

Hot Air Balloons in the *LP-Gas Code*



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The next edition of the *LP-Gas Code* should be available shortly after you read this. We will begin enforcing the new edition on Jan. 1, 2017, which gives us time to acquire the new codes, train our inspectors on the changes, and let you know about some of the changes. I understand that Dave Donahue plans to offer some of this training at the NCPGA annual convention in Cherokee in September.

One significant change is the addition of a new topic on filling hot air balloon containers. Some of you may remember that we addressed this in 2011 in a

memo that you can find at www.ncagr.gov/standard/LP/LPgasConcerns/documents/BalloonDispenser2.pdf.

The need to include this topic in the code became clear a couple of years ago when a hot air balloon festival in another state was almost shut down. The sticking point was a lack of information in the code about filling balloon containers. Because balloon containers are not covered in the current code, the inspector felt that filling them was not permitted.

Recognizing the need for guidance, the Technical Committee for LP-Gases agreed to address the topic. The reason I bring it to your attention is that the code will specify that you include the customer in the filling operation, a significant change to what has been previously directed.

With the addition to the code, containers had to first be described, which has been done in chapter 5. The Federal Aviation Administration has a method for approving or certifying containers for hot air balloons. Their process is different from the Department of Transportation or the American Society of Mechanical Engineers in that the FAA doesn't have specifications for how to design and manufacture the containers. Instead, they look at a container provided by a manufacturer and decide if it is OK or not. If OK, then they allow an FAA-approval indication to be part of the name plate.

Sometimes the container may be an all-new design. Sometimes it is a modified DOT forklift cylinder. The main difference is that the liquid withdrawal opening is not protected by an excess-flow valve. Balloon burners almost always operate on liquid propane and may need a lot of heat in a hurry. If an excess-flow valve checks, then it is likely the pilot would lose control of the balloon, with probable dire consequences. Another departure from what you normally see is that part of the collar may be cut away on a cylinder or there may be other modifications.

These modifications are allowed by the FAA. They are not allowed on tanks or cylinders for anything other than hot-air-balloon use. There is a clear restriction in the new edition against using a hot air balloon container for any other purpose. Again, look for the FAA approval.

Those of us who serve on the technical committee are being careful with our terminology. We do not refer to hot air balloon propane containers as tanks or cylinders. The *LP-Gas Code* has clear definitions for "tank" and "cylinder." These definitions stipulate compliance with ASME or DOT specifications, respectively. Since balloon containers do not comply with either of these, we steer away from those terms. "Container" seems to satisfy everyone, but there are the occasional slips. Pilots tend to call them tanks.

The rest of the changes concerning balloons are found in chapter 7 and address filling the containers. A new section, 7.2.1.4, specifies that a balloon pilot or trained crew member shall be present to ensure proper filling.

Most pilots or crew will want the dispenser operator there to operate everything on the dispenser except the hose-end valve. There is usually a manifold system in the balloon basket for the multiple containers. Pilots know this system and are best qualified to ensure that each container is full but not overfilled. The training and testing required to be a pilot include extensive knowledge of propane systems and containers. A pilot's license counts as documentation the pilot is properly certified for dispenser operation. A trained crew member wanting to fill the containers will not have a license to prove his qualification. Instead, he must have a card that provides this documentation. Details of what will be on this card and who provides it are still to be determined, but it will probably come from a balloon association.

At least one state official indicated that some pilots overfill their containers so they can get more flight time. This is not a good practice. It reflects what was sometimes done pre-OPD by dispenser operators to "give people a better deal." This is not allowed and, if observed by a dispenser operator, could be stopped by shutting down the pump. A word to the pilot or crew about the violation would be appropriate. There is, after all, some possible liability on your part if you knowingly let them leave with overfilled containers.

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Sections 7.2.2.10 and 7.2.2.11 specify that the sleeve on a balloon container does not have to be removed before filling and containers do not have to be removed from the basket for filling. The justification for these exemptions is that the FAA is responsible for inspection of the containers. Each balloon, including its basket, is disassembled every year and completely inspected by the FAA. The containers are almost always aluminum or stainless steel, so corrosion is not a real problem. They stay in the basket, so physical damage is not likely unless the basket is heavily damaged, which would require another FAA inspection.

Some pilots like to fill containers while the basket is in a trailer. This violates the requirement for the point of transfer to be open for 50% of its perimeter. They must pull most of the basket out of the trailer when filling containers. No new requirement here.

We don't really expect much change to your operations by filling balloon containers. The biggest change will be the likely participation by another person. It may represent a new market for you if there are balloonists operating in your area. 

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Test Board

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