



TO: Owners and Operators of Light-duty Vehicles Powered by CNG

FROM: The Transport Project's Technology & Development Committee

DATE: August 27, 2024

SUBJECT: CNG cylinder end-of-life (EOL) safety bulletin for light-duty applications

Summary

As the national trade association dedicated to the growth and development of a safe and sustainable market for vehicles powered by gaseous motor fuels including renewable natural gas and hydrogen, this notice emphasizes fuel container (i.e. cylinder) end-of-life (EOL) dates for light-duty vehicles powered by compressed natural gas (CNG) and serves as a reminder to the vehicle owners and operators of the recommended inspection intervals. Industry standards, best practices, and manufacturer guidelines specify regular inspection intervals for a vehicle's CNG cylinder(s) that are an important part of normal fuel system safety checks, and they define a formal process to track cylinder EOL dates. Owners and operators of vehicles powered by CNG are expected to be fully aware of the EOL date specified on the cylinder label and to follow manufacturer guidelines if the cylinder(s) is approaching or has exceeded its EOL date. In particular, TTP strongly recommends that all owners and operators promptly check the last CNG cylinder or fuel system inspection record to confirm compliance with inspection intervals and operational life of the cylinder(s).

This bulletin is intended for owners and operators of commercial and consumer light-duty CNG vehicles (i.e. those with gross vehicle weight rating less than 4,536 kilograms or 10,000 pounds), such as the one pictured below, but TTP recommends that all owners and operators of any vehicle powered by CNG review it as well.



Background

All owners and operators of CNG powered vehicles need to be aware of the local inspection requirements and/or recommended practices for inspecting CNG fuel systems and cylinders. The local authority having jurisdiction (AHJ), such as State DOT or the local Fire Marshall, can provide the local requirements for inspecting commercial vehicle fuel systems, which may vary between fuel type, vehicle type, vehicle class, and operating location.

It is the vehicle owner's responsibility to monitor cylinder EOL date and ensure that expired cylinders are properly removed from service in accordance with all applicable regulations, standards and best practices. Enforcing regulatory compliance is the responsibility of the local AHJ.




All owners of vehicles powered by CNG should have periodic fuel system inspections performed by qualified persons, and both the owner and inspector should be well aware of the cylinder EOL. For additional information on performing CNG cylinder and fuel system inspections, refer to TTP's CNG Vehicle Fuel System Inspection Guidance at <https://transportproject.org/wp-content/uploads/2022/03/NGV-System-Inspection-Guide-3.7.22.pdf>

Cylinder EOL Labeling Requirements

All CNG cylinders in vehicles operating in the U.S. require labels that clearly identify fuel system and cylinder characteristics such as the EOL date specified by the cylinder manufacturer. The EOL date will appear next to the words "Do Not Use After" as shown here.

Requirements for these labels are specified by the Federal Department of Transportation Standard No. 304 (i.e. FMVSS 304).

The image provided here provides an example of proper identification of CNG fuel system and cylinder characteristics on the cylinder label.

CNG ONLY	
 Manufactured In: MM/YYYY	This container should be visually inspected for damage and deterioration after a motor vehicle accident or fire, and either (a) at least every 12 months when installed on a vehicle with a GVWR greater than 4,536 kg, or (b) at least every 36 months or 36,000 miles, whichever comes first, when installed on a vehicle with a GVWR less than or equal to 4,536 kg.
Do Not Use After: MM/YYYY	
Service Pressure: XX,XXX kPa (X,XXX psig)	If there is a question about the proper use, installation, or maintenance of this container, contact: Hexagon Agility 3335 Susan St., Ste. 100 Costa Mesa, CA 92626, USA +1 949 267 7745 www.hexagonagility.com
DOT TYPE 4 NGV 2-YY	
Part Number: 24XXXX-0XX	
Serial Number: 0000-000	For use only with the container manufacturer's approved pressure relief devices and valves. Mounting shall be in accordance with the container manufacturer's instructions.
CRN: X9999.9	
 	

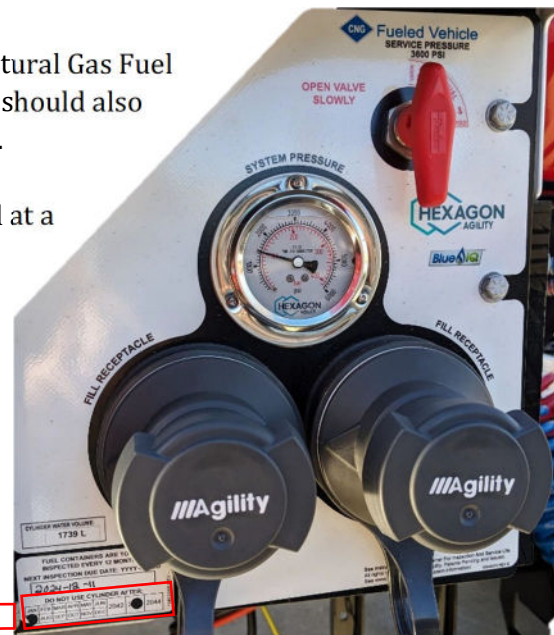
The National Fire Protection Association’s Vehicular Natural Gas Fuel Systems Code (i.e. NFPA 52) requires that the EOL date should also be displayed at the refueling connection of each vehicle.

The photo here shows an example of EOL date specified at a vehicle’s refueling connection.

Important Cylinder EOL Resources

If the CNG cylinder(s) onboard a vehicle is approaching or is past its specified EOL date, the resources below should be consulted in the order as listed.

1. The **cylinder manufacturer** should be consulted first for guidance on proper cylinder decommissioning, defueling, or disposal. The name, address, and telephone number of the cylinder manufacturer is clearly labeled on each cylinder per FMVSS 304 requirements.
2. The applicable **codes or standards** (e.g. CSA SPE-2.1, NFPA 52, NGV 6.1, NGV 2, CGA C-6.4) can be consulted second for guidance.
3. Educational services are available from **training providers** such as AFVi and CSA Group as a third option. For details on an example 3-hour training course available online and on demand, go to <https://www.csagroup.org/store/product/2426039ol/>
4. TTP’s Director of Technology and Sustainability is available as an industry resource in lieu of all options listed above. Questions, concerns, or referral requests can be sent to psandsted@transportproject.org.



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