



DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS REGULATIONS BOARD 21485
WASHINGTON, D.C. 20590

[49 CFR Part 177]

[Docket No. HM-110; Notice No. 75-5]

USE OF CATALYTIC HEATERS IN CERTAIN
MOTOR VEHICLES, AND REPAIRS TO
VEHICLES IN CLOSED BUILDINGS

Proposed Rule Making

On December 2, 1974, the Hazardous Materials Regulations Board (The Board) published Amendments Nos. 173-87 and 177-31 under Docket HM-110 (39 FR 41741). One portion of the amendment pertained to the use of catalytic heaters in the cargo compartment of a motor vehicle transporting flammable liquids or flammable compressed gases. The revision authorizes use of catalytic heaters in these motor vehicles if guards are installed to keep the cargo at least one foot away from the heater. The amendment was to become effective April 1, 1975, but those sections covered by this notice were postponed until October 1, 1975 (40 FR 12269).

After the revision was issued, a petition for reconsideration was received from Cargo Safe, Inc., a manufacturer of catalytic heaters, containing the following statement:

believe the wording as it currently does not deal adequately with the nature problem and can allow for dangerous catalytic heaters to be produced even though they conform to the present requirements.

Specifically, the petitioner seeks the addition of a limitation upon the temperature that may be reached on the outside surface of a catalytic heater used in the cargo compartment of a vehicle transporting flammable liquids or flammable compressed gases. Petitioner cited tests of a prototype heater, with guards 12 inches away from the heater, which allowed the outside skin temperature of the guard to reach 284° F.

After reviewing the data submitted in support of the petition, the Board has concluded that the petitioner's contention has merit. Accordingly, the Board proposes to add to paragraph (1) of § 177.834 a limit to the maximum temperature permitted on the outside surface of a catalytic heater which is used in the cargo compartment of motor vehicles transporting flammable liquids or flammable gases. However, the Board has not removed the requirement for the guard on the heater as the petitioner suggested because the guard affords protection against damage to packages coming in contact with the heater. The Board further believes that a catalytic heater needs to be marked so carriers will know if the heater complies with these requirements. Therefore, the Board is proposing that "Meets DOT Requirements"

marked on the heaters as a manufacturer certification that the heater complies with the requirements of § 177.834

(1).

Upon further consideration, the Board believes that catalytic heaters should not be lighted or used in the cargo compartment of a motor vehicle containing flammable liquids or flammable gases if any flame is present on the catalyst or visible anywhere in the heater. Such a restriction is proposed to be added to § 177.834 (1) along with a requirement that catalytic heater manufacturers place a sign on each heater warning of this danger.

The Board also received a letter from Phillips Petroleum Company concerning the § 177.854(g) amendment being different from what was proposed in the notice. After further review, it appears that the rationale behind the final amendment, and that § 177.854(g) as amended does not clearly state the Board's intent. Therefore, what follows is a further explanation of the Board's decision and a proposed editorial revision of the section.

Prior to this rule making, § 177.854(g) contained a blanket prohibition against a vehicle containing any hazardous material being in a closed garage for repairs. In response to a petition, the Board proposed that this prohibition be lifted provided certain conditions existed in the closed garage. The proposed restriction was without regard to any particular class of hazardous material. Following a review of comments submitted, the Board decided that vehicles containing material which posed an inherent fire or explosion danger, i.e., explosives, flammable liquids or gases, should not be in a closed garage for repairs or maintenance regardless of the added conditions. Therefore, the amendment was written to allow vehicles containing hazardous materials, with certain exceptions, to be in a closed garage for repairs. This decision was a compromise between the original blanket prohibition and the proposed relaxation without regard to type of material on the vehicle. The Board is also proposing a definition for a closed building for purposes of § 177.854(g).

In consideration of the foregoing, in 49 CFR 177.834, paragraph (1) would be revised to read as follows:

§ 177.834 General requirements.

(1) Use of cargo heaters with explosives and flammable commodities—(1) Flammable liquids and flammable gases. Except as provided in paragraphs (1)(2) and (1)(3) of this section, a flammable liquid or a flammable gas must not be loaded into a truck body or a trailer containing a combustion heater, or equipped with operable automatic temperature control equipment. Fuel tanks for automatic temperature control equipment must be emptied or removed from the vehicle, except that liquefied petroleum gas fuel tanks exterior to the vehicle body may have their valves closed and disconnected from the fuel feed lines instead of being emptied or removed.

(2) Exceptions for catalytic heaters. Flammable liquids and flammable gases may be loaded into or transported in the same cargo space of a truck body or trailer containing an operating catalytic heater provided—

(i) Guards are installed to prevent any cargo from being closer than 30.05 cm (12 inches) to the heater;

(ii) The heater is designed so that no part of the catalytic heater or its guard, which may come into contact with the cargo, will reach a temperature over 130° F. (55° C.);

(iii) There is no flame on the catalyst or anywhere in the heater;

(iv) The heater is marked "DO NOT LOAD INTO OR USE IN CARGO COMPARTMENT CONTAINING FLAMMABLE LIQUIDS OR GASES IF FLAME IS VISIBLE ON CATALYST OR IN HEATER;" and

(v) The heater is marked "MEETS DOT REQUIREMENTS." This marking will be considered a certification that the heater was manufactured in accordance with the requirements of this section.

(3) Exception for certain automatic temperature control equipment. A flammable liquid or a flammable gas may be transported in a vehicle equipped with automatic temperature control equipment if, (i) any electrical apparatus in the cargo compartment is of the non-sparking or explosion-proof type, (ii) no combustion apparatus is in the lading space; and (iii) there is no connection for return of air from the lading space to any combustion apparatus. The heating system must prevent heating of any part of the lading to a temperature of more than 130° F. (55° C.) and must conform to the requirements of § 393.77 of this title.

(4) Explosives. An explosive may not be loaded into a truck body or trailer which contains a combustion heater including a catalytic heater, or is equipped with operable automatic temperature control equipment. All fuel tanks for a heater or automatic temperature control equipment with which a truck body or trailer is equipped must be drained. All automatic heating or refrigeration machinery must be rendered inoperative by disconnection of the automatic controls and sources of power for its operation.

In 49 CFR 177.854, paragraph (g) would be revised to read as follows:

§ 177.854 Disabled vehicles and broken or leaking packages; repairs.

(g) Repairs and maintenance to vehicles. Except as provided in paragraph (h) of this section, no maintenance or repair using open flame or any type of welding may be performed on vehicles containing flammable liquids, flammable gases, oxidizers, or explosives.

(1) A vehicle containing explosives or a cargo tank containing a flammable liquid or a flammable gas (regardless of quantity) may not be inside a closed building for repairs or maintenance.

(2) A vehicle containing hazardous materials (other than one containing explosives or a cargo tank containing a flammable liquid or a flammable gas) may be inside a closed building for repairs or maintenance provided—

(i) There is no flame-producing or welding device in operation within the same enclosed area of the building; and

(ii) The vehicle has an operable means of motive power or is connected to an operable truck or truck tractor to facilitate its quick removal from the building.

(3) For purposes of this section, a closed building is any structure having a roof and at least three side walls, including any roll-up, sliding, or swing-out doors.

Interested persons are invited to give their views on these proposals. Communications should identify the docket

number and be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, Washington, D.C. 20590. Communications received on or before July 15, 1975 will be considered before final action is taken on these proposals. All comments received will be available for examination by interested persons at the Office of the Secretary, Hazardous Materials Regulations Board, room 6215 Trans Point Building, Second and V Streets, SW., Washington, D.C., both before and after the closing date for comments.

This notice of proposed rule making is issued under the authority of the Transportation of Explosives Act (18 U.S.C. 831-835), and Section 6 of the Department of Transportation Act (49 U.S.C. 1655).

Issued in Washington, D.C. on May 9, 1975.

ROBERT A. KAYE,
Board Member for the
Federal Highway Administration.

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