



**Technical Standards &**

**Safety Authority**

4<sup>TH</sup> Floor, West Tower  
3300 Bloor Street West  
Toronto, Ontario  
Canada M8X 2X4

Subject: Safety Advisory — Compressed Air Systems

Date: June 23, 2000

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The attached Safety Advisory will be of interest to persons involved in the design, installation, and operation of compressed air systems.

TSSA requests your assistance to ensure that such individuals are aware of the Safety Advisory. We request that you distribute this information to any persons you believe will benefit from the knowledge of the Safety Advisory.

For your convenience a copy for those on distribution for this communication is attached.

Thank you for co-operation in this matter.

*Original signed by*

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Eric Dahlin  
Vice President  
Boilers and Pressure Vessels Safety Division

Distribution:

TSSA Web Site  
Boilers & Pressure Vessels Advisory Council  
Operating Engineers Advisory Council  
Ministry of Labour (MOL)  
Commercial Diving Operations (provided by MOL)  
Ontario Underwater Council (OUC)  
Recreational Dive Shops (Members of OUC)  
Office of the Fire Marshal  
Ontario Provincial Police (OPP)  
Association of Chief Inspectors  
Industrial Accident Prevention Association (IAPA)



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# ***Boilers & Pressure Vessels Safety Division***

## **SAFETY ADVISORY**

### **Compressed Air Systems**

The Boilers and Pressure Vessels Safety Division of the Technical Standards and Safety Authority (TSSA), is investigating the failure of a compressed air system at a dive shop in Tobermory, Ontario, on June 8, 2000. The failure of this system resulted in the death of a worker and significant property damage. The incident occurred when a stationary pressure vessel ruptured catastrophically, causing fatal trauma to an employee in the building. The blast and fragments of the vessel destroyed the building in which the equipment was installed.

TSSA cautions all users of compressed air piping systems to follow requirements for proper use and installation to prevent potential property damage, serious injury or death. These systems are commonly used in industrial and commercial applications including dive shops where they are used for filling of scuba tanks.

The following requirements of Ontario's *Boilers & Pressure Vessels Act* must be followed by owners of compressed air systems. Please be advised that this list is a summary of the requirements only. All owners of compressed air systems are advised to obtain a copy of the *Act* and *Regulations* to ensure compliance.

1. Pressure vessels, piping and fitting designs must be registered with TSSA, for its intended service conditions, prior to fabrication or installation. The Canadian Registration Number (CRN) is evidence of this registration.
2. All pressure vessels must be certified upon completion of fabrication by a manufacturer holding a valid Certificate of Authorization issued by the American Society of Mechanical Engineers (ASME) or a Canadian Boiler and Pressure Vessel Jurisdiction. The vessel nameplate and Manufacturer's Data Report (MDR) provide this confirmation.
3. Pressure vessels shall only be operated with a valid Certificate of Inspection issued by TSSA or the insurer of the vessel.
4. Pressure vessels used as compressed air receivers shall be periodically inspected at least once every thirty-six (36) months unless the maximum allowable pressure is not greater than 250 psi and the capacity is not greater than 23 cubic feet.
5. Every pressure vessel shall have at least one safety valve of adequate capacity set to relieve at or below its maximum allowable pressure.
6. The local TSSA Inspector shall be notified prior to the commencement of the fabrication and installation of a new or modified piping system. A Certificate of Inspection is required from TSSA on completion of the installation.
7. Every owner of a pressure vessel or system of piping shall ensure that the pressure vessel or system of piping is maintained in a safe working condition and operated safely.

TSSA is a not-for-profit safety organization, which is responsible for regulating boilers, pressure vessels, pressure piping and fittings manufactured and used in Ontario under the *Boilers & Pressure Vessels Act*. TSSA delivers public safety programs and services under specific terms of an administrative agreement with the Ontario Ministry of Consumer and Commercial Relations.

If further information is required regarding this safety advisory, please contact TSSA's Boilers & Pressure Vessels Safety Division at (416) 325-0606. An electronic version of the safety alert is also available on our Web site, TSSA Online, at: [www.tssa.org](http://www.tssa.org)

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