





# THE APPARITION

UFCs usually come from another planet, but owner-driver John Horswell's Apparition came from his back yard. Ben Mead took a look at the out-of-this-world re-cabbed Ford Louisville unconventional

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**W**hen John Horswell's Apparition was first sighted on the highways of New South Wales last year, it probably caused more commotion than if a UFO had landed on the Sydney Opera House and aliens had stolen the roof tiles.

CBs buzzed red hot with speculation over the origins of this futuristic truck that looked more like it had fallen to earth than rolled off a Ford production line. Rumours that it was a secret test bed for a new adiabatic engine abounded. Its picture appeared in the daily press and there were numerous phone calls to Ford to ask about its new prototype.

The truth is rather more down to earth, science fact rather than fiction. Owner-driver and creator John Horswell plays down the fuss, too, simply referring to his truck as a cab-over Louisville. Nevertheless, the story of how the Sydney-based owner-driver designed, built and now drives a truck with a cab that he built from scratch makes out-of-this-world reading, particularly since John now gets considerably better performance and fuel economy than he did with the manufacturer's original cab.

Underneath this smart new mutant lies a Ford Louisville LNT9000 conventional, built in '79, which John bought in '86. He'd signed on as a subbie with Aztec, to haul bulk

cement powder, and though the truck had the best part of a million kms on the clock, was fine for starting out on the job to see if he could make ends meet. With the contract going well, but missing a sleeper for nights out on the road, and the cab also showing signs of serious tin worm, John had to make an important decision. For most owner-drivers the choice would have boiled down to a pair of options: either fit a new cab or buy a new truck. In John's case buying a new truck was out of the question. Getting a new cab was also expensive, besides which replacing the LNT cab wouldn't have given him a sleeper, as there was no room to squeeze a Ford LTL sleeper cab onto the chassis. John then considered a pretty unique third option: building a new cab himself, to his own design and specification.

If he'd had a dollar for every person who told him he was crazy he prob-

ably could have bought an all-new, top-of-the-range Kenworth. Add to that the number of people who told him it would never work and he would have had the makings of a small fleet by now. But he ignored them all and at the beginning of '87 began working out the basic design. John looked at cabs of virtually every truck on the market, measuring dimensions, and itemising its good and bad points, to come up with a specification that combined the best of everything for his particular needs.

Not wanting to fall foul of the red tape bureaucrats, John talked his ideas over with his state department of transport. All they required was that John's new cab should match the ADR compliance of his old '79 Louisville. To check the design was up to scratch technically, he had the drawing gone over by engineering consultant Bob Buckley. Meanwhile, by day, John continued hauling for Aztec. By night and at weekends his new cab gradually began to take shape in the workshop. The frame was MIG-welded into one rigid piece from 0.75in x 0.75in tubular steel. Cross braces were made from 0.5in steel. With the frame pre-drilled to accept all the wiring, John began cladding the shell with 18gauge zincaneal panel sheeting. In spite of the solid construction of the cab, it's

Above, Ford badge on the back of the cab gives a hint at the Apparition's heritage. Truck usually hauls a tanker filled with bulk cement powder

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by no means overweight, as one might expect of a home-brewed wagon. The rig tares off at 8.94 tonnes, or half a tonne lighter than a W900 Kenworth Aerodyne.

The tilting hood, which gives access to the radiator and batteries, was made from fibreglass and mounted on a steel frame. John fabricated the doors, fitted with International locks, handles and hinges. Glass is laminated throughout, for better safety and, since it's all flat, is easily and cheaply replaced for just around £50 a pane. Surprisingly, working out how to get the wipers to wipe properly took a huge amount of work.

In June '87, John took the ageing Louisville off the road to begin the long and complicated process of marrying the cab shell to the chassis. Considerable attention was paid to getting the weight distribution just right. John wanted a 5.5tonne loading on the steer axle all the time, 16.5 tonnes on the drivers and 20tonnes on the tri-axle trailer: 'I kept the chassis exactly the same as before but shifted the radiator, batteries and steering around to fine tune the distribution and get that 5.5tonne loading on the front axle. That way I've always got positive steering,' he explains pragmatically.

The Cummins Big Cam 1 motor that sits under the cab was sent off to

Newtons Diesel for a rebuild. So were the Fuller 15speed Roadranger and diffs. John wanted to do the job properly and not have his new truck sidelined by mechanical problems after going to all the trouble with the cab. However, he has also ensured that Cat, Detroit or newer Cummins motors will slot in under the new superstructure for the day when a new powerplant is necessary.

John didn't stint on the necessities or luxuries a driver both needs and wants. The driving position offers excellent vision, both from its high viewpoint and the positioning of the screen pillars. With his mechanical background John likes to know exactly what's going on in the engine room and mechanicals department of his truck. It's also important to him to know how the changed airflow is affecting his truck, too, and to this end there are VDO instruments worth about £1500 plumbed in to the dash.

Above, cab tilts through a full 67degrees for major maintenance.

Detachable panels behind nose

cone allow easy access to all

electrical wiring looms behind

These include temperature gauges for both diffs, the gearbox and engine as well as the exhaust, fuel and ambient air temperature. Other dials include boost, volts and a Murphy gauge. He's also fitted a VDO cruise control and fuel consumption meter, as well as a VDO engine protection pack. This sounds a warning buzzer and shuts down the motor within 45 seconds if vital fluids or pressures get too low, a handy device if John ever decides to get a relief driver in.

At the end of a long day the sleeper comes close to offering the luxury of a five-star hotel. The bed's huge, and there's enough height in the Aerodyne-styled roof to let one stand up to dress and undress. What's more, John has even installed a shower with a 60litre hot water tank, warmed by waste engine heat! John's a mechanic by trade so he hasn't left maintenance or the ease with which daily checks can be carried out as an afterthought, either. Fluid levels are all easily checked and the cab tilts to a full 67degrees for major maintenance. Anybody who's ever cursed while trying to get at the wiring behind the dash will also appreciate the panels behind the nose cone, which remove to allow full access to the wiring looms behind.

To ensure that the cab doesn't succumb to rust as badly as its fore-

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runner, John rustproofed the shell with Tectrol and the exterior has been finished off in Berger two-pack Permacron. The interior upholstery, in blue fabric, was handled by Tony Kerr, of Kdumba Upholstery.

John got his creation on the road in February '88. The Apparition met for the most part with a mixture of admiration, envy and awe. Naturally there were a few detractors and pessimists, who predicted that the thing would shake itself to pieces over Australia's rough roads. But one year later, and with well over 100,000kms under the crank, John's Apparition has been a constant sighting on the highways of New South Wales and the critics have had to eat their words.

When I joined John for a typical day's work pulling a 1300cu-ft BPT Newcastle powder tanker, the first thing noticeable was how quiet the new cab was. Compared to the noise of a regular Louisville the truck



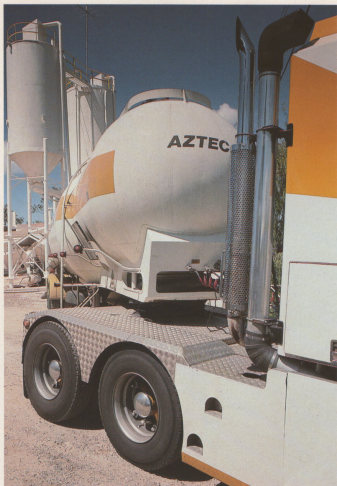
positively whispered. The ride is pretty good, too. The cab is suspended on Hino cab springs and a set of Mack airbags. As a measure of the ride quality I could still make readable notes while travelling, and nothing got thrown around the dash as we drove along, in spite of some pretty bumpy road surfaces.

While ride comfort and low noise levels are a bonus for John, the biggest benefits of his new cab have been reaped where it matters most

to an owner-driver – in the wallet. While John admits that he only had a layman's grasp of aerodynamics, the considerably reduced drag of his cab design over the flying brick-like qualities of his Louisville has had a significant effect on the fuel economy. John claims that he's getting between 0.5 and 1mpg better fuel returns, at 6.9mpg running at 42tonnes on tough going. How many operators wouldn't like to improve their fuel return by seven to 14percent, over-

**Top, ex American Space Program boffin reckons the Apparition is the most aerodynamic prime mover in Australia. Above, John has gauges for everything**

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night? What's more, John reckons that this figure could be further improved with a newer powerplant than a Big Cam 1, which is getting decidedly long in the tooth.

There have been other benefits from the redesign, too. Improved airflow through the engine compartment has reduced oil temperatures in both the motor and the diffs. The truck runs better on the cruise control and John also reckons that a combination of the aerodynamics, and the improvement of the engine following its rebuild reduce the amount of gear-changing that he has to do.

There have been teething problems, but considering that this is a first prototype they've been minor ones. The worst has been the splitting of the sideskirts. This was caused by the

flexing of the chassis, and was cured by cutting the skirts into three sections and mounting them independently. There are one or two dust traps as well, which he feels that he could design out without too much difficulty in a future mark two model.

Another unfortunate, and expensive mishap happened fairly shortly after John put his prototype on the road when the rebuilt motor blew up. Totally unrelated to the cab work, by chance, two of the internal baffles in the aluminium fuel tanks broke loose and the resulting particles of aluminium that got into the diesel acted like emery paper on the bores. The resulting rebuild that followed at least allowed John to make a few revisions to the motor, and a Switzer manifold and turbo was added which has

boosted mid-range power and, according to dyno figures enabled it to produce 415bhp at the back wheels at 1900rpm, when running at higher boost pressure than standard.

Not surprisingly, John reckons to get the best figures when running in the top two gears. But one of the main indicators that John has got the aerodynamics right is the fact that there's so little spray thrown up when it's raining, which in turn keeps time out with a sponge and soapy water down to a minimum. Harry Close, executive director of energy conservation for transport giant TNT, and a former American Space Program research boffin, even came out and said that John's truck was the most aerodynamic prime mover in Australia. Not bad going for a bloke who put the thing together in his spare time and a rented workshop.

One of the most frequently asked questions now is whether John will offer similar cabs to any interested individuals. Naturally he was none too keen to make boastful promises before he'd proven the prototypes to his own high standards of satisfaction. But now he's been giving the matter some serious thought. He's in the process of patenting the design and has also started working out some costing for possible clients.

'I'm reckoning to make a production one in aluminium as it's lighter and cheaper in the long run. I also plan to build, fit, finish and paint the vehicles in my own workshop, rather than sell a cab shell for people to fit themselves. For all that the price should work out around the \$40,000 (£20,000) mark,' John reckons. 'That's for everything, including seats and instruments,' he adds.

That figure begins to look quite attractive to an owner-driver with an ageing or disintegrating truck to replace. But if owner-drivers start beating a path to John's door, there'll be one big problem he'll have to solve. He'll have to rename his own truck. After all, people would reckon you'd been mixing your Cokes with too many runs and shakers if you said you saw 10 Apparitions every time you ventured out onto the heat-hazed Hume Highway.

Above, Aztec is the name of the company John hauls for. A lot of attention was paid to getting the weight distribution just right. It was well worth it