



Improving vehicle aerodynamics can go a long way to helping transport operators improve efficiency and cut fuel costs. Dan Gilkes reviews efforts being made by bodybuilders to get in on the act

# AERO dynamic

**L**ighter, stronger materials, improved structural design and slippery aerodynamics are increasingly important aspects of the bodybuilding world. Customers always want to carry more, but use less fuel doing so.

Many box or curtainside bodies are just that – boxes – with all the aerodynamic properties of the proverbial house brick. Cab roof spoilers, side skirts and other aerodynamic aids go some way to smoothing air flow over a vehicle, but, by designing curved lines into the body, it is possible to improve economy even further.

The likes of Bevan Group, with its distinctive Icon Luton body, has been making big strides in aerodynamic shapes for large vans and light trucks in particular. Now, truck manufacturers are getting in on the act, too. DAF has been constructing its own box and curtainside bodies for the LF and some CF65 chassis for some years. Now the firm is to launch a full Aero body for its LF trucks. “It uses a curved front end and a diffuser on the rear of the body, but we wanted to avoid any compromise on loading,” explains marketing director Tony Pain.

The front bulkhead is therefore the same height as the rear 2,260mm aperture, though internal height stretches to 2,345mm. A choice of internal lengths from 5,065mm to 6,725mm is available, along with two widths of 2,480mm and 2,350mm. This provides useable load volumes of 28–37.5m<sup>3</sup>.

DAF’s Aero body is said to offer a potential for big fuel savings, without cutting into useable space. “We believe we can save about 8% in fuel, compared to a normal roof spoiler,” continues Pain. “But the Aero offers 98% of the capacity of a standard box. It costs a bit more, but the payback is within two years, so I think that between 30 and 40% of our LF bodies could end up being the Aero model.”

DAF has quietly become a major force in the UK bodybuilding market, providing box and curtainside bodies for its UK-built trucks. “Last year, we did over 900 LF and CF trucks,” states Pain. “This figure means that we built around a third of all LF box and curtainside trucks sold in the UK last year.

“There is a huge range of dimensions and specifications, so nearly every order is, in effect, a special,” comments Pain. That is perhaps why rental company Ryder is the biggest single customer for



**Above and below:**  
Scania is seeing potential in the bodybuilding market for a range of applications

the DAF bodied trucks, as it has more of a uniform specification. DAF is looking at additional bodies for the future, though, particularly those that offer repeatability. "We look at volume against complexity, so a lightweight tipper would be next," Pain adds.

But DAF is not alone in making great strides on bodywork. "We've also started building curved

aerodynamic bodies for a number of different fleets, as fuel consumption and carbon footprint are on everybody's minds," says Andy Hawkyard, managing director of Aire Truck Bodies. This company has been incorporating new materials in the construction process, too, in an effort to reduce weight and provide smoother profiles. Perhaps the most effective of these are the thermoplastic panels from Omnia Composite Solutions, which offer light weight in a strong floor or roof panel.

Chassis manufacturers are also becoming increasingly involved in the complete vehicle approach, providing one-stop shops. The majority of van makers have been offering a variety of dropsides, tippers, box and curtainside bodies for their heavier vans for some years. Some companies achieve this by having bodies installed onto chassis within their own factory environment, while others use recognised suppliers to fit bodywork at import centres or bodybuilder premises before the vehicle is delivered to a dealer.

Citroen is, perhaps, the most prolific manufacturer in the sector – its Ready To Run programme offering the usual tippers, Lutons and dropsides, but also more obscure options, such as car transporters, glass carriers and refrigerated vans. There are several advantages to this approach for operators, not least that lead times can be much shorter, as the manufacturer may well have vehicles built for stock. It also provides a single point of

contact, both for the order, but, more importantly, for maintenance and warranty work.

Scania has taken this approach to heart, too, offering a varied line-up of complete vehicles. Built by their respective bodybuilders, but sold through the firm's dealer network, this includes Cartwright curtainsiders, Hyva skip trucks, Multilift 8x4 hooklifts, and a range of wet kit and Pet Reg tractors.

### The race to comply

All of which doesn't make things any easier for the independent bodybuilder. And things aren't about to improve any time soon, with Whole Vehicle Type Approval (WVTA) looming. The SMMT (Society of Motor Manufacturers and Traders) has recently warned that time is running out on European Community WVTA.

Minibuses, buses and coaches have been covered by the rules since last October. Complete light vans and trucks under 3.5 tonnes will have to conform by 29 April this year, while complete trucks of more than 3.5 tonnes will come under the regulations by 29 October. Complete vehicles, where one company builds the chassis and another, usually a bodybuilder, finishes the vehicle, will have to conform by the respective dates in 2014.

The SMMT European and National Approval (SENTA) guide has been developed to assist companies with applying for type approval. The SMMT will hold a SENTA seminar at the CV Show for any companies interested in finding out more.

"In the UK, we've always had Construction & Use and many other regulations, which have made us, as bodybuilders, do what Whole Vehicle Type Approval has done in Europe," comments Aire Truck Bodies' Hawkyard.

"Adopting WVTA will not make our own vehicles any safer: it will just make us comply with Europe," he adds. "We are members of the SMMT and the VBRA (Vehicle Builders & Repairers Association), and we've been in talks about WVTA for years. Recently, we've had meetings and attended seminars and all of the main bodies involved are now on the same page, so we have clear guidance." <sup>1E</sup>

