

# From the ground UP

Scania's next-gen R and S series have new cabs, new interiors, reworked chassis, a new flat-floor flagship and innovative service packs. Ian Norwell reports from the Paris launchpad

**S**cania's outgoing R series was launched in 2004. To say it captured hearts and minds in the UK is an understatement. Drivers are renowned for their devotion to the brand. But fleet managers like it, too. In 2015, Scania sold more three-axle tractors in the UK than any other marque, with over 4,000 registered. So the firm is coming from a position of strength – and its new R and S series look set to cement that.

Underneath a new cab, the drivetrain sports extensive modifications. The heart of the matter is now four SCR-only (selective catalytic reduction) 13-litre in-line six-cylinder engines, with a new 500bhp variant at the top. That much is in step with other mainstream OEMs: even Mercedes relinquished its 'V' engines years ago, citing cooling issues with increasing combustion and injection pressures. However, Scania also retains three signature V8s, reaching up to a mighty 730bhp.

That said, modified cylinder heads, new injectors, altered combustion



regimes, and a raft of other engine and transmission refinements give a claimed 3% average fuel economy gain. Add the new R and S series' aerodynamic improvements, and that figure is 5%.

Meanwhile, in a development that casts further doubt on the need for dual-clutch transmissions, Scania's Opticruise now gets a lay shaft brake that improves synchronisation and cuts shifting time. "Thanks to [this], our most popular gearbox for long-haul trucks, the GRS905, shifts up a gear in 0.4 seconds," says Magnus Mackaldener, head of transmission development.

But it's not just about the powertrain.

Most recent truck redesigns have been limited by the cab. While DAF, for example, made a great job of the XF, it was based on a long-established cab. But Scania gave its designers free rein. As a result, the driver's seat has moved 65mm closer to the windscreen and 20mm closer to the door. Hence the enlarged windscreen, lowered and reshaped dashboard, and additional space behind the seats for wider beds. Instrumentation is also new, with a seven-inch touchscreen and Bluetooth.

Outside, mirrors have wider angles and better vibration suppression, although their housings are still big.

## View from the top

Scania's launch event at the Grand Palais, in the centre of Paris, did not lack pizzazz. Upwards of 2,000 guests joined the 'Driving the Shift' sustainability forum that preceded the evening. Hosted by Henrik Henriksson, president and CEO of Scania, forum presentations on the environmental impact of transport – second only to energy generation, we were told – was reflected on by a heavyweight cast.

Andreas Renschler, Scania chairman and VW commercial vehicles board member, said that connectivity will be part of the solution. "There will be 28 billion connected devices by 2021, many of them in trucks and cars. They can talk to each other, and save waste at every turn."

But keynote speakers don't get much bigger than ex-UN secretary generals. Kofi Annan called for faster progress towards the de-carbonisation of transport. "This needs to be done within a generation, or faster. The current 40 billion tonnes of annual CO<sub>2</sub> emissions must be reversed by 2020."

In an expression of pragmatism that stood out among the retinue of worthies, he put his personal estimation of hitting this target at "two thirds" chance of success.



the S series will have a massive 2.7m headroom.

Others prefer footwells to contain mud and dirt while migrating through the cab. Either way, there's no denying the spaciousness.

### FORM AND FUNCTION

Ultimately, the new R and S cabs will encompass 24 variants, all having base structures developed with Scania sister company Porsche Engineering. None will share parts with existing cabs, we're told. Indeed, aerodynamics is apparent everywhere – including flush designs for lights and other external cab structures.

Incidentally, Scania has finally dropped the sun visor as a standard spec item (a known fuel drinker), although operators may still install them, along with extra spotlights. On their own, however, the new cab's aerodynamics claim a full 2% saving on fuel economy – although the high roof does look a little DAF-esque.

Moving on to safety, though, an optional rollover curtain airbag makes its debut here. "Seat belt use, the new rollover side curtain airbags and steering wheel airbags, together with seat belt pre-tensioners, mean that an occupant now has considerably greater chances of surviving a rollover accident," states

Christofer Karlsson, head of crash and safety systems at Scania.

But that's not all. Cab structures are still tested using Swedish impact tests, with single cabs subject to three scenarios. Why? Karlsson makes the point that the dynamics of a rollover rarely deliver just one impact. Additionally, the front axle has been moved forward 50mm to improve chassis balance and response under emergency braking. Brake chambers are also larger, with Scania claiming a two metre reduction in stopping distance. AEBS [autonomous emergency braking system] specs remain as per the previous range.

What about operating costs? Fleet managers will like Scania's new approach to maintenance. Flexible planning exploits remote downloads from connected vehicles – meaning customised schedules and content. This is more than just bringing in the truck earlier, or letting it run on.

"Each truck will be serviced exactly when it needs it: no sooner and no later," insists Christian Levin, head of sales and marketing. "It will also get the service it needs: no more, and no less." So, for light duty cycles, with low average gvw and benign topography, service intervals up to 150,000km are theoretically possible.

TE will report from behind the wheel soon, but for now, 10 years and €2 billion worth of development seem to be time and money well spent. **TE**

Some mirrors are camera-ready for urban operation. 'A' pillars are thinner, giving a wider view between pillar and mirror. This change alone will make driving easier. At roundabouts and junctions, drivers contending with large mirror bodies and thick 'A' pillars adopt a bobbing-and-weaving head motion to maintain a safe view. A reduction in that activity will be welcome.

The other big news is the release of a flat-floored flagship S-Series cab. In fact, Scania is one of the last mainstream truck makers to introduce one – although its lack has never been described as a limitation. Some drivers love them, and