



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

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Ref. No. 02-0057

Mr. John J. Geffert
Wegman, Hessler & Vanderburg
6055 Rockside Woods Blvd.
Cleveland, Ohio 44131-2302

Dear Mr. Geffert:

This is in response to your letter requesting clarification of the requirements under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) regarding the term "securely closed" in § 173.220(b)(1). You state that your client wishes to transport a subcompact tractor that has a vented cap on the fuel tank. The vented cap contains a valve that seals off the tank to prevent leakage of fuel in the event the tractor does not remain upright during transportation. You ask whether a vented cap with a sealing valve is considered securely closed under the HMR.

Section 173.220(b)(1) and (b)(4) provides the requirements for transporting self-propelled vehicles containing flammable fuel. The term "securely closed," as it applies to the vents in the cap, means that no flammable gas, vapor or liquid will be able to escape. Securely closing the cap of the fuel tank without also securing vents in the cap does not satisfy the requirement in § 173.220.

Sections 173.21(g) and 173.24 (f) and (g) also apply to the vented caps on the subcompact tractor. Section 173.21(g) prohibits the offering for transportation or the transportation of packagings that give off a flammable gas or vapor likely to create a flammable mixture with air in a transport vehicle. Section 173.24(f) requires closures on packagings to be secure and leakproof with no release of hazardous materials to the environment from the opening. Section 173.24(g) permits venting to reduce internal pressure only under certain conditions, including when the evolved gases are not likely to



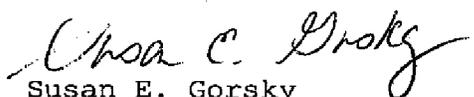
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173.220

create a flammable mixture with air under normal conditions of transportation. Thus, vents in a cap such as you describe must be securely closed to prevent the escape of gas or vapor.

I hope this information is helpful. Please contact this office if you need additional information.

Sincerely,



Susan E. Gorsky
Transportation Regulations Specialist
Office of Hazardous Materials Standards

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February 4, 2002

McIntyre
§173.220
Definition
02-0057

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VIA REGULAR MAIL

Mr. Edward Mazzullo
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Re: Interpretation of § 173.220 and vented gas caps

Dear Mr. Mazzullo:

Pursuant to a January 30, 2002, telephone conversation with Cameron of your office and on his recommendation, I am writing to request your interpretation of § 173.220 of the Hazardous Materials Regulations and Procedures. In particular, I would like an interpretation of the phrase "securely closed" as used throughout § 173.220.

My client has a new product, a component part of which is a gasoline engine, which it intends to ship with enough fuel in the tank and fuel system to allow the product to be driven onto and off of a tractor-trailer. The new product is a subcompact tractor to which § 173.220 appears to apply. According to § 173.220(b)(1), the fuel tank, engine components, or fuel lines may contain up to 500 mL of residual fuel if they are "securely closed to prevent leakage of fuel during transportation." Additionally, § 173.220(b)(4)(i) permits more than 500 mL of fuel to remain in self-propelled vehicles and mechanical equipment if transported by motor vehicle or rail car and the fuel tanks are "securely closed." During our telephone conversation, Cameron indicated that products could likely be shipped with full tanks so long as the tanks are securely closed.

Mr. Edward Mazzullo
February 5, 2002
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My client uses a vented cap on the fuel tank of its product, as opposed to the sealed and pressurized system used in automobiles. This is a key factor in interpreting whether my client's gas tank can be "securely closed." The cap is vented in order to allow gasoline to freely and efficiently flow through the gravity-fed fuel system while avoiding the creation of a vacuum within the tank. Additionally, for safety reasons, the vented cap serves to release pressure from the tank during normal operation. During transport, the cap will prevent gasoline from splashing or leaking out of the tank, which is in an upright position. The subcompact tractor is loaded, transported and stored in an upright position on its four wheels. The cap also contains a valve that will seal off the tank if the product is on its side or upside-down, preventing any fuel from leaking out and, effectively securely closing the tank and fuel system (See attached photos). If you would like further information regarding the actual mechanical functioning of the valve, I would be happy to provide such information upon your request.

It is likely that the product will carry only a small amount of fuel while in transit, possibly less than the 500 mL allowed under § 173.220(b)(1). The purpose for keeping the residual fuel in the tank and fuel system is to allow the product to be loaded and unloaded from a tractor-trailer during shipment.

It will be appreciated if you can offer an official interpretation of the above-mentioned regulations with respect to my client's use of a vented fuel cap on its new product. We would like to know if the use of a vented fuel cap with a sealing valve fits within the meaning of "securely closed" as it is used throughout § 173.220. If you should have any questions or need any additional information, please do not hesitate to contact me at (216) 642-3342.

Very truly yours,

WEGMAN, HESSLER & VANDERBURG


John J. Geffert

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