

The Pegasus

John Wickersham was one of only two journalists given inside access to Bailey's revolutionary Pegasus project. Here he tells the amazing story of the van's creation

THE DEVELOPMENT TIMETABLE

● The Pegasus project has been running over two years and several prototype structures were built as the project evolved.

● Finding a way to bend an Alu-Tech external framework was a big challenge but this task was accomplished within the first year.

● The following year, colour-coding with a powder-coating process was mastered, thereby enhancing the visual effect.



● The rigorous tests at Millbrook Proving Ground were completed early in May of this year. Close scrutiny included cold-chamber testing as well as track driving.



● As one of the two technical journalists appointed to monitor developments, I had to sign confidentiality forms last spring.

● Editors were shown Pegasus products in July 2009 and information was embargoed from publication until 16 September, on which date the Pegasus website went live: baileyalu-tech.co.uk

● The first public viewing of Pegasus models will be at the International Caravan & Motorhome Show, which opens at the NEC in Birmingham on Tuesday, 13 October 2009.

For 30 years, caravans have been built using pre-fabricated insulated panels. Their construction is speedy and the resulting living enclosure pleasingly light. But there's a basic flaw in the present assembly method – rain can get into such structures quite quickly.

Whereas marine manufacturers avoid drilling holes in the hulls of their boats, caravan manufacturers make numerous holes in their 'vans. For instance, the awning channels on my caravan are attached using 104 screws. A further 38 screws secure a trim along the ridge of its 'boat-style' roof. In total, there are 274 puncture points in the skin and when trim 'bedding' sealants become brittle, it's no wonder rain finds a way in.

Recognising that thousands of damp caravans are scrapped prematurely, Bailey's technical staff decided to look for alternative constructions. To achieve five avowed objectives, a Pegasus team of eight specialists embarked on a two-year mission.

Last December, I arranged to evaluate a new heating system in one of Bailey's prototype caravans. This gave me a 'top secret' preview of 'Project Pegasus' and I was later invited to watch track-testing work on the new model. It was abundantly clear that Bailey had built something special.



An early prototype showing the clamping system inside a roof locker

ALU-TECH CONSTRUCTION HOW IT WORKS

Expressed simply, instead of screwing the five body panels together in a conventional way, Alu-Tech ribs and plates clamp everything together tightly. As the photograph above shows, nuts are tightened on threaded spindles before cosmetic cover strips are finally added.



External test temperatures went as low as -15°C

revolution

Bailey's MD Nick Howard crouches on top of the test vehicle



WHAT MAKES A PEGASUS CARAVAN SO SPECIAL?

- No other caravan built using prefabricated panels carries a 10-year bodysell integrity guarantee. That shows remarkable faith in a product. Equally there are no flimsy acrylic plastic panels and no joins in the roof and front section.

- Colour-coded 'Alu-Tech' ribs, which clamp the walls and roof panels together, achieve both immense rigidity and resistance to water ingress. This assembly method reduces the number of fixing points and external joints by 90 per cent. Fewer screws mean fewer holes.

- Structural integrity is incredible – could any other caravan bear the weight of a car with a driver on its roof (a combined mass of 1630kg)? The single-piece bonded front

and roof play their part and internal headroom is 1.96m (6ft 5in) throughout the interior – without weight penalty.

- No wonder the heater had to be switched off when I was sleeping in a prototype last January. Panel thicknesses of 37mm sides, 31mm ceiling and 44mm floor achieved a Grade III Classification of Thermal Insulation during cold-chamber testing at Millbrook Proving Ground.

- This high performance bodysell, with its timber-free internal skeleton, is truly the pièce de résistance. However, there are many other neat touches, such as low absorbency buffer zones around windows and doors, quite apart from the smart interior designs.



The notable insulation performance is achieved by having 37mm side panels