THE BIG LEAGUE

DAF moves from being a mid-field player to the front row

DAF's flagship truck, the XF105, is the highlight of this year's new product releases, as it substantially increases the ability of the PACCAR group of Kenworth and DAF to take on all comers.

The XF105 has achieved an almost iconic status in the United Kingdom, where it is renowned for its ability to attract and keep new drivers for transport companies, at a time when driver availability, worldwide, is known to be a problem.

When launched onto the European market in 2007, the XF105 immediately gained the accolade of *International Truck of the Year*, voted by a panel of specialist transport media, achieving recognition for providing the most spacious cab in its class.

For an industry, where the driver travels across Europe relying on the cab to provide the highest levels of comfort, the DAF XF105 offers a degree of spaciousness that underpins its attraction.

The Space Cab stands some 1,885 mm, from road to roof, offering an internal standing height of 1,735 mm, within a width of 2,490 mm and a depth of 2,250 mm. The lower bunk width is 810 mm, with a length of 2,100 mm, and, with twin bunks fitted, there's a 555 mm and 550 mm distance between the two mattresses.

The Super Space Cab version stands some 2,255 mm, from road to roof, offering an internal standing height of 2,105 mm. When fitted with twin bunks, the bunk spacing is 810 mm from lower mattress to upper bunk, and 615 mm from upper bunk mattress to roof.

There are high levels of storage space around the cab, in over-windshield lockers and under the lower bunk, as well as in the door pockets. There's room for a microwave in the centre locker above the windscreen, and for those who want to practise their role in MasterChef, there's a slide out table

from the dashboard that suits anyone sitting on the lower bunk. And, while on the subject of bunks, these have full 150 mm thick, pocket sprung mattresses.

Electrically heated and power adjusted mirrors give a great rear vision, plus there's the added safety of a kerb-side mirror to spot cyclist and pedestrians in the city. The standard headlamp system is halogen with a Lexan lens to prevent stone damage, but Xenon headlamps are available as an option.

In terms of active safety, as you'd expect from a class-leading European specification, it's all there for those who tick the right boxes. Systems such as Vehicle Stability Control (VSC), Lane Departure Warning System (LDWS), Electronic Braking Systems (EBS), Adaptive Cruise Control (ACC), and Forward Collision Warning (FCW) are all available.

Passive safety also plays a major role in minimising accident risk, and the cab structure features an integral steel safety cage and provides knee protection for the driver and passenger. Three-point seat belts are integrated into the air-suspended seats. There's also an airbag SRS in the steering wheel, and, if triggered, this also activates automatic seat belt tensioning.

Given that the Europeans are very big on spreading salt over their roads in winter, DAF has paid considerable attention to corrosion protection. The cab sheet metal is of double-sided, hot-dipped, galvanized steel for inner and outer panels, the cab rear wall and various brackets and sections in exposed areas. The metal parts are degreased during cab assembly and treated with zinc phosphate before receiving a cataphoretically applied primer, followed by a filler coat. The underbody is treated to a PVC-coating and then the entire body is painted in a two-component polyurethane topcoat. Finally, wax fluid is sprayed into box sections and cavities for added protection.

The heart of the truck is, of course, the engine, and here, the 12.9-litre PACCAR MX comes with an already proven track record. In the XF 105, this engine has a horsepower output of 510 hp, providing a torque rating 2,500 Nm through from 1,000 to 1,410 rpm. For Euro V emissions ratings and EEV exhaust gas emissions standards, the engine uses SCR (Selective Catalytic Reduction), requiring the addition of AdBlue/DEF (Diesel Exhaust Fluid).

In January 2010, PACCAR, the parent company of DAF, Kenworth and Peterbilt, announced the introduction of the PACCAR MX engine to be installed in Kenworth and Peterbilt trucks built in the United States.

This decision effectively changed the way that PACCAR does business, and heralded in the first signs of vertical integration, where the truck maker also manufactures their own engine, and, in some cases, gearboxes and axles.

Initially, the first MX engines for the United States market came from the DAF engine plant in Holland, but, as we featured in *PowerTorque* last year (June 2011), engine supply soon came on stream from the PACCAR engine plant in Columbus, Mississippi, which was built uniquely for the MX engine production.

Australian operators will be seeing much more of the MX engine in coming years, and it won't just be confined to DAF product. The move in technical development, globally, is towards an increasing dominance of 13-litre engines, and our own market for Kenworth products will also be adopting the PACCAR MX engine, while remaining with the Cummins engine range as an alternative option.

Over 125,000 PACCAR MX engines are successfully operating in DAF trucks, globally. It already meets the United States' Environmental Protection Agency's (EPA) 2010 emissions regulations and has accumulated over 50 million test miles in rigorous and severe conditions in North America. PACCAR pioneered the design and manufacture of high-strength compacted graphite iron (CGI) used in the MX »

engine block and cylinder head. This premium material is more durable and lighter than conventional grey iron, resulting in superior power-to-weight performance.

The electronically controlled, high-pressure fuel injection system delivers excellent fuel economy and assists in achieving the low emissions required by the EPA. The engine's block design and rear gear train contributes to significantly lower in-cab noise levels, resulting in a more comfortable driver environment. The integral engine brake provides powerful performance across a broad range of engine RPM's.

Transmission choice is between the 18-speed manual Eaton Roadranger or the AS-Tronic automated manual, both of which use hub reduction axles and are rated for heavy-duty applications up to 70,000 kg GCM.

The XF 105 is already a big favourite in 4x2 form with European operators, now in 6x4 for Australia it has a huge future.

Interior space and comfort levels are right up at the top of the spec' chart.

As part of its ATe (Advanced Transport Efficiency) programme, DAF, in Europe, offers a complete package of roof spoilers and side fenders, combined with side skirts, which will be supplied on the CF85 and XF105 ATe as standard. Low rolling-resistance tyres of 315/70R22.5 are also part of the ATe package, lowering ride height to further decrease air resistance.

The ATe programme is specifically modelled for the European freeway speeds of 80 km/h, and it's unlikely these specifications for ultimate fuel consumption reduction will be made available in our market. The aerodynamic aids are, however, very relevant to Australian long haul transport.