

One of the important factors in seating fatigue is time. If we compare the relatively short time that a person sits in the theatre, perhaps an hour and a half or two, with the longer time that he is likely to sit in a bus, sometimes as much as six or eight hours, it becomes evident that unless the bus seat is comfortable, sitting fatigue is a serious factor. If the seat is so confining that there is no chance to shift a little in the seat to change the pressure on the sensitive popliteal area and the buttocks, then fatigue sets in quite rapidly. A wider cushion whether it is flexible foam or foam supported on springs, can be designed to give a much more comfortable cradling effect than a narrower cushion. It might be interesting to remember that the airlines have recently been subject to criticism because of the relatively narrow seats that are provided in the tourist section of the cabin. The first class passengers get a very comfortable wide seat, 24 inches sometimes. Railroad seating too provides much wider seating per passenger than bus seating. In the case of the bus seat the vehicle size and the aisle width determine the sitting space so restrictively that some increase in the vehicle width is a real necessity before major improvements in sitting comfort can be made.

All the available data seems to corroborate the fact that people are getting larger and need more sitting space and that this trend will continue. The seat width that might have been adequate for the ancient knight whose stature was that of the boy of today is inadequate for a large percentage of the bus travelers of 1968 and will be more inadequate in the years ahead.

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COMPARISON OF INTERCITY BUS MODEL SPECIFICATIONS

| Item                                                                        | Dual level PD-4501   | The Silver Eagle     | New bus, model MC-6X  |
|-----------------------------------------------------------------------------|----------------------|----------------------|-----------------------|
| Seating capacity.....                                                       | 43.....              | 46.....              | 43.....               |
| Overall length.....                                                         | 40 ft.....           | 40 ft.....           | 40 ft.....            |
| Overall width.....                                                          | 96 in.....           | 96 in.....           | 102 in.....           |
| Overall height.....                                                         | 10 ft. 11½ in.....   | 11 ft. 2 in.....     | 12 ft.....            |
| Weight loaded—(gross vehicle weight in pounds).....                         | 40,000.....          | 37,900.....          | 42,000.....           |
| Number of axles.....                                                        | 3.....               | 3.....               | 3.....                |
| Front axle.....                                                             | 10,735.....          | 10,440.....          | 14,000.....           |
| Drive axle.....                                                             | 14,955.....          | 18,000.....          | 18,000.....           |
| Trailing axle.....                                                          | 14,310.....          | 9,460.....           | 10,000.....           |
| Underfloor luggage compartment capacity (cubic feet).....                   | 344.....             | 215.....             | 450.....              |
| Engine horsepower, at governed speed.....                                   | 310.....             | 263.....             | 380.....              |
| Engine horsepower per ton of gross vehicle weight.....                      | 15.5.....            | 13.8.....            | 18.05.....            |
| Tire sizes:                                                                 |                      |                      |                       |
| Front.....                                                                  | 11.00 by 19.00.....  | 11.00 by 20.00.....  | 13.50 by 24.50.....   |
| Rear driving.....                                                           | 11.00 by 19.00.....  | 11.00 by 20.00.....  | 13.50 by 24.50.....   |
| Rear trailing.....                                                          | 11.00 by 19.00.....  | 11.00 by 20.00.....  | 11.00 by 22.50.....   |
| Total road contact area of tires (footprint area in square inches).....     | 800.....             | 591.....             | 754.6.....            |
| Road contact area per ton gross vehicle weight (area in square inches)..... | 40.0.....            | 31.1.....            | 35.9.....             |
| Total effective brake drum area (square inches).....                        | 1909.....            | 1554.....            | 2116.....             |
| Effective brake area per ton of gross vehicle weight.....                   | 95.45.....           | 81.7.....            | 100.6.....            |
| Brake size (diameter by width of drums):                                    |                      |                      |                       |
| Front.....                                                                  | 14½ in. by 5 in..... | 16½ in. by 4 in..... | 16½ in. by 6 in.....  |
| Rear driving.....                                                           | 14½ in. by 8 in..... | 16½ in. by 7 in..... | 16½ in. by 10 in..... |
| Rear trailing.....                                                          | 14½ in. by 8 in..... | 16½ in. by 4 in..... | 14½ in. by 5 in.....  |
| Interior headroom at center aisle, minimum.....                             | 75½ in.....          | 75 in.....           | 76½ in.....           |
| Width between seats at center aisle.....                                    | 14 in.....           | 14 in.....           | 14½ in.....           |
| Width of double passenger seat.....                                         | 38 in.....           | 38 in.....           | 40 in.....            |