

or allow edges to be raised between fasteners in schoolbus crashes. Such edges are a source of injury to passengers.

- 3) The joints employed to join structural members and potential load carrying panels in schoolbuses are often inadequate and "inefficient" in the technical sense because they employ relatively few fasteners and thus do not develop more than a small fraction of the structural strength which is potentially available.
- 4) Other types of buses, such as intercity buses and city transit buses, exhibit much more adequate joining of structural load carrying panels than do schoolbuses. This indicates that more adequate fastening of schoolbus structures is technically feasible.
- 5) The question whether the increased cost of more adequately fastened schoolbus bodies would be repaid in reduced fatality and injury is difficult to determine; however, the Safety Board believes that adequate joints are necessary in justice to the innocent schoolchildren passengers.
- 6) The correction of this problem is not a high priority matter in relation to the total numbers of national highway losses; however, it is an important matter of justice in the field of schoolbus manufacture and operation. Not only is it unfair to children to allow the sources of injury from inadequate joining to continue, it is also undesirable to allow a source of injury to continue in one field (schoolbuses) when it is voluntarily controlled in another field (intercity and transit buses).

RECOMMENDATIONS

The National Transportation Safety Board recommends:

- 1) That the National Education Association and the schoolbus manufacturing industry adopt a policy of using fastening methods which inhibit the raising of sharp edges and which provide much greater efficiency of joints to prevent the disintegration of schoolbus bodies. This policy might well be implemented by voluntary specifications adopted by the National Education Association and used by schoolbus purchasers and manufacturers. (H-70-14)
- 2) That the National Highway Safety Bureau include in its accident research investigations and studies a search for evidence of the nature of schoolbus disintegration and the significance of the disintegration phenomena in injury causation. (H-70-15)