

CRASH TESTS WITH OLD AND NEW VEHICLE MODELS DEMONSTRATE THE DEVELOPMENT OF PASSIVE SAFETY - ARE THEY IN CORRELATION WITH THE PUBLISHED NATIONAL STATISTICS?

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The national statistics published in Germany and Great Britain since the seventies are evidence of major improvements in road safety. The reasons for that are manifold. Contributory factors include, inter alia, improvements in the infrastructure, the rescue services, driver instruction and general road safety campaigns, as well as improvements in the active and passive safety of vehicles. The overall effect is demonstrated for example in the falling numbers of fatalities in Germany, **Fig. 1**, and in Great Britain, **Fig. 2**, but it cannot be attributed to individual factors.

In recent years, the frontal impact performance of cars has significantly improved. The move towards vehicle design which perform better in offset crashes has led to improved energy-absorbing frontal structures and safety cells which work in conjunction with highly effective

Fig. 1:
Killed car occupants and total mileage of cars in the Federal Republic of Germany

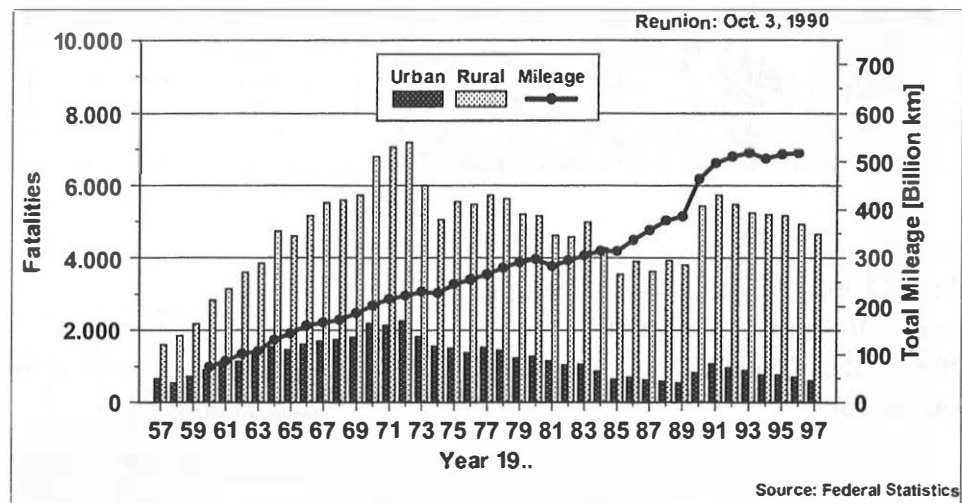
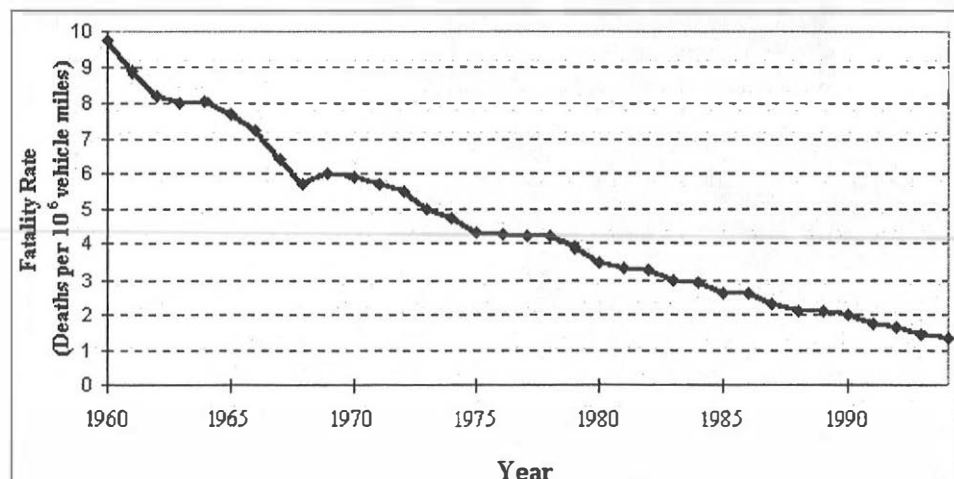


Fig. 2:
Fatality rate of car occupants in Great Britain



restraint systems to protect the occupants in severe impacts. This can be demonstrated with results of crash tests with older and newer car models. An example is given in Fig. 3. In the poster presentation, the improvement in the passive safety of the Ford Fiesta is demonstrated by the results of crash tests of several vehicles covering model years 1985, 1987, 1996, 1997 and 1998, together with a description of associated safety features. The published official statistics for road accidents involving passenger cars in Germany and Great Britain are subsequently presented and analysed against this background.

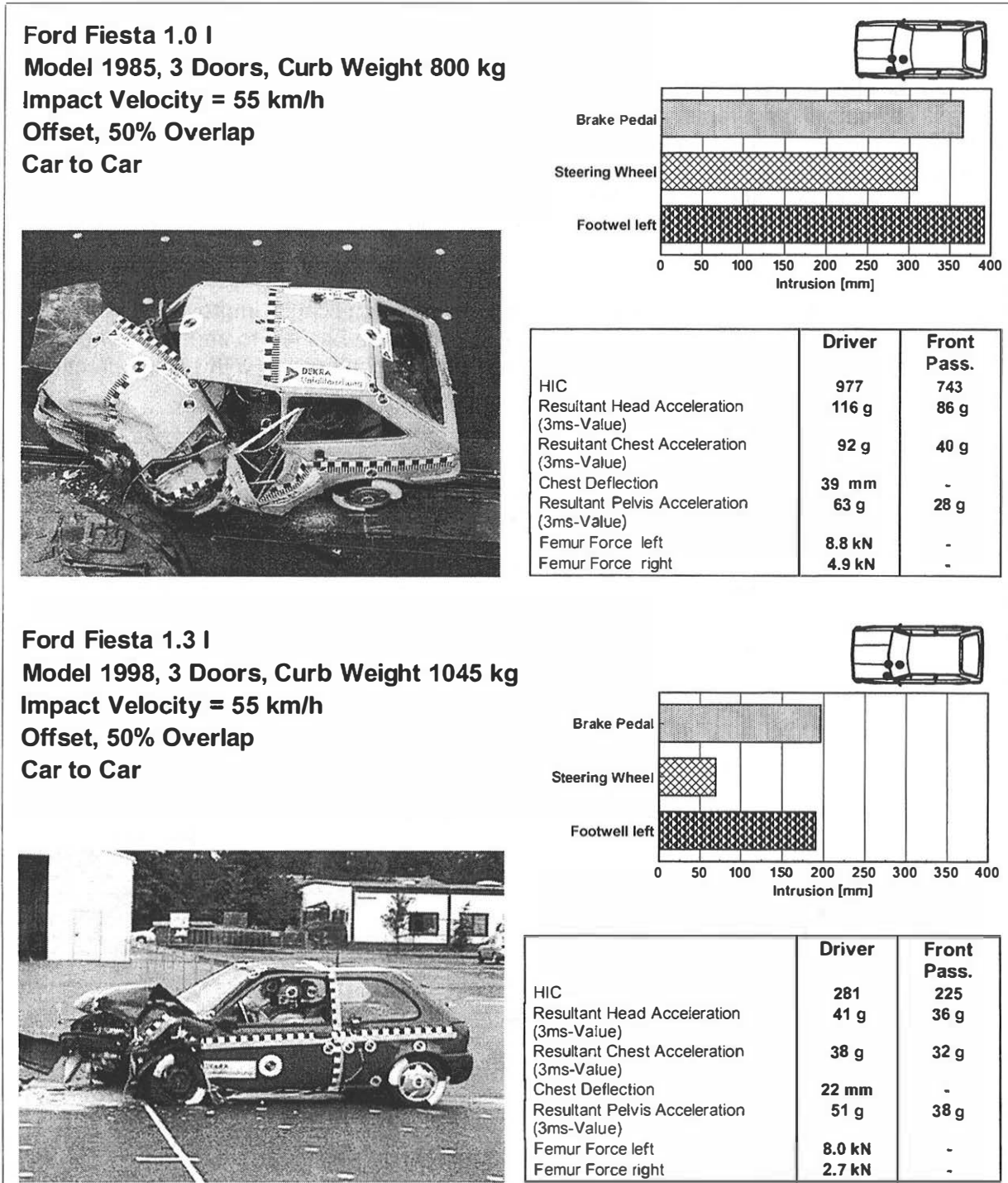


Fig. 3: Results of a car to car crash test with two Ford Fiestas (model year 85 to model year 98)