Home advantage

With a host of fresh new designs and ideas, tractor unit cabs have moved on and up since we last compared them five years ago.
When CM LAST CARRIED out a comparison of cabs in 2009, we focused on compact tractor units like the Daf CF85, Mercedes-Benz Axor and Volvo FM. But this time, we moved upmarket. Resisting the lure of top-of-the-shop palaces, we have instead evaluated those designed for regular nights out but still within a prudent fleet budget. Broadly speaking, we are talking about full-width (2.5m or so) cabs that provide sufficient space and creature comforts for the average driver to stand up right and spend a reasonable night. This is a highly relevant and competitive part of the market, made even more so by the fact that five of the seven cabs have been either renewed or significantly revised within the year or so as part of Euro-6 upgrades. We were looking for evidence of progress and new ideas.

**THE SPACE RACE**

With the exception of the Iveco and the Renault, you can get higher versions of each of these cabs, so absolute size is not the be all and end all. As we can’t ignore interior space, we evaluated three critical dimensions – measured interior height directly above the centre of the engine tunnel, width across the door pillars at headrest level, and cab length from just above the dashboard to the rear wall. Multiplying these dimensions gives us a feel for the core gross volume of the cab.

Scania’s new Actros BigSpace offers the most internal height and the second most width and length and so is the biggest overall package. The Stralis doesn’t look nearly so big from the outside but comes second, a whisker ahead of the MAN and then the Volvo Daf’s Space Cab is the smallest, purely because it provides less headroom than all the others. If that is an issue, take the Super Space, offering an extra 370mm or so of internal height.

It is customary to assess the size of flats by reference to floor area, so we did that too. The only genuinely usable part of a cab floor is the engine tunnel, so we measured the largest unimpeded rectangular area, discounting areas obscured by a projecting centralconsole, for example. Automated gear-shifting frees up floor space, and nearly all the others. If that is an issue, take the Super Space, offering an extra 370mm or so of internal height.

For left-hand drive. Our initial reaction was that UK drivers aren’t the be all and end all. As we can’t ignore interior space, we evaluated three critical dimensions – measured interior height directly above the centre of the engine tunnel, width across the door pillars at headrest level, and cab length from just above the dashboard to the rear wall. Multiplying these dimensions gives us a feel for the core gross volume of the cab.

It is customary to assess the size of flats by reference to floor area, so we did that too. The only genuinely usable part of a cab floor is the engine tunnel, so we measured the largest unimpeded rectangular area, discounting areas obscured by a projecting central console, for example. Automated gear-shifting frees up floor space, and nearly all the park brake levers are on the dash these days, so there is more floor area than there used to be. The exception is Daf’s Super Space Cab is the smallest, purely because it provides less headroom than all the others. If that is an issue, take the Super Space, offering an extra 370mm or so of internal height.

We noticed that in most cases, footwells on the passenger’s side are wider than those on the driver’s side, presumably a function of design for left-hand drive. Our initial reaction was that UK drivers are getting a raw deal but, on second thoughts, maybe that isn’t the case if they swap seats when off-duty, they end up with more room.

We also checked for the presence of a footrest for the driver’s left foot. Daf, Mercedes, and Renault all tick that box, while Volvo has what looks like a rather half-hearted attempt. Scania and MAN don’t bother at all, while Iveco has thoughtfully included one – such a shame it’s on the passenger’s side.

Are you sitting comfortably?

Seat comfort is a subjective issue, so we chose to adopt a more objective approach by measuring the amount of knee room, determined by maximum and minimum length between driver’s seat back and the nearest point on the dashboard. With the seat in its rearmost position, Mercedes and Iveco respectively give the most knee room for long-legged drivers; Renault and MAN give less. Scania and Iveco seat tubs had the greatest range of travel, and so should be able to satisfy more extremes than others. Being able to push the seat a long way forward also means the seat-back is not so oppressive when using the bunk.

Taller drivers are also likely to have longer-than-average thighbths that need seat squabs that provide support under the knee. All seven trucks have movable squabs that can be pulled out to extend their length, although we are not sure how many drivers take advantage of this.

We found a huge variation in how manufacturers approached passenger seats. The optional leather seat in the Iveco, for example, has a swivel action so the seat can be turned 90° to face inwards for a change of scenery in off-duty hours. The seat-back can also be folded down flat so it isn’t in your face if you are sleeping with your head at that end of the bunk. There is also a pocket on the seat-back. Both Scania and Mercedes have passenger seats that fold to create extra space: the squabs fold up or the backs go down. Scania’s seat-back also serves as a bedside table when it is folded. Passenger seats that lack these folding functions are an opportunity missed.

Good evening?

Before they turn in for the night, drivers need cabs to function as a living room. We’ve mentioned standing room and folding passenger seats, but the bunk arrangement also plays a part. Our pet hate is a top bunk that is shug too low and/or hanging at 45° when stowed. Anything that prevents the average driver from sitting comfortably on the lower bunk is a pain in the neck.

The Volvo FH assessed here has three lockers on the back wall instead of an upper bunk, neatly avoiding the compromises associated with providing two beds. Conversely, most Daf XF Space Cab are specified with only one bunk, but this particular example had two. There simply isn’t sufficient height in the cab for this arrangement to work comfortably. The top bunk, which also hangs down at an intrusive angle – is too low, too seriously encroaching on the living space.

The Renault is probably the best of the rest, with an upper bunk that folds almost flat against the rear wall and a reasonable amount of headroom between bunks. What’s more, the upper bunk has a novel longitudinal folding arrangement that turns it into a thickly lipped shelf. Renault also has come up with a simple reclining device that is little more than a mat anchored to a rail mounted on the sidewalls above the lower bunk. Your backside anchors it at whatever angle of recline you choose.

However, Renault’s bottom bunk is only 425mm above the engine tunnel – about 100mm less than most – so sitting on it is like using a child’s chair.

Iveco’s upper bunk also folds flat against the rear wall, and you will probably want to keep it stowed for as long as possible because it is low-mounted, leaving relatively little headroom when the lower bunk. Behind the passenger seat, the lower bunk has a three-position reclining mechanism akin to a sun lounger. Another nice touch in the Iveco is a small drop-down table recessed into the side wall on the passenger side.

Scania and Mercedes have all stowed their upper bunk at 30° to 50° to vertical. Of these three, Mercedes is probably the most liveable because it offers the most headroom between bunks, boasting a multifunction reclining arrangement for the lower mattress. MAN’s pull-out cool box, which refuses to slide all the way, impedes your calves when sitting on the lower bunk.

Asleep on the job

When it’s time to bed down we think the driver should choose which way round he sleeps, not the truck manufacturer. We know one driver, overnighting in a lay-by, whose cab was crumpled by a bulldozer blade on the back of a low-loader that passed too close. He never slept with his head nearest the roadside again.

So full marks to Volvo, Scania and Renault which all...
provide over-the-shoulder flexible snake lights for reading at both ends of the bunk. Ivecos and Daf's reading lights are at the driver's end only. Mercedes' and MAN's are at the passenger's end only.

On paper, Scania's bottom bunk is the biggest: long, with a 1,780mm pocket-sprung mattress. It's wide too, but only if you use the clever pull-out arrangement that expands mattress width by 350mm once the seats are pushed forward. Volvo's pocket-sprung mattress lacks the pull-out trick, but is almost as wide anyway. Daf's lower bunk mattress is foam in the Space Cab (interior sprung in the Super Space) and looses out to the two Swedes because the cut-outs behind both seats are deeper, making it substantially narrower at the ends. MAN's lower bunk, with a foam mattress isn't particularly wide (790mm) but has only one small cut-out against the back wall on the passenger side, so more of its full width is usable. The foam mattress on Ivecos lower bunk is marginally wider (800mm) but has a bigger cut-out behind the driver's seat. That configuration, plus the reclining mechanism mentioned earlier, lends itself to sleeping with your head on the passenger side, so it is annoying to find the reading light on the side wall at the other end.

By the time you get to the Renault, the foam mattress width is down to 770mm in the middle and 650mm at either end, so it feels restrictive around the head. Renault offers an extending-width mattress à la Scania, but not on right-hand drive models. Mercedes' approach is different from the rest, opting for a straight (foam) mattress without any cut-outs. At a constant 750mm, it is narrow in the middle but loses nothing at either end.

Most of the top bunks are narrower than those beneath them. The two exceptions are Mercedes and Ivecos, both of which are the same width top and bottom. The Actros' upper bunk has a clever ratchet system on its support straps, allowing the bunk to be levelled if the truck is parked on a slope: there is even a spirit level on the bunk frame to get it spot on. Ivecos has apportioned the space so that the upper bunk gets more headroom than the lower one, suggesting that Ivecos gives more priority to the upper bunk than other manufacturers. The aluminium ladder is cleverly stored within the bunk's base. Our vote for the best ladder goes to Daf, which sports wide treads for comfortable use with bare feet and slides along between the frames of upper and lower bunks.

Storage hunters
The driver with everything needs only one more thing – somewhere to put it. Looking first at the big storage lockers under the bunk, Mercedes offers plenty of volume, largely because its bunk sits higher than the others, so space beneath is deeper. Volvo's cunning idea is to use pull-out trays on top of the two big under-bunk lockers so if you don't need their full depth you can add a second tier of storage for smaller items. There are a couple of additional smaller lockers too, accessible only from the outside. Ivecos opts for a pair of small external lockers to complement the main lockers that are illuminated and accessible from inside and outside. Most of the units offer the option of a pull-out fridge replacing the centre drawer. MAN's troublesome box once again rears its head, wasting valuable space behind it under the bunk.

All seven trucks have three lockers above the windscreen, mostly with a couple of open-fronted cubby-holes beneath for paperwork. etc. The most common failing is the lack of an appropriate space to keep a big floppy road atlas easily accessible. Plaidsis go to Volvo, Daf and Renault for using light-coloured interiors for their lockers making it easier to find things than in the black holes of MAN, Iveco, Mercedes and Scania. The row of lockers on the back wall makes the single-bunk Volvo FH a winner on storage.

As well as integrating pull-out tables, Mercedes' and Daf's dashboards offer more substantial storage space than most: the others mainly have multiple small niches for pens, glasses, credit cards, etc. Ivecos finds additional novel storage opportunities, such as bins beneath the seats and a cubby-hole beneath the hinged cushion pads on the door arm-rests. Either cargo nets or pockets are found on nearly all the side walls above the doors and on the back walls too. Ivecos' rear-wall storage isn't particularly accessible because it is above the upper bunk.

Room with a view
The desire to minimise intrusion of the engine tunnel pushes up the height of the floor; we measured heights ranging from 1,420mm (Iveco) to 1,670mm (Mercedes). Consequently, a driver's eye line is around 3,000mm above the ground. While that provides a commanding view, these lofty perches also create blind spots immediately adjacent to the truck. Using a 1,100mm-high traffic cone, we measured the distance from the side of the truck at which the top of the cone just became visible to a driver of average height in each of the trucks, without using mirrors. Shorter measurements indicate smaller blind spots. The cone was placed centrally in front of the truck and at 90° to the centre of the side windows.

Our results (see table) show some big differences between the trucks. Floor height appears not to be a causal factor: the Mercedes has the highest floor but the second smallest blind-spot area, whereas the Iveco has the lowest floor but the second largest blind-spot area. The size and shape of the windows, and the position of the driver's seat relative to the glass, seem to be the critical factors. Ivecos is growing on the upper part of the window at the floor level has an adverse effect on visibility, increasing the width of the blind spots as the window depth decreases towards the rear. This was particularly noticeable with the Renault.

Scania comes out best in our assessment overall, with MAN's hampered by poor views through its relatively shallow side windows, in seventh place. While much of the debate surrounding blind spots focuses on cameras and ultrasonic proximity sensors, maximum direct vision through windows is a good starting point. A downward-facing kerb (class V) mirror picks up the area closest to the nearside of the truck, but we found a significant gap – typically around 2m to 3m – between the edge of that area and the point at which direct vision begins on the nearside, so those trucks with the smaller measurements undoubtedly offer a safety advantage.

Feel-good factor
As well as measureable factors, we sought to take account of the softer, aesthetic elements of the cab designs too. We would have welcomed a splash of colour to escape the sea of black, grey and beige. Mercedes makes a strong statement with its sharply contrasting light beige and black interior. The Renault also stands out, with a rather more conventional two-tone palette with beige and grey the dominant shades, with integrated red seatbelts – amid the predominantly grey interior. Iveco has made huge strides with its interior; notably with soft-touch plastics around the dashboard, and carpeting that lifts the interior. Of the others, most have a carpet insert for the engine tunnel, only Renault and Scania choose rubber or vinyl. Daf, Scania and Volvo interiors are all safe and restrained in their choice of interior colours. All three

MAN TOX XLX: It's a big cab but let down by a lack of mod cons and too much clutter restricting standing space on the engine tunnel
interiors are finished to what looks and feels like a good standard. MAN steers clear of beige, with a palette of greys and black highlighted by silver trim. MAN’s flatish dashboard is beginning to show its age and is rather a plain Jane in this company. This year’s cab test shows that differences between the fit, finish and perceived quality of interiors are not as great as was once the case, so that tends to focus more attention on style and aesthetics, where there are fewer regrets – it’s more a matter of taste.

We found evidence of more attention to audio systems than ever before. For example, as well as the customary multiple-speaker radio/CD unit, all seven trucks’ audio systems had a USB port, plus a 3.5mm jack-plug socket for connecting devices such as MP3 players. But while gadgets are well catered for, there is less attention to more mundane features such as a towel rail, shaving mirror or waste bin. All these cabs are intended for routine nights in the actros.

One nice touch we noticed was the coat hook at either end of lockers above the windscreen in the actros. Daf has added a multifunction panel on the rear wall of the Euro-6 XF to control cab lighting, heating and the roof hatch. Daf’s main cabin lights were the brightest. Renault’s main cabin lights were the brightest.

Our scoring matrix shows how we ranked them on eight key criteria.

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Conclusions

All these cabs bring something different to the party. Our scoring matrix shows how we ranked them on eight key criteria. Renault’s T 460: excellent control panel on rear wall and good lighting, waste bin. All these cabs are intended for routine nights in the euro-6 XF to control cab lighting, heating and the roof hatch. Daf’s has added a multi-function panel on the rear wall beside the driver’s seat, reachable from the lower bunk.

Renault T 640: the new design accomplishes a great deal, with excellent control panel on rear wall and good lighting 

Let there be light

Multiple cab lighting options are a matter of course these days. The best two lighting systems we found are by Volvo and Renault. Both feature a mixture of LED and filament bulbs, with several pre-set programmes, plus a dimmer function. But it isn’t all about fancy programmes and coloured LEDs; the quantity of light is hugely important. Truck cabs with black floors need plenty of light to allow drivers to live comfortably during nights out. The Renault’s main cabin lights were the brightest.

Daf has added a multi-function panel on the rear wall of the Euro-6 XF to control cab lighting, heating and the roof hatch without leaving the lower bunk, which is handy, but others do more. Once again, we think Volvo and Renault do it best. Volvo’s do it best. The best two lighting systems we found are by Volvo and Renault.

The upper bunk, not the lower. MAN’s lags behind the others, with just a detachable alarm clock in the side wall behind the passenger seat. But at least window controls and the main cab lights switch are next to the park brake beside the driver’s seat, reachable from the lower bunk.

We feel sure that this test has come at the wrong time in the cab life-cycle for both MAN and Scania. The other five cabs have all been renewed or refreshed to some extent for Euro-6, whereas the TOG and R-series are essentially unchanged inside and arguably due for revision.

As sister companies in Volkswagen’s truck business, perhaps MAN and Scania will unveil new cabs before too long – possibly variations on a common theme?

We found lots to like about Daf’s XF but the elephant in the room is the upper bunk. The Space Cab isn’t tall enough to accommodate it comfortably, so the upper bunk impinges on precious living space. It was hard for Daf to justify major internal revisions for euro-6 and so
we feel the XF Space Cab hasn’t made the progress of the others. It was penalised in our test more for size and packaging issues than for quality.

In fourth place, just a single point ahead of the Scania and the Daf, is Renault’s new T range, with Iveco’s Ecostralis Hi-Way a further point ahead in third. We found it hard to split the Iveco and the Renault. Both are huge improvements on their predecessors and bring some nice new touches. The extra space just tipped the balance in favour of the Iveco. But we feel that both could be improved by attention to their sleeping arrangements.

We found Renault’s lower bunk rather narrow at both ends, while we are not sure about Iveco’s apparent prioritisation of the top bunk ahead of the lower bunk.

That leaves just Volvo’s FH Globetrotter and Mercedes’s Actros BigSpace. This pair is well ahead in our judgement, with the Actros taking the top slot. The clue is in the name – BigSpace. Although absolute size was not the be all and end all of this test, and bigger versions of both cabs are available – Volvo has the Globetrotter XL, Mercedes the Actros GigaSpace – it is impossible to overlook the fact that the Actros offers more room than the FH. In contrast to Daf, Volvo made the most of its space by providing us with a single-bunk arrangement that works well and should be more popular across the industry as a whole, we feel. Both Actros and FH scored consistently well across all our criteria, emerging as strong all-round packages.

Reviewing the outcome, it strikes us that investment in cab updates definitely pays dividends as far as drivers are concerned, with newer designs doing well. It is apparent that two of the all-new cabs, the Actros and the FH, do indeed deliver tangible advantages.

The other all-new cab, Renault’s T range, is aimed at a broader audience and strikes a pretty good compromise, we reckon. Iveco carried out a root-and-branch revision of its interior, resulting in what now looks like a far better environment. If this pattern of development continues, we can surely look forward to MAN and Scania raising the bar even higher with their next generation of cabs.

CM’s testers also spent the night in each of the seven cabs. Their impressions are recounted in the March issue of our sister title Truck & Driver.