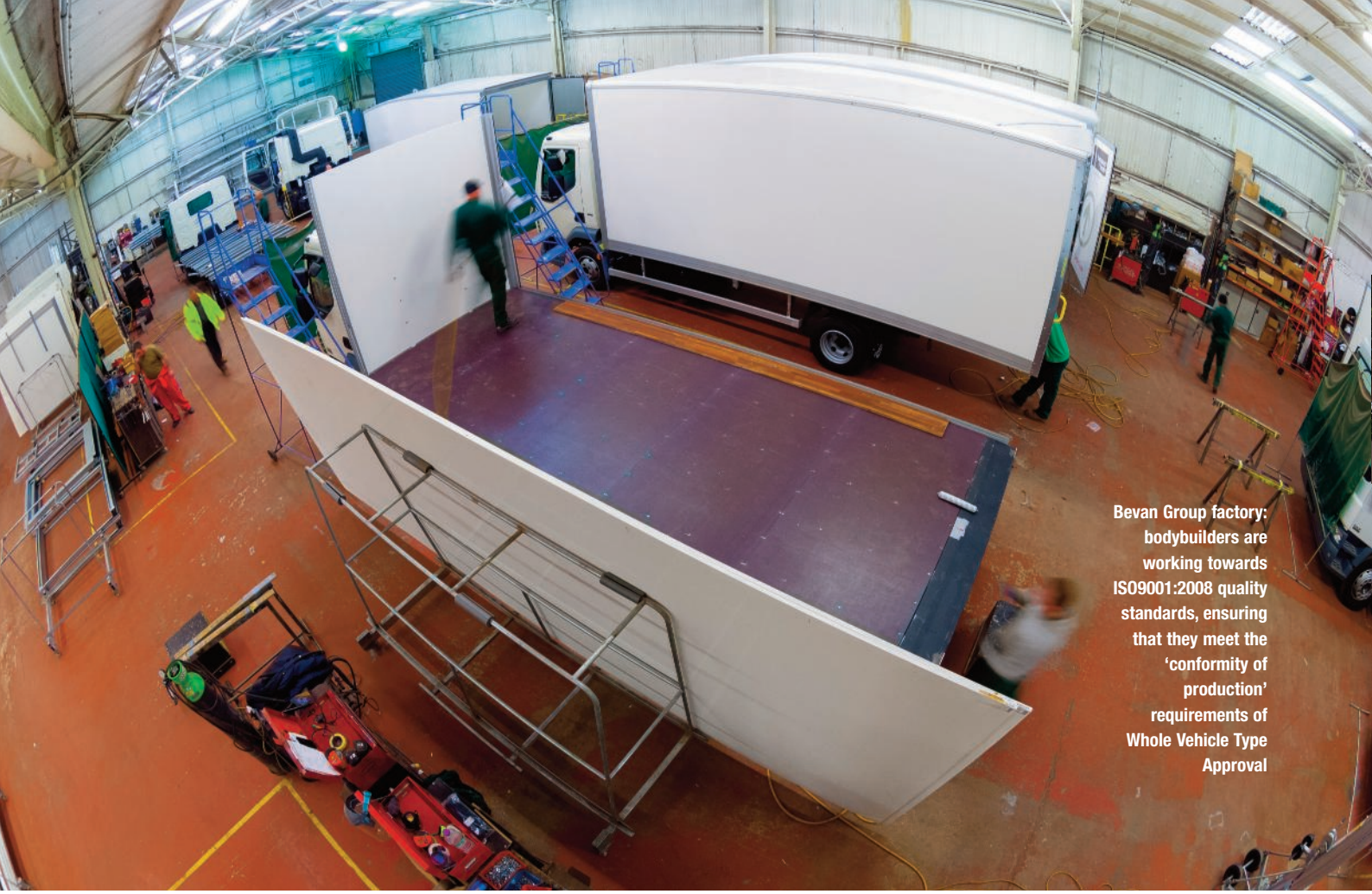

Bevan Group factory: bodybuilders are working towards ISO9001:2008 quality standards, ensuring that they meet the 'conformity of production' requirements of Whole Vehicle Type Approval

CONSTRUCTION

With N2 and N3 trucks now in scope of Whole Vehicle Type Approval, Toby Clark talks to bodybuilders and converters about the implications for operators

Any discussion of bodybuilding is bound to be dominated by Whole Vehicle Type Approval (WVTA), with October having seen the final phase – bringing N2 and N3 trucks (those over 3.5t gvw) into scope. And while some bodybuilders have struggled, others reckon they have been ready for a while.

"We've been working on type approval for 6–7 years now," comments Lee Dimmock, director at the Bevan Group. "We had the first of our approvals for larger vehicles in April 2009, and have now processed around 140 approvals. When each can cost £5,000, you can see the level of investment."

Chris Berridge, managing director of Paneltex, says it's been an interesting five years. "We've had plenty of time to plan, but the UK is unique, because of the large number of specialised bodybuilders. WVTA is good news for companies like us, but possibly bad news for smaller firms. It's going to make a significant difference to the market five years ahead." For him though, the real value of WVTA is its requirement for 'conformity of production'. "As an industry, we haven't been too good at that."

Neil Brandrick, legal director at JC Payne, confirms the old view of body manufacturers as coachbuilders who do anything. "They can build you a very good body, but you might get 10 similar bodies rather than 10 identical ones," he quips.

Years behind automotive

Dimmock agrees, suggesting that bodybuilding is generally "years behind the automotive or aerospace sector". By contrast, Bevan's two Midlands sites already meet ISO9001:2008, while a third has just completed its own VCA (Vehicle Certification Agency) audit. "We have a policy not to go through the IVA [Individual Vehicle Approval] route," he explains, because the limited capacity for testing is an issue.

"In 2013, some people were reporting 18–20 weeks' wait for IVA testing. We're not overly worried about the time it takes to fully approve a vehicle. Working with the VCA, we've streamlined the process. The effort has been substantial, but it's

Jackson Coachworks emphasises durability in its products. This DAF reefer features the firm's own Eistechnik underslung refrigeration unit

paying off: we now have four employees doing nothing but type approval, and we've had one approval completed from inspection in six days."

Support from chassis manufacturers has been variable though. "Each manufacturer has its own way of doing it," says Berridge. "We see great variation between dealerships. But now that a chassis-cab only has Stage 1 approval – you can't register it on its own – the manufacturers are perhaps more interested in talking to bodybuilders."

"One manufacturer took 15 months to provide documentation," comments Dimmock. "Another gave us exactly what we needed in three days." And he mentions another issue: "The industry has been starved of Euro 6 vehicles. A lot of customers brought orders forward – one bought 1,400 Euro 5 chassis-cabs at the end of last year. We've had nothing this year at Euro 6 that we could demonstrate to the VCA to get approval."

Interestingly, some bodybuilders have been looking at markets formerly the preserve of specialists. "There has been a bit of a resurgence in removals vehicles," says Brandrick. "We build quite a strong but lightweight pantechnicon, which we can

AND USE

JC Payne is taking on traditional removals van builders with this lower cost pantechnicon, derived from a conventional rigid body

produce at low cost because we build most of the vehicle on the line before it goes into our skilled area."

As ever, vehicle weight is another key issue. "There's a real drive for payload," confirms Brandrick, "particularly in the 3.5-tonne sector". With grandfather rights disappearing on 7.5-tonners, and Luton payloads of 500–800kg, he says: "Every kilo is critical at 3.5 tonnes. There is a real push to take weight out." And he adds that some OEMs are moving from welded to bolted construction to save cost.

Payload is king, agrees Lionel Curtis, now technical director at Cartwright. "But on a 7.5-tonner it's a real battle to get a 50% payload fraction." The weight penalty of Euro 5 and 6, he explains, has encouraged OEMs to shave weight from chassis, so in more recent chassis torsional stiffness is lower. "This imposes a different set of limiting conditions on the body, and you need to take account of that."

Hence possibly the move from welded to bolted mountings, he says. Either way, designing for changing conditions requires a combination of experience and technical skill. "Finite element analysis is increasingly important," he adds.

Dimmock says Bevan has used lighter-weight panels. "We have box bodies where the panels have interference fits and are slotted together and bonded, rather than bolted," he explains. These bodies are both light and durable, he says. And he adds that precise building "helps with our understanding of weight" – which is important given that mass must be specified in WVTA applications.

However, innovative materials and processes need to be justified, warns Curtis. "Some customers get excited about aluminium honeycomb panels, but once they get one and damage it – and realise what it takes to repair it – they might be disappointed. Traditional materials have stood the test of time for a good reason."

Ask the right questions

Jackson Coachworks uses traditional five-element panels that include a layer of plywood underneath the laminate on each side, greatly improving impact resistance. "It is slightly more expensive and very slightly heavier," agrees director Matthew Jackson, "but damage is much less frequent, the body holds temperature better, the fridge is less stressed and breakdowns are less common. In our opinion, the benefits outweigh the costs several-fold."

Meanwhile, to ensure that customers get what they need, bodybuilders need to ask the right questions. So does Cartwright take clients through a formal checklist? "Sadly not," says Curtis, who says that fleet engineers still have significant influence. "Fleet engineers don't buy off-the-shelf boxes: they know what works for their operation and they know what they want – flooring, roof materials and so on."

Jackson agrees: "Either they know exactly what they want, or they just tell us how many pallets they want to carry. Loading makes the difference: nearly everywhere has its own setup. Everything has standard elements – we use the same sideguards, marker lights and other aspects on every body we make – but every vehicle we produce is customised."

So, has WVTA limited choice and forced manufacturers and operators into standardised designs? Not necessarily, says Brandrick. "Standard box bodies and Lutons are 80–85% of our production. In April 2013,it was a similar percentage."

"It's caused a change in approach," says Dimmock. "You have to consider any changes a lot more," However, he adds: "We say 'yes' wherever possible, regardless of the initial order quantity. For example, some manufacturers of glass frails said there was no way to type-approve a panel van with a glass frail fitted. You have to fit it after registration. It was difficult, but we found a way."

And Paneltex's Berridge answers: "We can offer the same options on size and mass as always. But other options [such as lights] might not be available." To justify full type approval on an N1 vehicle, he explains, the firm needs to build at least 50 a year. "It would be a shame if European legislation meant that we lost the efficiency we have in this country." TE