6 AVIA IS 90!

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15 HOW GREEN?

ASHOK LEYLAND

ASHLEY NEWS

ASHOK LEYLAND
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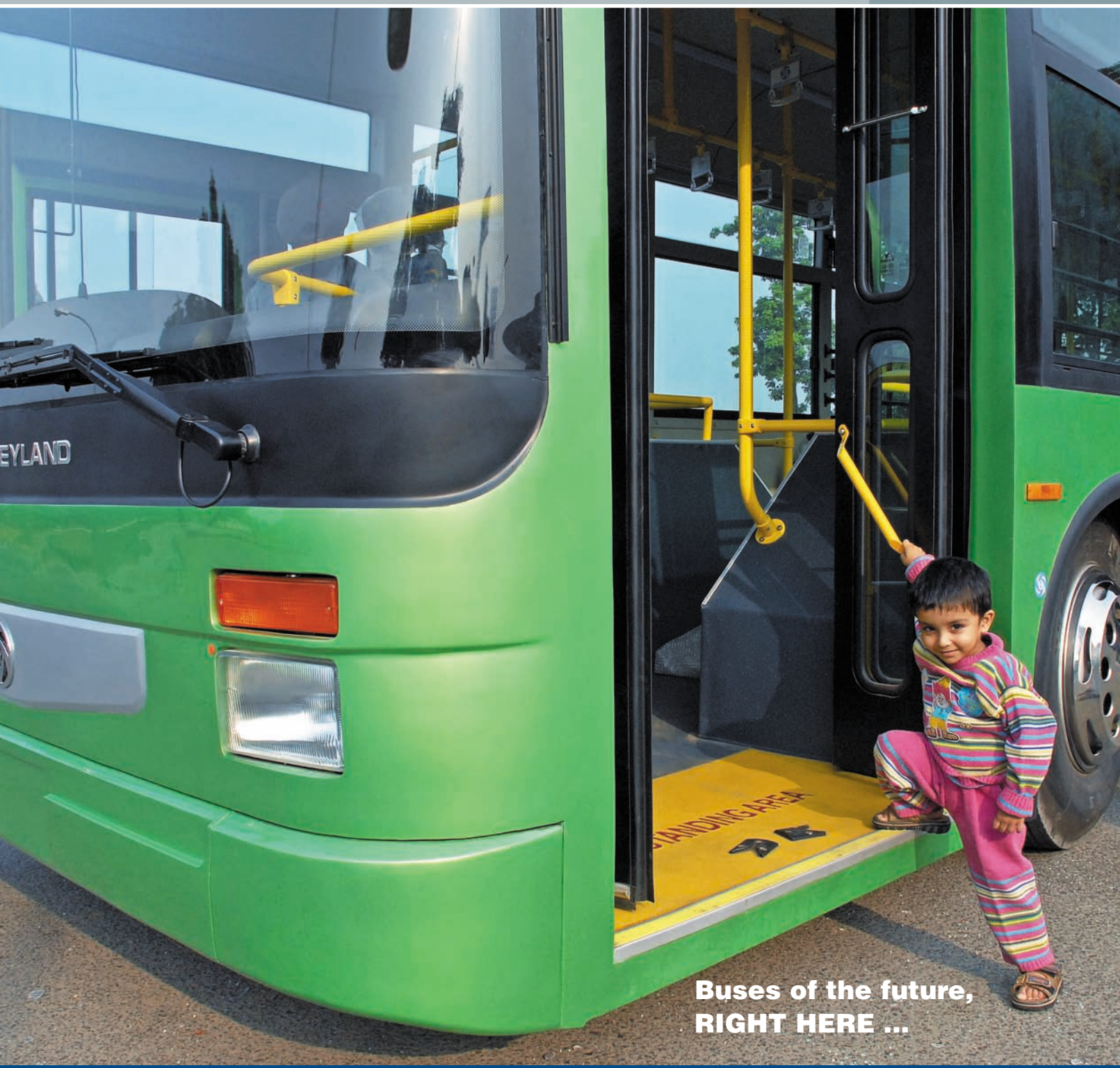


Buses of the future, RIGHT HERE ...

HINDUJA GROUP

Buses of the future; right here ...

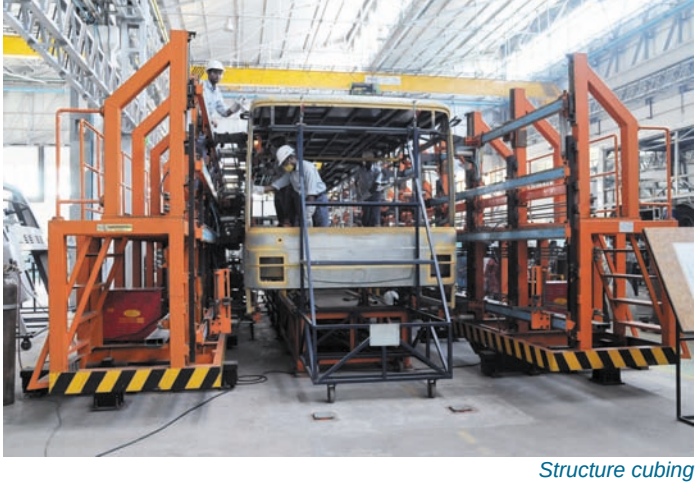
Rules of urban transportation being re-written at Alwar

WINDS OF CHANGE are blowing over Ashok Leyland's Alwar plant. Set amidst lush greenery and waltzing swans, the Alwar Unit now sports a new and trendy look with a long line of spanking new, green buses glistening under the harsh October sun. These are the new, high-end Ultra Low Entry (ULE) CNG-powered buses that the Company is manufacturing against the 875-bus order received from the Delhi Transport Corporation and also for other STUs under the JNNURM.

While the unit manufactures chassis for various bus and truck models, its outstanding claim to fame has been its specialization in the manufacture of CNG bus chassis. In fact, all Ashok Leyland CNG buses plying the Delhi roads have rolled out of Alwar. Hence the choice of Alwar to manufacture the ULE buses was not surprising. Only that it presented a new and very stiff challenge: to achieve even higher levels of efficiency, precision and superior tooling to meet extremely complex, stringent and demanding specifications.

Apart from the test-driven chasses buzzing around, there is a general air of peace that pervades the plant. But step into Shop V and the change is almost cataclysmic. One is hit by a scene of frenetic activity. It is Ashok Leyland's all-new bus building facility. Well-lit, well-ventilated and spaciously spread over 20,000 square meters, it houses a host of modern machinery that has been globally benchmarked and is the best in class.

The production lines are divided clearly into three: the structuring line, the paint line and finally the trim line and as one is conducted along these lines, one is almost suffused by the enthusiasm of Karmendra


Structure cubing


Precision dropping of the shell

Fitting of the windscreen

Kapoor, AGM, Bus Body Manufacturing, and his merry group of colleagues as they present each station with conviction, pride and precision.

The journey starts from the huge cubing structure where the six sides of a bus are joined with an accuracy of +/- 2 mm. The shell dropping that marks the marriage of a fully-tested chassis with the body


Dashboard fitments


Spray painting using man-lifts

... and the team re-writing Alwar's history

August 22, 2007. Silver Jubilee of Ashok Leyland's Alwar unit. "I want Alwar to become a world-class bus body manufacturing centre", R Seshasayee, MD, laid out the Company's mission.

Soon, teams from Project Planning and Design visited various globally competitive bus body manufacturers to bring in the best and the latest – be it in structure cubing, panel stretching or painting and shower testing facility. The goal was to provide a facility that can roll out top quality buses spanning all ranges and segments.

In September 2008, Ashok Leyland bagged the prestigious Delhi Transport Corporation order for 875 Ultra Low Entry buses. Considered very exacting, the 329-page DTC tender, had some unique features like batch-wise/invoice-wise testing of material and flammability testing. "The tender document was like the Bhagvad Gita. Every time we read it, we learnt new meanings!"says Rajendra Kumar, Sr Exec-Bus Body, who eventually even postponed his wedding plans when his team had got into the thick of things.

It was a special task that demanded special attention. And this was clearly communicated to the cross functional team - with weekly reviews by WTD and keen follow-ups by MD. With quality compulsions forcing a change of platform during the initial stages, there was an urgency to completely redesign, develop, source and arrange parts at required cost and quality. The Design and Strategic Sourcing teams had to completely indigenize the bus body parts in a very short span of three months. While the Design team led by Mohammed Iqbal Vanti, Sr Manager-PD, was instrumental in designing the structure, trimming and finishing parts; the Strategic Sourcing team - under the leadership of R Parthasarathy, DGM-SS - was a group of young engineers ably guided by V S Kumaran and Julius Shelton to develop and arrange complete bus body parts within three months.

Co-ordination, understanding the intricacies of the tender, training the team of young engineers and associates to take charge and produce a totally new product meeting stringent quality requirements – all this demanded complete dedication to the task at hand. (The list of proud members of the project is long and the names included here are representatives of the whole team!)

Of course at the end of the day, it is "… great learning and execution. I enjoyed burning the midnight oil … I enjoyed working on this project – every bit of it … despite the huge pressure", says Iqbal.

Agrees Vinay Bhardwaj, AGM-QC, and adds: "After all the hard work … when I saw the buses test run on the Delhi-Alwar highway, I felt like a proud parent".

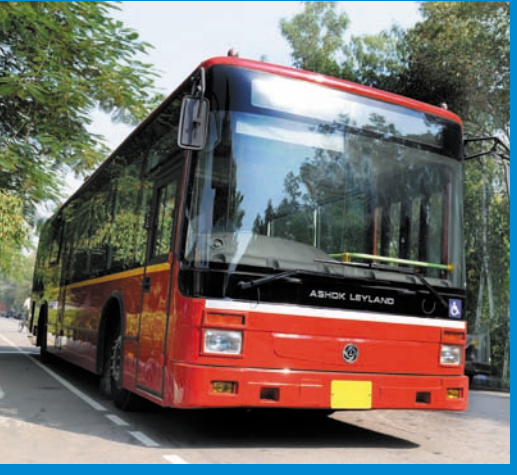
When the first batch of 40 ULE buses rolled out of Alwar on October 28, 2009, A K Chopra, GM-Alwar, said "This is just the beginning. We have a long way to go …" And he was not referring to the DTC order alone. The Alwar unit, hitherto associated with CNG, will now become top-of-the-mind for its bus body building facility, the first chapter of which has been successfully written …

followed by the structure alignment are fascinating in their precision. The stretch paneling is unique and one its kind in India, where the steel and aluminum panels are stretched to their maximum elongation limits to ensure a smooth, dent- and wrinkle-free surface. Another unique aspect of the ULE is the use of multiplex wiring systems because of the enhanced amount of electronics in use. The advantages of this system are manifold: it integrates the electrical and electronics systems, it simplifies the entire wiring harness, it drastically reduces the number of fuses and relays and, most importantly, it enables for increased on-board diagnostics.

Enhanced level of electronics and the need for precise integration of the electronics and electrical in the bus makes the multiplex wiring system vital.

The paint line is elaborate with state-of-the-art combi-booths giving the bus its characteristic color and sheen post which it is ready for its final fitments: the huge one-piece windscreen, CNG cylinders and air-conditioner fitments on the roof, windows, glass fixtures, mirrors, locks, doors. The interior fixtures include heat and sound insulation, ABS trims, anti-skid vinyl flooring with silicon impregnation, seats, hand grips, grab bars and stanchions and electrical items like displays, lights and switches. Once complete, the bus goes through a shower test before it is certified road-worthy.

Surely, the rules of urban transportation are being re-written at Alwar!



Features of the ULE

GENERAL SPECS

- Body - Steel, integral, welded type
- Panels - Front–steel; Rear&roof–Aluminum; side-stretched steel
- Engine - 230hp turbo-charged, inter-cooled
- Transmission - Fully automatic, 5-speed
- Electricals - Multiplex wiring

SALIENT FEATURES

Safety

- Electro-pneumatically controlled double jack knife doors: controlled by door lock sensors, the driver can either open or close them in an emergency. The bus will not move until the doors are securely closed.
- Anti-skid vinyl flooring: with silicon impregnation
- Grab handles and textured stanchions: conveniently located
- Windscreen: Single-piece, huge, laminated - affording the driver excellent frontal visibility
- Rear-view mirrors: Over-hang type rear-view mirrors provide for clear, unhindered visibility
- Brakes: Efficient braking system: full air brakes
- Speed Limiting Device: Tamper-proof electronic speed limiter prevents over-speeding
- Fire retardant – all material used inside conform to fire retardant properties

Comfort

- Step-less entry: With a floor height of 390 mm (15.5 inches), the bus is at kerb height and hence the passenger has just to enter the bus without climbing even a single step.
- Kneeling option: Floor height can be further reduced to 330 mm (13 inches) for easier boarding and alighting
- Disabled friendly: Has provision for a retractable ramp for wheel-chair entry.
- Seats: Comfortable, modern roto-moulded cushioned seats
- Air-conditioning: Main engine driven air-conditioning unit for even, efficient, and continuous and uniform cooling
- Suspensions: Front and rear air suspensions for smooth, jerk-free rides
- Steering: Adjustable Power steering reduces driver fatigue
- Rear-engine: Reduces noise and vibrations to the minimum

Convenience

- Destination boards: LED destination boards at the front, rear, left hand side and inside the saloon
- Two wide, 1100 mm doors: At the front and middle ensure easy and smooth entry and exit of passengers
- Connectivity : Lap-top connections: power points for laptops, mobile chargers
- Entertainment: Driver controlled public address system

EMERGENCY FEATURES

- Emergency doors: Two easily accessible emergency doors or windows, even by differently-abled people - in the side and through the roof.
- Safety sensors: Four gas leak sensors with sound and light alarms
- Fire extinguishers
- Stop request buzzer for the passengers to request the driver to stop the bus in case of an emergency