



Natural Gas Vehicles for America

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Deputy Administrator Heidi Renate King
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
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RE: Docket No. NHTSA 2019-0055; Federal Motor Vehicle Safety Standards (FMVSS); Compressed Natural Gas Fuel Container Integrity; 49 CFR Part 571); 84 Fed. Reg. 29145 (June 21, 2019).

Introduction

NGVAmerica respectfully provides the following comments in response to the National Highway Traffic Safety Administration's (NHTSA's) notice of proposed rulemaking concerning labeling requirements for compressed natural gas cylinders. NGVAmerica is the national organization dedicated to the development of a growing, profitable, and sustainable marketplace for vehicles powered by natural gas and biomethane and for promoting the use of more natural gas in trucks, trash, transit, and even off-road uses like high horse-power applications, e.g., marine, rail, and construction/mining applications.

NGVAmerica supports the revisions to FMVSS 304 proposed by NHTSA in the June 21, 2019 notice of proposed rulemaking (NPRM). As indicated in the NPRM, the proposed changes are in response to petitions submitted by NGVAmerica and the American Trucking Associations (ATA). The proposed changes will promote safety and better align with industry practices and recommendations. Specifically, the proposed change would amend labeling requirements to adjust the recommended inspection intervals for heavy-duty vehicles or motor vehicles having a GVWR of greater than 4,536 kg (10,001 lb. or up).

The change, if finalized, would require that new cylinder labels state that such vehicles should be visually inspected for damage or deterioration after a motor vehicle accident or fire, and at least every 12 months. The proposed change would not affect the recommended inspection interval for light duty vehicles or vehicles under 4,537 GVWR. For light duty motor vehicles, the recommended inspection interval for such vehicles would continue to be every 36 months or 36,000 miles, whichever comes first, in addition to after any motor vehicle accident or fire.

Comments

Review of Industry Developed Recommended Inspection Guidance

The NGVAmerica Technology & Development (T&D) Committee has developed recommended inspection guidance for compressed natural gas cylinders. This guidance was developed with commercial motor vehicles and high mileage vehicles in mind. The T&D Committee members include fleets, vehicle OEMs, system and component manufacturers, station equipment and system suppliers, natural gas distributors, and consultants. NGVAmerica's *Compressed Natural Gas Vehicle Fuel System Inspection Guidance*¹ was published in 2018 and is available on the NGVAmerica website. This guidance is consistent with guidance also prepared in cooperation with the ATA's Technology Maintenance Council (TMC).

NGVAmerica and its members recommend four levels of inspection for owners of commercial motor vehicles. These four levels are briefly described below.

- Pre-Service Visual Inspection of New Vehicles. This is a thorough inspection of the entire CNG fuel system to be completed before the vehicle is placed into service. For fleets that have a detailed vehicle specification, this would be the time to compare the delivered vehicle with the vehicle specification, and to ensure that there are no omissions, modifications, or installation code violations. This is the first Detailed Visual Inspection of the entire fuel system and includes removal of all shielding or covering. Cameras, bore-scopes, mirrors, etc. may be used to visually inspect the complete fuel system – every surface, component, and fitting.
- Cursory Visual Inspection. The driver performs a Cursory Visual Inspection of the CNG fuel system during each pre-trip and post-trip vehicle inspection. During this visual inspection, the shields/enclosures of the fuel system should be observed for any damage including dents, gouges, scrapes, cuts, abrasions, discoloration, heat damage, etc.; and any readily accessible system components should be observed for signs of damage or leakage. Pressure relief device (PRD) vent lines should be inspected to ensure that vent lines are capped to prevent water from getting in the PRD outlet tubes. It is important to note that this Cursory Visual Inspection does not include the removal of any shielding, enclosures, coverings or opening of any system access panels.
- General Visual Inspection. A General Visual Inspection should be performed at each preventative maintenance inspection and includes a close examination of all system shielding and readily accessible system components. During this general inspection, the shields and enclosures of the CNG fuel system should be inspected for any damage including dents, gouges, scrapes, cuts, abrasions, discoloration, heat damage, etc. and the readily accessible system components should be inspected for

¹ <https://www.ngvamerica.org/wp-content/uploads/2018/03/CNG-Vehicle-Fuel-System-Inspection-Guidance.pdf>

signs of wear, damage, or leakage. It is important to note that the General Visual Inspection does not include the removal of any shielding beyond system access panels.

- Detailed Visual Inspection. A Detailed Visual Inspection of the fuel system is to be performed on an annual interval, in the event of a thermal event or accident, and/or if damage or evidence of a leak is noted during the general visual inspection. Some fleets may elect to perform a complete Detailed Visual Inspection of the fuel system during the Federal Motor Carrier Safety Administration (FMCSA) annual inspection. The Detailed Visual Inspection requires a thorough inspection of the entire CNG fuel system. This inspection will likely require the removal of shielding and/or the use of mirrors and cameras to visually access all components. It is recommended that operators obtain a checklist from the vehicle or cylinder manufacturer, or review the check lists available in CGA C-6.4.

As it relates to the FMVSS 304 label and the recommended inspection intervals contained therein, the detailed inspection highlighted in bullets 1 and 4 are consistent with the inspection called for on FMVSS 304. While NHTSA does not address the need for pre-service visual inspections of vehicles, NGV America recommends this step to ensure that equipment provided on new NGVs come equipped as specified in purchase orders and that no equipment has been damaged in shipment or delivery to the customer.

The above steps are recommended for commercial truck operators to ensure safe operation of their natural gas vehicles. These steps take into account normal business practices of commercial fleets and ensure that inspecting the natural gas fuel system is a part of these business practices. These steps also reflect the expectation that commercial vehicles are often operated in circumstances that subject them to greater abuse and wear-and-tear than light duty vehicles and that additional precautions are necessary to ensure safe operation of such vehicles.

Need for Change to FMVSS 304

FMVSS 304 currently requires CNG labels to include wording that the container should be inspected every 36 months or 36,000 miles, whichever comes first. This requirement was adopted at a time when most new natural gas vehicles were light duty motor vehicles including passenger cars and light duty pickup trucks. Thus, the recommended inspection interval in FMVSS 304 aligned with the warranty timeframe commonly applicable to light duty vehicles. However, in recent years, natural gas has become a popular choice among heavy duty fleets, and most new natural gas vehicles going into service are heavy-duty commercial vehicles.

Recommending that containers be inspected at least every 36,000 miles is unnecessarily burdensome in the case of most commercial motor vehicle applications because these vehicles in many cases are high mileage and can easily exceed the 36,000-mile threshold in less than a year, and in some cases in only a few months. The 36,000-mile level also does

not align with the FMCSA's regulations for commercial motor vehicle inspections, which calls for an annual inspection of the fuel system.

The effect of the current labels is that many companies exercising extreme caution and adherence to the wording on the FMVSS 304 label and the annual inspection requirements found in FMCSA Part 396 are performing multiple detailed inspections each year. NGVAmerica believes that these inspections and the frequent disruption to the fuel system is potentially detrimental to safety because of the potential for human error or damage to occur when removing shielding, bracketry, or loosening compressed natural gas lines to inspect the entire natural gas cylinder. The additional inspections also impose unnecessary costs on operators and natural gas trucks.

It is for these reasons that inspection guidance prepared by NGVAmerica calls for the detailed visual inspection to only occur either once a year or after a fire or motor vehicle crash. We do not believe that additional detailed visual inspections are warranted unless circumstance or cause (e.g., a leak is detected, or the vehicle has been in a crash) dictate the need for an inspection.

Proposed Changes to FMVSS 304

NGVAmerica supports the revisions to FMVSS 304 as proposed by NHTSA in its June 21, 2019 notice of proposed rulemaking. Under this proposal, labels for compressed natural gas cylinders would include the following new language:

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.

NGVAmerica specifically supports the proposal to make changes to the wording for heavy-duty motor vehicles and the retention of requirements for light duty motor vehicles. We agree with NHTSA's reasoning in the preamble that most natural gas commercial vehicles are likely to be high mileage vehicles that accumulate even greater miles than similar gasoline or diesel fueled vehicles. Therefore, we agree with the assessment that the current labels do lead to multiple inspections during the year for higher mileage vehicles. For lower mileage commercial vehicles, we support the inclusion of a recommendation for an annual inspection due to the environment and more rigorous conditions that many commercial trucks operate in. Moreover, we believe that this recommendation imposes little or no additional burden on most lower mileage operators of commercial natural gas vehicles since FMCSA regulations separately already call for an annual inspection of the fuel system.

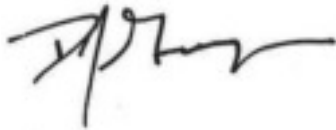
In support of the proposed changes we point to the practices and requirements in place for commercial motor vehicles and contend that these procedures and inspections are sufficient to identify and prevent potential safety issues related to the operation of

compressed natural gas fuel containers. Requiring additional detailed inspections during the year solely based on mileage and not on circumstances would impose a significant additional burden on businesses and would not in our view provide additional safety.

Conclusion

NGVAmerica respectfully requests that NHTSA adopt the proposed changes published in the June 21, 2019 notice of proposed rulemaking.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Gage', with a long horizontal flourish extending to the right.

Daniel J. Gage
President, NGVAmerica