

Skills challenge


If there is one point upon which all sponsors of last month's finals of the IRTE Skills Challenge – the competition to find the best technicians and operators from the bus and coach sector – are agreed, it is that the entrants' standards were exemplary. As Richard Belton, deputy chief executive of hosting organisation S&B Automotive Academy, who was instrumental in developing the tests with the sponsors, puts it: "The standard was simply excellent. There was some outstanding work, which also proves that our tests were set at the right level."

Staged at S&B Automotive Academy's impressive Bristol engineering headquarters, the two-day event saw five teams and individual technicians competing for the top honours in trials that stretched their abilities across mechanical, electrical and bodywork maintenance and repair.

The test stations were provided and run by S&B staff and the sponsors (Allison Transmissions, Bridgestone, Cummins, Knorr-Bremse and Shell), with support in the form of chassis, equipment and components from Arriva, MAN, Scania and S&B itself. Meanwhile, the assessors were seconded from the sponsors' technical departments, while S&B examiners co-ordinated marking.

Looking at the workshop challenges, they were wide ranging. Fault-finding tests on the mechanical and electrical sides covered: brakes, tyres, wheels, transmission systems and engines. And there were additional electrical faults, door problems, non-start issues, and measurement and inspection tasks to complete, each within 20–30 minutes. Then, on the bodywork side, technicians were faced with complex fibreglass repairs, MAG welding, panel fabrication and structural bonding jobs over several hours.

Allison Transmissions hosted the driveline test station, with faults set up on an Optare, provided by Arriva. According to Allison UK area manager Ricardo Sardelli, this was less about the firm's diagnostics equipment – Allison DOC (Diagnostic



For the bus and coach technician finalists, last month's two-day contest was testament to their engineering prowess. Brian Tinham reviews the IRTE's inaugural event



Optimised Connection) – and more about challenging the technicians to diagnose mechanical faults likely to be seen in normal operations.

"Our tests were drawn from the field – for example, diagnosing the cause of a vehicle failing to deliver the gear range properly," explains Sardelli. "It might not be the electronics; it could be caused by incorrect cable adjustment on the shift selector, due to cable stretch or poor installation."

Rolling tests

As for the tyres and wheels station, Bridgestone was in charge, with nine tyres, each having different faults for the technicians to identify and suggest remedial action. Stuart Atfield, commercial marketing analyst with Bridgestone, states that faults ranged from sloped wear across the tyre tread – most likely due to alignment or tracking problems on the bus – to a bulge on an inner liner and shoulder, which was the result of impact damage. Other faults for the finalists included: irregular wear, accelerated wear to tyre shoulders, cracking between the blocks, severe damage to side walls, damage to a tyre inner and damage to the rubber in the bead area – in that case due to excessive removal and fitting.

Meanwhile, Cummins provided the engines for the power plant test station. Tests included



examining the technicians' skills in adjusting valve clearances. That might sound basic but, as Cummins European marketing and communications manager Mark Dunk, points out, is increasingly important, with bus and coach operators required to keep within Euro 5 engines' emissions targets. Throughout, the tests' emphases was on accuracy and a methodical approach.

Elsewhere, Knorr-Bremse's test station centred on diagnosing braking faults, with mechanics and electricians required to work together on an Arriva Optare bus and S&B's newly refurbished air brake testing board. John Simmons, Knorr-Bremse's bus and coach account manager, says the tests focussed on an ABS modulator fault and a wiring issue. He describes the tasks as challenging the technicians' understanding of everything from wiring and piping diagrams to the ABS diagnostic equipment, while demonstrating logical procedures – and doing so against the clock.

Tremendous achievements

These were not trivial tasks and the SOE (IRTE's umbrella organisation) says it is delighted with the technicians' performance, and grateful in particular to S&B Automotive Academy for its herculean effort in making this major event possible. "The IRTE Skills Challenge represents precisely the IRTE's key aims – to support, recognise and reward competence," comments Nick Jones, SOE chief executive. "Engineering professionals are an essential part of society, and none more so than those technicians working on buses and coaches."

He and others also point to the wider implications of the Skills Challenge for the transport industry. As Richard Harrington, chief engineer at Go-Ahead London, one of the participating operators, puts it: "The Skills Challenge shows the industry that the public are travelling on vehicles that are maintained by a highly skilled and motivated workforce."

For S&B's Belton, the inaugural Skills Challenge was "a cutting-edge event", for the first time bringing


all the disciplines under one roof. "We now hope this event will become an annual mainstay and that we'll see next year's contestants back here at the academy next year. For us, it's about supporting the industry, the operators and manufacturers, their technicians, as well as the accrediting bodies, which we see as extremely important."

Knorr-Bremse's Simmons agrees: "The Skills Challenge was a very positive experience for everyone. For us, it's all about working with the bus operators, and helping them to improve maintenance procedures and their technicians' diagnostic skills. That's important, given the sophistication of modern electronic braking systems. Getting this right reduces maintenance costs and downtime, and makes bus and coach operators more profitable."

"It was an excellent event," comments Bridgestone's Attfield. "Not only could you see the passion, enthusiasm and capabilities of these bus companies' technicians, but also they got to discover their strengths in a great working environment. It was an incredible opportunity for the operators and we were delighted to support it."

Bring it on

Attfield is one among many who feel the next job is to build on the success of the Skills Challenge. "There's so much scope," he says. "We're committed to improving skills though major events like this. Now, we're keen to get even more bus and coach companies fired up for next year."

"Well done to the SOE and IRTE for making this happen," comments Allison Transmissions' Sardelli. "Proper maintenance is the route to getting the best out of any equipment and we see the IRTE Skills Challenge as important in our role of helping to bring on best practice." 

Winners of the IRTE Skills Challenge 2011



Top Scoring Mechanical Technician Award, presented by Allison Transmissions: William Scott of Translink

Top Scoring Electrical Technician Award, presented by Cummins: Nick Field of Go Ahead

Top Scoring Body Technician Award, presented by Shell FuelSave for Diesel: Gary Jones of Arriva

Electrical, Mechanical and Body Team Award, presented by Knorr-Bremse: Go Ahead

Mechanical and Electrical Combined Award, presented by Bridgestone: Go Ahead

Best Collaboration on Teamwork Challenge Award, presented by IRTE: Translink