

STATE OF MINNESOTA  
DEPARTMENT OF PUBLIC SAFETY

In the Matter of the Proposed Adoption  
of Rules of the State Department of  
Public Safety Governing Markings  
Required on Vehicles Having Concealed  
Pressurized Flammable Gas Tanks.

STATEMENT OF NEED AND REASONABLENESS

The above captioned rules are not amendments to existing rules of the State Department of Public Safety.

The need to adopt these rules arises because of the mandate of Minn. Stat. 169.762, which requires that vehicles carrying liquefied petroleum gas fuel or natural gas in a tank in any concealed area display a warning symbol on the exterior of the vehicle. It requires display on the vehicle exterior the words "Pressurized Flammable Gas" or a standard abbreviation or symbol established by the Commissioner. These rules specify the symbol and the design, color, composition, and placement.

The use of pressurized flammable gas as a motor vehicle engine fuel is increasing steadily within our state. A pressurized flammable gas tank concealed on a motor vehicle, out of the immediate sight of fire fighters, constitutes a potential danger. Flames and heat from a vehicle fire may impinge on or involve the pressurized flammable gas tank. This impingement or involvement can cause a rapid increase in tank pressure as well as weakening the structural material of the tank. When the tank has become weakened and the pressure continues to build up, an explosion will occur. This is most often a disastrous explosion with metal fragments and flaming gas being expelled in all directions.

Fire fighters, law enforcement, and other first responders, recognizing a symbol that indicates such pressurized flammable gas tanks do exist on a vehicle, can adjust their response efforts so as to control the incident and protect themselves from a potential explosion. It is possible that in some vehicle accidents only a gas leak could occur, not a fire. First responders, recognizing the symbol, could immediately check for the leak and take the necessary action to control the incident and protect themselves or others from the potential danger which exists.

The need for and reasonableness of the specific substantive portions of the rules is outlined below:

11 MCAR 1.5080 specifies the purpose of the rules and the statutory scope and reference of the rules, in order to limit its applicability to the specific legislative mandate.

11 MCAR 1.5081 defines the term "pressurized flammable gas", in order to provide understanding and limit its applicability in the rules to the specific legislative mandate.

11 MCAR 1.5082 reiterates the basic intent of the legislative mandate, that the warning symbol be displayed in the exterior of any vehicle carrying a concealed tank of pressurized flammable gas. This section is included to give the rules self contained continuity and overall understanding of the requirements, in addition to the subsequent specifications.

11 MCAR 1.5083A gives three warning symbol designs for each type of pressurized flammable gas that may be contained in the concealed tank. This symbol and the three abbreviations were chosen because of their simplicity, easy recognition and ability to clearly communicate the fire hazard. The "PROPANE" symbol for liquefied petroleum gas has been adopted by the National Liquefied Petroleum Gas Association (NLPGA) as a recommended industry standard identification, and proposed wording for the National Fire Protection Association's next edition of pamphlet No. 58, corresponds to the requirements of these rules. This is as close as we have to national model standards at this time. When national standards are finalized Minnesota will be in compliance with these rules. The propane decal is in production and will be available through NLPGA sources.

11 MCAR 1.5083B gives the size, color, lettering and composition specifications of the warning symbols. It is necessary to delineate these specifications in detail in order to ensure uniformity. The legislative mandate only specifies the minimum size of the block letters. In order to ensure that the warning symbol is easily identifiable to first responder emergency personnel, uniform size, shape, and color and reflectorization are required.

11 MCAR 1.5084 gives alternate symbol placement requirements. It is necessary to have uniform placement of the symbol so that first responder personnel know where to find it. The appropriate action can be taken as quickly as possible. The placement specification in paragraph A is preferred. It is reasonable to expect that most vehicles have bumpers on which the warning symbol can be placed. If not, paragraph B gives an alternate placement location with a great deal of latitude. In each case a dual location is specified. The dual location is necessary since one end of a vehicle could be so severely damaged that the symbol would not be visible or recognizable.

These rules are reasonable and justified because the symbol does not affect the physical operation of a vehicle, and the size and color of the symbol is such that it does not adversely affect the physical appearance of a vehicle. The purpose of the symbol is to provide notification and warning, and it does this clearly and simply. The uniform location of the symbols is essential to quick recognition by emergency personnel.

PAUL J. TSCHIDA  
COMMISSIONER

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