Docket-SVC-124
Std 225

207287

U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

DEPARTMENT OF TRANSPORTATION
02 DEC 11 PM 4:17

DEC 9 2002

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

NHTSA-02-14051-1

Mr. Alan Aylor
President
General Testing Laboratories, Inc.
1623 Leedstown Rd.
Colonial Beach, VA 22443

Dear Mr. Aylor:

This responds to your letter dated May 1, 2002, which you e-mailed to our office on May 7, asking six questions about Federal Motor Vehicle Safety Standard (FMVSS) No. 225, "Child Restraint Anchorage Systems" (49 CFR §571.225). This letter also follows up on a May 22, 2002 telephone conversation between you and Ms. Deirdre Fujita of my staff. Each of your questions is restated below, followed by our response.

BACKGROUND

On March 5, 1999, the National Highway Traffic Safety Administration (NHTSA) published a final rule establishing Standard No. 225. The rule required vehicle manufacturers to equip vehicles with new child restraint anchorage systems that are standardized and independent of the vehicle seat belts. Each new system has two lower anchorages and one tether anchorage.

A number of manufacturers submitted petitions for reconsideration of various aspects of the new standard, including the strength requirements for the anchorage system. In response to concerns of several of the petitioners about leadtime for and the stringency of the anchorage strength and other requirements in the March 1999 final rule, NHTSA permitted vehicle manufacturers to meet alternative requirements during an interim period (64 FR 47566). Manufacturers were permitted to meet either: (a) the requirements in the March 1999 final rule; or (b) alternative Canadian requirements for tether anchorages and, for lower anchorages, requirements in a draft standard developed by a working group of the International Organization for Standardization (ISO). NHTSA later extended that period until September 1, 2004 (65 FR 46628).[1]

[1] NHTSA was petitioned to reconsider other aspects of the rule as well. We will be responding to those petitions in the near future.

RESPONSES TO QUESTIONS

Question 1. S4.1 states: "Each tether anchorage and each child restraint anchorage system installed, either voluntarily or pursuant to this standard, in any new vehicle manufactured on or after September 1, 1999, shall comply with the configuration, location and strength requirements of this standard. ..." Does the phrase "any new vehicle" refer to all vehicles regardless of type and gross vehicle weight rating (GVWR)?

> **Answer:** The answer is Standard No. 225 does not apply to tether anchorages and child restraint anchorage systems installed in vehicles not listed in the Application section of the standard (S2). (This issue was discussed in the agency's August 31, 1999 response to petitions for reconsideration. 64 FR at 47578.) Anchorage systems voluntarily installed in vehicles not listed in S2 are not subject to the standard's requirements. They will, of course, be subject to our defect authority.

Question 2. If tether anchorages and/or child restraint anchorage systems are voluntarily installed in side facing or rear facing designated seating positions, do the requirements in S4.1 apply? If so, in what directions should the test loads be applied?

> **Answer:** Our answer is the requirements of Standard No. 225 would apply to anchorages installed in side- or rear-facing seating positions in vehicles subject to the standard. The standard requires only forward-facing rear designated seating positions to have the anchorage systems (S4). Side- or rear-facing seating positions are not factored into the determination of how many anchorage systems a vehicle must have. However, if a manufacturer voluntarily installs a tether anchorage or a child restraint anchorage system in a side- or rear-facing designated seating position in a vehicle subject to the standard, the configuration, location, marking, and strength requirements apply (S4.1). The loads for the strength test would be applied (1) along a longitudinal axis toward the front of the vehicle for LATCH anchorages installed in side-facing seating positions, and (2) along a longitudinal axis toward the rear of the vehicle for LATCH anchorages installed in rear-facing seating positions. The loads would be applied in this manner to side-facing seats to replicate loads likely to be imposed on the anchorages in a frontal crash. For rear-facing seats, testing in this manner ensures that the anchorages will be able to sustain loads from rear impacts.

The installation of LATCH in side- and rear-facing seats should be carefully considered, however. As far as we know, all child restraint manufacturers recommend against use of child restraints in side- or rear-facing seating positions.

Question 3. Which certification options are available for voluntarily installed tether and/or child restraint anchorage systems for vehicles built before September 1, 2004?

Answer: There are several options available to manufacturers of vehicles manufactured before September 1, 2004. These are outlined below. Manufacturers must select the option prior to, or at the time of, certification of the vehicle. (See answer to question 6 for further discussion.)

--As noted above, manufacturers are permitted to meet (a) either the tether anchorage strength requirements in the March 1999 final rule or alternative strength requirements that are based on Canadian requirements (S6.3); and (b) for lower anchorages, either the strength requirements in the March 1999 final rule or the strength requirements developed by the ISO working group (see introductory paragraph of S9).

--There is also an option available to manufacturers of passenger cars manufactured before September 1, 2004 relating to the strength of tether anchorages and how they are tested (a load of 5,300 N may be applied by way of a belt strap)(S6.3.2).

--Until September 1, 2004, manufacturers may meet alternative requirements as to the number of tether anchorages and child restraint anchorage systems they have to install in a vehicle, and where those systems must be located within a vehicle (S4.5).

There are some options concerning the location of the tether anchorage relative to the seating reference point of a designated seating position (S6.2).

Question 4. Paragraph S6.3.3(b) states: A tether anchorage of a particular child restraint anchorage system will not be tested with the lower anchorages of that anchorage system if one or both of those lower anchorages have been previously tested under <u>this standard</u>. Paragraph S9.4.2(b) states: The lower anchorages of a particular child restraint anchorage system will not be tested if one or both of the anchorages have been previously tested under <u>this standard</u>. [Emphases added.]

Do these paragraphs mean that for a given designated seating position, a manufacturer certifies compliance with the tether anchorage requirements of FMVSS 225 in accordance with paragraph S6.3.4(a)(2), which specifies testing with SFAD-2 to apply the test loads to both the tether and lower anchorages, that he has satisfied all of the

strength requirements for the child restraint anchorage systems at that designated seating position?

> **Answer:** No. The child restraint anchorage system must be capable of meeting both the requirements of S6.3.4 (strength of tether anchorage) and those of S9.4 (strength of lower anchorages alone). NHTSA has the option of choosing which test to conduct. Any tether anchorage could be tested, and must meet the requirements of S6.3.4 if and when the anchorage is tested. Any pair of lower bars of a child restraint anchorage system could be tested to the requirements of S9.4. Manufacturers must ensure that their anchorages comply with both requirements of the standard.

Question 5. Does "this standard" as used in paragraph S6.3.3(b) and S9.4.2(b) refer to the entire standard or to the individual paragraphs S6 and S9 respectively?

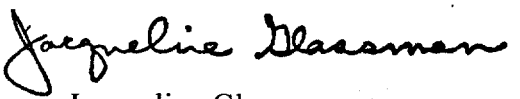
> **Answer:** I believe our answer to question 4 responds to this question.

Question 6. What interactions with NHTSA, if any, are required by a manufacturer to irrevocably select the various compliance options in FMVSS 225?

> **Answer:** Manufacturers must select an option prior to, or at the time of certification of the vehicle. Manufacturers are required to identify the option to which a particular vehicle has been certified. In practice, prior to conducting a compliance test on a vehicle, NHTSA will ask the manufacturer which option was selected for that vehicle and will test the vehicle in accordance with the manufacturer's response.

I hope that this information is helpful. If you have any other questions, please contact Ms. Fujita at (202) 366-2992.

Sincerely,



Jacqueline Glassman
Chief Counsel