

requiring lap/shoulder belts in the rear center seats of LTVs. These reductions in injuries and fatalities are purely the result of the added protection offered by the shoulder belt.

As noted above, the agency has observed a seven to ten percent increase in belt usage for seating positions equipped with a lap/shoulder belt rather than just a lap belt. Assuming that the switch to lap/shoulder belts lead to a ten percent increase in belt use, the agency would expect to see the benefits increase to 16 fewer fatalities, 77 fewer AIS 1 injuries, and 202 fewer AIS 2–5 injuries in passenger cars equipped with rear center lap/shoulder belts. Likewise, it would expect to see the benefits increase to 17 fewer fatalities, 60 fewer AIS 1 injuries, and 317 fewer AIS 2–5 injuries in LTVs equipped with rear lap/shoulder belts. Most of the reduction in injuries would be in the AIS 2 range. These are injuries that, while not life-threatening, can result in significant financial costs and long-term pain and suffering.

III. Proposed Requirements

Today we are proposing to require lap/shoulder belts for all forward-facing designated seating positions other than the center front seat for all passenger cars and for most other vehicles with a GVWR under 4,536 kg (10,000 lb), unless there is an exception for a particular type of vehicle.⁵ The vehicle exceptions are discussed below. We are also proposing to require lap/shoulder belts for rear-facing seats.

Since the rulemakings of the late 1980s, manufacturers have begun voluntarily installing lap/shoulder belts in the rear center seating position. Data collected in the course of preparing NHTSA's "Buying a Safer Car" brochure indicate a significant increase in the voluntary installation of lap/shoulder belts in that position. Those data indicate a nearly twofold increase in the number of vehicle models with center rear lap/shoulder belts between MY 2000 (66 models) and MY 2002 (120 models). While those data cannot be used to make projections for the overall fleet, they are indicative of a strong upward trend. An analysis of passenger cars and LTVs sold during 1999 to 2000 reveals that approximately 8.2 percent of the passenger cars were equipped with either two or four seats and did not have any center seating position.

Approximately 69 percent came equipped with a lap/shoulder belt in the rear center seating positions. The rest of the fleet, approximately 23 percent, would have to be, for the first time, equipped with a rear center lap/shoulder belt should we decide to issue a final rule adopting today's proposal. The percentages for LTVs are roughly reversed. Approximately 67 percent of LTVs sold during 1999 to 2000 had only a lap belt in the rear center seating positions.

We have also tentatively decided to require lap/shoulder belts for rear-facing seats and for forward-facing outboard seats adjacent to an aisle. While we have little data to determine whether a shoulder belt will reduce the risk of death or injury in a rear-facing seat during a frontal collision, it is likely that a shoulder belt integrated into the seat would reduce occupant trajectory in frontal and rear crashes. However, a shoulder belt mounted to a side pillar may not be as beneficial in a frontal crash. FMVSS No. 208 currently allows a rear forward-facing outboard seat that is adjacent to an aisle that runs between the seat and the side of the vehicle to be equipped with only lap belts if that aisle is used to gain access to seats rearward of the seat in question. This exclusion was added to the standard to address potential ingress/egress problems for those more rearward seats and because anchorages attached to the side of the vehicle could be a poor fit with the vehicle seat. With the advent of lap/shoulder belts that are integrated into the seat back, we believe such an exception may no longer be needed. Likewise, a manufacturer could choose to anchor the shoulder portion of the belt to the vehicle roof rather than the side of the vehicle.

At the present time, we are not planning on changing the lap/shoulder belt requirements for swivel seats or for readily removable seats. Both of these types of seats may have modified lap/shoulder belt assemblies. Currently, FMVSS No. 208 specifies that seats that can be adjusted to be forward-facing and to face in some other direction (e.g., swivel seats) must have at least a lap belt at all positions in which the seat may be placed while the vehicle is in motion. Additionally, the seat must have at least a non-integral lap/shoulder belt that is usable while the seat is in its forward-facing position. While integral lap/shoulder belts are also permissible, a non-integral belt allows a passenger to only buckle the lap portion of the belt while the seat is forward-facing, although the occupant does have the option to use both the lap and shoulder portion of the belt. This

exception may no longer be needed with the advent of lap/shoulder belts that are integrated into the seat back. The standard also permits readily removable seats to have a shoulder belt that may be detached at either the upper or lower shoulder belt anchorage, but not both. Again, the advent of lap/shoulder belts integrated into the seat back may obviate the need for this exception.

We have tentatively decided against requiring lap/shoulder belts for the center front seat, because the projected benefits, when compared to the cost involved in requiring lap/shoulder belts for this seating position, are so low. The primary reason that benefits are so low is because belt use among front center seat occupants is low, particularly in LTVs. While the belt use rate in the front center seating position of passenger cars is 25.6 percent, in LTVs it is only 16 percent. However, we also recognize that requiring lap/shoulder belts for the center front seating position would allow individuals who do use their seat belt to receive the additional benefit of a shoulder belt. We estimate that, assuming a ten percent increase in belt use rates due to the addition of a shoulder belt, there would be approximately four fewer fatalities and ten fewer injuries (AIS 2–5) per year if a lap/shoulder belt were required for front center seat positions in passenger cars. For LTVs, the numbers are quite a bit higher, with an estimated 12 fewer fatalities and 59 fewer injuries (AIS 2–5) per year. Additionally, being able to use a booster seat in the front center position could have a further incremental safety benefit in those vehicles where there are no rear seating positions by enabling the use of a belt-positioning booster seat at that seating position. Accordingly, the benefit associated with a front center lap/shoulder belt may be particularly high for LTVs; this may be especially true for pick-up trucks with a single row of seating, where the additional cost of the shoulder belt would be minimal, there are no other locations other than the right outboard passenger seat to place a booster seat, and the presence of a lap/shoulder belt may increase the currently low levels of belt use. A more thorough discussion of the costs associated with this rulemaking is provided below.

Likewise, we have tentatively decided against proposing to require lap/shoulder belts for side-facing seats, although we are seeking comment on this. Lap belts would be required for side-facing seats that are designated seating positions. While we are unaware of any studies demonstrating benefits related to the addition of a shoulder belt for side-facing seats, there could be

⁵ The rule, if adopted, would include school buses under 4,536 kg (10,000 lb). However, the agency is currently working on a separate rulemaking regarding seat belts in school buses. Accordingly, this document will not further discuss potential requirements for lap/shoulder belts on school buses with a GVWR under 10,000 lb.