

IS THREE A CROWD?

The three-axle tractor unit is the undisputed king of the road in the UK. Peter Shakespeare asks whether the 4x2 deserves a second look

The 6x2 tractor unit remains the tool of choice for the UK's regional and national haulage industry. According to Andrew Jamieson, sales director for Scania (Great Britain), during the rolling 12-month period to the end of March 2018, 17,570 three-axle tractors were registered. This is up compared to the 16,977 sold over the same period 12 months before. Looking at 4x2 tractors, only 2,161 units were registered to the end of March 2018, down compared to the 2,344 sold over the previous rolling 12 months. Limited by law to 40 tonnes gcw, 4x2s have limited appeal for most UK haulage and distribution operations, as judged by the statistics alone.

But they do still have a genuine UK application. Jamieson states: "In the main, 4x2 tractors are used by the food retailers; not international hauliers, as many people assume. Although we do still see some orders for high-horsepower 4x2s from Northern Ireland and Scotland, the bulk of sales are down to the supermarkets. This tractor unit split has been consistent for several years and is driven by operators' desire for flexibility within their fleet. The assumption that many operators could use a 4x2 at 40 tonnes is correct, but they would lose some flexibility. That appears to be the most important driver for the market."

In 2007, the Department for Transport (DfT) commissioned research into the

precise relationship between HGV payload and fuel economy. The research (<https://is.gd/isopuq>) was conducted on-road using a variety of vehicle types, which included a retail distribution 4x2 artic running up to 38 tonnes and a 6x2 artic up to 44 tonnes.

Both had tri-axle box-bodied trailers and were driven by SAFED-qualified (safe and fuel-efficient driving) instructors. Before the test, the tractor units' power and torque outputs were tested on a chassis dynamometer. There was a 20bhp difference between the more powerful 6x2 and the 4x2. Both tractors were Volvos and had the same transmission, final drive ratios, cab configurations and aerodynamic set-ups. Both were loaded with palletised freight

with identical load distribution. The 122-mile test route ran from Bridgwater in Somerset to Barnstaple, Devon and back, along motorway, dual- and single-carriageway roads.

The first run was with solo tractor units. The 7,020kg 4x2 averaged 13.24mpg compared with 13.41mpg for the 8,180kg 6x2. Run two was with an empty trailer. The five-axle combination returned marginally better fuel consumption (0.75%) overall, but higher fuel consumption on dual carriageways and A-roads. But with a load, in multiple runs at 18, 23, 33 and 38 tonnes gcw, the 4x2 prevailed, bettering the 6x2





by a margin of 4.14% at the top weight. The 6x2 repeated the test at 44 tonnes gcw, and saw its fuel efficiency drop by 0.66mpg. The researchers concluded that higher power does not necessarily provide better fuel consumption, and that in fact the third axle, which weighs about a tonne, is to blame for that relative increase, compared to a 4x2. Over the whole life of the vehicle, money saved by the less thirsty 4x2 more than compensated for its lower residual value.

RESIDUAL VALUE

As to that latter point, Jamieson confirms that 6x2s sold secondhand are valued significantly higher, mainly because the market for secondhand 4x2 tractors in the UK is extremely limited. Most of Scania's are exported; a few converted into rigid applications, such as horseboxes. He adds: "The catch-22 situation here is that, while plenty of jobs could use the 4x2, the lack of appetite among the second life customers makes the residual values much worse."

IVECO believes that while UK hauliers desire the added flexibility that 6x2 tractors offer, many of their operators do not really need it. A spokesperson says: "It's difficult to say how many use the extra four tonnes. From our experience, probably about half who operate a 6x2 don't need the extra capacity. The

residual values do justify specifying a 6x2, however operators should still be mindful of the additional fuel burden of running with an axle that is not fully utilised. Interestingly, if you look around on the motorways, you will see quite a large percentage of 6x2 vehicles running with the mid-lift axle raised."

There are other expenses to keep in mind, the OEM points out. "The difference in repair and maintenance between the two is nominal, with the 6x2 being the more expensive because of items such as the additional axle and brake costs. But there is a lower road tax on a 6x2 (£1,800 for a 40-tonne 4x2 compared to £1,200 for a 44-tonne 6x2). Because of the lower taxation levels, and lower leasing costs for a 6x2 given higher residual value, the overall picture will be more positive towards the 6x2."

Calculating the benefits of specifying 4x2 tractors therefore requires a very careful analysis of the operation for which they are intended. Their champions - the retail distribution operators - have clearly identified those benefits. Waitrose, Iceland, Marks & Spencer, Tesco, Ocado and the Cooperative Food Group buy 4x2 tractor units in significant volumes.

Iceland, for example, is one of the largest 4x2 tractor customers of David Waddington, national key account

manager at Renault Trucks UK. The company operates 160 Range Ts (pictured) and is looking at the new Range D urban artic for its smaller stores.

Waddington explains why: "They are cheaper to buy and cheaper to run in terms of R&M, tyres and fuel. Iceland is mainly an urban operation, and its stores tend to be in high streets. It must contend with weight and accessibility issues, so the delivery fleet operates between 28 and 31 tonnes gcw. The company has now moved away from rigids because its 18-tonners only offered a 10-tonne payload. 4x2 artics with a tandem-axle trailer with rear steer have a similar footprint to a rigid, but give them better access, and can carry up to an 18-tonne payload."

He continues: "Iceland keeps its 4x2 tractors for up to six years. In terms of second life, we have no problem disposing of 4x2 tractors. They are in demand in the rental market, and currently there is a shortage because so few are registered and operators keep them longer than 6x2s. The 6x2 is a UK mindset. Many operators specify them on a just-in-case basis," he adds.

Over the last few years, IVECO says it has sold a few hundred urban artics, predominantly to brewery distributors. It says: "The advantage is they are running at 22-23 tonnes gcw as opposed to a 26-tonne rigid that offers less payload."

Tractor unit specification is very much the case of horses for courses. There is no denying that the 6x2 is still the safest bet, but a careful analysis of your operation might reveal that 4x2s could improve your competitive advantage, especially if run beyond five years. **TE**

FURTHER INFORMATION

'Lightweight tractors' - <https://is.gd/jamose>

'2017 operator cost review' - <https://is.gd/ujicog>

'DAF CF 4x2 review' - <https://is.gd/acedel>
SAFED course, by the DfT (2009) - <https://is.gd/ogaqus>