

Accessible Vehicles

“No Bail-Out Necessary”



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An auto show conjures images of futuristic cars and attractive women displayed to make most men drool and wish they could ride away with one or the other. Many auto manufacturers have recently also featured concepts of vehicles for use by individuals with disabilities and the elderly.



The WelCab is Toyota’s innovative take on motoring for people with limited mobility, including the elderly and individuals with disabilities. The vehicle gives assistance-free access to a mobility-impaired driver and one passenger – both in custom-designed wheelchairs – via remote-controlled, electric-powered sliding doors and an onboard electric lift. The wheelchairs lock into position inside the vehicle. Driving controls are hand-operated – the driver steers the car with the right hand using a unique yolk-style controller and accelerates or brakes with the left hand using a centrally-mounted joystick.



The world’s aging population is having an effect on cars being designed for the future and Japan, which has one of the oldest populations in the world, is at the forefront of the development. Estimates are that only 100, 000 or less consumers per year in the U.S. will need modified vehicles, which is less than half of 1 percent of all new cars sold. But that number is climbing. Already in Japan 20 percent of the population is over 65, and as America’s baby boomers increasingly demonstrate that everyone is better off in a barrier-free society, the market for drivers with disabilities will expand. In my native India 5-6% of India’s billion-plus population are thought have a disability - about 60 million. A new accessible cab was unveiled and is in use in Mumbai.

Honda revealed the Jazz Sports concept with its “Power Techmatic” system, which allows a driver to operate the car using their hands only. The throttle and brake switch are on the center-mounted joystick next to the gear lever. Illustrating how drivers with limited mobility can enjoy a sporty look and a fun and safe ride, Honda added a bucket driver’s seat with side pads, a six-point roll-cage, five-point harness and sports suspension as well as a pedal cover to prevent accidental operation. Mitsubishi has four barrier-free vehicles, including the “kneeling” Townbox Transporter, which has rear suspension that automatically lowers for a wheelchair ramp, that folds out of the tailgate. The lowered suspension reduces the angle of the ramp, making entry easier. They also have a model – Grandis, with a computer-controlled front passenger seat that swivels around, then slides out and down, all the while maintaining maximum foot space. The Lancer Self-transporter was designed for wheelchair users, with a remote-controlled loader that stows the wheelchair behind the driver’s seat via a sliding rear door, while the smaller Colt Plus Swivel & Slide seat has, as the name suggests, a seat that rotates 90 degrees and slides out for the front passenger.



Isuzu builds a full range of trucks and buses, including accessible transit buses that are in use throughout Asia. They also make the Isuzu Gigamax Tractor Ability Cab—a 7,500-pound long-haul big-rig tractor that is factory built to be driven by a paraplegic. The cab’s interior is barrier free, including movable support bars and state of the art hand controls. Unfortunately, the Isuzu Gigamax Tractor AC isn’t sold outside Asia.

There is clearly a bright future if you are in the market for a barrier-free vehicle. In

Japan at least, automakers have chosen to design and build vehicles for drivers with disabilities “in house” rather than have after market firms modify existing vehicles. There is advantage to both approaches. As with wheelchairs, motor vehicles for drivers with disabilities must often be tailor-made for specific needs. That will never change. On the other hand, there can be a distinct advantage when a vehicle is specifically designed and intended by its manufacturer for individuals with disabilities, instead of starting life as an OEM vehicle and having to be torn apart and rebuilt.

Ford offers its Focus ZX3 with swivel-out seats and hand controls, and GM is reducing barriers by designing cars with improved door and trunk openings, knobs, switches, etc. And at the latest North American International Auto Show, Ford, in collaboration with Tiger Racing, exhibited a modified 2005 Mustang GT specially equipped for drivers with disabilities. But all this is a comparatively small effort by American automakers when compared to the Japanese car companies, especially given the demand for barrier-free vehicles and range of vehicles that could be produced.

Some interesting aftermarket modifications available in Canada are the Elaine Anne Lift and the T.M.N. robot 2001.

The TMN2001 is designed especially for disabled persons who drive a private car and use a wheelchair for moving around, the device is



operated by electric motors and placed in the trunk. The robot, brings the wheelchair, stored in the trunk, to the driver’s door. Once the driver removes the wheelchair from the device, the robot folds back into the truck. The robot does not require any structural modifications .

The Elaine Anne Lift System is available for Chevrolet & GM full size vehicles such as: Chevrolet’s Avalanche & Tahoe, GM’s Yukon & Hummer, and the Cadillac’s Escalade. (For full details on available models see Available Vehicles)

The vehicles appearance is outwardly unchanged and retains the styling the driver was originally looking for. The driver enters through the driver’s door, directly behind the steering wheel and operates the vehicle from his/her wheelchair. Only the driver’s area is renovated, so passenger capacity is virtually unaffected. The roof is not raised so underground parking is not an issue.



We are all getting older, and eventually many more of us will need a barrier-free vehicle. Who is willing to spend the time and money to corner this lucrative market and offer drivers with disabilities more than just another mini-van? Maybe our beloved auto manufacturers that received the “bail-out” funds will take notice.

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