



Kansas RTAP Fact Sheet

A Service of The University of Kansas Transportation Center for Rural Transit Providers

Don't Let a Breath of Fresh Air Become an Airborne Projectile

By Anne Lowder

The Community Transportation Association of America (CTAA) Expo is a great place to learn about new, useful products, and this year was no exception. The new "GO2," sold by Q'Strain and Sure-Lok and on display at the Expo, was one of those products that may be of interest to you.

"One only needs two tools in life: WD-40 to make things go, and duct tape to make them stop." Expand this quote by G. Weilacher to include bungee cords, zip ties and seat belt securement straps... because those, I have been told, are what agency bus drivers currently use to secure medical oxygen cylinders. Is there a better way?

What is the *proper* way to secure oxygen tanks? It depends on the size of the tank. In most cases, riders with small oxygen cylinders secure them by placing them in their purses or backpacks. Larger oxygen cylinders, though, need to be secured by the transit driver.

In 2006, the U.S. DOT established a set of guidelines for transporting medical oxygen. DOT guidelines include inspecting the cylinder for damage and never lifting, dragging or handling the cylinder by the valve or regulator. Regarding securement, the DOT advises securing the cylinder in an upright position and away from any heat source. (See sidebar on the next page for a complete list of the guidelines.)

The DOT guidance includes where and in what position to store the

cylinders, but not *how*. Enter the new GO2—a convenient and portable oxygen securement device. Using the GO2 device, drivers of transit, paratransit, and other vehicles that have L-tracks, can seat passengers anywhere inside their vehicle and safely secure their oxygen. [A photograph of a GO2 device seated in an L-track is shown at right. The L-track is visible at the front base of the image.]

GO2 key features

GO2 prevents oxygen cylinders from tipping, falling or becoming a projectile during a sudden stop or maneuver. The GO2 (pronounced 'GO-TO') has a tightening and release knob, a visual lock indicator to ensure that the cylinder is secured, and two anti-slip straps that adjust to accommodate oxygen cylinders from sizes M2 to E (Americas) as well as AZ to RD (Europe).

The GO2 is compact in size, lightweight (less than 5 lb), and is made of high grade anodized aluminum for durability and resistance to corrosion. The transit driver can easily secure the GO2 in Series L Tracks on the vehicle floor and can move the GO2 from one vehicle to another without the use of tools.

Testing specs

The GO2 has a dynamic crash test at 30mph/20g and meets applicable standards and regulations for securement of the cylinder that include

- The National School Transportation Specifications and Procedures



The GO2, above, locks into the L-track the same way a wheelchair securement retractor slides into place. Install the track fitting of the GO2 into a slot on the L-track and slide it to lock into position. Pull on the GO2 to make sure it is secured. Twist the tightening-and-release knob to loosen the two straps that will secure the oxygen cylinder in place. Place the cylinder in the device, tighten the straps, and re-tighten the knob.

- Support Equipment and Accessories B.3 and IEP-IFSP Process, Guidelines, E.11
- Ambulance Manufacturer's Division AMD Standard 003 and Oxygen Tank Retention System.

Advice for your transit agency

If you agency transports larger medical oxygen cylinders on a regular basis, you might find it advantageous to purchase the GO2 at a cost of around \$295.00, versus unproven securement devices such as bungee straps and wrapping the lap- and seat-belts around the cylinders. However, if your customers only have small oxygen cylinders they can secure in purses and backpacks, a device like the GO2 is not necessary. ●

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DOT GUIDANCE FOR THE SAFE TRANSPORTATION OF MEDICAL OXYGEN FOR PERSONAL USE ON BUSES AND TRAINS

The Department of Transportation recommends that bus and train operators take the following precautions to assure that medical oxygen being transported for passengers' personal use is handled and transported safely:

FOR TRANSPORTATION IN THE PASSENGER COMPARTMENT

- Only transport oxygen in a cylinder maintained in accordance with the manufacturer's instructions. The manufacturer's instructions and precautions are usually printed on a label attached to the cylinder.
- Before boarding, inspect each cylinder to assure that it is free of cracks or leaks, including the area around the valve and pressure relief device. Listen for leaks; do not load leaking cylinders on the bus or train. Visually inspect the cylinders for dents, gouges or pits. A cylinder that is dented, gouged, or pitted should not be transported.
- Limit the number of cylinders to be transported on board the vehicle to the extent practicable.
- Except in emergency situations, the bus or rail operator should consider limiting the number of passengers requiring medical oxygen.
- Cylinders used for medical oxygen are susceptible to valve damage if dropped. Handle these cylinders with care during loading and unloading operations. Never drag or roll a cylinder. Never carry a cylinder by the valve or regulator.
- Do not handle oxygen cylinders or apparatus with hands or gloves contaminated with oil or grease.
- Secure each cylinder to prevent movement and leakage. "Secured" means the cylinder is not free to move when the vehicle or train is in motion. Each cylinder should be equipped with a valve protection cap.
- Never store or secure oxygen cylinders or other medical support equipment in the aisle. Make sure that the seating of the passenger requiring oxygen does not restrict access to exits or use of the aisle.
- Since the release of oxygen from a cylinder could accelerate a fire, secure each cylinder away from sources of heat or potential sparks.
- Under no circumstances should smoking or open flames (cigarette lighter or matches) be permitted in the passenger compartment when medical oxygen is present.
- When you reach your destination, immediately remove all cylinders from the bus or train.