

Humantech Shares the Ergonomics for Selecting Fleet and Service Vehicles

When your workplace is a vehicle, ergonomics matter most. Humantech Management Consultants Kent Hatcher and Deepesh Desai have researched ways to improve the ergonomics of these atypical “offices” so that they don’t get left on the side of the road.

Anthropometry, or the measurement of the size, weight and proportions of a human, is very important to consider when selecting fleet and service vehicles, Hatcher says. If a 4-foot-11 female and a 6-foot-6 male do the same job, then the vehicle must accommodate both body types. This requires adjustable features and designing for extremes. The general rule of thumb, he says, is to design large for any clearances and small for any reaches. When designing space for head room, for example, design for the large male. When designing the vertical reach to close the trunk, design for the small female. The analysis of a vehicle should focus on manual material handling and interior comfort and posture, Hatcher adds. Manual material handling includes features like interior trunk width, height and depth, loading service height and depth, force required to open the trunk and the vertical reach to close it.

In order to effectively retrofit vehicles, Desai suggests assessing the risks already present and then developing viable and cost effective solutions to create a business case for implementing them across all vehicles. Because there are thousands of vehicles already in circulation, a company should start by gaining support from top management and establishing a loss prevention plan and goals. From there, it can prioritize ergonomic issues through workplace ergonomic risk assessments, develop short-term and long-term improvement plans and then implement short-term improvements. “Test it and tweak it,” Desai says. “You don’t want to do it all and realize that you’ve made a mistake.” For more information, visit www.humantech.com.

Top Five Recommendations for Sales Fleet Vehicles:

1. Cargo deck (floor of trunk) height should be within recommended guidelines for manual material handling, 33 inches to 38 inches above the standing surface.
2. Cargo deck flush with the loading sill, to prevent the need to lift and clear products from the cargo area. The total depth of the sill, or the horizontal reach, should be 18 inches.
3. Higher driver’s seat height, to ease ingress/egress from vehicle.
4. Quality of visibility to exterior of vehicle when using mirrors (rearview and side) as well as when checking blind spot.
5. Presence of full controls on steering wheel to optimize driver attentiveness on the road and to reduce reaches to console.

Top Five Recommendations for Field Service and Delivery Vehicles:

1. Product Storage: position heavier, more frequently handled items in the comfort zone, between 38 inches and 49 inches above the standing surface.
2. Appropriate Handholds: Retrofit grab handles with 30 inches in length and 1.25 inches in diameter.
3. Entering/Exiting Cab – Step Height: Retrofit a retractable supplementary step.
4. Lift Gates: Provide a pendant control to operate the lift gate.
5. Rear View Camera: Ensure that the vehicles are fitted with rear view camera. Make sure the camera monitor is placed in optimal viewing distance, preferably on the dash board.