

**Miller, Diane M. (CDC/NIOSH/EID)**

---

**From:** Graeme Shelford [graemeshelford@gmail.com]  
**Sent:** Wednesday, March 30, 2011 4:07 PM  
**To:** NIOSH Docket Office (CDC)  
**Cc:** William.Antunes@WorthingtonIndustries.com  
**Subject:** SCBA Cylinder Approvals.

The respirator manufacturers' argument that if a fire company purchases directly from a cylinder manufacturer rather than through a respirator manufacturer, that safety is compromised with a non-NIOSH approved cylinder is not valid.

I spent 36 years as an engineer and senior executive in the aviation industry before volunteering as a firefighter. Back in history, aviation spare parts manufacturers were told they could not supply parts they manufactured for the aircraft or engine manufacturers (known as Original Equipment Manufacturers or OEMs) direct to airlines because the aircraft/engines were certified as a complete unit and use of parts not supplied by the OEMs invalidated the certification. As in the fire service, OEMs added a substantial mark-up to parts they did not manufacture. The airlines clamored for relief from this position and the FAA introduced a Parts Manufacturer Approval process which certificated parts separately from the higher assembly they were used in. This not only opened the door to approved parts manufacturers (known as PMA manufacturers) supplying the parts they manufactured for OEMs direct to airlines at a much lower price, but also provided a tightly controlled process for PMA manufacturers to design and supply parts to airlines that they did not supply to OEMs. The result is lower costs for airlines. It remains illegal for an airline to use a non-PMA part in lieu of an OEM part.

The OEMs hate this process and fought it every inch of the way, arguing that it would lower safety. But the pressure to save the unnecessary costs that their markups represented was sufficient to see the PMA process well established. Pick up any aviation magazine now, and you will see several advertisements for PMA parts. In fact, one of the OEMs used it to their advantage. The engine builder, Pratt & Whitney, having lost market share to CFM International, now offer PMA parts for the CFM56 engine at reduced prices over the genuine CFM parts.

The reason for relating this story is that SCBA cylinders should be certificated separately from the respirators themselves to allow reduced costs. The arguments against it are identical to the aviation OEMs' arguments back in the 1970s. If you need a process to do this legally, look to the FAA for guidance.

Graeme Shelford  
Deputy Chief  
Thetis Island Voluntary Fire Department  
Box 14-6, Thetis Island  
British Columbia, V0R 2Y0  
Cell: 250-252-0417