribution centers.