



Technology Committee Bulletin

December 1, 2010

Safety Advisory

Advisory to Scrap and Recycling Yards Regarding Safe Disposal of High Pressure Cylinders

A significant number of compressed natural gas vehicles were placed into service in the mid 1990's. Federal Regulations (49 CFR 571.304) require that CNG cylinder be labeled with the following information: 1) visual inspection should be done every 3 years or 36,000 vehicle miles, and after an incident involving a vehicle equipped with cylinders if the cylinders were or could have been damaged 2) CNG cylinder must be taken out of service at the End of Life (EOL) date, which is noted on the cylinder label. To prevent reuse the cylinder should be destroyed. EOL periods vary and may be from 15, 20 or 25 years from the date of manufacture depending on the cylinder type and design. We are entering a period where scrap and recycling yards will begin to see an increase in natural gas powered vehicles and cylinders being removed from service.

This Bulletin is to advise scrap and recycling yards of the need to identify these vehicles and cylinders and to follow appropriate methods in the handling of high-pressure cylinders. First and foremost, the recycler needs to determine that cylinder pressure has been reduced to atmospheric pressure and that all the fuel has been properly purged with an inert gas or water to remove it from the cylinder as required by NFPA Vehicular Gaseous Fuel Systems Code 52 Section 6.14 2010 Edition, which may be purchased at:

<http://www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=52>

No attempt to handle the cylinder should be made until this is verified. If you are unsure of how to safely accomplish this procedure, contact the vehicle manufacturer, cylinder manufacturer or the cylinder valve manufacturer for proper instructions. Once it has been verified that the pressure and fuel have been removed from the cylinder disposal can be accomplished. Safe methods for

disposal of CNG cylinders are described in CGA C-6.4, which may be purchased at:

<https://portal.cganet.com/Publication/Details.aspx?id=C-6.4>

NHTSA regulations do not allow for cylinder recertification after the expiration date on the cylinder label. As such, the expired cylinder should be rendered useless. CGA C-6.4 describes the appropriate procedures for disposing of an empty cylinder. This includes conducting the destruction in a secure area with a 300-foot diameter around the cylinder, electrically grounding the cylinder, drilling two (2) ½ inch holes in the cylinder, and permanently marking the cylinder with a label. This brief summary is not intended as a substitute for fully reviewing and understanding the above regulation but is included here to emphasize the importance of the proper handling of cylinders being retired. The flammability of natural gas and high pressures involved provide 2 separate mechanisms for a potential incident. Thus, recyclers should review and understand the procedures for properly and safely handling cylinders.

If you cannot contact the manufacturer, contact Paul Sandsted at psandsted@ngvamerica.org or (202) 824-7084. For more information on CNG cylinder related safety subjects, see https://afdc.energy.gov/vehicles/natural_gas_cylinder.html.